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WRITING AND MOTIVATION

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Foreword

Writing has implications across the curriculum at all school levels, and affects the academic performance of students in a wide range of subject matters. As recent research demonstrated, and as teachers have experienced for many years, a major problem in writing instruction is students’ lack of motivation to write. This problem may be due to both the difficulty and the limited attractiveness of certain demanding academic genres and writing tasks. The aim of this volume – to the best of our knowledge, the first book focusing on motivation and academic writing – is to bring together contributions from international research on this topic. We not only address the basic question of how motivation to write can be fostered, but also provide analyses of conceptual and theoretical issues at the intersection of the topics of motivation and writing. What emerges from the various chapters is that the motivational aspects of writing represent a rich, productive and partially still unexplored research field. On the one hand, the two main approaches to writing research – cognitive and socio-cultural – present different views of motivation and writing and, subsequently, different although complementary implications for writing instruction. On the other hand, motivational constructs in relation to writing are more difficult to categorize and often require clarification to avoid overlapping and ambiguities. The aim of this volume is to present and compare various models, perspectives, and methods of research on motivation and writing, as a step towards a more systematic analysis of the problem.

The editors want to thank the Series Editor, Gert Rijlaarsdam, for his support in the various phases of the preparation of this book.

Suzanne Hidi and Pietro Boscolo
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Chapter 1

The Multiple Meanings of Motivation to Write

Pietro Boscolo and Suzanne Hidi

Although over the past three decades motivational research, on the one hand, and writing research, on the other, have greatly developed, studies on the motivational aspects of writing are relatively recent. This introductory chapter is aimed at highlighting the motivational variables that have been particularly investigated in their relations to writing: in particular, interest, self-efficacy, and self-regulation. The motivational implications of the socio-constructivist approach to writing are also underlined. At the end of the chapter, the organization of the volume is presented.

There are two questions that language skills teachers frequently pose to writing researchers. First, why are students so often not motivated to write? Second, how can their motivation to write be increased? This volume that, as far as we know, is the first book which exclusively deals with motivational aspects of academic writing, addresses these questions from different theoretical approaches and perspectives. The diversity of the chapters reflects the state of the art of a developing field that in the future may become more integrated.

The introductory chapter has three objectives. The first one is to clarify how motivation and writing are conceptualized and to examine their relationship. As both constructs have multiple meanings, we have focused on the aspects of motivation and the types and contexts of writing that are relevant for student’s positive or negative attitudes to writing. The second objective is to outline the main research areas in which the relationships of motivation and writing are currently investigated, and in which the chapters of the volume are framed. Finally, the organization of the book is presented.

1 Motivation and Writing: What Relations?

Motivation is so broad a research field that it is difficult to analyze its various aspects. A useful way of organizing the variety of motivational constructs is by referring to the three
main areas into which recent motivational research can be divided (Wigfield & Eccles, 2002b), and considering how each area may be related to writing. The first area regards the motives — e.g., goal orientation (mastery vs. performance vs. avoidance goals), needs, values, interests — which activate a student’s behavior. In relation to writing, it can be exemplified by a middle school student’s interest in exposing his/her ideas on a relevant topic in written form, or a novelist’s intention to narrate an involving story. In contrast, the novelist’s lack of motivation to write is probably different from a middle school student’s negative attitude toward the composition assigned by the teacher. However, in both cases the writers have an orientation to write, or not to write. A second area regards the writer’s perceptions of his/her ability to write in relation to the difficulty of the task and the resources of the context. Again, a novelist’s concern with critics’ comments and audience response to his/her work is probably different from a student’s concern with his/her teacher’s evaluation. Both writers, however, have positive or negative representations of themselves as writers. Such representations include self-efficacy, self-concept, and self-perceptions of competence. Finally, both professional and student writers, when dealing with a demanding task, try to manage it by using various, more or less productive strategies: from planning time, to adopting metacognitive tools, to resisting the temptation of giving up writing. That is, they regulate their cognition, affect and behavior to achieve the objective of a demanding writing task. As motivational researchers have often underlined (e.g., Hidi, Berndorff, & Ainley, 2002; Pajares, Britner, & Valiante, 2000; Zimmerman & Kitsantas, 1999), these areas are rarely, if ever, separate from one another. The “will” (or lack of will) to write is closely connected to a writer’s self-perception of ability, as well as to the ways and tools he or she can adopt for self-regulating. For instance, in a recent intervention study Hidi et al. (2002) found that 6th graders’ general interest in writing and liking and self-efficacy of writing several text types were closely related both before and after the intervention, thus suggesting that these variables develop in concert and may have reciprocal influences on each other.

Not only is motivation a construct with multiple meanings, but also the conceptualization of writing is complex. Psychological research on writing over the past three decades has developed by elaborating and integrating contributions from various theoretical approaches to literacy, from information processing to literary theory to social constructivism. This research did not produce a unitary conceptualization of writing. Cognitively oriented scholars view writing as interrelated processes of different levels of complexity (e.g., Bereiter & Scardamalia, 1987; Collins & Gentner, 1980; Graham & Harris, 1989a; Harris & Graham, 1992, 1996; Hayes, 1996; Hayes & Flower, 1980), whereas the approach of social constructivism emphasizes the connections of writing activities — practices, not processes — with the social and cultural contexts in which people are “motivated” to write (e.g., Englert, 1992; Hiebert, 1994; Nelson & Calfee, 1998; Spivey, 1997). In general, these different perspectives on writing have not placed particular emphasis on the motivational aspects of the activity. However, through analyses of the processes and functions of writing, they have highlighted two main potentially de-motivating features of academic writing which help answer our first question: Why are students so often not motivated to write?

A major contribution towards understanding students’ lack of motivation to write comes from studies, mainly from a cognitive approach, that have shown the complexity of writing
processes and the difficulties students, particularly novice ones, have to deal with. Among literate practices, writing is particularly demanding for children, and in general, novice writers. There are various kinds of writing difficulties, extensively described by recent research, and for which effective instructional strategies have been identified (e.g., Bereiter & Scardamalia, 1982, 1987; Harris & Graham, 1992, 1996). To perform a demanding writing task, such as those assigned in high school, a writer must use strategies of knowledge integration, as well as create unique combinations and links between his or her prior knowledge and the new topic. The difference between expert and novice writers is that an expert writer is able to recognize and overcome difficulties when writing – for instance, how to connect two paragraphs in a convincing way, to outline the various aspects of a problem clearly, or to avoid inconsistencies – whereas a novice writer tends to be aware of his or her weaknesses only through a teacher’s feedback on his or her written production. These two types of perceptions are apparently very different: for an expert writer a difficulty is basically perceived as a problem to be solved, whereas a novice student sees a problem as an obstacle which makes a writing task “dangerous” and unattractive.

The second potentially demotivating aspect of school writing is inherent to its role in the traditional curriculum, that includes not only the rigidity of genres, but also the separateness of writing from other school subjects (Boscolo & Carotti, 2003). Emphasized in recent times by the socio-constructivist approach, the rigidity of writing genres in school has been anticipated by Britton’s studies in the early 1970s. In 1975, James Britton and his colleagues published “The development of writing abilities (11–18)”, an extensive study on English adolescents’ writing. Britton and his colleagues did not analyze writing according to the traditional literary categories of narrative, argumentation, and so on, but on the basis of a distinction between informational and literary uses of language. Britton’s system included three main categories: transactional, poetic, and expressive. The transactional (or informational) function is used to persuade, record and convey information or ideas. In the poetic or imaginative function, language is used to express an experience in literary form. This category includes stories, plays, and poetry. The expressive or personal function regards the uses of language that focus on a writer’s interests and feelings. When the authors applied the function categories to their corpus of writing samples, they found that transactional or informational writing accounted of 63% of school writing, and that students did little poetic writing, and produced even less expressive texts.

Britton et al.’s work has been seminal for two reasons (Durst & Newell, 1989). The first reason was the construction of a reliable category system that described student writing across different subject areas. The second reason and most relevant for our concern, was the authors’ emphasis on the limited functions of writing in school and its limited power to foster reasoning and exploration of ideas. The limited functions of writing can be viewed in a developmental perspective. Through school levels and grades, writing tends to be reduced to a very limited number of academic genres. Whereas in elementary school students practice a variety of genres, from free writing to personal narratives to report of classroom experiences, this variety of genres is progressively reduced in middle and particularly high school, where students almost exclusively write compositions on given (by the teacher) topics and reports (Boscolo & Carotti, 2003). These types of compositions tend to focus on literary and historical questions, about which students are required to elaborate what they have learned from the study of literature and history.
Compositions may also be about topical subjects, on which students are asked to express and sustain their own points of view. They are usually demanding tasks, in which students have to express appropriate ideas in a correct form (writing a “good” text), and demonstrate what they have learned. In other words, writing is mostly used as a rhetorical exercise and evaluation tool.

The limited function of academic writing is increased by its being separate from the other school subjects. Although writing, like reading, is a cross-disciplinary activity which also serves school subjects other than language skills, in middle and high school it is taught and evaluated as a discipline itself. By cross-disciplinary writing we mean both the production of texts within disciplines different from language skills (e.g., a scientific report), and the writing used by students to record and organize knowledge, such as notes, outlines, and summary. However, unlike reading, which develops its cross-disciplinary identity quite early, at all school grades writing is essentially perceived by teachers and students in its disciplinary function, and this perception is strengthened by teachers’ methods of teaching and evaluating writing. When writing is used as an aid to other disciplines (e.g., essays or scientific reports), teachers’ evaluations focus mainly on the amount and organization of knowledge conveyed by the text. Notes, outlines, and summaries are viewed as a student’s personal strategies and therefore tend not to be evaluated.

This instructional conceptualization of writing limits students’ occasions to write, to discover interactions between subjects, and to use writing as a communicative tool, and thus, to find writing an interesting activity, not only an academic task. Students in schools are seldom aware that writing is a powerful tool for fixing, using, changing, and re-elaborating their ideas and knowledge as well as for collaborating with other people, schoolmates, for instance, and/or others outside the classroom, as partners in the construction and negotiation of meaning through discourse. In addition to not recognizing the collaborative aspects of writing, students are unlikely to be motivated to write for themselves. Although writing for oneself can be a resource for approaching, understanding, and analyzing problems in a more personal and gratifying way, this type of informal writing is rarely encouraged by teachers.

The above problems of academic writing instruction do not mean that students are never interested or excited about writing. As any language skills teacher knows, there are occasions in which students write with interest and satisfaction. Unfortunately, such a gratifying experience is more often due to a writer’s engagement in a topic, than to writing instruction aimed at fostering motivation. Thus, from elementary school onwards, the motivational salience of written composition tends to decrease progressively, except when it involves an interesting topic, and written production often becomes a routine and rigidly scheduled task, aimed almost entirely at assessment.

2 Trends in Research on Motivation and Writing

In spite of the significant increase of motivational research over the past two and half decades, on the one hand, and the remarkable development of writing studies, on the other, the topic at the intersection of the two fields has been only partially explored. The initial scarcity of studies on the motivational aspects of writing is not surprising though as most
motivation researchers have been mainly focusing on students’ general orientation to learning (e.g., learning goals, intrinsic and extrinsic motivation, expectancy, self-efficacy), rather than on students’ approach to specific disciplines. Moreover, in the area of writing, the powerful cognitive approach has privileged the investigation of cognitive processes, which has influenced the teaching of writing and resulted only in an implicit concern with motivational problems. Thus, over the past two decades, teachers have been more concerned with how to improve children’s ability to write than with how to increase their interest in writing. The socio-constructivist research, representing the other powerful approach to writing, tends to neglect motivational aspects of writing as it assumes that motivation is inherent in writing as an authentic activity.

However, over the past decade and half some researchers have started to recognize the importance of motivational issues of academic writing (Bruning & Horn, 2000; Hidi & Boscolo, 2006). A first field was related to the “discovery” of interest as an individual’s affective response to specific features of the environment (Hidi, 1990; Renninger, Hidi, & Krapp, 1992). Starting from the late 1980s, this research field contributed to highlighting the role of this variable in learning in specific domains, including writing. A second line regarded the application of Bandura’s (1986) socio-cognitive theory of human agency. Writing tasks are often complex, demanding, and perceived as risky by students; therefore, writing lends itself to be investigated in terms of a writer’s beliefs of his or her ability to compose a good text (Pajares & Johnson, 1994, 1996; Schunk & Schwartz, 1993a, b; Zimmerman & Bandura, 1994). Finally, the complexity of writing, which requires careful planning and control of time and resources, has stimulated studies in another important motivational aspect: self-regulation (Zimmerman & Kitsantas, 2002; Zimmerman & Risemberg, 1997). On the side of literacy learning research, emphasis was particularly on students’ engagement in reading (Guthrie & Wigfield, 2000), but a few significant contributions to the study of motivational aspects of writing came, in the 1990s, from the socio-constructivist approach to literacy learning (e.g., Gambrell & Morrow, 1996; Oldfather & Dahl, 1994).

3 Writing on an Interesting Topic vs. Writing as an Interesting Activity

Several studies investigated the conditions which make a writing task attractive to students and may contribute to a long-lasting positive orientation to writing. Some studies, conducted for the most part with middle school students, have investigated the role of interest in writing, in the light of the distinction between situational and individual interest (Hidi, 1990; Schiefele, 1991). Hidi and McLaren (1990, 1991) hypothesized that situational interest, that is the interestingness of themes and topics, which has been shown to influence children’s comprehension, should also influence children’s production of expository texts. The authors found that the positive effect of topic and theme interest on the quality and quantity of the written expositions was confounded by knowledge factors, that is, the level of students’ knowledge of the content they were required to write about. There is some limited evidence, though, to support claims of an association between interest and writing quality. Unlike Hidi and McLaren (1990, 1991), who considered interest as
generated by text topic, Benton, Corkill, Sharp, Downey, and Khramtsova (1995; see also Albin, Benton, & Khramtsova, 1996) focused on interest in a topic as an individual difference. The authors found that writers’ high or low level of topic interest was associated with particular aspects of writing quality.

In these studies of interest in writing, topic attractiveness has been viewed as the basic motivational source of writing. Interest has tended to be viewed as rather static: students were thought to be interested or uninterested in a particular topic about which they wrote. Interest in writing on a specific topic is an example of situational interest, that is, triggered by a stimulating or involving topic. However, the type of task in which the topic is treated can also be an aspect of situational interest. Hidi, Berndorff, and Ainley (2002) hypothesized that interest would emerge in social activity viewed as meaningful by the students themselves, as they performed tasks in a fashion that they viewed themselves as competent. From this perspective, interest is a student’s orientation to writing, which is triggered, stimulated, and to some degree maintained, by attractive features of the activity which emerge in a specific situation, such as the possibility of using writing in an unusual and enjoyable way, a writing task of which students can perceive the usefulness, collaborative planning, and writing of an important document. Interest is the result of the activity in a situation; a student therefore finds writing interesting if the instructional situation allows him/her to discover and practice the attractive, unusual, and challenging aspects of the activity, which may not, and usually do not emerge from traditional writing tasks. In turn, by experiencing and enjoying new aspects of writing, a student feels more competent and able to face the difficulties of writing.

4 Self-Perception of Competence in Writing

Research on students’ self-perceptions in the 1990s has drawn researchers’ attention to the role of perceived competence and control in student motivational orientation, and their relationship with the stimulating features of an instructional environment (e.g., Brophy, 1999; Harter, 1992; Pajares & Johnson, 1994; Pajares & Valiante, 1997; Renninger, 1992; Shell, Colvin, & Bruning, 1989, 1995). An optimal learning environment for writing – and literacy generally – is one which provides students with tasks and activities at an appropriate level of difficulty (“challenge”) and autonomy (Bruning & Horn, 2000). Being able to choose and manage challenging but solvable tasks and problems helps students to perceive themselves as competent learners. This self-perception, in turn, is believed to foster their engagement and motivation in literate activities (Gambrell & Morrow, 1996; Guthrie & Wigfield, 2000; Turner, 1995).

The roots of research on writers’ self-perceptions of competence can be found in the studies on writing apprehension conducted in the 1970s with high school and college students. Apprehension was defined as the tendency to avoid writing situations or to react in an anxious manner if forced into them, because of the anticipation of negative consequences (Daly & Miller, 1975a, p. 243). Daly and Hailey (1984) distinguished a dispositional or trait-like form, measured by self-report questionnaires, and a situational anxiety, which was perceived to be transitory and dependent on the particular characteristics of a
writing situation. The two forms were considered complementary, although studies on apprehension have focused on the dispositional form. As a trait, writing apprehension was measured by a 26-item questionnaire (e.g., “I am nervous about writing”, “I don’t like my composition to be evaluated”) (Daly & Miller, 1975b). In the late 1970s and in the 1980s the construct was used in several studies, which demonstrated that low-apprehensive writers scored significantly higher on tests of grammar mechanics and writing skills, whereas high-apprehensive ones tended to develop avoidance behaviors. However, differences in writing competence seemed to be only partially related to apprehension: writing apprehension was found to affect writing quality when the writer was limited by time constraints (Kean, Glynn, & Britton, 1987), and when he/she wrote personal texts (Faigley, Daly, & Witte, 1981). The writer’s feeling of distress not accompanied by any objective shortcoming of writing was called the “paradox of writing apprehension” (Madigan, Linton, & Johnson, 1996).

Studies in writing apprehension represent an isolated research area, although measures of apprehension have been used in recent writing research (e.g., Pajares & Johnson, 1994; Pajares, Cheong, & Valiante, this volume). A major reason of this isolation seems to be the theoretical weakness of the construct, conceptualized before the development of writing models, on the one hand, and of motivational theories, on the other. Now, research on writing self-efficacy has become the dominant area in which writers’ self-perceptions are examined. Self-efficacy for writing represents individuals’ beliefs of their ability to write certain types of texts (Pajares & Johnson, 1996; Schunk & Schwartz, 1993a; Zimmerman & Bandura, 1994). Many investigations over the past 20 years have demonstrated a relationship between self-efficacy for writing and writing measures. For example, Schunk and Swartz (1993) found that 4th and 5th graders’ writing self-efficacy was highly predictive of their writing skills and use of strategies. They concluded that self-efficacious writers are more likely to choose and persist at writing tasks than students who do not feel competent. Several other researchers found that older students and adults’ self-efficacy was predictive of their writing performance, intrinsic motivation to write, and self-regulatory processes (McCarthy, Meier, & Rinderer, 1985; Meier, McCarthy, & Schmeck, 1984; Pajares & Johnson, 1994; Shell, Corvin, & Bruning, 1989; Zimmerman & Risemberg, 1997). Interestingly, Zimmerman and Bandura (1994) found that increased levels of writing self-efficacy resulted in higher-level goals that students set for themselves, thus, linking self-perceptions of writing competence to writers’ goal setting. Considering learning-disabled students’ self-efficacy beliefs, Graham and Harris (1989a) demonstrated that these students tended to overestimate their abilities for creative writing. Self-instructional strategy training for these students not only improved their self-efficacy judgments, but also their composition skills.

Although research on interest and self-efficacy developed independently, some researchers maintained that increased interest was an outcome of increased self-efficacy (e.g., Bandura & Schunk, 1981; Zimmerman & Kitsantas, 1997, 1999). However, Hidi et al. (2002) argued that self-efficacy is associated with interest, and that these two motivational factors may reciprocally influence each other’s development (for a review of the theoretical and empirical aspects of this problem see Hidi & Boscolo, 2006).
5 Self-Regulation of Writing

A writer has to coordinate cognitive, metacognitive, and linguistic processes when producing extended texts. She or he has to select sources to gain information, make choices about ideas to be included, adopt strategies about the use of time. In other words, the writer must self-regulate at several levels. In addition to cognitive and metacognitive aspects, self-regulation also includes motivational aspects. For example, a self-regulated writer should have positive feelings, interest and self-initiated thoughts that would lead him/her to activities that attain various literary goals, such as improving their writing skills and the quality of the text they create (Zimmerman & Risemberg, 1997).

According to the socio-cognitive model (Bandura, 1986; Zimmerman & Kitsantas, 1999, 2002; Zimmerman & Risemberg, 1997), self-regulation of writing is viewed as involving three elements: the person, the behavior, and the environment. Based on this view, various writing self-regulatory activities can be identified, grouped according to these three elements. A writer *controls internally* the writing activity such as setting specific objectives and assigning time for the writing task. The writer also controls his or her *behaviour*, for instance, by using the best ways of expressing ideas, and by taking into consideration the already produced text. In addition, he or she establishes a suitable writing *environment* such as a quiet place.

Zimmerman and Kitsantas (1999) further argued that the strategies of a self-regulated writer can be described in the frameworks of recursive writing models, such as Rohman’s (1965) and Hayes and Flower’s (1980), which hypothesized three phases of writing: planning, transcription, and revision (see Zimmerman and Kitsantas’s chapter in this volume). Zimmerman and Kitsantas’s (1999) also hypothesized that there are four progressive levels in the development of writing self-regulation. The first level of self-regulation involves the learner observing a model (e.g., a teacher who illustrates how to best combine simple sentences into a complex one). The second level of self-regulation involves emulation, that is, when the student attempts to copy the model’s performance. For example, at this level the writer composes the complex sentence based on the teacher’s demonstration. The third level of self-regulation involves self-control; the learner can plan and use a particular strategy and self-monitor the process. At this level the learner’s self-satisfaction is related to awareness of matching or surpassing the model. Finally, the fourth level is actual self-regulation, i.e., students adapt their performance to various internal and external conditions. At this level, the primary sources of motivation are high levels of self-efficacy and interest in writing. According to Zimmerman and Kitsantas (1999), a major aspect of self-regulation is the ability to shift from processes goals to outcome goals, that is, from the steps through which a skill is achieved at a proficiency level to the target a writer wants to achieve. In two empirical studies, the authors have supported various aspects of the model.

Zimmerman and Kitsantas’s studies demonstrated that teaching students self-regulatory strategies contributes to improving their writing performance, attitude to writing, and self-efficacy. Graham, Harris, and colleagues (e.g., Graham, Harris, & Troia, 2000; Harris & Graham, 1996; Harris, Graham, Mason, & Saddler, 2002) designed a writing program, called Self-Regulated Strategy Development (SRSD), that targeted struggling writers, under the assumption that a self-regulated writer is also one who wants to write. Their research program demonstrated that the SRSD improved problem writers’ performance.
6 Writing as a Meaningful Activity: The Socio-Constructivist Approach

Although motivational aspects are not central to the social constructivist approach to literacy and literacy learning, it represents a resource for conceptualization of motivation to write, as some of its constructs are salient for how to improve the teaching and learning of motivated writing in the classroom. In a socio-constructivist view, writing is a process of construction of meaning (e.g., Gambrell, Morrow, Neuman, & Pressley, 1999; Hiebert, 1992; Kostouli, 2005; Nelson & Calfee, 1998). Studies on the teaching of writing conducted within this approach over the past two decades have emphasized that two main instructional conditions should be respected in order to help students construe writing as a meaningful activity, and make them feel motivated to write. The first condition regards overcoming or limiting the traditional isolation of academic writing, and linking it closely to other classroom activities. By participating in classroom activities, a student learns the functions of reading, writing, and the other literate practices, and is able to construe what it means to be literate. Thus, writing is portrayed as a multi-disciplinary activity. Although, occasions to write in school tend to be related to the teaching of language skills, writing can be used for many objectives and in various subjects, such as science, social studies, and mathematics; that is, across the curriculum (Petraglia, 1995). Stimulating occasions for engaging in writing and a positive teacher attitude are powerful means for helping a student develop a sense of competence and control as a writer, as well as a sense of the self as a literate person, who is a member engaged in the social practices of the community of discourse of the classroom (e.g., Benton, 1997; Langer, 1986; Langer & Applebee, 1987; Mason & Boscolo, 2000; Rosaen, 1989). The socio-constructivist concept of genre, as a typified response to situations which are construed socio-culturally as recurrent, in contrast to the idea of text types as fixed and “general” models for writing instruction, contributes to limiting the isolation of academic writing (Bakhtin, 1986; Berkenkotter & Huckin, 1993; Chapman, 1995; Freedman, 1995; Freedman & Medway, 1994; Dias, Freedman, Medway, & Paré, 1999). More specifically, according to socio-constructivist view of genre, there are as many text types as there are recurring situations, in and out of school, whenever writing is required to express, elaborate, and communicate feelings and ideas, information and events, rules and instructions; in other words, when it makes sense to write (Bromley, 1999; Burnett & Kastman, 1997; Gambrell & Morrow, 1996; Hiebert, 1994).

The second condition regards the social nature of writing. In addition to experiencing writing as an authentic activity (Bruning & Horn, 2000), the occasions in which writing is a social activity, and students are to different degrees involved in collaborating to the writing of a text can have a motivational relevance for students, also increased by the use of computer technology in the classroom. Research into the social nature of writing shows affective as well as cognitive advantages associated with collaboration in a community of learners and writers (see Nolen, this volume). Classroom collaboration is one of the best conditions for creating a community of discourse practices through which students can discover their identities as learners (e.g., Boscolo & Ascorti, 2004; Duiute, 1989; De Bernardi & Antolini, this volume; Flower, Schriver, Carey, Haas, & Hayes, 1989; Hidi et al., 2002; Higgins, Flower, & Petraglia, 1992; McLane, 1990; Morrow & Sharkey, 1993; Oldfather & Dahl, 1994; Spivey, 1997).
7 A Concluding Comment

In selecting the various chapters of this volume, our aim was to provide a fairly representative sample of current research on motivation and writing. The variety of contributions focusing on different motivational aspects related to academic writing and providing different perspectives is, in our opinion, a major merit of this volume. However, the selected chapters also make two limitations of current research emerge. The first limitation is the lack of integration of motivational constructs related to writing. For example, although several studies over the past two and half decades – some of which included in this volume – have shown a close connection between interest and self-efficacy on the one hand, and self-efficacy and self-regulation, on the other, a theoretical integration of these constructs has not been developed. In this perspective, Lipstein and Renninger’s chapter is a valuable starting point.

A second limitation, related to the first, seems to be due to the origins of studies on motivation and writing. As we mentioned in the first part of this chapter, studies on the topic were conducted mainly from the motivational rather than from writing research perspective. When, in the late 1980s, interest researchers, on the one hand, and social cognitive researchers, on the other, applied their constructs to writing, the cognitive complexity of the activity appeared to be a promising field for motivational analysis. From those early studies onwards, emphasis was on the motivational aspects of academic writing. This volume reflects this emphasis. Although, Nelson’s rhetorical analysis of motivation to write and Zimmerman and Kitsantas’s concept of self-regulation can be applied to various types of writing, basically this volume focuses on elaborative writing, that is writing aimed at expressing ideas and thoughts elaborated by students from reading and listening in academic settings. We are aware that writing is not only academic elaboration of previous knowledge, as Iran-Nejad and co-authors argue in their chapter. One may disagree on the quite sharp distinction between a “determinate” and “indeterminate” zone highlighted in their chapter; after all, whereas elaborative writing is not necessarily creative, no creative writing can be produced without knowledge elaboration. Admittedly, a few of the “multiple meanings” of writing, such as those not related to academic contexts (e.g., literary and personal writing) are left out of this volume. Hopefully, future research will relate these types of writing to the motivational constructs that have proved to be so fruitful when applied to academic writing.

8 Outline of the Volume

The volume has four general sections. The first group of chapters, including the contributions of Nelson, Lipstein and Renninger, Zimmerman and Kitsantas, and Iran-Nejad, Watts, Venugopolan and Xu, provides theoretical analyses of motivation to write and/or reviews of related literature. The second group report empirical works aimed at clarifying various aspects of the relationship between motivation and writing. The authors included in this group are Boscolo, Del Favero and Borghetto, Cumming, Kim and Eouanzoui, Pajares, Valiante and Cheong. The chapters included in the third section by Berninger and Hidi, De Bernardi and Antolini, Hidi, Ainley, Berndorff and Del Favero, and Raedts, Rijlaarsdam, van Waes and Daems, present interventions studies aimed at improving motivation and/or writing performance. The fourth section includes the chapter by Nolen and
Oldfather and Hynd, reporting longitudinal studies on the development of writing motivation. However, our categorization of the chapters should not be considered fixed, as some of the chapters could be included in more than one of the above categories.

In her chapter, Nelson analyzes motivation to write from a rhetorical perspective, not focusing exclusively on academic writing. The origin of the word “motivation” is the Latin verb *movere*, that means to move. According to the author, there are two main meanings of motivation in writing related to movement: the writer’s reason, goal or motive to write, and the effect or movement his or her writing produces on a reader. The movement metaphor is closely related to motivation to write, of which Nelson analyzes some aspects such as fluency in writing, *hypergraphia*, blocks, and closure. In her view, writing is not only a dynamic process but also an interaction, in which a writer is motivated to produce a text as well as to use it as a communicative tool.

Iran-Nejad, Watts, Venugopalan, and Xu analyze writing-to-learn as a tool for critical thinking in the light of the determinate/indeterminate zone of practice dimension. According to the authors, this distinction is particularly appropriate to research in school learning, including writing, which has been traditionally conducted with analytic methods aimed at guaranteeing scientific rigor. The determinate zone of practice characterizes writing as a mind-regulated elaboration of knowledge, whereas the indeterminate zone is brain-regulated and characterized by complexity, flexibility, and professional artistry. Iran-Nejad and collaborators argue that a new type of understanding for researchers, educators and students is required, in which complexity is not unduly simplified. Regarding motivation, students may have an approach or alternatively, an avoidance attitude to the indeterminate zone of practice. Students in the determinate zone view writing as the translation of existing knowledge into definite prose, and assume an avoidance orientation in front of the complexity of experience, whereas those in the indeterminate zone use writing in a divergent and creative way, being more concerned with taking multiple perspectives (e.g., creating metaphors) than with reducing writing to the reproduction of knowledge. An interesting and novel aspect of this chapter is the idea that writing-to-learn has different levels of cognitive and motivational complexity, according to the zone in which a writing experience or task is located.

The Zimmerman and Kitsantas’s chapter analyzes self-regulation of writing as a motivational construct that influences writers activities, and the quantity and quality of output. Self-regulation is defined as self-initiated thoughts, feelings and actions that writers use to produce texts and to improve their writing. The authors emphasize the importance of self-motivational beliefs, such as self-efficacy, and the role of self-regulatory strategies in motivation to write. In addition, they present a social cognitive cyclical model that describes key self-regulatory processes not restricted to academic writing. The model is applied to a particular example of writing instruction in the classroom that deals with teaching to students the use of a sentence revision strategy through social modeling experiences.

The chapter by Boscolo, Del Favero, and Borghetto presents a study conducted with high school students, aimed at demonstrating the positive effect of writing from multiple texts on a topic on their interest in the texts and in the topic. Whereas in several studies on interest and writing interest has been considered as the variable influencing writing (e.g., Hidi & McLaren, 1990, 1991), in this study the opposite relation was hypothesized, that is, elaborative writing was viewed as potentially facilitating the development of interest in a topic.
The study also addresses issues relevant to text processing and writing, for example, the influence of students’ general interest in writing and self-perception of writing competence on specific aspects of topic and text-based interest. Whereas the hypothesis of a positive effect of writing on topic interest was not confirmed, and interest turned out to be lessened rather than augmented by writing, significant relationships were found between interest and self-perception of writing competence, on the one hand, and various specific motivational and cognitive measures involved in writing from multiple texts, on the other.

Cumming, Kim, and Eouanzoui examine the motivation to write, perceptions of the writing abilities and self-regulation of the composing processes of a unique population of adult ESL (English as second language) learners who plan to enter university programs in Canada. They report three studies that examine the goals and motivation of ESL students for writing improvement and their self-efficacy and ability to self-regulate their composing processes. Their results indicate that ESL students’ motivation to write can be best explained by both extrinsic and intrinsic factors, and their self-efficacy regarding the composing processes are generally comparable to American students beginning university studies.

In Lipstein and Renninger’ chapter, the method of portraiture is used to analyze 12–15-year-old students’ attitudes to writing and relate them to the four-phase model of interest elaborated by Hidi and Renninger (2006). Portraiture is a method of presenting case descriptions that reflect the response of a similar group. It does not present individual responses, but the response of a group of individuals sharing certain characteristics: in this case, a certain degree of interest for writing. Interest in writing is conceptualized as a pattern of cognitive and motivational variables: interest for writing, conceptual competence about writing, effort to write, self-efficacy, goal-setting in writing, and preferred writing activities. The authors identify and describe four “portraits”, that is four degrees of interest for writing corresponding to the phases of the interest model – low interest, maintained situational interest, emerging individual interest, and well-developed individual interest. A valid aspect of the portraiture method is that the different aspects related to writing – competence as well as motivation – are highlighted in their relationships at different levels of interest development.

The aim of Pajares, Cheong, and Valiante’s chapter is to provide a developmental perspective on students’ writing self-efficacy beliefs based on data obtained from cohorts of students ranging from age 9 to 17. The authors are concerned with how students’ self-efficacy beliefs change with school grade, and how they are related to students’ gender orientation. The various motivational variables examined in the study included achievement goal orientation, self-regulation, interest in writing, and writing apprehension. The results show that these variables are positively related to self-efficacy, and also to writing competence. However, the relationship between competence and self-efficacy was weaker for high school than for elementary school students. Regarding gender, girls reported higher self-efficacy in writing than boys, but these differences were made nonsignificant when controlling students’ gender orientation beliefs.

Berninger and Hidi’s chapter describes a specialized instructional intervention – Mark Twain Writers’ Workshop – aimed at improving the spelling and composition abilities of 4th, 5th, and 6th graders with learning disabilities. The study is one of the very few dealing with the motivational aspects of writing in this population. The authors reject the common belief of many teachers that a unidirectional relationship exists between motivation...
and learning; that is, that motivation causes learning. Instead, they argue that motivation can be a consequence or result of learning. Regarding writing, children with LD can also be taught to learn and master the basic skills needed for literacy learning, and to change their negative attitude learned through repeated failure experiences.

De Bernardi and Antolini’s chapter presents an intervention conducted with 120 8th-graders, aiming at improving students’ performance in and attitude to argumentative writing. Argumentative writing is a complex and rather difficult genre that students often deal with in school with scarce or no personal involvement. In the intervention, students’ interest for argumentative writing was stimulated by making them write on topics related to their own experience, by creating collaborative writing contexts, and enabling the use of various sources (traditional, such as volumes and newspapers, and the Internet) to seek information. The intervention proved to be fruitful for the improvement of argumentative writing, as well as for students’ involvement and self-efficacy. Interestingly, no significant difference emerged due to the use of traditional documents vs. the Internet.

Hidi, Ainley, Berndorff, and Del Favero examine how interest can facilitate science-related expository writing, and how interest and self-efficacy measures are associated. An additional objective of the study was to investigate the effects of resource materials provided to students electronically (put either on the web or written by the researchers) vs. resource materials presented in paper. Students had to write on two topics four months apart. In each case the resource materials were presented prior to the writing task. Several measures relating interest and self-efficacy were collected. Unexpectedly, in general, computer presentation of the learning resource materials did not positively affect students’ motivation and writing performance; in fact, in the case of one of the two topics the hard copy condition was associated with the highest holistic ratings of writing. Statistically significant positive relations that were found between various interest and self-efficacy measures support the hypothesis of a reciprocal influence between the development of these variables.

Self-efficacy is also investigated in the chapter by Raedts, Rijlaarsdam, van Waes, and Daems, aimed at demonstrating that observational learning may be a valuable tool in academic writing instruction. In their intervention study, the authors set up an experiment to test whether first-year university students’ self-efficacy for a complex writing task – a literature review – improved through observation of peers performing under think-aloud conditions. The results indicated that the students in the observational condition were not only more able to predict their scores in the writing performance, but also wrote better reviews than students of the control group. Moreover, although the intervention did not influence students’ knowledge about relevant text features, a significant effect was found for their knowledge of writing strategies.

Nolen’s chapter outlines the role of the classroom as a literate community and its effect in the development of students’ writing interest. By “literate community” the author means a classroom in which literacy activities establish and maintain the relatedness of individuals; or, in other words, where reading and writing provide opportunities to experience writing as a tool for self-expression and communication, whereas in traditional classrooms writing is a basically individual activity. From a socio-constructivist perspective, Nolen emphasize the importance of the social interaction in the classroom for the development of interest in writing and literacy in general.
Also Oldfather and Hynd’s chapter assumes a socio-constructivist perspective. On the basis of the results of longitudinal and cross-cultural studies in writing instruction conducted in United States and in Georgia (Russia), they emphasized that motivation to write really develops when students can write on personal and emancipatory experiences: that is, the expression of ideas, constructions and beliefs. They analyze the aspects of the classroom culture, which may hinder motivation to write, such as emphasis on teacher’s evaluation and focus on correct form. Epistemological empowerment is defined as “a sense of intellectual agency and ability to know that emerges from a strong sense of the integrity of one’s process of constructing meaning”.
SECTION I:

THEORETICAL ANALYSES OF MOTIVATION TO WRITE
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Chapter 2

Why Write? A Consideration of Rhetorical Purpose

Nancy Nelson

This chapter considers two major aspects of motivation for writing that are associated with movement. First, writers are moved to write. They discern – or construe – exigencies to write in rhetorical situations, including situations in school settings. Those immediate situations are embedded within sociocultural and historical contexts, and the acts of writing that result fit within larger discourse practices. The movement metaphor undergirds much theory, research, and instruction in writing, since writing is often conceptualized in terms of fluency and is set in opposition to stops or stalls, as in writer’s block. Second, writers attempt to move their audience. They try to achieve their desired effects on their readers – to accomplish their purposes for writing, such as informing, persuading, expressing, or entertaining. To move their audiences, writers use appeals, including those that the classical rhetoricians labeled ethos, pathos, or logos. Although, the two aspects of motivation – being moved and attempting to move others – are treated separately throughout much of the chapter, they are brought together in the end, since writers are moved to move readers.

Sing in me, Muse, and through me tell the story.
– Homer, Odyssey

Writers are moved to write, and they attempt through their writing to move their audiences. These two facets of writing – being moved to write and trying to move others – are key components of motivation, and they have also been concerns of rhetoric from classical times to the present. The word motivation derives from the Latin movere, “to move,” an etymology that undergirds this chapter’s focus on movement in discussing motivation for writing. To a great extent, movement – physical activity as well as mental and social activity – defines the active process of writing. Composing is characterized by its starts, its flow, its recursions. It is also characterized at times by lack of movement resulting from “blocks” or stalls. Writing does not always flow easily; instead, it progresses irregularly.
This irregular tempo has been studied by writing researchers using various approaches, such as analyses of pauses (e.g., Matsuhashi, 1981), think-aloud protocols (e.g., Hayes & Flower, 1980), interviews (e.g., Mathison, 1996), questionnaires (e.g., Torrance, Thomas, & Robinson, 2000), text analyses (e.g., Bridwell, 1980), and observations (e.g., Graves, 1975). As every writer knows, writing is often a struggle to get the creative “juices” started, the ideas developed, and the words right.

1 Writers Moved to Write

What moves a writer to write? In this initial section of the chapter, I address this question by considering various factors – contextual, social, and cognitive – associated with movement to write and with movement in writing. To begin, let us imagine some writers and their situations: An advertising agent has to prepare a proposal to submit to a client for a new advertising campaign. A new member of the psychology faculty at a university begins an article based on her Ph.D. research to submit to a research journal. Students in an elementary language arts class have been asked by their teacher to write an account of a memorable experience in their lives. And a young child takes up colored pencils to write a story for his younger brother, who is ill that day. These people are all experiencing rhetorical situations. The term rhetorical situation, which plays a major role in composition studies today, refers to the contexts in which writers are moved – are motivated – to write.

2 Motivating Situations

Lloyd Bitzer (1968) described the rhetorical situation as a “natural context of persons, events, objects, relations, and an exigence which strongly invites utterance” (p. 5). He explained that “rhetorical discourse comes into existence as a response to a situation, in the same sense that an answer comes into existence in response to a question, or a solution in response to a problem” and that “the situation controls the response in the same sense that the question controls the answer and the problem controls the solution” (p. 5).

Five years after Bitzer’s publication, Vatz (1973) offered an important modification of this conception by pointing out that it is not the situations themselves that are rhetorical but it is the people interpreting them who make them rhetorical. Whether a situation is rhetorical or not is a matter of perception or even construction. This is a critical point, since individuals would vary in the extent to which they construe particular situations as requiring a response. Not every new professor would see a need to initiate publication early in the first academic year. Not every child would see having an ill sibling as a rhetorical situation inviting him or her to write. A critical component of the notion of rhetorical situation is exigence, or exigency, the term I will use – the urgency to write. In rhetorical contexts, writers perceive gaps needing to be filled (answers to be given to questions, solutions to be given to problems, clarifications or corrections to be made, information to be provided, stories to be told). Sometimes, as in the examples above, it is as if the writer created those gaps, problems, or needs themselves. Exigency – or, rather, construed exigency – leads to writing.
More recently, there has been a broadening of the notion of rhetorical situation to encompass the larger sociocultural context as well as the more immediate context. Invitations to write fit within traditions of social practices, and writing produced in response to those situations does too. For instance, the professor writing the scholarly paper might not be in an immediate situation that all others would see as urgently requiring the paper, but she would be working within a longstanding Western tradition requiring academics to publish if they are to have successful university careers. The child writing the story would not get an explicit invitation to do so, but, would instead, construe a need to write because of a social practice and the cultural tradition associated with his culture and his family: doing something for a loved one who is ill. The other writers too – advertising agent, elementary school children – would also be writing within social traditions. Their motives to write would arise within the social practices in which they engage (cf. Miller, 1984).

The traditions associated with all four situations not only invite the discourse, but also constrain the form it takes. Traditions are tied to discourse communities, which might be academic, disciplinary or professional, familial, or educational groups. Community members experience recurring kinds of situations that members “know” to invite discourse and to invite particular kinds of responses.

Today, due largely to the theoretical contributions of Bakhtin (1981, 1986), there is increased emphasis on sociocultural and historical context in literacy studies. This Russian theorist, who pointed to a large and rather abstract rhetorical situation, made it clear that a writer enters, and participates in, a situation that is historical and ongoing; is oriented to past, present, and future; and is tied to traditions. Like Bitzer, Bakhtin used a dialogue analogy, but he expanded it beyond a single invitation and response to other intertextual relations. As he said in the 1981 volume, a writer produces a text in response to a “background” of other texts, such as “contradictory opinions, points of view and value judgments” (p. 281). These texts are not only prior texts but also possible future texts that might be produced in response to this one. This is a very important point for the notion of dialogism: that the text someone writes is influenced not only by what came before but also by the kind of reception that that writer anticipates from an audience. The writing is “determined by that which has not yet been said” (p. 280). Bakhtin employed a chain metaphor in the 1986 volume, saying that “an utterance is a link in a very complexly organized chain of other utterances” (p. 69), and “the utterance is related not only to preceding, but also to subsequent links in the chain” (p. 94).

3 School Contexts for Writing

The notion of rhetorical situation is certainly relevant to school writing, where teachers try to provide contexts conducive to writing and create exigencies for writing. In school as well as out, students experience situations that they see as “strongly inviting utterance.” Yet, as Bakhtin’s theoretical work made so clear, a student’s text is a contribution to an ongoing dialogue. It is a response whose nature is affected not only by the immediate situation but also by a complex background of prior texts and also by the responses it might elicit from a reader or readers.
Much school writing results from assignments, which are sometimes called prompts. Use of the term *prompt* (a device to get someone or something moving), like so much of the lexicon of writing research and writing instruction, relates to movement (which relates to motivation). Prompts for writing specify some or all of the following constraints and possibly others: the topic, purpose, genre, audience, format, length, and evaluation criteria. When constraints are not specified, writers tend to infer them on the basis of prior experience. For instance, if the format is not specified but all papers so far for that particular teacher have been multi-paragraph themes, students would likely infer that these papers should also fit that form. If evaluative criteria are not specified, students would probably assume from prior responses that the teacher will use the same criteria that have been used before. Thus, another important part of the context is previous experiences in receiving responses to writing: that teacher’s responses and also other teachers’ responses. The papers can be seen as students’ responses to their interpretations of rhetorical situations (or as answers to questions or solutions to problems), and they “read into” the situation more than is actually said. Jennie Nelson’s (1990) study of writing tasks revealed some of the many factors influencing a student’s interpretation of an assignment: good grades on previous papers produced through short-cut strategies, instructors’ comments and marks on previous papers, further clarifications and specifications provided by the instructor, and conversations with other students. One instructor participating in the study had developed an assignment that he saw as “challenging” (requiring students to “boil down” a great deal of information into a concise argument), but the task was viewed quite differently by his students. One student who received full credit on his paper commented that “this was an easy assignment” (p. 362) and explained that all it required was going through previous coursework and using what the instructor had indicated was important. Completing the final project was simply a matter of splicing together the previously highlighted points.

Certainly there are general traditions and practices associated with school writing that contribute to the shaping of immediate rhetorical situations (cf. Boscolo, 1997; Nelson & Calfee, 1998). A typical pattern of social interaction in schools is as follows: the teacher initiates by giving an assignment, the student writes a paper in response, and teacher provides a response to that, usually in the form of evaluation. This familiar practice is related to the more general initiation–response–evaluation (IRE) pattern of schooling discussed by Mehan (1979), who focused his attention on oral discourse. For oral recitations, a teacher would initiate an exchange with a question, a student would respond, and the teacher would evaluate the response (saying something like “That’s right” or, for a negative evaluation, moving on to another student).

A much-discussed shift from a product emphasis to a process emphasis in writing instruction during the past three decades has been driven, to a great extent, by the desire to make writing more motivating for students. Classroom setting and classroom practices have been modified by teachers employing a set of instructional practices that are collectively called *writing workshop*. In the workshops, attention goes to cognitive processes, such as prewriting strategies and revising, and also to social processes, such as peer response, teacher–student conferences, and publication, often with positive results (cf. Dahl & Farnan, 1998).
4 Movement: Fluency, Stalls, Blocks, and Closures

Another important aspect of writing – fluency – is also related to the movement metaphor. Fluency refers to easy movement in writing or the absence of struggle, and much attention has been given to developing it (cf. van Gelderen & Oostdam, 2002). Among educators, there is even a term for writing when most of the constraints are removed: freewriting. Although, the term is used broadly today for any writing that is relatively free of constraints, Elbow (1975), who is credited with the original notion, had the following procedure in mind:

The idea is simply to write for ten minutes (later on, perhaps 15 or 20). Don’t stop for anything. Go quickly without rushing. Never stop to look back, to cross something out, to wonder how to spell something, to wonder what word or thought to use, or to think about what you are doing. If you can’t think of a word or spelling, just use a squiggle or else write, “I can’t think of it.” Just put something down …. The only requirement is that you never stop. (p. 3)

Freewriting, which has become a conventional part of many teachers’ instructional practices, stands in dramatic contrast to the writing associated with highly explicit assignments. In freewriting, the only criterion for success – if a criterion is made explicit – is amount of language generated; the emphasis is on sheer quantity of words.

With the theoretical and empirical work of Csikszentmihalyi (1990), the concept of flow has gained much attention with respect to writing as well as various other kinds of activities. This psychologist has described flow as total engagement in an activity – complete absorption in a task, which might be physical or mental. A person having a flow experience has a sense of being one with the task; he or she performs with clarity and competence and does not even notice the passing of time. Csikszentmihalyi (1997) used interviews to study motivation in 91 exceptional people known for their creative work in their particular fields – science, social science, art, music, business, and politics as well as writing – and found that these people remained motivated not because of the accomplishments but because of the quality of the experience when they were engaged in the activity. Many of them described a pleasurable and “almost automatic, effortless, yet highly focused state of consciousness” (p. 110), and they tended to use similar descriptions regardless of the area of work for which they were known.

Whereas Csikszentmihalyi focused mainly on adults, including professional writers, Abbott (2000) found that writers as young as fifth-grade have their own ways of describing flow experience. She studied two young writers who had, for at least a year, spent some of their free time writing at least once a week. One used the phrase “blinking out” to describe writing experiences that he had had:

I’m just blinking out from everything …. I’m basically talking to me and myself. Me, myself, and I, we’re having or own little conversation …. Like I’ll be writing and then I’ll look up and you know, just kind of getting off my train of thought, by blanking out, and it might be 30 minutes later. (p. 75)
The other provided this description:

It’s like a flashlight in my brain. And I just write it down …. Dragging your hand along …. I couldn’t stop writing …. It was weird. Because then I get done. Well, actually, I didn’t have to put my pencil down, I stopped myself actually. Yeah, I did. I stopped myself. Because I had written two pages or something like that …. If they said, “You have to write another story,” I would have written five more. I had so many ideas. (p. 85)

Clearly, for many teachers, a major goal in literacy education is for students to experience fluency in their process and to derive pleasure simply from the creative experience itself. Is it possible to have too much motivation to write and too much fluency? For writing educators, seeking to motivate reluctant students to do more writing, it might seem strange even to think about problems resulting from too much drive to write rather than too little. Excessive motivation to write is certainly not the issue of this volume or of research into interventions (cf., Hidi, Berndorff, & Ainley, 2002). Yet there is such a condition known as hypergraphia, which is rare. In a recent book titled *The Midnight Disease*, Flaherty (2004) provided a summary of the physiological research on the condition and also a fascinating account of her own experience with it. For people having the condition, not much of an “invitation” is required for the writing to begin; instead, the motivation appears to be biological, related to changes in temporal lobes and controlled by the limbic system. It should be noted here that biological factors are not relevant only to this hyper-motivated condition; surely, all motivation has a biological component.

The previous discussion has focused on writers being moved to write and following through on that motivation. Now my attention turns to writers, who, when invited to write, choose not to write at that time or who cannot write at that time. The choice not to write is what we now call procrastination. In English, the term meaning “putting off till tomorrow,” from *pro* (“forward”) and *crastinus* (“tomorrow”), is used for the choice not to move into the writing or not to move forward in the writing; procrastinating writers knowingly put off the writing that the rhetorical situation has invited. Ferrar, Johnson, and McCown (1995), who have traced the history of the concept, note that use of the term in English dates back to the mid-1500s but that it was not until the mid-1700s that the term acquired a pejorative meaning. It used to be simply descriptive without the negative value it has today; a person was simply putting something off till another day, and the decision to do so might, in many cases, be a wise thing to do. Now procrastination has all sorts of negative associations.

Procrastination can be related to writing apprehension – a factor studied rather extensively in the 1970s and 1980s by John Daly and his colleagues (Daly & Miller, 1975a; Daly & Hailey, 1984; Faigley, Daly, & Witte, 1981). Writing apprehension leads to task avoidance, particularly when the writing is to be evaluated. There seem to be two dimensions to the apprehension: an enduring kind of apprehension toward writing and an apprehension that is transitory and is affected by the particular writing environment and assignment (Daly & Hailey, 1984).

Apprehensive writers might avoid writing or be hesitant about writing, but some writers experience block. They cannot write. Leader (1995), who has researched the history of the term *writer's block*, pointed out that the phenomenon has been little researched and “its air
of psychological substance and authority is largely an illusion” (p. 1). Dating back to the 1950s, the term has a short history of use, although the experience of being stymied in writing had been discussed in various times and places. Today blocking has become a major theme in how-to books for prospective authors, who need to know how to overcome it. Professional authors discuss it and the angst it brings in their autobiographies or biographies, or even in poems, such as the following titled “Block” that was written by Linda Parton (1991) and begins this way.

I place one word slowly
in front of the other,
like learning to walk again
after an illness.

For students, who can suffer dire consequences in their classes from writer’s block, there is some research on blocking that shows cognitive as well as affective factors (cf. Tingle, 1998). Major contributions to the research literature on student blocking were made in the 1980s by Mike Rose (1980, 1984), who took a cognitive approach to studying the problem and defined writer’s block as a writer’s inability to initiate or continue writing when there are not reasons related to lack of skill or commitment. He explained that “blocking is not simply measured by the passage of time (for writers often spend productive time toying with ideas without putting pen to paper) but by the passage of time with limited involvement in the writing tasks” (Rose, 1984, p. 3). The major findings of Rose’s two studies in 1980 and 1984 are both summed up in the title of the 1980 article, “Rigid Rules, Inflexible Plans, and the Stifling of Language.” Student writers who fit the profile of “blocker” tended to have and to follow mental rules that were absolutist and were often based on inaccurate assumptions about writing, such as “a sentence has to be correct the first time” or “you’re not supposed to use passive voice.” They also lacked effective strategies for planning. This might result in an overly complex outline to which a writer felt he or she had to adhere. In contrast, the non-blockers followed rules that tended to be in the form of “if this … then that,” for instance, “if you’re stuck, write a few words.” The planning strategies of the non-blockers were more flexible; non-blockers knew they could change their plans if those plans were not working.

In closing this section, I mention one additional concept relevant to this issue of moving or not moving forward in writing. This one is actual stopping – concluding work on a particular piece. For mature writers, it is often difficult to forgo further revision and consider a version finished, since it seems that there are always more improvements that might be made. Each reading of a piece reveals something that might be changed, and one change can lead to another. For stopping under these circumstances, there is the strategy labeled satisficing. Identified and named by Newell and Simon (1972) in their research on problem-solving, satisficing is a strategy that can, on occasion, be useful for, or possibly even therapeutic to, writers who are ready for writing to end. They decide that what they have is all right, even though it is not the best; in order to satisfy some constraint, such as meeting a deadline, they sacrifice quality. Sometimes it makes sense to satisfy – stop working on a piece; decide it is okay as is, even though it is not the maximal response for the rhetorical situation; submit it; and move on to other things. Other times, when the response must be of higher quality, this is not a good decision. This strategy and its label have been adopted
by composition scholars (e.g., Flower & Hayes, 1980) and is now a part of the literature on writing strategies.

Thus far, I have considered contexts for writing, focusing on rhetorical aspects of those situations that move writers to write, and have also looked at the nature of the movement itself: fluency, stalling and blocking, and stopping. Now attention goes to movement of readers – the other aspect of motivation that is the focus of this chapter.

5 Writers Attempting to Move Their Audiences

As stated earlier, writers write for reasons, and those reasons are to have some particular effects on their audiences. This is the case even if the audience is the self. Writers are successful if they have the desired effects – that is to say, if they affect their audience in the intended ways. From antiquity to present times, various schemes for categorizing rhetorical purposes for discourse have been described and debated. Although the word motive is sometimes used, there are other, almost interchangeable, terms used to communicate similar notions. One of them is purpose, the term used in this chapter; others are aim, intent, end, and function. In this section, I review these various classificatory schemes and discuss factors associated with writers’ attempting to move their audience.

6 Intended Effects on Audience: Grand Schemes

Through the years, there have been numerous attempts to identify the major purposes of discourse. The classical rhetoric of Aristotle (trans. 1926) included the following: to present “truth” (scientific), to present probable “truth” (dialectical), to present seemingly probable “truth” (rhetorical), and to present internally probable “truth” (poetic); and Cicero’s (trans. 1942a, 1942b) list comprised to teach, to persuade, and to delight. The ends identified by George Campbell (1846/1776), the Scottish rhetorician, were also directed to audiences: “to enlighten the understanding, to please the imagination, to move the passions, and to influence the will” (p. 1). Campbell, who put much emphasis on audience analysis, used the psychology of his day, associationism, as he speculated about the effects of different discourses and discourse features on readers. Missing from these and other influential schemes was discourse focused on the self – language which might be called expressive.

Predominant in much scholarship on writing has been the theoretical synthesis created by James Kinneavy (1980), who argued that there are four general aims of discourse: persuasive, referential, literary, and expressive. In his typology, he added the expressive category, which was missing from other lists. Within the persuasive aim, he included Aristotle’s rhetorical category, Cicero’s “to persuade,” and two categories of Campbell’s, “to move the passions” and “to influence the will”; and he included in his “literary” aim what Aristotle had included in his poetic category, what Cicero had included in “to delight,” and what Campbell had in “to please the imagination.” Within his referential category, he included Aristotle’s scientific and dialectical discourse, Cicero’s “to teach,” and Campbell’s ‘to enlighten the understanding. Kinneavy made distinctions among various kinds of referential discourse (directed to components of “reality”) and used the label
informative in a restricted way. Today, however, many people use the term informative, instead of referential, to label this general aim of discourse.

Thus one can say, in discussing general purposes for writing, that writers write to inform, to persuade, or to entertain their readers and that they also write to express or discover something about themselves (often with the self as reader) (Nelson & Kinneavy, 2003). As the triangle in Figure 1 below illustrates, the emphasis in expressive discourse is on the writer, the emphasis in persuasive discourse is on the reader, the emphasis in informative writing is on the subject matter, and the emphasis in literary writing is on the features of the text itself. Writers often seem to have one of these general purposes as the dominant one. For our hypothetical writers, the following would seem to be dominant: the advertising agent writing the proposal, to persuade; the children writing their personal narratives, to express; the professor writing the research article, to inform; and the boy writing the story for his brother, to entertain. However, writers typically write to accomplish more than one purpose. For instance, the university professor would want to present the findings of her research (informative) but would also probably seek to convince others of perspective being taken (persuasive). These, of course, are very general purposes for discourse, and writers typically have purposes within a particular category that can be very specific. Purposes blend and change over the course of composing, and writers’ actual purposes cannot be discerned with any absolute certainty by analyzing the writing.

7 Purpose, Genre, and School Writing

Recurring purposes lead to recurring discourse and thus to genres. This link was made by Bitzer (1968), who spoke of “comparable situations” leading to “comparable responses”
It was affirmed by Miller (1984), who drew attention to the socially constructed nature of genre.

Genres arise in situations with similar structures and elements and because rhetors respond in similar ways, having learned from precedent what is appropriate and what effects their actions are likely to have on people. (p. 152).

It was also argued by Swales (1990), who said that “a genre consists of a class of communicative events, the members of which share some set of communicative purposes” (p. 58), and by Bakhtin (1981), who said that “each sphere in which language is used develops its own relatively stable types of utterances” (p. 60). Discourse communities are characterized by their discursive practices – ways of “getting things done” – and thus their genres. Consider the purposeful practices of academic communities, such as critiquing, proposing, and reporting, which translate to genres of critique, proposal, and report.

School curricula are designed to give students experience in writing various forms of discourse for different purposes: informative, persuasive, expressive, and literary. However, in the context of schooling, other purposes may, at times, be overshadowed by one purpose: for students to display what they can do and what they know – an aim that might be considered a subset of persuasion. Students often write to display skills and knowledge to one particular reader, their teacher, who is in the role of judge. Britton, Burgess, Martin, McLeod, and Rosen’s (1975) classic study of students’ writing in Great Britain drew attention to this aspect of school writing. Heath (1982) has linked the display function of essay writing to practices of display in oral discourse. When asking questions of students in a recitation session, teachers typically already know the answers. The purpose of the questions is not for the teachers to learn the answers but is, instead, for students to display to the teacher that they do indeed know what they are supposed to know. Many times, in writing, the point is not really communicating new insights to the teacher but is instead showing that one can produce the piece.

Forms of school discourse fit into traditions and are influenced by standardizing influences (cf., Sheehy, 2003). A familiar standard form is the five-paragraph theme, which has held sway for decades in American schools and seems disconnected from discourse outside of school. College and university instructors often try to “unteach” this school genre when students reach them. Other common school genres include book reports, laboratory reports, and summaries of textbook material. In addition there is the research paper, for which instruction focuses almost entirely on note-card procedures and on bibliographic correctness, and the journal, which has become increasingly like other forms of assigned school discourse and more dissimilar to journals outside of school.

At the present time, there is much emphasis in American schools on the kinds of discourse emphasized in high-stakes tests administered by state agencies – tests that in some states can decide promotion to another grade or graduation from high school. As Hillocks (2002) has shown in his recent study, there is increasing standardization in English (L1) classes of these specific types of writing assignments, which purport to present various purposes for writing and to provide various audiences to whom students can write. State agencies provide sample assignments similar to those that appear on their tests, and teachers then use those as models for their own assignments. Some teachers even divide up
instructional time: providing test-preparation for writing as something that is quite
different from regular writing instruction. Even though there is variation in assigned pur-
pose and audience, most of these writing assignments can be accomplished within the
familiar frame of the five-paragraph theme. For instance, a “standardized” argument
would likely have the following: an introductory paragraph that presents the issue, takes
a stand on it, and previews three kinds of support that will be presented; three body para-
graphs that each focus on one of the three supports; and a conclusion that summarizes
what has been argued. A “standardized” exposition would have an introduction that states
the topic and thesis and previews the three points that will be made about it; three body
paragraphs, each focusing on one of the points; and a conclusion that summarizes what
has been explained.

Whereas in the United States the label essay is used for most any type of writing except
a story or a poem, there are different understandings of what an essay is in other countries.
For instance, in Norway, as Berger (2002) has reported, there are two forms of discourse
that go by the label essay, the formal essay and the causerie, which is a less formal, more
personal piece. There is also a form called “the article,” which seems to be a school form,
much as the five-paragraph theme is a school form in the United States.

In “inviting” discourse, those issuing the invitation do not always receive the texts that
they expect because writers’ purposes do not always align with intended purposes of others.
This can certainly be the case for school writing. Student writers can create their own pur-
poses and construe their own audiences, which may or may not coincide with the teacher’s
intended purposes and audiences. In one study that James King and I conducted (Spivey &
King, 1989; discussed in Spivey, 19971), middle school students were given an assignment
to write an informative piece about the rodeo for teenagers and adults who were new to
Texas and were not familiar with the rodeo. The students had three encyclopedia articles
that they could use as sources. Almost all of the students produced the kind of discourse we
expected: factual reports that began and progressed in the following fashion:

Rodeo means “roundup” in Spanish. A rodeo is when cowboys or cowgirls compete
in riding and/or roping events. Each rodeo has these five standard events: riding,
bareback bronco riding, calf roping, bull riding, and steer wrestling.

Rodeo origins go back to the mid to late nineteenth century. It is said that one of the
earliest known rodeos was Deer Trail, Colorado, in 1869. In 1936 contestants started
to organize. The Rodeo Cowboys Association, later renamed the Professional Rodeo
Cowboys Association, was formed in 1945.

Today the rodeo is big business. In Canada and the United States each year alone
there are more than five hundred rodeos held. Millions of spectators attend rodeos.
Several millions of dollars of prize money are awarded yearly.

However, one student wrote a different sort of piece, which was not at all what we
expected. His paper began this way:

1 Prior to 1998, I wrote under the name Nancy Nelson Spivey.
For people who don’t know anything about rodeos: Some people think they are fun. If you really want to fit into the crowd and not look like a city boy, you will need the followin’ items: a good pair of country style cowboy boots, a nice lookin’ cowboy hat, some Wrangler jeans, a button-down shirt (cowboy patterns), and last of all, a can of Copenhagen (the choice is optional – depends on how much cowboy or cowgirl you want to be).

This student’s writing, advice to young people on how to look “cool” at a rodeo, which differed so much from the writing of the other students, can be explained in terms of stasis, another concept from rhetorical theory that relates to movement. Stasis is the point at which a writer identifies the central question to be addressed in the situation and can then move into the writing. The writer identifies, from what has happened or has been said, the main question to be considered in the text he or she will produce.

Stasis is a starting point, a way of getting into the piece, and it is thus relevant to issues of motivation. For this writer, the way into the piece seemed to be related to audience: seeing them as teenagers who were concerned about fitting in if they went to a rodeo and who wanted guidance. His motivation apparently developed from the question that he asked himself about his audience: What do people [the teenagers] really need to know if they want to fit in? To answer it, he wrote from his own perspective and his background. For other writers, the starting point was more consistent with most school writing: produce a conventional text, in this case, a report that would meet expectations of unknown readers (probably similar to teachers). Even though the audience of “people new to Texas” was specified, that audience specification was included in the assignment mainly to provide a justification for writing the report. The report would not actually be given to such people. Those other students read the assignment as we had intended it – to select material from the sources and synthesize it into one informative report. They produced conventional texts, which varied in certain other ways of interest to us. When we had the students’ writing rated for overall quality, the raters, who were very consistent in their ratings of the other papers, had difficulty with the fitting-in piece. They too considered it anomalous, and individual raters gave it scores that were either very high (because of its “originality”) or very low (because the student did not do “the task”).

The concept of stasis in rhetorical theory, which has been neglected and misunderstood through the years, is relevant to studies of motivation in writing and needs to be explored further. Stasis, a Greek word that comes from the root sta, “to stand,” is, as Dieter (1950) explained, “both an end and a beginning of motion, both a stop and a start” (p. 350). It is not movement, but it follows and precedes movement. There has been motion before it, and there will be motion after it. Today researchers might use the labels task interpretation or problem definition.

8 Connections Between Author and Audience

At the very center of rhetoric is the relation between author and audience. Writers produce their texts to move audiences in some way, and, without audience, there would be no reason to write. The writer’s audience, which may develop and change over the course of composing as purposes develop and change, can be specific or general, real or hypothetical,
individual or collective. Usually the audience is someone other than the self, but sometimes it is the self, as in the keeping of diaries. Rubin (1998) has considered this phenomenon of being both author and audience:

> We value so-called personal writing for the purposes of helping the writer make sense of the world, to discover one’s own point of view, to express or vent one’s feelings. Even in these inner-directed kinds of writing, however, writers establish a distance between self in the here-and-now (that is, author) and self in the potentially-distant-context (that is, audience). Else why bother encoding one’s own sense making, discovery, or venting in the time-binding medium of writing? Why not just think the thought? (p. 62)

Classical rhetoric presented three major kinds of appeals that speakers or writers use in connecting to their audience: logos, ethos, and pathos. Logos is the logical appeal that is associated with the subject matter itself, but ethos and pathos are both associated with human participants in the rhetorical situation. Ethos is an appeal to the credibility of the author himself or herself, and pathos is appeal to some quality of the audience, such as passion, feeling, and concern. These appeals can be positioned at the three points of the rhetorical triangle included in the figure above: logos with subject, ethos with author, and pathos with audience. In addition, there is an appeal accomplished through the style of the text itself; this appeal to textual style can be positioned in the center of the triangle. Writers typically use all, or at least most, of these appeals in writing any text. Although the Greek terms may not always be used today, the appeals are still important in composition instruction. Writers seek to generate and organize logical ideas, to include material that resonates with their readers, and to present a persona that is appropriate for the situation. They also want the style of their text to have the desired effects.

Another important rhetorical concept, Wayne Booth’s (1963) notion of *rhetorical stance*, is relevant to motivation of audiences and is associated with the triangle. Booth argued that the challenge in writing is to get the right kind of balance among author, audience, and subject matter when writing a particular text. For a text to be effective with readers, there should not be an overemphasis on author; else the writer comes across as an egotist. There should not be an overemphasis on audience; else the writer comes across as a salesman or saleswoman. And there should not be an overemphasis on subject matter; else the writer comes across as a pedant. There are no “rules” for how much one should lean toward one point of the triangle or another, since what is best depends on the rhetorical situation itself and the writer must read the situation and the audience and make choices on the basis of those interpretations. The writer is balanced when he or she gives the various elements the emphasis that is appropriate for that particular situation and is out of balance when overemphasizing one element to the detriment of the others.

There has been research into the ways in which writers can lean more in the direction of the audience or in the direction of author – to highlight the human participants in the process and thus make their texts more effective. Some researchers have examined the devices (sometimes called *moves*) by which authors bring readers “into” the text, and others have looked into the devices used by authors to draw attention to themselves. For instance, Hyland (2001), taking the first approach, has shown the following ways in which academic writers seek to activate their readers: questions (real or rhetorical), first-person inclusive
pronouns (including reader with author); ought-to statements and statements like “it is important to”; references to knowledge that author and audience share; and addresses to the reader that are marked off from the rest of the text. Beck, McKeown, and Worthy (1995), Crismore, (1990), Nolen (1995), and Sarig (2001), taking the second approach, have pointed to the following ways in which authors become more visible to their readers: conversational tone, personal pronouns, addresses to the reader, self-revelation, expressions of attitude, and such metadiscourse as hedges, emphases, and evaluation. There has also been attention to the matter of readers’ role in making connections with authors – reading texts to discern authors’ intents and the contexts in which they write. Haas and Flower (1988) have used the term rhetorical reading for this type of reading that attends to author.

In this section, my focus has been on writers’ attempts to move readers. This discussion has included three topics: intended effects on readers; relations among purpose, genre, and school writing; and connections between author and audience.

9 Conclusion

Motive has two meanings: It can refer to something that moves a person to act in a particular way, or it can refer to the goal of the person’s action. On the one hand, we can say that a particular situation provides an invitation to write or, on the other, can say that the person wrote out of a particular motive to affect others. These two meanings have provided organization for the chapter, which first addressed the movement of writers to write and then the movement of readers by means of writing. Here at the conclusion, it is important to note that, even though these two aspects of motivation can be separated for purposes of discussion, they cannot be separated in acts of composition. Writers are moved to write to move readers; or put another way, writers are moved to move readers and the means of doing so is writing.

Also, at this conclusion, it seems appropriate to explain the epigraph that opened the chapter. My epigraph – “Sing in me, Muse, and through me tell the story” – comes from Fitzgerald’s 1998 translation of the Odyssey, which Homer began by invoking the muse of epic poetry. This familiar invocation resonates today in the allusions to the muse or muses that still predominate in many discussions of motivation and writing. Today in the popular press and in many books for would-be authors, the muse lives on, still invoked to provide inspiration. It is important to note that the muse in Greek mythology, a spiritual source of inspiration, was believed to sing through the poet, historian, or astronomer. The poet was merely a medium for the text rather than the creator of it. Similar notions appeared in other cultures, such as the inspiring spirit of Leanan-Sidhe in Ireland.

My major reason for this particular epigraph was to achieve an ironic effect – a dissonance between the notion of muse as a source of inspiration and the conception of motivation as movement that is developed in the chapter. Motivation is characterized by movement, both emotional and cognitive, and the writing process that results is also characterized by movement. Writing is not a passive, receptive process; it is not simply a patient wait for inspiration from a muse. Writers’ motivation arises within rhetorical situations – social situations – in which they experience or actively construct exigencies for writing.
Chapter 3

The Wholetheme Window of Dynamic Motivation in Writing to Learn Critical Thinking: A Multiple – Source Perspective

Asghar Iran-Nejad, Jason Brian Watts, Gopakumar Venugopalan and Yuejin Xu

Writing is used extensively in academic settings either as a tool for assessing course content or for the purpose of learning how to write. Writing also has great potential in academic settings as a tool for the development of critical thinking. However, several fundamental challenges stand in the way of using writing to learn how to think. These challenges are particularly severe when it comes to the problem of figuring out the role, nature, and relationship of cognition and motivation in writing to learn critical thinking. Chief among these is the monumental challenge of grounding symbols and constructs in thinking, motivation, learning, and the manner in which these aspects tend to seamlessly integrate in some respects and defy integration in other respects. This chapter addresses the problem of integration of writing, thinking, motivation, and learning from the perspective of wholetheme education, and presents illustrative data bearing on the investigation of a multiple-phase window of wholetheme motivation for writing to learn critical thinking.

1 A Glance at the Wholetheme Education Perspective

We have coined and used the term wholetheme education to maintain (a) an integration and (b) a multiple-source disposition in exploring educational topics such as learning, motivation, and writing (Iran-Nejad, 1990, 1994; Iran-Nejad & Gregg, 2001). The bulk of the past research (see Iran-Nejad, 1986, 1987; Iran-Nejad, Ortony, & Rittenhouse, 1981), has been investigating individual constructs or the relationships among a focused few. However, concentration on individual educational constructs comes with a costly tradeoff. The more narrowly we zoom in, the more isolated the subject of our investigation becomes.
Construct-focused exploration may be an inevitable fact of life in human sciences; it is unlikely to cover the entire realm of human functioning. If so, wholetheme education is a useful reminder that there exists an organic, open-ground, and global coherence context of integration, organization, and reorganization in educational research and practice that deserves not to be overlooked. The wholetheme perspective offers a panoramic view in which we can, if we choose, zoom in for depth and zoom out for breadth at will.

The benefits of a wholetheme perspective are more than organizational. The wide expanse of a panoramic perspective is likely to make the most out of the diverse sources contributing to the educational enterprise. A construct-focused exploration elaborating on the meaning of the term *learning*, for example, is likely to leave out the non-obvious contributing sources to learning such as those responsible for the flash of an insight or awakening with one Bransford & Schwartz, 1999; Iran-Nejad & Chisena, 1992. The tendency to view the external world as the one and only source of learning is a case in point (see Iran-Nejad, McKeachie, & Berliner, 1990). Often internalizing information from the outside world is seen as the exclusive definition of learning. However, when it comes to complex human behaviors such as writing, many internal sources can contribute to learning even in the total absence of incoming information (Donchin, 1981).

The focusing capacity of the human mind can create the illusion of single-sourceness. For instance, in all likelihood, it is by no accident of nature that fundamentally different sensory modalities expose the nervous and bodily systems inside the skin to diverse facets of the outside world. Thus, a seamless panorama of vigilance is maintainable pervasively around the individual in all directions (Rosch, 2000). If single-sourceness is the rule, why more than one sensory modality? And the host of sensory systems are not all. There is also a multitude of other internal systems, making the individual a living system of systems of the most splendid kind (Bekey, 2005; Naderi, 2005; Tien, 2005; Iran-Nejad & Homaifar, 2005; Sage, 2005; Zadeh, 2005). If a uniform information processing system is all it takes to support the human mind and behavior, why such a kaleidoscopic diversity of human experiences?

As an illusion, single-sourceness can be explained by the consideration that the focusing capacity of the human mind can, by natural design, allow selective attention to only one sensory modality at a time. The wholetheme perspective holds that human learning can carry out, in vast proportion, its multiple-source agenda everywhere and more or less independently of the focusing activity. We may learn, not necessarily accurately, about a new acquaintance’s smile, voice, perfume, handshake, body physique, movements, wisdom, depth, sincerity, friendliness, trustworthiness, to name a few, all at the same time. A corollary assumption is that the wholetheme perspective can exploit such multiple-sourceness – in educational research and practice, in general, and in writing, in particular – through regulation of the zoom-in and the zoom-out capabilities of learners.

Another equally vital implication is that a person’s all-encompassing panorama of vigilance can sink in unnoticeable dimness in favor of single-modality-focused, or more broadly single-construct-focused, concentration. To go back to the example from the previous paragraph, if we focus on a single construct pertaining to a new acquaintance that we find unpleasant (such as an unpleasant smile, hair color, or one of a myriad of other
features we are capable of perceiving in someone), we might find ourselves with a new enemy rather than a new friend. It is intriguing to wonder why so many people consistently fall victim to this Achilles’ heel of human cognition. The good news is that education, including and particularly self-education, can help us avoid it if we know how. We may self-educate ourselves to draw attention away from the repulsive smile or hair color; stay back, and open the gates of learning to the multitude of available sources, internal or external. If we find a way to do this successfully, we may yet find room for our new acquaintance in our world as a lasting friend. Until we have a better idea as to how to go about addressing issues like these, perspectives like wholetheme education may help to guard against the undesirable consequences of an overzealous focusing capacity. For instance, for communication to be successful, writers and readers must know an incredible amount about one another. Nevertheless, under the control of the focusing capacity, we are very likely to hook our attention on the construct-focused assumption that successful communication depends on each party considering only the intention of the other, at the expense of a vast array of other constructs such as affect, interest, motivation, wisdom, creativity, hope, or the like.

A straightforward hypothesis derivable from the wholetheme perspective is that the most natural way for writers to view the course of writing and their audiences is to turn inward first and look in the living mirror of their own wholetheme experience. Ironically, as already suggested, there is also only one way to render this living mirror dull and lackluster: by adopting a construct-focused disposition. Writing solely with the intent of completing assignment objectives is an example. By contrast, when writers make their living wholetheme experience the origin of their writing, the potentially separate paths of writing, motivation, learning, and critical thinking are all likely to converge into one organic, multiple-phase, reorganizational journey. There are at least three major phases in this wholetheme journey. In the first phase, writers must embrace the challenge of situating their writing journey in the vast panorama of their own experience without falling into the trap of some individual construct. One seductive trap in academic writing is the common practice of having the teacher to be the sole audience of one’s writing. The first wholetheme phase is predominantly a divergent non-representational stage; the second is a convergent representational phase; and the third is a propositional (or actual writing) phase. The phase-to-phase transitions are wholetheme reorganizations such that the last phase encompasses what has gone before. In other words, in all of the three phases, the divergent wholetheme and the convergent representations stay in relative vigilance by the balance of the writer’s zoom-in and zoom-out capabilities.

From past research on the motivation-writing integration, we know a lot about the last two phases (Bandura & Schunk, 1981; Boscolo & Mason, 2003; Bruning & Horn, 2000; Shell, Murphy, & Bruning, 1989; Faigley, Daly, & Witte, 1981; Hidi, 2001; Hidi & McLaren, 1991; McLeod, 1987). By contrast, we know nothing in academia about the first phase perhaps because of the difficulty of casting a seamless non-representational ground in representational terms. The problem is to find a way to imagine how, in the living expanse of the panoramic wholetheme, everything is *full* of everything else and *empty* of its own independent self as described in the following quotation:

> If you are a poet, you will see clearly that there is a cloud floating in this sheet of paper [paper is held aloft by the speaker]. Without a cloud there will be no water;
without water trees cannot grow; and without trees, you cannot make paper. So the cloud is in here. The existence of this page is dependent on the existence of a cloud. Paper and cloud are so close. Let us think of other things, like sunshine. Sunshine is very important because the forest cannot grow without sunshine, and we as humans cannot grow without sunshine. So the logger needs sunshine in order to cut the tree, and the tree needs sunshine in order to be a tree. Therefore, you can see sunshine in this sheet of paper. And if you look more deeply ... with the eyes of those who are awake, you see not only the cloud and the sunshine in it, but that everything is here, wheat that became the bread for the logger to eat, the logger’s father – everything is in this piece of paper .... This paper is empty of an independent self. Empty, in this sense, means that the paper is full of everything, the entire cosmos. The presence of this tiny sheet of paper proves the presence of the whole cosmos. (Nhat Hanh, 1987, pp. 45–46)

This quotation comes close to describing what must occur during the first phase of writing from a wholetheme perspective. As eloquent as it is, however, it is nonetheless an inadequate articulation of the wholetheme panorama. It is eloquent because it makes a thought impossible to imagine become imaginable enough to grasp. It is inadequate, necessarily, because it uses the language of representations to describe the existence of the opposite world of non-representation. In the world of representations, construct boundaries are everywhere since everything is, at least relatively speaking, full of its own independent self and empty of everything else. In the world of non-representation, construct boundaries do not exist as everything is full of everything else and empty of its own independent self. Each of these two antithetical modes of existence can work at the expense of the other. This is probably why, ironically speaking, writing poetry (the immediate topic of the above quotation) and academic writing are housed in two different departments in the hyperspecialized (Popham, 2004) realm of academia. When we think about the nature of writing from the standpoint of the wholetheme perspective, we feel overwhelmed with how highly unrealistic this type of educational practice turns out to be. This unrealistic stance does not simply represent a focus on the whole construct of writing; consistent with Popham’s notion of hyperspecialization in education, it focuses on the construct divided in so many ways even further (Iran-Nejad, 1994).

If hyperspecialization of this kind is an unrealistic way of practicing education at one extreme, is the wholetheme perspective itself not an unrealistic expectation when it comes to human behaviors as concrete as writing? The answer from the wholetheme perspective is not really (see, e.g., Watts, 2005; Xu, 2005). As a faculty member affected by the somewhat severe constraints of today’s academic setting, the first author, for instance, has been practicing a wholetheme approach to writing for more than a decade in his own writing, teaching, and research. The number of ways wholetheme education can be practiced depends on the practitioner’s willingness to embrace the challenge. As already noted, one of the major implications of the wholetheme perspective is to encourage writers to turn inward and look in the mirror of their own panorama of wholetheme experience as the immediate ground for launching and maintaining the course of their writing practice. For instance, the first author has been teaching undergraduate and graduate educational psychology courses from the wholetheme perspective with this goal in mind. One of the
undergraduate courses taught was an educational psychology course in the Multiple Abilities Program (MAP), an experimental dual certification program in teacher education (Iran-Nejad & Gregg, 2001). The students were asked to respond to several prompts in writing their guided weekly reflective journal (GWRJ). One of the prompts was: "As a facilitator of authentic learning in children, this week I view myself to be ______ (insert a suitable METAPHOR)." We believe responding to prompts like this on a weekly basis for two semesters is likely to have a major wholetheme-learning impact on the students (see Iran-Nejad & Gregg, 2001, for further discussion). The following quotation is from the GWRJ 2/16/97 of a student who started her program in the fall of 1996:

As a facilitator of authentic learning, I view myself to be a beautiful sunny day. A day of sunshine after many days of cold rain ... Today on my walk down a new path, I asked myself questions that I can relate to the wholetheme learning principles. I reorganized my thoughts by asking myself many open ended questions. I drew from many sources (the sun, the path, the beautiful sky). I listened to my inner feelings. I fed off the sunshine and my outside surroundings. Because I listened to what my body was telling me (Get outside and enjoy the day to the fullest!) I put my self in a creative, constructive mode of functioning. All of my thinking and writing may seem a little far out to you or anyone else that reads this. I am not concerned about that, because for the first time I am able to take what we have discussed in class and relate it to an everyday life situation. Today, I realized that on my walk I had been thinking about Ed. Psych. and my journal for the week. I didn’t tell myself to think about it, but subconsciously I was. I stopped for a moment while on my walk and found myself chuckling inside. For the first time I was able to let out a loud BINGO! I actually understood what you were meaning in class. I am excited about my realizations and I am also curious to see if I can pass the sunshine on to my students. As an authentic teacher, I hope I will always be a bright, bright, sun shiny day!!!

GWRJ-M(2/16/97) (Iran-Nejad & Gregg, 2001, p. 890)

1MAP began in 1994 as an experimental program designed to merge general and special education curricula for the preparation of teachers for multiple ability levels from a wholetheme perspective. Currently, the program prepares K-6 educators to hold Multiple Abilities Certification in early childhood, elementary, and mild learning disabilities and mild behavioral disorders. The students spend about 50% of their time in field placements in local schools as interns under the supervision of teacher mentors (see Ellis & Larkin, 1995). Perhaps the most important type of learning that MAP affords its interns comes from the in-school experiences provided throughout the program. Such early experiences qualify as occurring in the indeterminate zone of practice because they are naturally characterized by novelty and uncertainty. At the university, the MAP curriculum does not comprise a set of isolated courses. From the beginning, MAP designers made a deliberate attempt to integrate the program’s curriculum. The goal was to (a) unify the regular and special education objectives, (b) focus on thematic knowledge, and, thereby, (c) guard against the myriad of trivial details that tend to creep into stand-alone courses that focus on the factual knowledge and procedures associated with specific aspects of teaching. MAP students do not take any of the traditional teacher-education classes. In lieu of the piecemeal approach offered by stand-alone courses, which change from one semester to the next, MAP students spiral through the same five curriculum every semester. The manner in which this curriculum is taught is totally integrated (Ellis et al., 1995). In essence, MAP is like one giant (wholetheme) course.
The reader can verify that this student’s reflective journal is similar enough to the one about Nhat Hanh’s poem to deserve being housed in the same university department.

## 2 Writing, Motivation, and Critical Thinking

As writers, we can view the outside world in two fundamentally different, but for the most part complementary, ways. We can take, like the typical college-student writer, the direct route of engaging the focusing capacity of the mind and look to the outside world as a source of information on a specific topic. Alternatively, like the above educational psychology student, we can turn inward, look in the mirror of our own wholetheme experience, turn on the light of the sunny day, regard the outside world as a source of wonder and uncertainty, and embark on our “walk down a new path” of understanding as the foundation for our writing. As the quotation from our undergraduate shows, when we do that our writing journey is likely to become full, to use Nhat Nanh’s expression, of almost everything, including critical thinking, motivation, and learning all collapsed into a unified wholetheme.

The first approach – looking directly to the real world as a source of information – is particularly useful in a fully determinate zone of practice for organizing in a prediction-driven mode the existing disciplinary knowledge accumulated by means of hypothesis testing within the framework of scientific inquiry (Schön, 1987). Thus, as scientists, we use writing to conduct reviews of the pre-established literature, perform meta-analyses, and articulate conceptual interpretations. Surprises are rare in this process, if possible at all, hence, the term determinate zone. Traditionally, the natural advantages of the focusing capacity of the human mind have made this type of information seeking the most popular, if not the one and only, perspective for looking to the real world as a source of learning. However, in doing so, we cannot overlook the possibility that the focusing capability of the human mind is only one aspect of the potential story of the human outlook on the world in which we live. Therefore, what we need is a perspective on how to heal the deterministic Achilles’ heel of the human mind by enabling it to adopt a more balanced outlook between the zooming-in and zooming-out human capabilities, as implied by wholetheme education perspective. The good news is that, to the extent that we manage to do this, we are likely to get writing, critical thinking, motivation, and learning all in one big picture.

The wholetheme approach points to a special kinship between critical thinking, motivation, and writing. Both critical thinking and motivation are non-linear undertakings relying heavily on the more-or-less antithetical, zoom-in/zoom-out, human capacities. Turning off the zoom-out, turns off critical thinking and motivation. Turning it on opens the gates to both. Now, here is the problem. The non-linear zoom-out/zoom-in undertaking must be accomplished in real linear time; and to do so involves overcoming some of the other most severe vulnerabilities of human thinking such as the ones inherent in keeping non-linear thoughts in vigilant memory over extended lengths of time. Here is where writing comes in as the ideal tool, with all the trappings for optimizing the process by eliminating the patronizing liabilities. However, engaging in writing itself involves, although it should not, a linear process and thus guarantees no progress toward learning how to think critically.
Before we figure out how writing can fulfill its unique wholetheme potential for fostering critical thinking, motivation, and learning, the following summarized considerations are a prerequisite.

1. **Writer's outlook on writing as a complex real-world behavior.** The outlook with which the writer views writing must not turn one-way in the direction of isolation in any form or fashion. Rather, writers should cast the net of their outlook boundlessly in order to make possible the simultaneous engagement of both divergent and convergent thinking. From the wholetheme perspective, given the vulnerabilities of the focusing capacities of the human mind, the way to engage divergent thinking is to resist the seductive temptation of turning outward directly in search of information; this includes resisting the seductive temptation of turning directly to academic knowledge or even to one's own representational knowledge of the world – as blasphemous as this might sound. Rather, the immediate launching pad for the non-linear journey of writing is, to reiterate, the non-representational panorama of the writer's own wholetheme experience.

2. **Writer's outlook on writing as an interlevel construct-grounding process.** The wholetheme perspective proposes a unique manner for negotiating the major reorganizational phases already described for the course of writing. Writing for critical thinking is not an intra-level process of construct-focused elaboration, in which a topic is elaborated – according to a direct means-ends analysis of the task in hand – into subtopics, subtopics into main ideas, main ideas into propositions, and, finally, propositions into written symbols. This is an intra-level approach because, to complete the job, the writer never has to leave the more or less level plane of the task in hand. As a result, the direct busy business of the means-ends elaboration on the topic or construct in hand becomes the sole overwhelming strategy that anyone can reasonably perform. Wholetheme writing requires an inter-level process going, more or less vertically, between the representational level of constructs, on the one hand, and the non-representational level of the writer's wholetheme experience, on the other. This is the brain–mind cycle of reflection process – as opposed to the direct mind–world interaction process – outlined in Iran-Nejad and Gregg (2001).

3 **The Writer's Natural Outlooks on the External World**

As suggested above, writers can look to the real world directly as a source of information. This is an essential outlook for certain writing tasks; but should not be the only outlook, as it may lock writers in the determinate zone of practice, run exclusively one-way by the prediction-driven focusing capacity of the mind. Under the hegemony of this direct mind–world stance, writers may confine themselves to paying selective attention to expected objects of perception in search of hidden topic-relevant information. However, information is not the only aspect of the real world, just as the focusing capacity is not the only human capability for interaction with the world. The real world can be a source of uncertainty and wonderment as well as a source of information. As a source of wonderment, it is an indeterminate zone of practice; as a source of information, it is a determinate zone of practice (Schön, 1987). According to Schön, modern developments in the realm of disciplinary research have provided a fertile ground for the popularity of the determinate-zone...
outlook on the real world. This has been the case especially since the advent of the cognitive revolution (Neisser, 1967) and the subsequent developments in the area of computer-inspired information processing. It turns out that writing for critical thinking does not lend itself well to the determinate-zone outlook on the world. On the contrary, it requires an indeterminate-zone outlook like the wholetheme perspective.

It is not surprising that popularity in one area – the determinate-zone outlook on the world – can come at the expense of another arena of human functioning like the indeterminate-zone outlook. For instance, investigation of the human capacity for handling surprises has been overlooked by the prediction-based, determinate-zone-dominant mainstream in educational research in part because dealing with surprises does not lend itself well to the disposition of looking to the world as a source of information (Iran-Nejad, 1986, 1987). Under the domination of this stance, people can only perceive whatever they have pre-existing schemas for and end up ignoring everything else (Neisser, 1967). How do successful writers make surprise, interest, and other affective variables a significant part of their writing? From the wholetheme point of view, surprise is the natural human capacity for counteracting the one-way momentum of the prediction-based focusing capacity. Working from inside the wholetheme experience, writers know well the affective consequences of the expectation-violating surprise and build it into their own writing. Like many capacities, affect is a more obvious challenge than writing in the determinate zone of practice because affective variables, unlike writing behavior, come into play at the moment the outside world actually stops to play along in its expected role as the provider of information in the determinate zone of practice. Thus, the capacity for surprise cannot, but the writing behavior can, occur so long as the determinate zone of practice seems to be working. Unfortunately, the writing that results here is qualitatively different from – and cannot be – writing for critical thinking. This is probably why the cognitive revolution is known to have ignored affect (Zajonc, 1980); but the reasons underlying this oversight have never been exposed. The wholetheme perspective implies that affective variables such as interest and surprise and cognitive variables such as importance or salience are brought to bear by qualitatively different stances on the world we live in (Hidi & Baird, 1986; Iran-Nejad, 1987).

Packed with people, classrooms and schools are complex places; and depriving them of surprises and other worldly aspects by turning them into determinate zones of practice does not always come with a negligible cost. Among the most recurrent problems has been the relationship between educational research and educational practice. Does this problem have anything to do with the determinate-zone stance taken in schooling? For example, alluding to the impact on practice of his renowned taxonomy of educational objectives (Bloom, Englehart, Furst, Hill, & Krathwohl, 1956), Bloom (1984) commented that the three decades since its publication the book had sold more than a million copies; but “our instructional material, our classroom teaching methods, and our testing methods rarely rise above the lowest category of the taxonomy” (p. 13). Why are so many people willing to pay for a book that no one ends up using with any noticeable degree of success? The lowest category in the taxonomy is knowledge or information and the category just above knowledge is comprehension. Success in the first level – information – is the consequence of the book’s outlook. The second level – understanding – requires the opposite outlook on the world as a source of uncertainty
and wonderment. As a result, Bloom’s statement “points to the alarming fact that, for more than thirty years, students have been memorizing facts and definitions without understanding them” (Iran-Nejad, 1990, p. 578). However, Bloom’s articulate statement of the problem was silent about why the information level in which we drown for so long has had such a quicksand effect on our practice. This is because contrary to Bloom’s assumption, moving from information to understanding is impossible by means of the linear depth-wise or breadth-wise elaboration on information. It takes a non-linear shift from a determinate-zone outlook to an indeterminate-zone outlook on the world to climb from the first level of the taxonomy to the next – contrary to the linear climb imposed by the taxonomy.

One of the major consequences of education’s confinement to the determinate zone reveals itself in the form of the self-isolating attitude of textbooks and scholarly reviews. They keep out the knowledge not yet included in the so-called scientific literature; and leave out any scientific insights that do not tie directly and incrementally to the domain-specific topics under mainstream investigation. However, life does not stop for everyone with what we find hidden in the already-unmanageable body of the scientific knowledge in education (Reese, 1999). The chapter on learning to write in an otherwise unusually balanced textbook (Mayer, 2003) is more or less about the technical knowledge of the three procedural strategies for writing: planning, translation, and revision. Similarly, a thorough review of the literature on writing to learn (Klein, 1999) focuses on the theory that “writing-to-learn is a set of cognitive [procedural] strategies” (p. 264). This perspective claims that it is the procedural content of the strategic information about composing, and not the natural practice of writing, that is the direct cause of learning by means of writing to learn. According to Klein

These various hypotheses [i.e., determinate-zone predictions] concerning writing-to-learn, and the empirical findings to date [i.e., determinate-zone facts], can be understood within the framework of cognitive strategy research [i.e., determinate-zone procedures – see below]. Initially, some authors claimed that writing “inherently” leads to learning (e.g., Emig, 1977), and they ascribed learning as characteristics inherent in the text [i.e., visible writing behavior], such as pace of composing, or linear organization (e.g., Ong, 1982; McLuhan, 1962). However, where research is more abundant concerning the genre hypothesis, learning appears to depend on the writer’s ability to successfully negotiate a series of contingencies [i.e., elaborative means-ends analysis]: Writers may adopt the goal of writing in an elaborative genre [i.e., determinate-zone outlook]; if they do, this may result in elaborative reasoning operations [i.e., intra-level operation confined to the plane of mental representations, at best]; and if they carry out elaborative reasoning operations, these may result in substantive, valid changes to their knowledge [i.e., more determinate-zone facts or information]. Each of these transitions is probabilistic rather than certain [i.e., each fact has its own alpha-level probability].

Several aspects of this quotation need to be discussed. First, the reader may want to verify that the bracketed expressions in bold are precisely the ones we have used in this paper to
characterize the determinate zone of practice in the writing-to-learn literature and its broader context. The second striking fact about this quotation is the total absence of any reference having to do with what we have characterized as, or in terms of, the wholetime perspective, including any reference to such motivational terms as surprise, interest, or affect. Third, Klein seems to describe a distinction between confining learning directly to the behavior of writing or to the content of cognitive strategies aimed at writing to learn—not even both. Fourth, the repeated elaborative term in the excerpt refers to elaborative rehearsal on previously known (or predictable) means-ends contingencies, as defined in the analytic context of modern information processing theory (Newell & Simon, 1972; see also, Atkinson & Shiffrin, 1968; Neisser, 1967). Fifth, the expression “substantive, valid changes” seems to refer to inductive (or bottom-up) and/or deductive (or top-down) conclusions made elaboratively and incrementally according to syllogistic principles of symbolic logic.

A number of conclusions can be drawn from the above discussion. First, the literature that Klein has reviewed seems to imply that the elaborative process of writing can be defined as the translation into prose of previously symbolically articulated knowledge. Second, it is assumed that writing follows a strictly predictable course; or, in other words, it occurs in the determinate zone of practice. This means that writing to learn produces no surprises for the writer, or at least none that can come from within the writer, leaving out all of those “aha” instances that fuse motivation, learning as knowledge creation, and thinking. Third, the literature review seems to consider the process of writing as exclusively regulated by the strategic mind, and does not acknowledge that the nervous and bodily systems have something to offer toward the behavior of writing to learn. Can writers not rely on their gut feelings, instincts, or intuitions? Similarly, no brain-regulated contributions are acknowledged, that can occur without the mental mediation of predictive contingencies of inductive or deductive reasoning. What is missing here is the recognition that many factors, such as spontaneous insights that occur during the writing process, cannot be explained without considering learning processes beyond the direct and deliberate focusing capacity of the writer. Our concern is that the more the writer is locked into a determinate zone of practice, the less likely it becomes that spontaneous, brain-created learning (such as bursts of insight, affect, or emotion) will occur (see Iran-Nejad, 1987; Iran-Nejad & Cecil, 1992; Iran-Nejad, Clore, & Vondruska, 1984; Iran-Nejad & Ortony, 1985).

4 The Rocky Road of the Motivational Journey of Ideas

So far, we have been trying to build the case for a stable ground in which the behavior of writing to learn critical thinking can evolve and flourish. However, there is more to the wholetime perspective than the global coherence context that it provides. Clearly, writing is by nature a live process in motion and not the static state the concept of ground might suggest. The essential role of the term ground in the process of writing is that it harnesses the non-linear stability that is often lacking in the elaborative chain of constructs following constructs. The other equally essential aspect of writing as a process in motion is the dynamic process of change. Broadly speaking, in traditional academia, the dynamic journey of writing begins in the determinate zone of practice with planning, followed by a
prediction-driven means-ends analysis, and ends in the determinate zone of practice with the essay or other similar products. In wholetheme education writing begins in the indeterminate zone of practice, followed by the non-representational mirror of the writer’s own wholetheme experience in reorganizational motion, and ends in the determinate zone of the final product. As already discussed, the two different perspectives have very different motivational implications. The differences between the two outlooks on writing are impossible to underscore.

4.1 From the Determinate Zone of Practice to the Determinate Zone of an Essay

It has been said that “one may argue that critical thinking is simply another name for the scientific method” (Staib, 2003, p. 499). This definition captures well the rigor in thinking entailed in the science’s principle of systematic observation. Clearly, as Dewey (1938) claimed, thinking is, for the most part, “a synonym of ‘inquiry’ and its meaning is determined by what we find out about inquiry” (p. 21). However, goal-driven inquiry is only one of the many processes involved in critical thinking. The definition of science as inquiry alone tends to make scientific practice an example of looking to the world for such information, that is likely to come from a determinate zone of practice point of view. Schön (1987) referred to this directly and strictly means-ends way of thinking of scientific practice as technical rationality and argued that it lacks intrinsic relevance to the real world and cannot be the source of knowledge for educational practice.

If adopting the wholetheme perspective is even a small step in the right direction, the above definition of critical thinking falls short of relevance by a large magnitude, not only to the real world as Schön (1987) has demonstrated, but also to the human nature of this fundamental source of human behavior (Iran-Nejad, Hidi, & Wittrock, 1990). Staib (2003) referred to a distinction between critical thinking as a philosophical orientation toward thinking and critical thinking as a distinct cognitive process (Jones & Brown, 1993). Once again no mention is made of the natural dynamic motivation side of productive thinking. Staib (2003) suggested that faculty members with the philosophical orientation of critical thinking as scientific inquiry rely on cold written or verbal reports as evidence for critical thinking; while perhaps those with a cognitive orientation hold that these methods do not adequately represent evidence for critical thinking as a process to the extent that they have no proof that the process of critical thinking took place. On the side of the above philosophical orientation, even if veteran scientists could apply successfully the symbolically laden dictionary definition of critical thinking, at the expense of their other unaccounted for aspects of the human nature, its application to learning critical thinking by novices on their way to becoming critical thinkers is too far a stretch. On the other side, those favoring critical thinking as a cognitive process run into similar considerations if they view these processes as being the cold symbolically laden cognitive ones proposed by the information processing theory. Either way, we need a much more inclusive perspective to be able to stay alert on the hot journey of writing to learn critical thinking.

In her review, Staib summarized 17 articles bearing on the challenge of teaching critical thinking and was able to locate a set of constructs derivable from “the consensus statement [of American Philosophical Association, 1990] on critical thinking in nursing (Scheffer & Rubenfeld, 2000)” (Staib, 2003, p. 499). Staib’s (2003) summary table listed the following
constructs: reflection, creativity, open-mindedness, contextual perspective, confidence, flexibility, and inquisitiveness. Whether these constructs represent a philosophical orientation or something else, their relevance to human nature or the real world cannot be meaningfully assessed without some idea about the dynamic motivation ground in which to use them in educational practice. Without such a ground, metaphorically speaking, these wonderfully suggestive constructs are, literally speaking, groundless. Dewey (1929) and Schön (1987) suggested that such constructs must be investigated on the grounds of professional artistry for educational practice to be possible in the “slimy swamp” of the real world’s indeterminate zone of practice. However, if Schön’s analysis is any indication, the prevalence of technical rationality is going to be the historical hallmark of the 20th century and the problem of the dynamic motivation nature of professional artistry is to be handed down to future generations of educators.

4.2 From the Indeterminate Zone of Practice to the Determinate Zone of an Essay

To be motivating beyond the sheer context of academic grades, writing projects should get situated by their authors in the indeterminate zone of practice. In academic settings, a significant number of learners end up discovering, one way or another, their indeterminate zone on their own. Without the motivational benefits of such a discovery, many other writers find themselves on the wayside. The majority of these individuals take an avoidance-of-the-writing disposition that triggers behaviors like procrastination, avoidance-consistent rationalization, academic task minimization or sheer regurgitation of existing text book facts.

In academic settings, a ubiquitous example of the avoidance disposition is what Bereiter (1990) identified as the schoolwork module. For those who adopt the schoolwork module, the process of writing becomes a task minimizing or discounting chore to deal with in the counterproductive zone of determinate practice. For those who adopt an approach disposition, the academic task in hand may take one of two forms. It may become a good-students-bite-the-bullet undertaking in the determinate zone of practice. Here the student suffers through the arduous task that Bereiter identified as difficult learning. For many of these learners, the “intentional learning” module tends to become an approach setting best described as repeating the teacher or others. This is because many intentional learners of difficult tasks attempt to do the job by minimizing the productive initial uncertainty, if not the task itself. As a result, they end up avoiding the indeterminate zone, its motivational benefits, and the opportunities that it affords. The best that these students end up accomplishing is a desired grade toward academic success.

The second kind of approach disposition that can, conceivably, occur in academic settings is currently taken by that minority of students who discover their own version of the wholetheme approach (Iran-Nejad & Cecil, 1992). Learners who discover this second kind of approach disposition are those who embrace the challenge of navigating the uncertainties of the indeterminate zone of practice and, consequently, benefit from the biofunctional sources of affect and motivation that it sets in motion in the nervous and bodily systems (Iran-Nejad, 1987, 2000; Iran-Nejad, Hidi, & Wittrock, 1992; Iran-Nejad, Marsh, & Clements, 1992; Iran-Nejad & Ortony, 1984; Rosch, 2000). The vast window of opportunity that these learners end up creating for themselves in writing is called the interest-creating
discovery module (Iran-Nejad & Cecil, 1992), only to stay in the vicinity of Bereiter’s school work and intentional-learning modules. A significant portion of the mission of education is to take to the majority of learners what a rare few can accomplish on their own. While this goal is commonly recognized, construct-focused solutions such as accountability can hardly get the job done. The wholetheme perspective embraces this challenge with an entirely different outlook.

### 4.3 Grounding the Non-Representational Ground of Writing

So far, we have used several similar expressions to refer to the non-representational ground that is the wholetheme soul of the approach taken in this paper. We have intentionally resisted the temptation to use a single construct or definition because doing so is contrary to the spirit of the wholetheme perspective. More specifically, we did not want to encourage a construct-focused outlook on the chapter for the reader. Instead, we have used a diverse set of similar expressions to capture the various nuances of the same thought in immediate contexts. Included in the set of expressions were “a seamless panorama of vigilance,” “a person’s all-encompassing panorama of vigilant experience,” “wholetheme panorama,” “the living mirror of the writer’s own wholetheme experience,” or even redundantly “the living expanse of the panoramic wholetheme.” We also used the notion borrowed from Hnat Nanh suggesting that, in the wholetheme panorama, every thought is full of all other thoughts and empty of its own independent self. This cluster of expressions, we believe, captures reasonably well what we have been trying to describe in this chapter as the non-representational ground for writing.

However, we have used elsewhere a concept that we think captures (a) the essence of the thought and (b) situates it more firmly in human nature and biology. This expression is the writer’s “own intuitive knowledge base” (IKB). Consistent with the spirit of this chapter, we will not try to define what we mean by the IKB, leaving its interpretation for the open ground of the reader’s own intuitions (Iran-Nejad, 1994). In other words, the working assumption is that the IKB is the best expression we have found so far for capturing the non-representational ground for motivational, critical thinking, reorganizational, and learning aspects of the extended journey of writing. For example, in the wholetheme perspective learning is being viewed not as direct internalization of external knowledge, but as wholetheme reorganization of the learner’s own IKB.

The idea is that, in the course of writing to learn critical thinking, the writer’s own IKB must become both the tool and the target of a multiple-phase reorganizational journey. This can happen if the writer embraces the challenge of spiraling through the wholetheme journey starting with the outlook on the world as the indeterminate zone of practice and ending eventually – upon a significant, if not dramatic, reorganization – in the determinate zone of an essay or some other product. The duration and momentum of the entire reorganization spiral can vary; but they are the most critical aspect of writing in that they constitute a highly productive window of opportunity during which the ongoing wholetheme picks up momentum in and “in-heat” sensitivity, so to speak, for reorganization with an increasingly intense dynamic urge for discovering ideas in the ground of the living wholetheme. Those students who discover their way through this reorganization spiral will, sooner or later, enter the
realm of professional artistry in writing to learn critical thinking, even though the process may take many years of climbing the steep staircase of an indefinite number of reorganization spirals.

4.4 Illustrating the Wholetheme Window of Dynamic Motivation

The wholetheme window of dynamic motivation that writing can present, is a rare occurrence in academia, and a ubiquitous occurrence in the real world. Given the wholetheme perspective, realizing this dynamic occurrence becomes a straightforward mission. Iran-Nejad and Cecil (1992) illustrated this using aha-eliciting statements like *The haystack was important because the cloth ripped* from Auble, Franks, and Soraci (1979). Presented alone, this statement encourages the reader an indeterminate zone that Auble et al. described as a state of incomprehension. This indeterminate zone is the beginning of a short-lived interest-creating-discovery module. For most readers, the climax of the brief motivational window becomes a reality if the interest-creating statement is followed by the clue *parachute*. Additional illustrations may be made using excerpts from the weekly reflective journals of three teacher education students from the same cohort as the student whose “sunny day” metaphor was quoted earlier. All of these illustrations have been reported in Iran-Nejad and Gregg (2001). As already indicated, these students were asked to respond to a set of prompts in their weekly reflective journals for two semesters. The following excerpt is in response to a hammer prompting the tool the student experienced in the course of the week for facilitating learning in future students:

The tool I have chosen for this week’s ground-breaking insight is one that I do not think I fully comprehend – in fact, I know I do not fully comprehend it. But I believe the very nature of my tool requires incomplete understanding – I would even go as far as to say this tool demands incomplete understanding. Well, I have kept you in suspense long enough: the tool I have chosen to apply, analyze, synthesize, and evaluate is the intuitive knowledge base. I am really quite unsure if I grasp this concept at all – but what I have learned is that it does not really matter if I am right or wrong – what matters is how flexible I am toward refining my understanding.

We must note that the idea of the IKB being used as a tool for anything was first proposed by this student after a two-hour session on learning as the reorganization of the learner’s own IKB. This is remarkable, given the difficulty in transfer for anything taught in school. There are several other equally remarkable aspects in this piece of writing. The excerpt articulates the window of dynamic motivation eloquently, capturing practically all of its major aspects. First, it portrays an indeterminate zone of practice. It reflects an incomplete understanding; nevertheless, it has groundbreaking implications both as a tool for future use as well as for refining understanding. It reflects the stability afforded by wholetheme closure in that it portrays non-representational (or thematic or, actually, wholethematic) certainty and representational uncertainty. The non-representational certainty gives the student conceptual power (or confidence) to think divergently and convergently at will. The representational uncertainty provides dynamic momentum and motivation for the student to push forward, to explore, and to refine “my understanding.” It portrays a
state of motivation *par excellence*. And, for all of these motivational, intellectual, and self-effectual considerations, it is a window of multiple-source opportunity.

The next excerpt from a different student in the same cohort as before provides quite a different kind of example. Again, this student is responding to the metaphor prompt: "As a facilitator of authentic learning in children, this week I view myself to be ______ (insert a suitable METAPHOR)." This except is the prime example of a writer looking to the world as a source of information and, as a result, she is overwhelmed by the type and volume of the information that she is challenged to handle.

**METAPHOR:** This week I feel like a migraine. No matter what you take for it, it just stays and does not go away. I feel that as much work that [sic] I do, my workload is not getting lighter. It seems to be getting bigger and bigger. It will soon be a mountain. When you have a migraine you just want to relax and forget everything around you. That has been what I have been feeling lately. I just want to relax and forget everything for now but then the mountain will just keep building and never get smaller. I am waiting for the migraine and pile to end.

The student is in an indeterminate zone of practice, looking through the wrong lens of the determinate zone of practice the academic world has planted in her. It is evident that this student is looking to the world narrowly as a quantitative source of information. As she zooms-in, she sees more vividly the growth of the imaginary pile of information. Judging by the vivid metaphor she has chosen, she seems to be a capable student. Therefore, it is safe to assume that the incompatible lens through which she is looking to the world, and not her ability, is drowning her in information and driving her to an avoidance disposition. Neither one nor both of the two schoolwork or intentional-learning modules are right for the challenge facing her. Accordingly, she finds herself in a severely unconstructive mode of performance characterized by procrastination, avoidance, and rationalization. Now consider the response a fourth MAP student to exactly the same prompt as the one for the above student

**METAPHOR:** I am like “one piece” of an enormous [read wholetheme] jigsaw puzzle that simply won’t fit no matter which way it is turned. I compare the “whole me” to an enormous jigsaw puzzle because my life has so many important pieces in it that are complicated and turn in many directions. For example, I have a husband who is stationed in New Orleans, two little girls, and MAP!!!!!!! I used to have many more areas in my life, however, since beginning MAP it has narrowed down to these basic areas. I cannot seem to get a grip on the “one piece” of me that brings these areas together. MAP has consumed “Andy” (pseudonym) and I don’t know how to do it all. I am a very private person and I don’t like to admit when I am losing control of the situation. Well, I have lost control! It really hit me when I realized how “stressed out” my 1 and 3 year old have become. You know the really bad thing about them being stressed out is I made them that way. Reflecting has become a big part of my life and now when I reflect on my family I feel like a failure [i.e., critical reflection has opened my eyes]. My family is the most important thing to me in the world, and I am not being a good “mommy.” As I watch and listen to you speak about children and what they need from their home environment, it tears me apart.
inside to think I am neglecting mine so much [i.e., I don’t like what I see deep inside myself with my newly discovered eyes]. How can I be a good teacher if I can’t be a good parent? MAP is hitting me in such a personal way I am overwhelmed. I mean who would of [sic] thought it would make me question my parenting skills?

This student looks to the same indeterminate zone of practice through the lens of the wholetheme perspective, the right kind of lens for the challenge. The wide-angle lens enables her to see beyond the linear maze of information and into the boundless expanse of understanding. Both students just quoted faced the challenge presented by the same amount of work required by the MAP. However, unlike the student before her, this student seems to be operating in an interest-creating discovery module. She is embracing the uncertainties inherent in the circumstances she is in with tolerance, hindsight, insight, and foresight simultaneously. She is in the creative, as opposed to habitual, mode of functioning, which is evident in the quality of her writing, in the terms she uses, and perhaps even in the relative amount of her writing. She is taking a divergent disposition as expansive as it can be, excluding nothing real or potential that might make itself available as relevant to the real nature of the challenge. In her wholetheme involvement, she is not misattributing anything narrowly to the specific information in the domain of MAP assignments. Rather, she is attributing it to the enhanced level of understanding MAP has accorded her (acknowledging the divergent momentum of her intuitive self-awareness): “I mean who would of [sic] thought it [MAP] would make me question my parenting skills.” For her, the concept of “good,” for instance, is wholetheme and runs across domains: “How can I be a good teacher if I can’t be a good parent?” In short, she is taking proper advantage of the MWWO her teacher education program is presenting to her.

4.5 The MWWO’s Multiple Phase Reorganization Spiral

The first author supervises and teaches several university courses from the wholetheme perspective. These courses use writing to learn intensely. Detailed syllabus guidelines describe the development of a wholetheme-learning portfolio consisting of several critical reflection essays. The syllabus details may vary from course to course or semester to semester; but the gist of the wholetheme portfolio stays the same. The essential idea is that writing-to-learn-critical-thinking is a multiple phase journey always launched in an indeterminate zone of practice (Phase A). The indeterminate phase then reorganizes into a wholetheme closure phase (Phase, B), which initiates the MWWO. Upon wholetheme completion, the MWWO is characterized by wholetheme certainty and representational uncertainty. At this point in the reorganization spiral, the writer experiences a stabilizing non-representational MWWO with antithetical divergent–convergent momentum toward representational completion in the ground of the writer’s own IKB. The three subsequent phases (Phases C–E) are representational phases distinguishable as a function of some seamless combination of external (or stimulation-regulated), deliberate (or mind-regulated), and dynamic (or brain-regulated) self-regulation. These phases are highly productive of direct mental representation, which continue to take the reorganization spiral to the point of direct representation closure. Direct representations are internal representations...
that carry their meanings in themselves, as compared to indirect representations, characteristic of the subsequent phase, that have no meaning in themselves and must rely on direct representations already in place for their meaning. We assume that momentum accelerates and peaks during these three phases as a function of dynamic (or brain-regulated) control. All of the A–E phases are assumed to be pre-writing phases, which must be in place before successful writing can begin. This would mean that two major points of closure are natural before the behavior of writing even starts. The last three phases (F–H) mark a shift to indirect representations (or propositions) ready to be crystallized in the physical behavior of writing in language symbols, ending with the physical essay. All in all, the course of the writing-to-learn reorganization spiral is marked by three different kinds of closure, each with its own relative momentum and duration, its own kind of content knowledge (non-representational, direct representational, and indirect representational), and its own cognitive and motivational causes and effect.

To what extent did the students’ reflective journaling in our graduate courses match the hypothesized phases? Was their reported experience supportive of multiple reorganization phases or a single-elaborative structure predicted by the information processing theory? Were the spiraling phases hot motivation productions or simply cold cognition productions? Figure 1 shows the preliminary results from one of our studies. In this study, 19 students in two educational psychology courses taught by the first author followed the wholetheme education guidelines to write three weekly essays. The week after each essay, students wrote another essay reflecting on and rating the intensity of the thinking and motivation they experienced during their previous week’s essay. The guidelines included a table with eight A–H phases in which they were to record their ratings of the intensity of their mental and motivational experience. Mental intensity ranged from 0 (not intense at all) to 5 (very intense) and the intensity of motivation ranged from −5 (very de-motivated), 0 (neutral) in the middle, and +5 (very motivated). Figure 1 maps the means collapsed over three essays for the eight phases after the motivation ratings were recoded into mind-intensity scale for comparison purposes. The figure shows that both mental and motivational experiences start at a relatively low level of intensity in Phase A, go up in intensity at the wholetheme closure phase, peak toward the end of the direct representation closure phases, and taper off during the phases associated with the behavior of writing.

The reader can verify that the data are far from the flat or linear shape that the knowledge elaboration theory predicts. On the other hand, they are closely in line with the multiple-phase MWMO predicted by the wholetheme education perspective. While the thinking and motivation lines roughly mimic each other, another notable trend is their relative independence, as shown in divergence between them. While the intensity of thinking attenuates as the reorganization spiral approaches completion, the intensity of motivation tends to linger on.

Table 1 shows the phase–phase intercorrelations. Given the small number of participants, two rather glaring aspect of the data is cautiously noteworthy. First, the motivation–mind relationships cluster in the phase transitions that carry the points of closure (B, E, and G). Second, the most noteworthy set of phase-to-phase correlations, in terms of magnitude and frequency, are motivation-to-motivation (41% middle panel versus 22% top panel and 8% bottom panel), suggesting that the global coherence context that holds the
5 Conclusions

Understanding the inherent nature of writing to learn critical thinking and its relationship with motivation requires overcoming some difficult challenges. These challenges are beyond the theories that look to the world narrowly as a source of information alone (Rosch, 2000). The lack of consensus that has plagued the constructs-chasing-constructs research in education and the crisis of confidence that the eclectic educational thought has brought unto educational practice are enough reason to move beyond the investigation or utilization of discrete constructs altogether. Similarly, given the vast potential of writing as a tool for critical thinking, we must move beyond the practice of writing to learn the technical aspects of writing. Equipped with the wholetheme education perspective, we have struggled in the past several decades to uncover fresh areas of exploration in the trenches of educational practice. Exploring the course of the multiple-phase reorganization spiral – the unique motivational window of wholetheme opportunity with a ubiquitous presence in all aspects of human
functioning – is one of the areas we find most promising in our efforts to understand the process and practice of writing to learn critical thinking and reflective writing.

Acknowledgment

The authors are indebted to the volume editors, Pietro Boscolo and Suzanne Hidi, for their significant editorial contribution and their insightful comments on several earlier drafts of this chapter. We also wish to thank the Series Editor and two anonymous reviewers for their helpful comments and Brenda Spencer for her excellent text editing contributions.

Table 1: Pearson phase–phase correlations between mind (M) and motivation (MO) intensity ratings collapsed across three essays (N=19). Upper panel shows M–M, middle MO–MO, and lower panel (MO–M) correlations

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* Correlation is significant at the .05 level (2-tailed); ** Correlation is significant at the .01 level (2-tailed).
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Chapter 4

A Writer’s Discipline: The Development of Self-Regulatory Skill

Barry J. Zimmerman and Anastasia Kitsantas

Successful writing requires high levels of self-regulation and self-motivation. Although these self-discipline qualities of writers are often hidden from readers, they are widely reported in personal accounts of professional writers. Prominent theories of writing have identified a number of processes that are clearly self-regulatory in nature, such as textual planning, goal setting, organizing, evaluating, and revising. To understand the relations among these processes (as well as other self-regulatory processes) and their links to important sources of self-motivation to write, we present a cyclical social cognitive theory composed of three self-regulatory phases: forethought, performance control, and self-reflection. Students’ acquisition of self-regulatory competence in writing is discussed in terms of a sequence of instructional levels, beginning with observational learning experiences, such as social modeling, tuition, and feedback, and eventuating with self-adaptive control of the writing process.

Becoming a proficient writer involves more than acquiring knowledge of vocabulary and grammar, it depends on high levels of self-regulation and self-motivation because writing activities are usually self-planned, self-initiated, and self-sustained. Writers work under solitary conditions, often over long periods with frequent stretches of meager results, and repeatedly revise output to fulfill personal standards of quality. These demanding personal requirements have led writers historically to develop varied techniques of “self-discipline” to enhance their effectiveness (Barzon, 1964; Gould, 1980; Plimpton, 1965; Wallace & Pear, 1977). The self-disciplined quality of literary competence, although hidden to readers, is pervasive in personal accounts of successful writers. The Pulitzer Prize winning author and renown teacher of writing, Donald Murray (1990) cautions, “Good writing does not reveal its making” (p. 5). “Getting writing done day in and day out, despite interruptions … is what separates the writer from the hope-to-be writer” (p. 15).
In this chapter, we will describe key sources of a writer’s self-discipline from a self-regulation perspective, which is derived from research in diverse areas of human functioning, such as academics, athletics, health, music, and business management (Zimmerman, 1998). Self-regulation of writing is defined lexically as self-initiated thoughts, feelings, and actions that writers use to attain various literary goals, such as improving their writing skills as well as enhancing the quality of the text they create (Schunk & Zimmerman, 1994). We posit that a writer’s willingness to implement these self-regulatory processes depends on key sources of self-motivation, such as self-efficacy beliefs, and these sources of self-motivation are influenced reciprocally by the outcomes of self-regulatory efforts and self-reflections regarding those outcomes. This cyclical dependency of writers’ sources of self-motivation and their self-regulatory efforts will be discussed in detail later.

To understand the self-regulation of writing, we first review prominent theories regarding the nature of writing and the role of self-regulation in literary accomplishments. Second, we describe a social cognitive cyclical model that includes key self-regulatory processes and motivational beliefs along with anecdotal accounts of them by well-known writers. Based on this model, we discuss empirical studies of students’ acquisition of self-regulatory competence in writing from social learning experiences, such as modeling, tuition, social feedback, and performance outcomes. Finally, we describe how to teach a sentence revision strategy to a student using social modeling experiences in a series of instructional levels designed to attain self-regulation.

1 Theories of Writing and its Self-Regulation

Historically, theorists have recognized that self-regulatory processes, such as planning, self-evaluation, and adaptation, play a major role in writing. For example, Rohman (1965) conceptualized writers’ use of self-regulatory writing processes in terms of three successive stages: (a) prewriting that involves planning, (b) composing performance, and (c) rewriting that involves self-evaluative editing and revising. Rohman posited that writing is executed according to a linear sequence of stages, but there is extensive evidence that writers seldom proceed sequentially – preferring instead to write recursively with planning and revision recurring at frequent intervals (Bereiter & Scardamalia, 1987). Murray (1990) describes recursive nature of writing in the following way, “We start drafting not knowing what we are going to say, and find we are collecting material, and the order in which it begins to arrange itself on the page makes our focus clear” (pp. 7–8).

Flower and Hayes (1980) developed a model of writing that sought to capture the recursive quality that Murray described. These researchers described writing in terms of a writer’s task environment, a writer’s long-term memory, and the writing process. A writer’s environment refers to the literary task or problem, written text as it evolves, writing tools, and external sources of information used during writing, such as a textbook, whereas a writer’s long-term memory involves his or her knowledge of the literary topic, the audience, and personal plans. The process of writing involves three primary components that are similar to Rohman’s stages: planning the text, translating ideas into text, and reviewing the literary draft as it is written. According to Flower and Hayes, textual planning involves three cognitive subcomponents: generating information that might be included in
the composition, setting goals for the composition, and organizing information that is retrieved from memory. Translating is the process of converting ideas into textual output, and reviewing involves two subcomponents: evaluating and revising text as it is translated. Goal setting, organizing information, evaluating, and adaptive revisions are key self-regulatory processes. The recursive sequencing of these writing processes was attributed to cognitive monitoring, which is another widely studied self-regulatory process.

Bereiter and Scardamalia (1987) also viewed the act of writing as a recursive process – one that involves use of problem-solving strategies that help writers think more effectively about a topic. Self-regulatory strategies are defined as mental subroutines for enhancing writing performance. These researchers have identified two primary classes of strategies that can improve one’s writing: rhetorical and self-regulatory. Rhetorical strategies focus on developing the plot or sequence of a written passage, such as starting a story with a dramatic event and then gradually explaining its meaning to the protagonists in a plot. By contrast, self-regulatory strategies focus on managing one’s cognitive behavior during writing, such as checking verbs for their agreement with the subjects of sentences. Bereiter and Scardamalia suggest that self-regulatory strategies also contribute to the development of one’s cognitive system by enabling writers to discover new literary rules. Thus, cognitive self-regulatory strategies are viewed as essential for explaining how writers can acquire greater skill from their own writing efforts.

Flower and Hayes’ (1980) and Bereiter and Scardamalia’s (1987) theories have spawned important investigations of individual differences in use of key self-regulatory processes involved in writing, such as goal setting, monitoring, and reviewing. For example, compared to experts, novice writers seldom set literary goals, usually create text in order of recall regardless of the audience, seldom monitor their output in relation to writing goals, and seldom revise text at an organizational level (e.g., Flower, 1979; Flower & Hayes, 1981, 1984; Scardamalia & Bereiter, 1983). These two models have focused primarily on explaining cognitive processes in the development of writing competence. But, as we noted at the outset of this chapter, highly competent writers have relied extensively on self-regulatory techniques to enhance their writing performance as well. Writing is more than a literary expression of cognitive skill: It is a social cognitive process wherein writers must be willing to devote personal time and effort to revise text drafts until they communicate effectively. Adverse writing environments, poor writing behavioral practices, low perceptions of self-efficacy or literary benefits can undermine engagement in writing activities and subsequent development of literary skill. Professional writers take special pains to create favorable social and physical environments in which to write. Furthermore, they use a variety of behavioral as well as cognitive self-regulatory methods to garner and sustain their affective experiences and motivation, as we will discuss in detail next.

2 A Cyclical Model of Self-Regulation by Writers

Social cognitive researchers have developed a cyclical model of self-regulation involving three sequential phases similar to Rohman’s (1965) writing stages and Flower and Hayes’ (1980) writing processes. This social cognitive formulation (e.g., Zimmerman, 2000a), which involves forethought, performance, and self-reflection phases (see Figure.1), was
derived from research on self-regulation in diverse areas of functioning. It includes sources of motivation as well as cognitive processes in a cyclical feedback loop wherein writing outcomes are used to modify and guide subsequent efforts to write. According to this view, forethought phase processes and sources of motivation prepare individuals to engage in writing. Performance phase processes influence attention, volition, and writing behavior, and provide input for self-reflection phase judgments and reactions. Finally, these self-reflective reactions influence forethought cyclically regarding subsequent efforts to write. Because of its cyclical nature, this model seeks to explain writing as a continuing process of growth as a writer becomes more competent.

**Forethought phase.** These preparatory self-regulatory processes and beliefs fall into two major categories: task analysis processes and sources of self-motivation (see Figure 1). Prior to performing, expert writers analyze their literary tasks and set specific writing goals, such as daily or weekly word counts or page completion, for themselves. For example, before the prolific British novelist Anthony Trollop (1946) began writing, he set weekly page writing goals for himself. He believed these goals focused his daily writing activities and functioned as implicit standards for self-evaluation.

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**Figure 1:** Phases and subprocesses of self-regulation. Adapted with permission from Zimmerman, B. J., & Campillo, M. (2003). Motivating self-regulated problem solvers. In: J. E. Davidson, & R. J. Sternberg (Eds.), The nature of problem solving (Figure 8.1, p. 239). New York: Cambridge University Press. Copyright (2003) by Cambridge University Press.
To reach their goals, expert writers engage in strategic planning that is appropriate for the literary task and environmental setting. This refers to choosing systematic methods for organizing, producing, and transforming written text – ranging from idea-generation strategies (e.g., the use of an outline or a figure) to revision strategies (e.g., grammatical checking of written drafts for subject–verb agreement). The American novelist and author of the Cider House Rules, John Irving, engaged in extensive planning, gathering information, making notes, systematic observations, and studying before beginning to write a book (Plimpton, 1989).

The cognitive forethought processes of highly self-regulated writers depend on advantageous sources of self-motivation, namely their perceptions of self-efficacy, outcome expectations, task interest, and goal orientation. Donald Murray (1990) put it this way, “The affective – feelings – usually control the cognitive – thinking – in my life. It is important for me to know how I feel when I write well and what causes me to feel that way” (p. 21). As we noted, self-efficacy, refers to personal beliefs about having the means to learn or perform effectively, and as we have already discussed, these beliefs are linked to students’ motivation to initiate and sustain self-regulatory efforts to write (Bandura, 1997). In his book Rejection, John White (1982) concluded that few professional writers would have succeeded without resilient sense of personal efficacy. For example, Gertrude Stein had to overcome countless rejections over periods of years before her work was published. A closely related source of motivation is an outcome expectation, which refers to beliefs about the ultimate ends of performance (Bandura, 1997). Writers often use expectations of potentially adverse consequences to motivate themselves to deliver their work on time, such as becoming destitute or losing a supportive publisher or patron (Barzon, 1964).

A learning goal orientation (Dweck, 1988; Ames, 1992b; Nicholls, 1984; Harackiewicz, Barron, Pintrich, Elliot, & Thrash, 2002) refers to learners’ intention to develop their writing competence (a learning goal) rather than to achieve competitive success (a performance goal). The American novelist William Faulkner put it this way: “Always dream and shoot higher than you know you can do. Don’t bother just to be better than your contemporaries or predecessors. Try and be better than yourself” (Stein, 1959, p. 123). Faulkner’s statement reveals that the process of learning to write has supplanted social accolades as the source of literary motivation.

Another key form of self-motivation is task interest, which refers to valuing a task for its inherent rather than its instrumental qualities in gaining other outcomes (Deci, 1975; Lepper & Hodell, 1989). As writers become proficient, the task of writing becomes a source of pleasure that is independent of subsequent social and monetary outcomes. This task valuing was particularly evident in comments by the British novelist Charles Dickens when he published his novels in serial form. He added the following note to his readers, “I send you this labor of love” (Millgate, 1959, p. 255).

Performance phase. These phase processes have been grouped into two major classes: self-control methods and self-observation (see Figure 1). Self-control refers to the major classes of strategies that writers have used. For example, self-instruction refers to overt or covert verbalization designed to enhance the process of writing (Meichenbaum & Biemiller, 1990, May). Many writers rely on listening to themselves develop their own personal voice, “As I draft, I write with my ear, hearing the language before it is on the page, following the beat, the melody, the phrasing that will reveal meaning to me” (Murray,
Poets, playwrights, and novelists commonly read written drafts aloud to appraise their tone, realism and rhythmic properties. In this way, self-verbalization functions as an additional source of feedback about the quality and appropriateness of written text.

Mental imagery refers to recalling or creating a vivid mental image of a setting, activity, or character to facilitate written descriptions of it (Pressley, 1977). Many novelists intentionally imagine a plot, character, or setting in gory, romantic, or pastoral detail to enhance the vividness of their prose. Murray (1990) puts it this way, “I see what I write, and many times the focus of my writing is in my image” (p. 97). Faulkner used a compelling image to begin many of his stories. “With me, a story usually began with a single idea or memory or mental picture. The writing of the story is simply a matter of working up to that moment to explain why it happened or what it caused to follow” (Stein, 1959, p. 133).

Task strategies, such as the use of outlines, mnemonics, or metaphors, are designed to enable writers to reduce the complexity of the literary task and to carry it out more effectively (Weinstein & Hume, 1998). For example, Irving Wallace prepared extensive notes and outlines before he began writing. “On each new novel, I have always written many outlines for myself, developing scenes, and characters, underlying story problems that need further thought. I work the novel out in chronological sequence, over many weeks, in my head and then roughly on paper before beginning it” (Wallace, 1971, p. 51–52).

Attention focusing methods are designed to improve one’s concentration during writing and screen out distracting events. For example, to engage his concentration promptly the next time he wrote, Hemingway would purposely halt his writing for the day in mid-sentence (Plimpton, 1965). The French novelist Marcel Proust was so distracted by outside sounds that he constructed a cork-lined room to screen them out (Barzon, 1964).

Another class of self-control strategies involves time management. Many novelists organize their time to ensure that they will have sufficient uninterrupted periods to write, such as at dawn. The German poet Goethe recommended, “Use the day before the day. Early morning hours have gold in their mouth” (Murray, 1990, p. 16). To prevent “burn out,” some writers set limits on their daily composing time. The poet Philip Larkin cautioned, “I don’t think you can write a poem for more than two hours. After that you’re going round in circles, and it’s much better to leave it for twenty-four hours. Some days it goes, and some days it doesn’t go. But over weeks and months I am productive” (Murray, 1990, p. 16). Clearly, these professional writers believe that the judicious management of their time for writing had significant benefits on their productivity.

Many authors use environmental structuring to select, organize, or create effective writing settings. For example, the French poet and novelist, Cendrars, described his need to write in a small-enclosed place. By contrast, the American novelist Norman Mailer preferred a long room with a view (Plimpton, 1965). William Faulkner humorously recommended a brothel as an ideal setting for writing because “The place is quiet during the morning hours which is the best time of the day to work” (Cowley, 1959, p. 124). The German playwright and philosopher Schiller kept rotten apples in his desk because he liked the fruity odor, and he often wrote with his feet immersed in cold water to stimulate thought. In contrast, the British poet and dramatist Ben Jonson believed he wrote best when he was stimulated by the pungent odor of an orange peel, a lot of tea, and a purring
cat (Barzon, 1964). Writers have been also exacting about the literary techniques they use. For example, the British poet and storyteller Rudyard Kipling would write only with the blackest ink, and the American poet Robert Frost would compose only on a writing board and would improvise for it while walking by using the bottom of his shoe if he was struck by an idea (Barzon, 1964).

Another class of writing strategies involves use of self-consequences, which refers to self-rewards for literary accomplishments according to a planned personal contingency. Hemingway used records of his daily written output to reward himself (Plimpton, 1965). If he could get more than a day ahead of his planned writing goals, he felt justified in taking a day off for pleasurable activities, such as fishing trips in the Gulf Stream when he lived in Cuba. To overcome the temptations of tavern life, the French novelist Victor Hugo resorted to giving all his clothing to his valet with strict orders not to return them until he completed his writing task (Barzon, 1964).

Adaptive help-seeking strategies refer to self-initiated efforts by writers to gain literary information or skill from social sources, such as models, tutors, or books. Adaptive help-seeking strategies are distinguished from social dependence by several key characteristics: self-initiation, selective focus, and limited duration (Newman, 1994). Professional writers are selective about the textual material in question and whom they ask for advice, feedback, or modeling assistance. For example, an expert editor (Scott, 1989) offers the following advice to writers who are concerned about sexism in their text. “When you finish writing anything, if you’re a male, ask a female to read what you’ve said. If you’re a female, ask a male to do the same” (p. 77).

The second major class of performance phase processes is self-observation, which refers to metacognitive monitoring or physical record-keeping of specific aspects of one’s performance, the conditions that surround it, and the effects that it produces (Zimmerman & Paulsen, 1995). Because novice writers fail to set selective goals, they are often overwhelmed by the amount of information that must be metacognitively monitored, and they cannot adjust their writing strategies optimally. Murray (1990) describes a writer’s need for literary focus in the as following way: “The most obvious difference between the amateur and professional writer is a matter of focus. The amateur rides off in all directions at once” (p. 92). Thus, goal setting and selection of a specific strategy during the forethought phase enables writers to monitor their writing activities more selectively and effectively during the performance phase.

Writers’ efforts to self-observe their literary progress can be significantly enhanced by self-recording, which increases the proximity, accuracy, and valence of their feedback (Zimmerman & Kitsantas, 1999). Trollop (1946), who wrote more than 50 novels, kept extensive records. When he began each new book, he would organize his personal diary into weeks, and he would set specific writing goals for each period. Trollop averaged 40 pages per week, never dropping below 20 pages and topping out at 112 pages for his most productive week. Similar forms of self-recording were used by many other writers, such as Ernest Hemingway and Irving Wallace, to increase self-awareness of their literary progress. In addition to recording writing completion outcomes, professional writers also record writing process notes to guide their efforts to compose: “Process notes help me understand what I do when the writing goes well so I can look back and repeat it when the writing doesn’t go well” (Murray, 1990, p. 21).
Self-reflection phase. Self-judgments and self-reactions are two major classes of literary self-reflection (see Figure 1). Self-judgments involve self-evaluating one’s writing performance and attributing causal significance to the outcomes. Self-evaluation involves comparing self-monitored outcomes with a standard or goal. The American playwright Thornton Wilder described the literary self-evaluation process as follows: “Every writer is necessarily a critic – that is, each sentence is a skeleton accompanied by enormous activity of rejection; and each skeleton is governed by general principles concerning truth, force, beauty, and so on” (Goldstone, 1959, p. 117). The writer Irving Wallace (1971, pp. 51–52) used a chart to self-evaluate his writing progress, “A chart on the wall served as such a disciple, its figures scolding me or encouraging me.” Setting high standards for self-evaluation can help writers improve the quality of their prose or poetry (Zimmerman & Bandura, 1994), but such standards can also inhibit one’s word fluency if they become unreasonable. The poet William Stafford (Murray, 1990) found that excessive self-evaluative standards are a major source of “writer’s block,” and he developed ways to lower his standards when his fluency dropped, such as delaying writing quality judgments until after text is generated.

Self-evaluative judgments are linked closely to causal attributions about the results of writing, such as whether a poor attempt is due to one’s limited ability or to insufficient effort. Poorly self-regulated writers often attribute their errors to uncontrollable factors, such as a lack of talent, which discourage these individuals from further learning efforts (Weiner, 1979). In contrast, attributions of errors to controllable variables, such as one’s writing technique, sustain further efforts to learn (Zimmerman & Kitsantas, 1999). Professional writers are very confident about their ability to improve the quality of initial writing efforts. For example, Faulkner opined, “If I could write all my work again, I am convinced that I would do it better, which is the healthiest condition for an artist” (Stein, 1959, p. 123). That attribution is why he keeps on working, trying again: He believes the next revision will accomplish it better.

Two key forms of self-reactions to writing efforts have been identified: self-satisfaction and adaptive inferences. Self-satisfaction refers to perceptions of satisfaction or dissatisfaction and associated affect regarding one’s writing performance. People will pursue courses of action that result in satisfaction and positive affect and will avoid those courses that produce dissatisfaction and negative affect, such as anxiety (Bandura, 1991). Expert writers condition their self-satisfaction on their progress in reaching their high literary goals (Zimmerman & Bandura, 1994). For example, William Faulkner cautioned that a writer, “must never be satisfied with what he (sic) does. It never is as good as it can be done” (Stein, 1959, p. 123). An accomplished writer’s personal satisfaction stems from improvements with each revision of a work in progress.

Another form of self-reactions involves adaptive or defensive inferences, which are conclusions about how one needs to alter his or her approach during subsequent efforts to write. Expert writers make adaptive inferences during writing, deciding to revise their written drafts and avoid making defensive inferences, which serve primarily to protect them from future dissatisfaction and aversive affect. The American humorist James Thurber was supremely confident in his skill in adapting crude text into polished prose. He jokingly describes his first drafts as “if it was turned out by a charwoman” (Plimpton & Steele, 1959, p. 88).
Because of the cyclical nature of self-regulation, a writer’s self-reactions to each literary draft influence his or her forethought processes regarding further revisions. For example, a writer’s self-satisfaction reactions strengthen his or her self-efficacy beliefs about improving the quality of prose and increase his or her interest in the task of writing (Zimmerman & Kitsantas, 1999). These enhanced sources of self-motivation cyclically sustain a writer’s self-regulatory efforts. Similarly, adaptive inferences regarding one’s writing efforts lead to adjustments in forethought process goals to guide the next self-regulatory cycle.

2.1 Research on Cyclical Self-Regulatory Processes and Sources of Self-Motivation

In this section, we discuss research on self-regulatory processes and sources of motivation according to their cyclical phase (see Figure 1). Because of our focus on writing production and revision, we exclude from this review studies of the self-regulation of the quality of one’s cursive script, accuracy of printing, or neatness.

In a study of forethought phase goal setting, Hull (1981) asked college undergraduates to set a specific goal and record the number of words they actually wrote that day. After baseline assessment of their word output, one group of students was asked to set goals personally whereas another group of students had their teacher set goals for them. Although the two goal groups did not differ significantly in word output, both groups did write longer journals after goals were set compared to baseline assessment. In another study of goal setting, Page-Voth and Graham (1999) asked 7th and 8th graders with learning disabilities (LD) to adopt as their goal increasing the number of arguments and refutations of counterarguments to the thesis of their essay. These students displayed more and better quality arguments and counterarguments than students in a no-goal control group. Graham, MacArthur, and Swartz (1995) studied the effect of an “add information” strategy for assisting fifth and sixth grade students with writing and learning problems. This strategy involved reading their paper and then inserting three additional things to make their paper better, such as things that happened, description of things, or details. Compared to students given a general goal to revise their paper better, students taught the task-specific strategy made more meaning-based changes and improved the quality of the text better. Clearly, from the elementary school level to the collegiate level, students who set specific goals to guide their writing produced wrote more effectively.

In a study of strategic planning during the forethought phase, Bloom (1988) examined the organizational strategies that ninth grade students used in their pre-writing samples for a statewide proficiency test. This researcher found that 65% of these students engaged in pre-writing, which was classified into 15 categories. Of the students who pre-wrote, the majority (53%) re-wrote the topic and then jotted down one or more ideas, 15% made lists, 9% created a formal outline, 4% used diagrams, and the remainder used a number of miscellaneous procedures, such as free writing and doodling. The two most highly organized pre-writing strategies, outlining and listing, produced the best essays. In contrast, the less organized but most frequently used strategies, re-writing the topic and jotting down ideas, led to essays of the poorest quality. Spivey and King (1989) studied the strategic planning of students from the 6th, 8th, and 10th grades who were asked to write a report based on three related encyclopedia articles. These researchers found that the quality of final essay
was significantly related to amount of written planning prior to writing. In a study of women from a junior college who were identified by their teachers as good or poor writers, Ferrari, Bouffard, and Rainville (1998) found that good writers waited longer before beginning to write, wrote for a longer period of time, and produced higher quality essays than poor writers. Across many academic levels, students who engaged in strategic planning before writing produced higher quality essays than those who failed to plan.

Regarding the role of self-motivation during the forethought phase, there is evidence that self-efficacy beliefs play an important role in writing (Graham & Harris, 1989a; Pajares & Johnson, 1994). For example, McCarthy, Metier, and Rinderer (1985) assessed the writing ability and the self-efficacy of college freshmen in beginning writing courses. Students wrote expository essays in class at the beginning and end of the semester, and their teachers assessed each essay for writing quality. The investigators found that self-efficacy perceptions regarding writing were significantly associated with the quality of the writing. In a study of college freshmen during their writing classes, Zimmerman and Bandura (1994) assessed students’ self-efficacy, goal setting, and self-evaluation at the beginning of the semester, and their final grades at the end of the semester. It was found that the students’ self-efficacy beliefs were predictive of their self-evaluative standards, grade goals, and their final grades in the writing course. Thus, students’ self-efficacy beliefs about their writing proficiency were predictive of not only their superior writing outcomes but also their greater use of self-regulation processes, such as self-evaluation.

The motivational role of outcome expectancies of writing for accomplishing various academic and life endeavors, such as attaining future employment, were studied by Pajares and Johnson (1994) with pre-service teachers. The teachers’ writing outcome expectancies were a significant predictor of their writing performance at the end of the term, as were their self-efficacy beliefs regarding their writing skills. These two motivational beliefs were not significantly correlated, indicating that they were distinctive sources of writing motivation. Interestingly, when the two motivational beliefs were studied together, only the self-efficacy measure predicted the teachers’ writing performance significantly. In a study of writing skill with college undergraduates, Shell, Murphy, and Bruning (1989) reported similar results. An explanation for these complex findings can be derived from social cognitive theory. Bandura (1986) has cautioned that when self-efficacy and outcome expectancies are studied together, the former will be more predictive because students will not strive for desired outcomes of tasks if they feel incapable. However, for tasks where competence plays a minor role, perceived outcomes should be more predictive of efforts to learn. Although writing has not been studied in such settings to our knowledge, there is evidence that self-efficacy and outcome expectancy were equivalent predictors of mere intentions on an elementary communication task (Maddux, Norton, & Stoltenberg, 1986).

There is also evidence that students’ self-efficacy beliefs are closely associated with their task interest or valuing. Zimmerman and Kitsantas (1999) found that high school girls’ perceptions of self-efficacy for writing were predictive of their interest in this task as well as their attained level of proficiency. Hidi, Berndorff, and Ainley (2002) found that the self-efficacy beliefs of sixth graders were predictive of their interest in writing — both at a general level of skill as well as at specific tasks, such as writing stories, poetry, reports, notes, and revision. It appears that students value especially academic tasks at which they are most competent.
Another key source of motivation in writing is students’ goal orientation. Schunk and Schwartz (1993a) assigned fifth grade students to one of three goal-setting conditions: to acquire a writing strategy (a learning goal), to write good paragraphs (performance goal), or to work effectively (general goal). The performance goal focused on the quality of writing outcomes whereas the general goal focused on accomplishing the task. Students in the learning goal condition exhibited the highest level of writing skill and self-efficacy, particularly when they received progress feedback from their instructor. In a parallel study with gifted fourth grade students, Schunk and Schwartz (1993b) reported similar findings. Clearly, students who set learning goals for themselves enjoy significant learning and motivational benefits.

In a study of the performance phase process of self-instruction, Daiute and Kruidenier (1985) prompted a group of seventh and ninth graders to question themselves about text they had written. Compared to students who did not self-verbalize, self-verbalizers revised more often and in a more meaningful way. Beal, Garrod, and Bonitatibus (1990) presented elementary school children with stories, some of which contained text errors and inconsistencies, and asked the children to revise the stories. An experimental group was taught to query themselves about the content of the stories by asking, “Why are the people in the story doing what they did?” These trained subjects found and revised more text errors than students in an untrained control group.

Englert, Raphael, Anderson, Anthony, and Stevens (1991) taught fourth and fifth graders to engage in self-talk using “think-sheets” that involved planning, organizing, and revising. Compared to untrained students, self-verbalizing students gave more interesting introductions, displayed a greater awareness of audience, mentioned more targeted text elements, and exhibited greater metacognitive awareness of the writing process. In addition, students in the self-talk group showed more generalization than untrained students. Evidently, students as young as elementary school age that engage in various forms of self-instruction during writing produced higher quality essays.

With regard to the mental imagery as form of self-control, Long and Hiebert (1985) taught a group of gifted students in grades three to six to use mental images to write a story. A comparison of stories written before and after the intervention showed an improvement in both the quantity and quality of writing. Jampole (1991) assigned gifted elementary students into one of three experimental conditions: mental imagery training, writing practice, and control. After the intervention, subjects engaged in creative writing, which was analyzed for originality and inclusion of sensory descriptions. The trained imagery group scored the highest on these measures, and these effects persisted on a delayed post-test. In a study involving the same experimental conditions with third and fourth graders, Jampole, Mathews, and Konopak (1994) found that mental imagery training enhanced students’ story structure originality, novelty, emotional tone, unusual response, and story style more than the writing practice or control conditions. Plainly, students who engaged in mental imagery during writing produced more creative essays than those who wrote without such imagery.

Regarding the self-control process of task strategies, Day (1986) assigned collegiate undergraduates to one of four conditions: summarization training alone (a task content strategy), self-management training alone (involving such activities as paying attention and checking), and two summarization plus self-management training conditions. After training, the students summarized eight expository texts. On an immediate post-test,
students who received the combined treatment summarized better than did students who
received only summarization training, although this difference was not statistically signif-
icant. On the delayed post-test, however, students in the combined summarization and self-
management group summarized significantly better than students who received training in
only summarization.

Graham, Harris, and their colleagues (Graham, Harris, & Troia, 1998) have studied the
effectiveness of various writing task strategies extensively. For example, three elementary
school LD students were taught to use the mnemonic strategy TREE (i.e., *Topic* sentence,
*Reasons*, *Examine* reasons, *Ending*) for writing argumentative essays (Graham & Harris,
1989b). Compared to baseline levels, all three students displayed considerable gains in
essay elements, story grammar elements (a generalization task), and overall quality.
Regarding coherence and number of words, two of the three subjects showed substantial
improvement. In addition, two of the three subjects increased their self-efficacy ratings
from pre- to post-treatment. Some maintenance effects were detected 12 weeks after
treatment.

Graham and MacArthur (1988) taught three elementary school students a strategy for
revising argumentative essays with a word processor. The mnemonic for the sentence revi-
sion strategy was SCAN: Does it make “Sense?” Is it “Connected” to my belief? Can I
“Add” more? “Note” errors. After training, all students displayed quantitatively more and
qualitatively better revisions. Two of the three students made fewer errors in spelling, cap-
itulation, and punctuation. And, finally, all students reported significantly higher self-
efficacy scores after training. Therefore, from the elementary school level to the collegiate
level, students’ use of task strategies led to superior literary output than when no strategies
were used.

To help a group of college undergraduate students self-control their *attention* when
writing, Kellogg (1988) trained them to write outlines for business letters. Compared with
an untrained control group, trained students displayed better writing quality overall and
better writing specifically in three of the five areas: idea development, effectiveness, and
language usage. Interestingly, students who outlined spent less time in planning and revis-
ing and more time in writing than did their control counterparts, presumably because the
outline reduced the cognitive load. The experimenter then added another training condi-
tion – to construct mental outlines, and he found that the essay quality for both outline con-
ditions was better than that for the no-outline control condition. However, students in the
two outline conditions did not differ on any of the writing quality measures. Clearly men-
tal organizational approaches compared favorably to physical approaches in this research.

In a study of the self-control process of *time management* during writing, Pianko (1979)
compared regular and remedial college students. Time management focused on pre-writ-
ing time, which refers to time taken after students receive a topic but before they begin
writing. Expert writers use this time period to generate and organize ideas and to decide
what they are going to write. Pianko found that non-remedial students engaged in signifi-
cantly longer pre-writing time than remedial students did. Similarly, Kennedy (1985)
found that, after acquiring information to use in writing an essay, higher ability college stu-
dents spent more time in planning than did lower ability students. Thus, in comparison to
disadvantaged (remedial and lower ability) college students, advantaged students planned
and managed their writing time more effectively.
The self-control process of *environmental structuring*, has received very little research to date despite its widespread use by well-known writers. In a pioneering study, Marcus (1988) placed individual students from the 3rd, 8th, and 11th grades into a room where a distracting radio and television set already was playing. Subjects then wrote a brief essay, and their behaviors before, during, and after writing were recorded. After evaluating the quality of the essays written under these conditions, the investigator found that higher essay quality was related to spending less time watching television and to adjustment of the sound on the radio to a lower level. These students restructured their environments to be more conducive for writing.

Another writing self-control process that has received very little empirical attention is *self-consequences*. In a study that initially involved self-recording, Ballard and Glynn (1975) sought to increase third graders’ writing output by having them count and record the number of sentences they wrote, along with the number of adjectives and action verbs. Unexpectedly, this self-recording procedure had little effect on word output when compared to baseline levels. Then investigators added self-consequences to the intervention by asking the subjects self-reward themselves for every time they wrote either an adjective or action verb. The self-reward involved taking a minute of free time to enjoy whatever they wished to do (i.e., free-choice). By adding self-consequences to self-recording, the students wrote longer stories and included more of the targeted types of words in their stories.

In a study of *help-seeking* from text sources, Nelson and Hayes (1988) compared freshman and upper classman college students who were assigned to write an essay. During trips to the library, the freshman chose pre-digested literary sources (e.g., encyclopedias) more often than upper classman, who tended to choose original literary sources. It appears that the quality of students’ help-seeking effort is related to their level of collegiate training. Risemberg (1993) assigned college undergraduates the task of writing a comparative expository essay on a particular topic, for which readings were provided. In addition, the students had the option of accessing three documents on a personal computer: two model essays using a comparative format and a guideline for writing essays according to this organizational format. In order to gain access to these additional texts, subjects had to keep a computer key depressed, whereupon the computer recorded the amount of time spent accessing these texts. Two variables, reading ability and self-selected text access, uniquely and independently predicted final writing quality. In summary, students who sought literary assistance more often and more effectively during writing composed better essays than students who wrote without such assistance.

To understand writers’ self-observation processes, Espin and Sindelar (1988) studied their *metacognitive monitoring*. These researchers gave normal and LD students texts, which contained various grammatical and syntactic errors, to revise. When asked to read the texts aloud, both groups of students detected and corrected more errors than when they read the texts silently. Other researchers focused on behavioral self-recording as a self-observation technique. In a study of *self-recording* of writing activities, van Houten (1979) engaged elementary school students in daily story writing periods during a baseline period and then asked them to self-record their writing output, in terms of the number of words per minute and percentage of action words, on a bulletin board. Compared to baseline writing, students increased these two target behaviors, and these outcomes generalized to other story writing without self-recording. Sawyer, Graham, and Harris (1992) compared strategy training with
and without self-recorded goal attainment by fifth and sixth grade LD students. Compared to strategy training alone, goal setting and self-recording increased the schematic structure of the students’ revisions during a generalization phase in writing.

Rumsey and Ballard (1985) investigated the effects of self-recording of writing behaviors as well as written output with students aged 9–11, some of whom were behaviorally disruptive and initially showed low levels of on-task writing behavior. Self-recording focused on students’ output of words and being on task during daily story writing periods. The investigators concluded that disruptive and non-disruptive students both increased their written word output and on-task behavior. Harris, Graham, Reid, McElroy, and Hamby (1994) compared the effectiveness of the two types of self-recording used by Rumsey and Ballard (1985): performance monitoring (recording the amount of output) versus attention monitoring (recording on-task behavior) on story writing by four LD fifth and sixth graders. The two self-recording interventions were found to be comparable in enhancing both writing output and on-task behavior. Plainly, students who metacognitively tracked or behaviorally recorded their literary output displayed a higher quantity and quality of writing than students who wrote without tracking or recording.

Regarding self-reflection phase *self-evaluation* judgments, researchers have studied comparisons of one’s written work with either self-set or externally set standards of performance. For example, second, and third grade students were asked to self-select their standards rather than using teacher-set standards to complete a series of writing tasks (Dickerson & Creedon, 1981). Students employing self-selected standards performed better than students in the teacher-selected standards group although both experimental groups displayed better writing than did students in a no-standards control group. Deshler, Ferrell, and Kass (1978) sought to assess differences in self-evaluative criteria between LD and normal students when reading personally generated and externally generated text. These researchers found that both ability groups of students used similar criteria for finding errors in externally generated material, but the LD students were less likely than normal students to identify errors in their own writing. Hillocks (1986) reviewed studies of secondary and higher education students, in which they were asked to evaluate their own and/or others’ writing. This investigator found that using specific criteria to self-evaluate led to better writing and re-writing than more traditional methods, such as formal grammar instruction.

There is evidence that students can be trained to self-evaluate more effectively. Fitzgerald and Markham (1987) used instructor modeling to teach sixth graders to revise their writing using a self-questioning strategy involving specific standards of writing quality. Trained students displayed improved knowledge of the revision process, made more revisions in their stories, and showed better writing quality across drafts compared to students in a control group who simply read literature. From the elementary school level to the collegiate level, students who self-evaluated their textual output using specific criteria displayed better writing and revision than students who failed to self-evaluate.

A second key form of self-judgment involves *attributions*. Rennie and Brewer (1987) interviewed 10 graduate students who experienced writer’s block during the writing of their thesis, and another six students who were not blocked, in order to ascertain the different circumstances and strategies between the two groups. The authors
found that blocked writers attributed their difficulties to a lack of control of the task, especially their poor time management. In contrast, the unblocked writers reported widespread use of specific time management plans. This finding implies that students’ use of time management strategies during performance phase influenced their self-reflective phase attributions. To test this hypothesis, Boice (1982) trained six graduate students to unblock their writing by using charts containing planned their schedule for writing and their daily output. This chart was designed to increase the students’ control over their writing, and it was successful in increasing their daily literary production. Evidently, students who attributed their writers’ block to a lack of control over their management of time were better able to employ planning charts to improve their literary production.

In a study of the relation between self-reflective phase attributions and self-satisfaction during writing, Zimmerman and Kitsantas (1999) asked college students to revise a series of sentences from commercially available sentence-combining workbooks. These exercises involved transforming a series of simple and often redundant sentences into a single non-redundant sentence. During a practice session following training, girls in a process goal group focused on strategic steps for revising each writing task, whereas girls in an outcome goal group focused on decreasing the number of words in the revised passage. Some of the girls in each goal group were ask to self-record during writing revision performance. A theoretically optimal group shifted from process goals to outcome goals when use of the strategy became automatic. Girls in the process-monitoring group recorded any strategy steps they missed on each writing task, whereas girls in the outcome-monitoring group wrote down the number of words used in each writing task. Girls in the shifting goal group changed their method of self-monitoring when they shifted goals. Thus, the experiment compared the effects of process goals, outcome goals, and shifting goals as well as self-recording during self-directed practice. The students were also asked during their writing revision why they did not perform optimally on all problems (i.e., their attributions for errors) as well as about their self-efficacy and task interest. It is advantageous motivationally to attribute errors to faulty strategy use because strategies can be corrected whereas attributions to uncontrollable forces, such as a personal lack of writing ability, cannot be corrected.

As hypothesized, girls who shifted goals from processes to outcomes after achieving automaticity surpassed the writing revision skill of girls who adhered exclusively to process goals or to outcome goals. Girls who focused on outcomes exclusively displayed the least writing skill. Self-recording enhanced writing acquisition for all girls regardless of their goal setting group. In addition to their superior writing skill outcomes, girls who adopted processes goals, whether initially or entirely during learning, attributed their outcomes significantly more often to strategy use than students who revised without goals or with outcome goals. Of particular interest, students’ attributions of errors to faulty strategy use were highly predictive of students’ self-satisfaction with their performance outcomes and with the quality of their strategic adaptations. Self-satisfaction was in turn highly predictive of the students’ self-efficacy beliefs and interest in the writing revision task, two key sources of forethought phase self-motivation to master this writing revision skill. In support of a three-phase model of writing self-regulation, the girls’ level of self-satisfaction was closely linked to their self-reflection phase attributions and their literary adaptations.
Similar findings were reported in a study of modeling influences on the same writing revision task (Zimmerman & Kitsantas, 2002). This writing study sought to demonstrate that self-regulatory skills, such as self-monitoring and self-correcting actions, could be learned vicariously. Two forms of modeling were studied. A mastery model performed flawlessly from the outset of the training, whereas a coping model initially made errors but gradually corrected them. Coping models are viewed as a qualitatively superior form of observational learning because they convey self-regulatory actions, such as self-monitoring and self-correction, as well as writing revision skill. By contrast, mastery models portray primarily writing revision skill. Students in a control group learned without the benefit of modeling, and some members of each of the three experimental groups were given social feedback. Students who observed the higher quality coping model revised more effectively than students who observed the lower quality mastery model. Social feedback improved writing skill for both forms of modeling. Students exposed to either form of modeling displayed higher levels of self-satisfaction, which was highly predictive of better strategic adaptations as well as improved self-efficacy beliefs and interest in the task than students who learned without the benefit of modeling experiences. As was reported in the previous study, the girls’ degree of self-satisfaction was predictive of their literary adaptations as well as their forethought phase motivational beliefs.

To improve students’ adaptation of their efforts to write, Graham (1997) taught 12 fifth and sixth grade students with LD to write and revise two stories under two sequential conditions: normal writing followed by writing using a revision strategy. This strategy involved identifying mismatches between the writer’s intentions and writing outcomes, locating the cause of mismatch, and deciding how to improve the text. The results also showed that 87% of the students believed the adaptation strategy improved the quality of their revisions, and objective analyses of the writing also revealed improved revisions. Thus, the writing revision strategy enhanced the quality of the students’ evaluation and adaptation of their writing.

2.2 Enhancing Writing Instruction: A Self-Regulation Approach

When analyzed from a cyclical self-regulation perspective, traditional writing instruction relies mainly on teachers’ lecturing and feedback about the effectiveness of students’ efforts to write. Unfortunately, this teacher-centered pedagogical approach does little to enhance forethought processes and often leads to negative self-reactions because students who fail to set personal goals tend to rely on graded comparisons with other students to derive information about their effectiveness. An at-risk student’s dependence on a graded (i.e., a social comparative) criterion of personal effectiveness is often unfair because other students usually start with higher levels of writing skill. It is also insensitive to improvements because other students’ writing skills also improve with practice. Furthermore, at-risk students’ lack of forethought strategies leads them to attribute errors in writing to uncontrollable forces, such as limitations in personal ability. This unfortunate attribution, in turn diminishes self-satisfaction, reduces adaptive self-reactions, and undermines sources of self-motivation to continue future cycles of learning to write.
In recent years, educators have taught students to use a variety of strategies to improve the quality of their writing. Although these efforts have often been successful in producing short-term outcomes, continued use of these strategies has been a problem (Pressley, Borkowski, & Schneider, 1987). Often the effectiveness of writing strategies has not been appreciated personally, and this has undermined students’ motivation to continue to improve the quality of their writing. Researchers have sought to determine how and why students strive to improve their writing through the development of personal discipline involving self-regulatory forethought processes and sources of self-motivation.

According to Graham et al. (1998), effective self-regulatory writing instruction involves four characteristics. First, it is interactive in that the instructor and student jointly collaborate to diagnose shortcomings in writing skill, setting appropriate goals, and choosing strategies for training. Second, instruction is individualized using modeling, guidance, and feedback that are personally tailored to the goals of the student. Third, instruction is based on sequential mastery of writing strategies, and fourth, instruction is adapted developmentally in that new strategies are introduced as previously taught strategies are upgraded. These characteristics are implemented in a multi-stage Self-Regulated Strategy Development model (SRSD), which initially involves a teacher’s and student’s evaluation of the latter’s current performance, a discussion of benefits of a strategy and the goal of using it, a teacher’s modeling the use of the strategy, a student’s memorization of the strategy using a mnemonic, a student’s self-verbalization when implementing the strategy, and finally, a student’s independent use the strategy during writing performance. There is extensive evidence of the effectiveness of this approach in teaching writing strategies in ways that are maintained over significant periods of time (De La Paz & Graham, 2002; Graham et al., 1998). Although there is evidence that students’ self-efficacy beliefs were enhanced by the SRSD approach (Graham & Harris, 1989b), other sources of motivation have received limited study.

From a cyclical perspective of self-regulation (Zimmerman & Kitsantas, 1999, 2002), students acquire writing skill in four sequential levels. Like the SRSD model, a cyclical instructional approach relies initially on social modeling and verbal description of needed writing strategies, followed by socially supported practice, self-directed practice, and finally independent performance. Associated with each of the four levels is a distinctive form of instruction and motivation, to which we now turn.

After discerning shortcomings in a student’s writing skill, such as poor revising, the teacher helps the student to target this deficiency as an outcome goal and to choose a specific strategy to correct it. The teacher then models and describes the revision strategy so that the student assimilates it at an observational learning level. To illustrate this multi-level approach to self-regulatory instruction, we will use the writing revision task adapted by Zimmerman and Kitsantas (1999, 2002). This revision task involves transforming a series of simple and often redundant sentences, such as, “It was a ball. The ball was striped. The ball rolled across the room” into a single non-redundant sentence, such as, “The striped ball rolled across the room.” An objective scoring system was developed to assess the effectiveness of the revisions based on eliminating all unnecessary words and integrating the remaining words grammatically. The following multi-step strategy for rewriting these sentences was developed: (a) to identify Novel words sequentially in each sentence, (b) to delete Redundant words, and (c) to integrate the
Remaining words in a meaningful sentence. To help the student memorize this strategy more easily, the teacher will use **NRR** as a mnemonic to reconstruct the three steps.

To enhance a student’s observational learning, the teacher models this strategy in a coping manner—namely, making common errors across variations in sentence revision problems but correcting and explaining the errors in terms of the strategy. A student’s motivation to learn at an observational level is greatly enhanced by positive vicarious consequences to the model, such as self-praise, when the teacher corrects a poorly written revision. Coping statements by the teacher-model also motivate vicariously because they convey the high value placed on the literary quality of one’s writing (Zimmerman & Koussa, 1979) and the need to persistently self-evaluate in order to improve the quality of one’s revisions (Zimmerman & Ringle, 1981).

After the writing strategy is acquired at observational level, the teacher asks the student to **emulate** the model’s writing strategy motorically on a corresponding task. The student is asked to verbalize his or her use of the writing strategy so that the instructor can monitor the student’s level of understanding. To increase a student’s accuracy and motivation during efforts to emulate, the instructor provides him or her with positive guidance, corrective feedback, and praise (Zimmerman & Kitsantas, 2002). Overt performance also produces motoric feedback to the aspiring writer. Thus, the key forms of motivation during this emulation level are **direct** and **social reinforcement**.

After the writing strategy is mastered at an emulation level, the teacher reduces his or her support by asking the student to practice on his or her own in a structured setting. To optimize acquisition of **self-controlled** level of writing skill, the teacher advises the student to guide his or her practice effort using the cognitive strategy and behavioral process standards gleaned from an expert model’s performance (Bandura & Jeffery, 1973). The student’s success in matching these standards during practice will determine his or her degree of **self-satisfaction**, a key source of motivation at this level. The teacher should encourage students to self-verbalize the strategy steps to guide his or her revision efforts more effectively (Schunk & Rice, 1984, 1985). Students are advised to set learning process goals (i.e., focusing on strategy steps) rather than performance outcome goals (i.e., the number of words in the sentence revision) until the strategy is mastered (Zimmerman & Kitsantas, 1999).

After the writing revision strategy is mastered at a self-controlled level, the teacher asks the student to perform his or her writing revision skills in unstructured personal settings, such as when writing personal essays, rather than with teacher-selected sentence recombining problems. To achieve a **self-regulated** level of writing revision, the student is asked to adjust his or her revisions based on their effectiveness, such as literary parsimony and clarity. These outcome goals represent the ultimate criterion by which the effectiveness of a written revision was assessed, and, as such, they can motivate moderately successful learners to strive for higher levels of mastery (Locke & Latham, 2002). As a result of their enhanced effectiveness, level four students will perceive higher self-efficacy for attaining positive outcomes and greater interest in the task of writing, two key forms of self-motivation.

Thus, a multi-level analysis of writing instruction begins with most extensive social guidance at the first level, and this social support is reduced systematically as aspiring writers acquire self-regulatory skill. However, a student’s functioning at a self-regulatory
level continues to depend on social resources on a self-initiated basis. Because the effectiveness of a writer’s skill depends on adaptation its to variations in contexts, unfamiliar performance tasks can uncover limitations in existing strategies and can require additional social learning experiences. This multi-level formulation does not assume that learners must advance through the four levels in an invariant sequence as developmental stage models assume, or that once the highest level is attained, it will be used universally. Instead, this multi-level model assumes that students who master each skill level in sequence will learn more easily and effectively.

3 Conclusion

Writing is one of the most complex skills taught in school (Murray, 1990), and there is extensive evidence that it is seldom learned well (De Witt, 1992). Traditional forms writing instruction have given little attention to self-regulative and self-motivational dimensions of writing – perhaps because the role of these sources of self-discipline during writing have not been well understood. In this chapter, we discussed biographical anecdotes as well as empirical evidence indicating that successful writers self-regulate systematically to achieve high levels of literary quality. According to current theories, one’s writing skill involves a complex system of processes and sources of self-motivation that must be self-regulated to attain one’s literary goals. The interrelation of various self-regulatory processes and sources of self-motivation can be explained according to three cyclical phases: forethought, performance, and self-reflection. From a cyclical perspective, advantageous forethought processes set the stage for superior forms of writing performance and self-reflection. Teachers can convey a writing skill, such as text revision, more effectively by demonstrating use of a powerful writing strategy according to a multi-level social cognitive sequence. This instructional sequence, which begins with literary modeling and positive vicarious consequences, has the added benefit of systematically enhancing several key sources of self-motivation, especially a heightened sense of personal efficacy. Murray (1990) described the importance of these personal beliefs to effective writing in the following way, “Yet we also write best – just as we play tennis best – if we feel confident. We have to learn to write with confidence (p. 5).”

Acknowledgments

We would like to thank Suzanne Hidi and Piero Boscolo for their helpful suggestions with an earlier draft of this chapter.
SECTION II:

EMPIRICAL STUDIES INVESTIGATING THE RELATIONSHIPS BETWEEN MOTIVATION AND WRITING
Chapter 5

Writing on an Interesting Topic: Does Writing Foster Interest?

Pietro Boscolo, Laura Del Favero and Michele Borghetto

The chapter focuses on the hypothesis that writing on a topic may stimulate interest in the topic. Three-hundred and eighteen 12th-graders were asked to read three texts on globalisation, and then were ascribed to one out of four different conditions. In a first condition (personal view) participants were asked to write a short paper dealing with the most interesting aspects of globalisation. In a second condition (synthesis) they were asked to synthesise the three texts. In a third condition (underlining) participants were asked to underline and reorder the most important sentences in the texts. Finally, students in the control condition were allowed to perform any kind of schoolwork that was unrelated to the readings. Motivation to write as well as prior topic knowledge were assessed prior to reading, while interest in the topic and interest in the texts were assessed before and after writing. Post-writing measures of knowledge of the topic were also collected. Results showed that participants in the synthesis condition scored better in the post-writing comprehension measures. Students in the personal view condition reported a decrease of interest in the topic. Interesting relations among motivation to write, text-based and topic interest also emerged.

Research on interest and writing includes several studies conducted on the conditions which make a writing task attractive to children and which may contribute to a long-lasting positive orientation to writing. Some studies have investigated the role of interest in writing, in the light of the distinction between situational and individual interest (Hidi, 1990; Renninger, Hidi, & Krapp, 1992; Schiefele, 1991). Hidi and McLaren (1990, 1991) hypothesised that a source of situational interest, that is, the interestingness of themes and topics, which has been shown to influence children’s comprehension, should also influence children’s production of expository texts. Topics were defined as coherent knowledge domains (e.g., space travel, wildlife), and distinguished from themes, which represent a
generalised form of specific content-related knowledge (e.g., survival, the impact of computer technology). The degree of interest of various topics and themes was previously rated by fourth- and fifth-graders and teachers. Subsequently, the same students were asked to write a composition on either a high-interest or a low-interest topic. The authors failed to demonstrate the positive effect of topic interest on the quality of written expositions, whereas combining topic with interesting themes (Space Travel with Survival, Living in the City) resulted in longer productions. Moreover, students who had rated Living in the City as a low-interest topic performed significantly better than those who showed some interest. The authors concluded that writing on a familiar and boring topic such as Living in the City was facilitated by high knowledge. From other studies, however, some limited evidence emerged to support claims of an association between interest and writing quality. Whereas in Hidi and McLaren’s studies (1990, 1991) interest was generated by text topic, Benton, Corkill, Sharp, Downey, and Khramtsova (1995; see also Albin, Benton, & Khramtsova, 1996) focused on interest in a topic as an individual difference. The authors found individual writers’ interest in the writing topic to be associated with particular aspects of writing quality.

In the above-mentioned studies of interest in writing, topic attractiveness has been viewed as a basic motivational source of writing, an independent variable affecting the quality of the written text. Interest has tended to be viewed as rather static: students are thought to be interested, or uninterested, in a particular topic they write about. However, being interested in a topic does not necessarily imply that one is interested in writing about that topic. In a recent intervention study, Hidi, Berndorff, and Ainley (2002) considered interest in writing as an activity (see also Boscolo & Cisotto, 1997), the source of interest being not an attractive topic or theme, but the various forms or functions of writing as realised in specific genres such as arguing, narrating, reporting, etc., related to meaningful classroom activities.

The study we report here has taken yet a different approach to the issue of interest and writing. We aimed at analysing the effects of a complex writing task – writing a text by elaborating information from multiple sources on the same topic – on both interest in the sources and in the topic; that is, in our study these two types of interest were considered dependent variables. The hypothesis of writing affecting interest represents the integration of contributions from two research areas: the role of interest in text processing (text-based interest), on the one hand, and research on elaborative writing, particularly on writing a text from multiple sources, or discourse synthesis, on the other.

1 Text and Task as Sources of Interest

Text-based interest is considered a particular type of situational interest (Hidi, 1990; Hidi & Anderson, 1992), whose effects on comprehension have been investigated and conceptualised since the 1980s. Hidi and Baird (1988) were the first to use the expression “text-based”, which indicated interest generated by reading salient sentences, that is, sentences conveying novel or unexpected meanings. The origin of text-based interest is seen as being in the text: interest can be activated by particularly attractive or involving topics (Kintsch, 1980; Schank, 1979), surprise (Hidi & Baird, 1986), novelty and activity level
(Anderson, Shirey, Wilson, & Fielding, 1987), seductive details (Wade & Adams, 1990), vividness of description (Garner, Brown, Sanders, & Menke, 1992; Iran-Nejad, 1987), coherence (Wade, Buxton, & Kelly, 1999), and ease of comprehension (Schraw, 1997; Schraw, Bruning, & Svoboda, 1995). In a seminal review, Hidi (1990) concluded that two types of factors contribute to text-based interest: structural characteristics of the text, such as novelty and surprisingness, and particular contents, that is, universally interesting concepts or topics, or life themes, such as violence, death, and sex.

The original concept of text-based interest has been further developed. A text is usually a wide context where numerous aspects, as well as their relations, can give rise to interest. Moreover, due to the emphasis on a narrowly defined text-based interest, other aspects of situational interest have been neglected or considered to a lesser degree by researchers. Recently, Schraw and Lehman (2001) have addressed these criticisms by proposing a conceptualisation in which, in addition to text-based interest, two additional sources of situational interest are distinguished: those related to task and knowledge. Task-based interest can involve encoding-task manipulations and/or changing the text itself. Encoding-task manipulations can provide perspectives from which a reader approaches a text. For instance, Schraw and Dennison (1994) found that assigning different perspectives to readers had important effects on their perception of the interestingness of text segments. The change-of-text manipulations may activate interest by making text information more accessible to readers. For instance, Hidi and Baird (1988) gave three versions of a text to 4th and 6th graders. The texts which had been manipulated to appear more interesting were judged as more interesting by students.

Finally, knowledge-based interest refers to the effect of prior knowledge on interest. Kintsch (1980) proposed that prior knowledge is related to situational interest according to a U-shaped function: that is, when finding a potentially interesting topic, a reader’s moderate amount of knowledge is likely to stimulate interest, because he or she wants to know more about the topic, whereas high and low levels of knowledge may hinder interest for the opposite reasons. Interest in a topic is not easily stimulated if the reader already knows a lot about it, or when he or she knows too little, and therefore cannot process the information appropriately and fit it in with his/her existing knowledge. However, empirical research on the relationship between prior knowledge and interest has not given coherent results.

Schraw and Lehman’s (2001) conceptualisation of sources of situational interest, and, in particular, the distinction between text-based and task-based interest, represents a valuable contribution to research on situational interest. An aspect of their conceptualisation which deserves to be analysed in greater depth regards if and how the two sources of interest – the text and the task – may interact in the situations in which reading is not an end in itself, but is directed towards performing a task. Rosenblatt’s (1978) distinction between efferent and aesthetic reading can help clarifying this point. In efferent reading, the reader’s primary concern is with what he or she will carry away from the reading: concepts to be retained, ideas to be tested, or actions to be performed after the reading (p. 24). In aesthetic reading, in contrast, the reader’s attention focuses on the feelings, emotions, and thoughts stimulated and activated by the reading itself. Expository texts, mostly used in school, are usually read for the purpose of studying (efferent), taking notes, or composing written summaries. When reading an expository text, interest in the text is activated by intrinsic features, such as coherence of the text or the salience of the topic. However, this interest is not limited to the text,
in that it is likely to stimulate a reader’s reflections and involvement, to make him or her pose questions and look for more information. Text-based interest can be seen, therefore, as the first step towards interest in the topic. Recently, Hidi (2000) has underlined the ambiguity of the expression “topic interest”, which can refer to both individual (the long-standing interest for a topic) and situational interest (interest in a topic as a triggering factor emerging from, say, reading a journal article or viewing a television program). In this paper, we mean by topic interest a reader’s cognitive and affective orientation to a topic, which leads him or her to perform autonomous operations, such as reflecting, discussing, reading, and researching information about it. Text-based interest does not only originate in the salience of a text’s topics or themes, or the way in which the text is written, although these features may contribute to the activation of a reader’s interest. A text may also be interesting in that it leads a reader to appreciating the relevance of the topic and searching for new information relevant to it. This should occur, in particular, when reading is tightly connected to writing, as in school tasks in which a student has to elaborate on information taken from reading various sources. Writing, which requires elaboration of the information from the sources, may contribute to activating interest. However, very few, if any, studies that focused on elaborative writing have considered writing as a source of interest, which is the focus of this chapter.

2 Elaborative Writing: Writing from Sources and Writing-to-Learn

Over the past three decades, a large part of writing research has focused on the elaborative function of writing, that is, the effects of writing on a writer’s learning and thinking processes. Britton and colleagues (1975), in analysing the functions of writing in British middle and high schools, pointed out that writing was rarely used to foster students’ learning. Emig’s (1977) study of writing as a mode of learning anticipated the emphasis of the cognitive approach on writing-to-learn. Since the 1980s, studies on the elaborative function of writing have followed two main research lines: discourse synthesis and writing-to-learn. In studies of writing-to-learn, the role of writing as a thinking and learning tool is emphasised, and the researchers’ attention is focused on the effects of writing on the comprehension of information learned from oral or written communication at various levels of complexity. In studies of writing from sources, the focus of research is additionally on how elaborated knowledge is organised in a new text.

Research on discourse synthesis has centred on different aspects of synthesis, according to researchers’ theoretical perspectives. Cognitively oriented scholars have investigated the processes underlying synthesis, focusing on either writing or reading. A basic contribution to the analysis of writing syntheses has come from Bereiter and Scardamalia’s (1987) model of the development of writing competence. They distinguished knowledge telling, a naïve and scarcely constrained strategy of providing information in a written text, from knowledge transforming, a writer’s mature strategy of adapting the exposition based on prior knowledge to a rhetorical goal. Although not exclusively related to synthesis, these two strategies effectively describe the difficulties the writer, particularly a novice one, deals with when integrating information from different sources.

Regarding reading, more recently Perfetti and colleagues have investigated how students learn and reason from history texts (Britt, Perfetti, Sandak, & Rouet, 1999; Perfetti, Britt,
& Georgi, 1995; Rouet, Britt, Mason, & Perfetti, 1996). Their research focused on comprehending the processes involved in reading different sources regarding a historical event. Historical information is often controversial in that the same event may be attributed to different and even conflicting causes. Thus, understanding a historical event from sources requires the reader to form a model, or representation of the source information, with a combination of integration and separation, as the sources may agree on the interpretation of one aspect, and disagree on another. Britt et al. (1999) identified several models readers form when processing information from multiple sources: from a separate representation, in which a unique representation of each source is formed, to what they called a document model, that is, a highly integrated situation model. The approach of Perfetti and collaborators makes a contribution to research on multiple text understanding by emphasising the role of the model readers form from sources.

From a socio-constructivist perspective, Spivey (1984, 1992; Spivey & King, 1989) used the term discourse synthesis to refer to the process writers are engaged in when they read multiple texts and produce a new and abridged one. In this process three main operations are involved. The first is to select the information to be included in the synthesis. The second phase is to organise the information in the text to be written (Meyer, 1975); that is, giving the text a structure appropriate to a specific topic (e.g., arranging information according to chronological order, or a list of features, as in a description, or in terms of a problem to be solved.). The last phase regards connecting the information taken from various sources to achieve a cohesive text (see also Stahl, Hynd, Britton, McNish, & Bosquet, 1996). Discourse synthesis includes both comprehension and composition processes, as a writer uses cues from more than one text to construct meaning in the text being written (Nelson, 2001; Spivey, 1997). Thus, a written report can be considered from two connected but distinct points of view: as a comprehension task, where the researcher’s main concern may be the reader’s processes of meaning representation, and as a production task, where the writer is more interested in how a text is organised and its parts connected. Spivey’s analysis is an interesting example of the socio-constructivist approach to literacy, which considers reading and writing not as separate process categories, but as jointly involved in a reader/writer integrated representation of meaning from, and in, a text. Viewing discourse synthesis as a pattern of integrated processes rather than as a mere writing task seems to be a promising approach to the study of this problem (Hartman, 1995). Recent research on literacy, within and outside the socio-constructivist approach, has led to some suggestions for analysing this pattern in greater depth.

Studies on writing-to-learn have been conducted with the assumption that writing influences students’ learning and thinking, as a writer is compelled to explore and examine better the ideas which he/she is writing about (e.g., Applebee, 1984; Connolly & Vilardi, 1989; Langer & Applebee, 1987; Mason & Boscolo, 2000; see also Tynjälä, Mason, & Lonka, 2001, for recent reviews). Newell’s (1984) seminal study demonstrated that composing an essay on a scientific topic leads students to acquire more knowledge on that topic and become engaged in more operations, such as planning, organising, and reasoning, than students who use more fragmentary types of writing (e.g., note taking and responding to questions). Langer and

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1 In recent papers (after 1997) Spivey’s name has changed to Nelson.
Applebee (1987) investigated the relationship between reading, writing and learning, and showed a relationship between students’ reasoning operations and the specific types of writing in which they were involved. For instance, students developed more hypotheses during essay writing, but asked more questions about study material during the study-question activity. Recently, in science education in particular, but also in other disciplinary contexts, the role of writing in improving learning has been highlighted. Several functions and types of writing have been considered, such as note taking, schematising, expressing comments, doubts, and impressions, although the effects of writing a synthesis from various texts on the understanding of a topic have been rarely investigated. Wiley and Voss (1999) asked college students to read information about Ireland in the first half of the 1800s from a text presented as a chapter of a book, or from separate sources using a computer in the alternative reading condition. After reading, students were asked to write a text on the causes of change in Ireland over the same period of time, using the information given. For each condition (book chapter and multiple computer sources), participants were divided into four groups, each with a different text to write: narrative, argumentation, summary, and description (for instance, the participants in the narrative group had to write about historical changes and their causes in narrative form). Moreover, all participants were given conceptual comprehension tasks on the topic. The results showed that students who wrote arguments produced the most integrated and elaborated texts, whereas those in the narrative group tended to remember historical information better. The authors explained their results in the light of Kintsch’s (1998) theory of comprehension. According to this theory, a reader processes a text by building a mental representation of its propositions (textbase). However, the reader does not restrict him- or herself to following the order of propositions in the text(s), and also integrates the contents on the basis of prior knowledge. The propositions taken from the sources and those produced by the reader contribute to building a situation model, which represents a deeper level of comprehension (van Dijk & Kintsch, 1983). Argumentative writing seems to facilitate construction of the situation model, in that writing an argumentation is a demanding task requiring the reader to elaborate constructively. Moreover, presenting the reading material as multiple sources implies a cognitive elaboration which, in turn, facilitates the construction of a situation model.

3 Interest and Elaborative Writing: A Study

Neither in studies on writing from multiple sources nor on writing-to-learn have affective aspects been considered, since the main objective of researchers has been analysis of cognitive processes. The present study represents an attempt to connect research on interest – particularly, topic and text-based – to studies on writing-to-learn, by analysing the relations between cognitive and affective variables involved in related reading and writing tasks. The cognitive variables included a reader’s prior knowledge on a topic and the comprehension processes regarding the texts. Affective variables regarded readers’ motivation to write, and topic and text-based interest. We posed several research questions, as follows. The first group of hypotheses regards the role of writing. We hypothesised that a writing task which follows reading multiple texts on the same topic, would increase the reader’s self-reported interest in the topic and lead to interest-driven behaviours, due to the elaborative processes required by the writing task (Kintsch, 1980; Iran-Nejad, 1987; Schank, 1979). As various writing tasks
can be performed on information taken from sources, we focused on three tasks: expressing a personal point of view on the topic of the sources, writing a synthesis of the sources, and identifying relevant information in the sources without writing. These tasks, that imply careful reading and reflection on the sources, are commonly carried out in the Italian lyceum, that is, the high school attended by participants of the present study. In lyceum two types of written composition are usually performed: on literary/historical topics, and on topical questions. In literary/historical compositions students have basically to elaborate knowledge taken from multiple sources, including books, articles, and the internet. In compositions on topical questions, they have to express their points of view based on information taken from various sources. The third task, that is, identifying relevant information, is usually carried out by students when studying. Expressing a personal view is more similar to argumentative text (see Wiley & Voss, 1999), whereas writing a synthesis asks a writer not only to select information, as in outlining relevant information, but also to organise it. We expected that writing a text from sources would have a greater effect on interest when the reader's involvement was stimulated by the expression of personal ideas, rather than in a more “academic” writing task, such as writing a synthesis or underlining the most important ideas in the sources. We also expected that interest in the texts or sources would not change due to the writing task. Since text-based interest is essentially conceptualised in terms of novelty and ease of comprehension (Schraw & Lehman, 2001), writing should not modify interest in the sources, or it should decrease due to lessened novelty at the second reading. According to studies on writing to learn (Tynjälä, Mason, & Lonka, 2001) we expected that writing, implying elaboration of text information, would affect comprehension of the sources.

The second group of research questions is related to the dynamic nature of the affective variables analysed in the study. We were interested not only in investigating the effects of writing on interest, but also the relations of cognitive variables (prior knowledge and comprehension) to pre- and post-writing topic and text-based interest, as well as the relations between topic and text-based interest. The overall experimental situation included a series of tasks, some of which could have affected topic interest both before reading and writing and after writing. Being asked to answer questions on a topic as well as reading a text can elicit curiosity, while the request to write can elicit emotions such as anxiety, boredom, interest, etc. Those emotions may depend on a general attitude towards writing. We expected to find different patterns of interactions between general motivation to write, text-based interest, and topic interest before and after writing. In fact, we expected that writing would induce a more careful analysis of the information provided in the sources, thus leading to a different level of topic interest, and to a different perception of the features of a text that stimulate interest. Therefore, for example, we may expect that novelty of the information provided by a text impacts to a greater extent on topic interest before writing than after writing, since after writing the information are not new. We also expected that motivation to write would affect topic interest both before and after writing, and that this relation might be mediated by different sources of text-based interest before and after writing. For example, perceiving oneself as capable to write, and feeling interested in writing, might lead a person to pay attention to the features of a text that help writing (such as ease of comprehension), and that also induce interest in a topic. Since the sources may prove to be harder to understand while writing on a topic, that relation might change after writing. As far as we know, only a few studies
explored the combined effects of different sources of interest in a complex experimental situation (Ainley, Hidi, & Berndorff, 2002; Ainley, Hillman, & Hidi, 2002).

In formulating our hypotheses and designing our study we kept in mind what the cognitive approach to writing (e.g., Bereiter & Scardamalia, 1987; Berninger, Fuller, & Whitaker, 1996; Graham & Harris, 2000; Hayes, 1996; Wong & Berninger, 2004) has emphasised; that is, writing is a demanding activity, that requires students’ cognitive effort and the use of their self-regulatory skills. Moreover, research on motivation and writing has demonstrated that students’ difficulties when facing a writing task may have negative effects on their self-efficacy beliefs and self-perceptions of competence, as well as on their attitude to tasks (Bruning & Horn, 2000; Hidi & Boscolo, in press; Pajares & Johnson, 1996; Zimmerman & Kitsantas, 1999). However, if a student feels able to overcome the task difficulties, and knows his or her text will not be evaluated by the teacher, his or her attitude to the task should not be negatively influenced.

4 Method

4.1 Participants

Three-hundred and eighteen (M=160, F=158) 12th graders from five scientific lyceums located in Padua (Italy) participated in the study. The curriculum of this high school is rather demanding, and includes the compulsory study of ancient (Latin) and modern languages, as well as scientific disciplines and philosophy. Writing has an important role in the curriculum, and students often write compositions on literary and historical topics and on topical subjects. Because of the achievement level of students who enter this type of school, and the large number of students who are eliminated particularly at the end of the first year (9th grade), we assumed that 12th grade students were able to both understand the texts and perform the writing tasks. School and class permission for the participation in the research was obtained before starting data collection.

4.2 Procedure

All materials were presented in the same order in the teacher’s presence during school time. Participants were briefly introduced to the objective of the research. It was underlined that the study aimed at investigating the relationships between students’ interest and text elaboration, not at evaluating their abilities. Participants were asked to mark questionnaires and answers with an individual code, to allow the authors to collect all data for each participant and to guarantee anonymity. The only personal data required were gender and class. Participants were first asked to fill in the questionnaire on motivation to write. This measure was collected at the beginning of the session. They were then asked to fill in the pre-test questionnaire aimed at measuring topic knowledge (about 10 min). They received a booklet made up of the three texts to be read, the text-based interest and the topic interest questionnaire, and some white sheets (in the writing conditions only). The three texts on globalisation were presented in random order. After reading the texts and answering the questionnaires (about 30 min) students were given one of the following instructions:
• “Express your view on globalisation, and support it with the most interesting information you found into the three texts” (personal view condition). The average time used to complete the task by participants (N=103, M=55 and F=48) was about 15 min.
• “Write a synthesis of the information presented in the three texts, as if you were asked to write a research report on globalisation” (synthesis condition). The average time used by participants (N=74, M=38 and F=36) to complete the task was about 20 min.
• “Underline the main ideas and concepts in the three texts and order the underlined sentences as if they were to be presented in a written summary” (underlining condition). The average time used by participants (N=78, M=27 and F=51) was about 15 min.
• “You can revise your homework, study or read your school books, etc., until you receive new instructions”. (control condition, N=63, M=40 and F=23).

The classes were randomly assigned to the different conditions.

Students were asked to record the time that was necessary to complete the task, by jotting down the time they began performing the task and the time they finished. The individual booklets were then collected and students were told they could keep the texts they were interested in, or they could ask for a list of readings on globalisation if they so desired. A special mark was written in the booklets of those who required the list of readings or kept the texts in order to get a behavioural measure of topic interest. When the task was performed, participants filled in the post-test versions of the text-based interest and topic interest questionnaires (about 5 min). Finally, participants filled in the open-ended questionnaire on topic knowledge (about 20 min). An overview of the procedure is shown in Table 1.

Table 1: Overview of the overall procedure

<table>
<thead>
<tr>
<th>Pre-reading measures</th>
<th>Readings</th>
<th>Pre-writing measures</th>
<th>Writing tasks</th>
<th>Post-writing measures</th>
<th>Behavioural measures</th>
</tr>
</thead>
</table>
| 1. Motivation to write (interest and self-perception of competence) | Three texts on globalisation | 1. Text-based interest (ease of comprehension, novelty, and conceptual richness) | • Underlining  
• Synthesis  
• Personal view  
• Control (readings only) | 1. Text-based interest (ease of comprehension, novelty, and conceptual richness) | 1. Keeping the texts  
2. Asking a list of supplementary readings |
| 2. Prior topic knowledge | | 2. Topic interest | | 2. Topic interest | |
| | | 3. Post-reading comprehension questions (inference and problem-solving) | | 3. Topic interest | |
| | | 4. Writing time | | 4. Writing time | |
4.3 Materials

Texts on globalisation. Students were given three texts on globalisation. This was a new topic to deal with at school as it was not part of the curriculum. The three texts were modified versions of journal articles and books, and were further elaborations of the texts used in a previous study (Boscolo & Borghetto, 2002). At the beginning of each text a different definition of the phenomenon was presented. The authors’ attitudes towards globalisation were also different in the three texts, although none was entirely in its favour.

Text A (602 words) explained the concept of the global market and underlined the role of technology and marginality that may be a consequence of limited technological development.

Text B (642 words) contrasted the expectations of the positive effects of globalisation on economic development, with a description of the negative consequences, particularly the increase in inequality between rich and poor nations, and the economic and cultural decay of many countries.

Text C (611 words) was clearly “no-global”. It neglected the economic aspects and stressed the negative cultural consequences of globalisation, such as loss of national identity and differences being cancelled out for a common lifestyle. It was underlined that globalisation is the objective of people and organisations aiming at obtaining power.

4.4 Measures

Motivation to write questionnaire. Participants were asked to rate on a 5-point scale (1=completely false; 5=completely true) 10 sentences aimed at assessing two general motivational variables related to writing: interest in academic writing (“I find very stimulating to express my views on interesting topics in written form.”), and self-perception of competence. (“It’s easy for me to express my views on a topic in written form.”)

From a principal component analysis two factors were extracted, and both “interest in writing” and “self-perception of competence in writing” grouped five items. The composition of each of the two factors was further confirmed with Rasch analyses. The individual scores’ estimates derived from the Rasch analyses were used for further data-analysis.

Prior knowledge. Before reading the texts, students were asked to answer five open-ended questions on globalisation, aimed at checking their prior knowledge on the topic. Some questions asked to give a definition of globalisation and of other concepts deemed to be relevant in order to understand the topic. (“Have you ever heard about globalisation? Can you please define this concept?”) Other questions were aimed at checking if students understood causes and consequences of globalisation. (“Why is globalisation strongly tied to the availability of computer knowledge and technology?”)

Text-based interest questionnaire. Before and after writing (or reading, in the control condition), students were asked to rate on a 5-point scale 14 sentences regarding their interest in the three texts. Following Schraw, Bruning, and Svoboda’s (1995) conceptualisation of sources of interest in literary-expository texts, three aspects of text-based interest were considered: ease of comprehension (“The three texts are very clear”), novelty (“I found a lot of new ideas explained in the texts”), and conceptual richness (“Some stances made me reflect upon globalisation”). The order of the sentences and their wording were
changed in the post-writing parallel form of the questionnaire. The questionnaire had been used in a previous study, where the three dimensions were clearly differentiated by a principal component analysis (Boscolo & Borghetto, 2002).

The questionnaire contained four items on the ease of comprehension and the novelty of the texts, and six sentences on its conceptual richness. The questionnaire structure was confirmed by a principal components analysis. Each factor’s composition was further tested by a Rasch analysis. Five items showed a good fit with the conceptual richness measure, while all the four items in the ease of comprehension factor and three out of four items in the novelty measure had a good fit. The individual scores’ estimates derived from the Rasch analysis applied on the pre-writing and the post-writing raw scores, were used in the subsequent data analysis.

**Topic interest questionnaire.** Before and after performing the writing tasks (or reading, in the control condition) students were asked to rate on a 5-point scale 8 sentences concerning their interest in the topic (“I’m interested in the social consequences of technological development”). and their will to deepen its knowledge and search for information. (“I would like to talk about this issue with someone who knows about it”). Two parallel forms of the questionnaire were made for the pre-test and the post-test, in which some items had a different order and were negatively stated.

A Rasch analysis was performed on the questionnaire (eight items) to test the validity of the overall measure. This analysis gave good results after the exclusion of two items. The questionnaire was thus reduced to six items. The individual scores’ estimates derived from the Rasch analysis applied on the pre-writing and the post-writing raw scores were used in the subsequent data-analysis.

Also two behavioural measures of topic interest were collected. Participants were told they were allowed to keep with them the texts on globalisation they used, and were offered a list of readings on globalisation (recent books and websites). Keeping one of more texts and asking for the list of readings were considered as indicators of topic interest.

**Post-reading comprehension questions.** Ten open-ended questions were asked at the post-test: six inference and four problem-solving questions. Inference questions were text-based (Kintsch, 1998), in that participants could answer by referring to text information, although with inferential integration. An example of inference question is: “Why do the multinationals instigate delocation of employment?” Problem-solving questions required the integration of text information with students’ prior knowledge, to express a personal evaluation (“Does globalization strengthen or weaken the concept of state-nation, in your view? Why?”), or to clarify a concept (“Do equality and globalization have the same meaning? Why, or why not?”).

### 4.5 Data Analysis

**Prior knowledge and post-reading comprehension questions.** Accurate answers were rated as 2, partially correct ones were given a 1, and incorrect and lacking answers were rated as 0. The maximum score in the prior knowledge measure was 10, in the inference questions was 12, and in the problem-solving questions was 8. Answers to prior knowledge and to inference and problem-solving questions were scored blindly by two independent judges, the second author and a doctoral student in educational psychology with experience in content analysis. Agreement between the two judges was 92% for prior knowledge, 91% for the
inference questions, and 88% for the problem-solving questions. All the disagreements were discussed with the first author. At the end of a careful analysis and discussion, all disagreements were resolved.

5 Results

5.1 Relation between Writing Tasks and Post-Writing Topic Interest

An ANCOVA was performed with post-writing topic interest scores as dependent variable, writing task as independent variable, and pre-writing topic interest scores, time employed in performing the task, motivation in writing scores (interest and self-perception of competence), prior topic knowledge, and pre- and post-writing text-based interest scores as covariates. Pre-test topic interest scores, as well as post-writing conceptual richness scores reached significance. The effect of the writing tasks was significant, $F(3, 128) = 5.01, p < .01$, $\eta^2 = .10$. A Bonferroni post-hoc test showed a significant difference between topic interest scores in the underlining and in the personal view conditions (Table 2), the first condition leading to higher scores than the latter.

Log-linear analyses were performed on behaviours indicating post-writing interest in the topic: keeping the texts and asking for a list of supplementary readings. A significant group X behaviour association emerged, $\chi^2(9) = 33.82, p < .01$: participants in the synthesis condition kept the texts more frequently ($z = 2.55, p < .05$) than participants in the underlining condition. Thus, participants in the synthesis condition seemed to be more interested in globalisation than participants in the underlining condition.

5.2 Relation between Writing Task and Post-Writing Text-Based Interest

A MANCOVA was performed with post-writing text-based interest scores (conceptual richness, ease of comprehension, and novelty) as dependent variables, and the writing task as independent variable.

The variables related to the writing tasks were used as covariates: time employed in performing the task, prior topic knowledge, post-writing comprehension questions (inference and problem-solving), interest in writing, self-perception of writing competence, topic

<table>
<thead>
<tr>
<th>Writing Task</th>
<th>Mean</th>
<th>SD</th>
<th>Adjusted mean</th>
<th>SE</th>
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<tbody>
<tr>
<td>Control</td>
<td>1.26</td>
<td>2.00</td>
<td>0.85</td>
<td>0.24</td>
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<tr>
<td>Underlining</td>
<td>1.51</td>
<td>2.11</td>
<td>1.25</td>
<td>0.17</td>
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<tr>
<td>Synthesis</td>
<td>0.90</td>
<td>1.54</td>
<td>1.10</td>
<td>0.21</td>
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<tr>
<td>Personal view</td>
<td>0.17</td>
<td>1.94</td>
<td>0.42</td>
<td>0.15</td>
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</table>
interest (pre- and post-writing), as well as pre-writing text-based interest (conceptual richness, ease of comprehension, and novelty).

Prior topic knowledge, time, post-writing topic interest, pre-writing conceptual richness, and pre-writing novelty, significantly covaried with post-writing conceptual richness. Pre-writing ease of comprehension covaried with post-writing ease of comprehension. Pre-writing ease of comprehension and novelty covaried with post-writing novelty. As hypothesised, the writing task did not significantly affect any of the three post-writing text-based interest measures.

5.3 Relation between Writing Tasks and Post-Writing Comprehension Questions

A MANCOVA was carried out with post-writing inference and problem-solving question scores as dependent variables, the writing tasks as independent variable, and time employed in performing the task, prior topic knowledge, motivation in writing (interest and self-perception of competence), pre- and post-writing topic interest, and pre- and post-writing text-based interest scores as covariates. Pre-test topic knowledge and time covaried with both inference and problem-solving scores. The effect of the writing task on inference scores was significant, $F(3, 129) = 5.77, p < .01, \eta^2 = .12$. A Bonferroni post-hoc test showed a significant difference between synthesis condition and both the underlining and the personal view conditions. Participants in the synthesis condition reached higher scores than participants in the underlining and in the personal view conditions (Table 3).

5.4 Relations among Motivational Variables, and between Motivational Variables and Topic Knowledge

First, relations between cognitive measures (prior topic knowledge and post-writing comprehension questions) and pre- and post-writing topic interest were analysed. A first linear regression was carried out with pre-writing topic interest as dependent variable, and prior topic knowledge as independent variable. The model was significant, $F(1, 314) = 8.69, p < .01$, and prior topic knowledge proved to be a good predictor ($\beta = .16, p < .01$) of pre-writing topic interest. A new linear regression was carried out with post-writing topic interest scores as a dependent variable, and post-writing transfer and inference scores as independent variables. The model did not reach significance, and no relation between cognitive measures and

<table>
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<tr>
<th>Writing on an Interesting Topic</th>
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Table 3: Post-writing inference question scores’ means and standard deviations for different writing tasks

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<th>Writing on an Interesting Topic</th>
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<th>Writing on an Interesting Topic</th>
<th>Writing on an Interesting Topic</th>
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<th>Writing on an Interesting Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>SD</td>
<td>Adjusted mean</td>
<td>SE</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Control</td>
<td>7.86</td>
<td>2.59</td>
<td>7.03</td>
<td>0.61</td>
<td>Underlining</td>
</tr>
</tbody>
</table>
interest emerged for the post-writing measures. Thus, the relation between prior knowledge and pre-writing topic interest was not confirmed for the post-writing measures, since transfer and inference scores were unrelated to post-writing topic interest.

Next, we wanted to analyse the relations among measures of motivation to write (interest and self-perception of competence), text-based interest (conceptual richness, ease of comprehension, and novelty), and topic interest before and after writing. In other words, we wanted to see if motivation to write interacts with text-based interest, and if this relation causes different levels of topic interest. Also we wanted to know if this pattern of interactions changes after writing. Some authors (Baron & Kenny, 1986) pointed out that in order to reveal mediational effects, three criteria must be satisfied. First, a direct effect between a predictor and an outcome must be found. Second, a link between the predictor and the mediator must be established. Finally, when the original predictor and mediator are tested simultaneously as predictors of the outcome, the mediator should significantly affect the outcome variable. Moreover, the effect of the original predictor should be substantially or completely reduced. The results of the analyses for pre- and post-writing measures are reported as follows.

First, a linear regression was performed with pre-writing topic interest as dependent variable, and interest and self-perception of competence in writing as independent variables. The model was significant, \( F(2, 247) = 12.27, p < .01 \), and both self-perception of competence \( (\beta = .13, p < .05) \), and interest in writing \( (\beta = .25, p < .01) \) significantly affected pre-writing topic interest.

Second, three linear regressions were performed, where the three pre-writing text-based interest measures (conceptual richness, ease of comprehension, and novelty) were in turn considered as dependent variables, and interest and self-perception of competence were considered as independent variables. Pre-writing ease of comprehension, \( F(2, 248) = 4.27, p < .05 \), pre-writing novelty, \( F(2, 248) = 3.66, p < .05 \), and pre-writing conceptual richness \( F(2, 248) = 3.72, p < .05 \), were all significantly affected by measures of motivation to write. Pre-writing ease of comprehension was predicted by self-perception of competence in writing \( (\beta = .17, p < .01) \), as well as novelty \( (\beta = -.17, p < .01) \), while conceptual richness was better predicted by interest in writing \( (\beta = .17, p < .01) \). Interestingly, self-perception of competence and interest in writing seemed to affect different dimensions of text-based interest.

Finally, two linear regressions were performed where pre-writing topic interest was considered as a dependent variable. In the first linear regression, pre-writing ease of comprehension, pre-writing novelty, and self-perception of competence in writing were considered as independent variables. The model was significant \( F(2, 247) = 12.47, p < .01 \). Ease of comprehension again significantly predicted pre-writing topic interest \( (\beta = .26, p < .01) \), while only a tendency to significance was found for self-perception of competence in writing. Thus, we can infer that the effect of writing self-efficacy on pre-writing topic interest was mediated by pre-writing ease of comprehension (Figure 1).

In the second linear regression, pre-writing conceptual richness and interest in writing were considered as independent variables. The model reached significance, \( F(2, 247) = 40.50, p < .01 \), and both pre-writing conceptual richness \( (\beta = .42, p < .01) \) and interest in writing \( (\beta = .20, p < .01) \) significantly affected pre-writing topic interest. Although interest in writing had a weaker effect on pre-writing topic interest, it was still a strong predictor. Therefore, we
cannot conclude that the effect of general interest in writing was mediated by pre-writing conceptual richness (Figure 2).

We also investigated if this pattern of relations was maintained after writing, since text-based interest measures were supposed to influence in a different way of topic interest after writing. First of all, post-writing topic interest was considered as dependent variable and interest and self-perception of competence in writing were considered as independent variables. The model was significant, $F(2, 245) = 13.68$, and both self-perception of competence ($\beta = .16, p < .01$) and interest in writing ($\beta = .25, p < .01$) were significant predictors of post-writing topic interest. Self-perception of competence-affected topic interest more strongly after writing, while interest in writing maintained a strong relation with post-writing topic interest.

Next, three different linear regressions were performed where the three post-writing text-based interest measures (conceptual richness, ease of comprehension, and novelty) were in turn considered as dependent variables, and interest and self-perception of competence in writing were considered as independent variables. Post-writing ease of comprehension, $F(2, 247) = 6.38, p < .01$, post-writing novelty, $F(2, 247) = 10.25, p < .01$, and post-writing conceptual richness $F(2, 247) = 11.38, p < .01$, were significantly and even more strongly affected by measures of motivation to write. Ease of comprehension was predicted by self-perception of competence in writing ($\beta = .21, p < .01$), as well as novelty ($\beta = -.27, p < .01$), and conceptual richness was better predicted by interest in writing ($\beta = .28, p < .01$). Therefore, the initial pattern of relations was confirmed for the three post-writing text-based interest measures.

Finally, two linear regressions were performed with post-writing topic interest as a dependent variable. In the first regression, post-writing novelty and self-perception of competence in writing were considered as independent variables. The model was significant, $F(2, 244) = 5.24, p < .01$. Self-perception of competence in writing proved to be a significant predictor of post-writing topic interest ($\beta = .21, p < .01$), while post-writing novelty...
no longer affected post-writing topic interest. Thus, only a direct effect of self-perception of competence on post-writing topic interest was found (Figure 3).

In the second linear regression, post-writing conceptual richness and interest in writing were considered as independent variables. The model reached significance, $F(2, 244) = 65.29, p < .01$, and post-writing conceptual richness proved to be a significant predictor of post-writing topic interest ($\beta = .55, p < .01$). Interest in writing, although still affecting post-writing topic interest ($\beta = .11, p < .05$), had a weaker effect. Thus, a mediational effect of post-writing conceptual richness, between interest in writing and post-writing topic interest, was found (Figure 4).

We can infer that self-perception of competence in writing directly affected post-writing topic interest, while the effect of interest in writing was mediated by post-writing conceptual richness of the texts.

6 Discussion

Our study aimed at exploring whether a writing task requiring the elaboration of information from multiple sources on a same topic might affect the readers’ interest in the sources and the topic. We expected that a writing task would more positively affect a reader’s interest when he or she is asked to elaborate ideas in a personal way, than in an academic task such as writing a synthesis. We also expected that interest in the texts or sources would not change due to the writing task. Since, as argued in the first part of this chapter, important aspects of text-based interest are novelty and ease of comprehension, writing from sources should not modify a reader’s interest in the texts, or it should make it decrease due to lack of novelty at a second reading. Instead, the elaboration of text information required by writing from sources might increase the topic interest activated by reading the sources. We also wanted to see if writing tasks implying different ways to elaborate the information provided by texts lead to different degrees of topic comprehension. We expected that writing about
one’s personal view on a topic would lead to deeper elaboration and comprehension of the contents. Moreover, we wanted to investigate the relation between students’ interest and comprehension of the texts as measured by two types of questions: inference and problem solving.

The hypothesis of a positive effect of writing on topic interest was not confirmed with the self-report measures of topic interest, since it decreased after the writing tasks, and particularly in the personal view condition. Thus, writing seemed to have a negative effect on interest. Two elements may have contributed to lessening students’ interest in the topic. The first element is the limited time given to participants. Although without any explicit time limitation, participants were given two hours (the Italian language class) to read, elaborate, write, and answer questions. The development of text-based into topic interest most probably requires a longer time to reflect, pose questions, and answer. A second comment or criticism regards our assumption on students’ “will to write”. Although the writing tasks were assumed to be relatively easy to lyceum students, and without any concern with teachers’ evaluation, the writing tasks seemed to produce a boredom or anxiety effect. For our participants, as well as, presumably, for students at all school grades, elaborative writing seems to represent an obstacle to developing interest in a topic. In fact, underlining – that is, elaborating without real writing – was the condition in which topic interest declined least, perhaps also because underlining requires less time than writing an essay or a synthesis.

Figure 3: Relations among self-perception of competence in writing, and post-writing topic interest

Figure 4: Relations among interest in writing, post-writing conceptual richness, and post-writing topic interest
However, when interest-driven behaviours are analysed, the results look very different. When given the opportunity to keep one or more texts, participants in the synthesis condition were more responsive than those in the underlining condition. This discrepancy arises questions on the measures usually employed in interest research. Behavioural measures seemed to reflect dimensions of interest that are different from those detected with a questionnaire, even though their validity may be questioned. In fact, these measures are subject to many motivational variables, as well as to many situational constraints: in this case, keeping the texts may not be due just to interest in the topic (globalisation), but also, for example, to the will to please the experimenter or to a school habit. Questionnaires are useful when a measure of change is required, and they may represent a more valid measure than single-ratings and even behaviours, but they require a great awareness of one's own motivational states. Thus, we think that behavioural measures need to be developed more, in order to understand what aspects of interest they detect best, so that different measures of interest may be used at the same time.

Whereas the effect of synthesis writing on students’ answers to comprehension question confirms the elaborative function of writing as a “tool for learning” (Tynjälä, Mason, & Lonka, 2001), demonstrating that writing can also be a “tool for interest” is a more complicated matter. We think that the motivational aspects of writing-to-learn deserve to be investigated with a different approach to topic interest. Topic interest is a rather delicate phase of the development of interest, in that it is connected to a situation – text and/or task – but it is also beyond that situation, as a first step towards the development of a personal interest (Hidi, 2000). The study should be replicated in a more “natural” condition, in which students can really have the time to develop an interest for topics that are relevant for them, and where the phases of interest development, or change, can be investigated. However, this natural condition implies not only more frequent interactions with a topic but also the stimulation of relevant learning goals.

As expected, text-based interest was not modified by the writing tasks. However, this study did not limit itself to showing the stability of text-based and the weakness of topic interest. Regression analyses on the various measures of interest showed interesting relations between students’ motivation to write (interest and self-perception of competence in writing), and interest related to the texts and topic. In the present study, the general construct of motivation to write was analysed into two components, which predicted different aspects of a reader’s text-based and topic interest: an energetic aspect, i.e., the “will” to write academic tasks, and self-perception of competence, i.e., the degree to which a student feels able to carry out those tasks. The regression analyses performed with these two components of motivation to write as independent variables, and the components of text-based interest as the dependent ones, showed that, before and after writing, the degree to which a student felt able to carry out a writing task involving reading, affected his or her perception of the ease of comprehension and the novelty of the texts. In other words, the better writer a high school student perceives himself or herself to be, the more he or she pays attention to the features of a text that may interfere with writing: novelty seems to be perceived as an obstacle to write well, while ease to comprehend is perceived as a facilitating condition. As for the relation between interest in writing and the texts’ conceptual richness, a student seems more likely to perceive the texts as “rich of meaning”, when he or she likes writing. Moreover, interest in writing seems to predict topic interest via the
texts’ conceptual richness, and this relation seems to be even stronger after writing. This relation can shed some light on the nature of interest, which may be considered as an energising factor, that is, strongly associated with the perception and the elaboration of complex stimuli. On the other hand, the effect of self-perception of competence on topic interest does not seem to be mediated by the same variables before and after writing. Although these results need to be confirmed by other studies, they represent a contribution to research on the relations between interest and writing. First of all, it seems plausible that the general construct of motivation to write can be analysed into its components; secondly, these components seem to predict different aspects of a reader involvement with texts. This seems to be a promising direction for investigating the relationships of cognitive and affective variables in complex reading–writing tasks.
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Chapter 6

Motivations for ESL Writing Improvement in Pre-University Contexts

Alister Cumming, Tae-Young Kim and Kéanré B. Eouanzoui

We consider the case of adult English as a second language (ESL) learners from diverse countries internationally aiming to enter university programs in North America, most of whom are highly motivated to improve their writing and their proficiency in English. We ask, how might we conceptualize motivation for this unique population? How can we describe these students’ perceptions of their writing abilities in English? How might teaching and curriculum be organized to capitalize on the goals these students have for their writing improvement? We report on three studies concerning (a) the goals that 48 ESL learners expressed during interviews about their writing improvement in English, (b) case studies of 2 ESL students who demonstrated relatively high and low levels of motivation for their writing improvement, and (c) a partial replication of Zimmerman and Bandura (1994), surveying 150 of these students about their abilities to self-regulate their composing processes.

The situation of international students learning to improve their writing as they enter English-medium universities in North America poses challenges not only for theories of motivation and literacy development but also for educational policies and practices. Characteristically, this population is highly motivated to succeed academically but also lacking, by definition (but to varying extents, individually), English language and/or general writing abilities (Cumming, 1989; Silva, 1993). In turn, their cultural backgrounds and long-term career aspirations may differ from the norms of student populations raised in North America as well as the cultural expectations at institutions such as universities (Spack, 1997; Zamel, 1995). Many come to North America solely for academic studies, intending to return to work in their native countries or in international contexts upon completion of their degrees. As this population has increased dramatically in recent decades, various programs and policies for the education of visiting international students have been developed at particular universities. These range from (a) courses of English language and writing support to (b) sheltered academic courses for
English learners to (c) individual tutoring services (Brinton, Snow, & Wesche, 1989; Leki, 2001; Stoller, 2004). In turn, numerous survey studies have tried to establish what this population’s particular learning needs may be. Typically, such surveys have identified a full range of communication abilities, of which the most conspicuous is often writing because of its prominence in course assignments and examinations and its inherent complexity (Bridgeman & Carlson, 1984; Cheng, Myles, & Curtis, 2004; Horowitz, 1986; Rosenfeld, Leung, & Oltman, 2001; Sun, 1987).

Theories of motivation, however, have scarcely considered international students in English-dominant North American universities and their unique situation. General theories of motivation for educational achievement have been conceived and validated almost exclusively in respect to majority populations and English-dominant cultural norms (e.g., Ames, 1992b; Bandura, 1986; Pintrich & Schunk, 2002; Ryan & Deci, 2000). In turn, theories of motivation for second language education have been framed primarily in respect to situations where students are learning a language taught as a school subject and seldom used for purposes of communication in local communities, for example, the learning of French in English-dominant regions of Canada or the U.S. (Gardner, 1985; Gardner, Masgoret, Tennant, & Mihic, 2004; MacIntyre & Gardner, 1991) or of English in countries like Japan or Hungary (Dörnyei, 1990; Dörnyei & Csizér, 2002; Yashima, Zenuk-Nishide, & Shimizu, 2004). This situational orientation toward “foreign language learning” has produced theories of motivation about language learning that focus on issues such as willingness-to-communicate, language anxiety, or distinctions between instrumental and integrative orientations to language learning—issues, which if they apply to international students in English-dominant North American universities to any degree, may provide only partial explanations for their current motivations, states, or actions. Moreover, almost all of this research has been conducted in reference to spoken, rather than written, communication. Prominent among theories of motivation for learning foreign languages has been Gardner’s distinction between integrative and instrumental orientations toward learning a second language, which we consider below. Gardner (1985) stated that an integrative orientation “reflects a goal to learn a second language because of a favorable interest in the other language community” (p. 54) whereas an instrumental orientation “emphasizes the practical value and advantages of learning a new language” (p. 133).

As Dörnyei (2003) argued, to be relevant for educational policies, research on motivation for second-language learning needs to continue to develop a situated perspective on the circumstances of particular learner groups. Although the situational uniqueness of particular learner groups has, in fact, been an emphasis of recent research on writing development

1 As many educators have observed, it is important to distinguish, particularly for issues of literacy and language acquisition, the population of visiting, international students from the equally increasing population of culturally diverse learners who have done most or all of their schooling in North America prior to entering universities—the so-called “generation 1.5” (Harklau, Loisey, & Siegal, 1999)–or from the population of adult learners who have recently immigrated to settle and work, rather than solely to pursue academic studies, in North America (Burnaby & Cumming, 1992; Spener, 1994) or other, similar countries such as Australia (Wigglesworth, 2003). The two latter groups may, in particular, face systemic barriers (e.g., socio-economic constraints, racism, limited access to higher education) or exhibit resistance (e.g., because of prior associations related to social class distinctions) to acquiring academic literacy practices in English (cf., Cumming & Gill, 1991; Loisey, 1997).
in second languages (Leki, Cumming, & Silva, 2006), no prior research that we know of has addressed the motivation for writing development among visiting international students at North American universities from a theoretically informed, systematic perspective. Nonetheless, various case studies and task analyses have pointed toward the importance for this population of issues such as self-regulation of composing processes (Cumming, 1989, 2001; Cumming & Riazi, 2000; Whalen & Menard, 1995), goal orientation (Cumming, Busch, & Zhou, 2002; Hoffman, 1998), and the acquisition of genre knowledge and interactional practices unique to university contexts (Casanave, 2002; Gentile, 2003; Johns, 1992, 1997; Leki, 1995; Spack, 1997).

In the present chapter we explore these concerns by posing two questions in reference to data from students with a variety of cultural backgrounds in an intensive, pre-university, ESL (English as a second language) program at a Canadian university. Our first question is broad and exploratory: How might we conceptualize motivation for this population, drawing on the range of current theories of motivation? Our second question concerns describing these students’ perceptions of their writing abilities in English: How do these students perceive their abilities to regulate specific composing functions in English? These concerns are as important for theory as for educational policy. From a theoretical point of view, we address issues such as, How should we think about motivation for this growing learner population? What may distinguish them from other learner populations? In view of educational policy decisions, we also ask, What curricular and instructional provisions are relevant for this learner population? How might educators capitalize on the motivations and self-perceptions that such learners have? How might students who lack motivation to improve their writing in English be motivated to do so?

1 Methods

1.1 Context and Participants

Our research involved students in an ESL program with the purpose of preparing international students for university studies in Canada the following year. The program was intensive (full-time studies over three months) and, as described in its syllabus, integrated “four skill areas (speaking, listening, reading, and writing) to improve overall English comprehension and production.” The students came from diverse ethnic backgrounds, representing 14 countries and reporting fluency in 12 languages. The two largest ethnic groups were from China and Korea (about half of the sample population) but other countries represented were Chile, Ecuador, Iran, Israel, Japan, Mexico, Morocco, Russia, Saudi Arabia, Thailand, Ukraine, and Vietnam. About two-thirds of the students had completed secondary school but not yet studied at a university, whereas the other third had already completed undergraduate degrees in their native countries and so intended to pursue graduate degrees the following year. All participants reported one to four years of part-time, formal English study during secondary school in their home countries. Their average score on the institutional version of the TOEFL (Test of English as a Foreign Language) was 552, which is just above the minimal score required for admission to undergraduate programs at most North American universities. So their proficiency in English was relatively high
but nonetheless discernibly less than full fluency. Given this, and their willingness to pursue a term or more of intensive ESL studies at cost-recovery tuition fees, we can assume these students were relatively motivated as well as cognizant of the need to improve their abilities in English, at least in the academic domain.

1.2 Data and Instruments

We gathered three types of data in addition to the demographic profiles summarized above: (a) two semi-structured interviews of about one hour’s duration concerning the students’ goals for improving their writing in English, administered individually near the beginning and the end of the ESL program; (b) questionnaire surveys about their self-regulation processes while writing in English, administered near the end of the ESL program; and (c) a follow-up questionnaire about their motivations for improving their English, administered a year later when a sub-sample of the students were in university programs. All 150 students in the ESL program completed the questionnaire about self-regulation of writing processes, 45 of these students volunteered to participate in the two interviews (and were paid $20 for each interview), and 13 of the 45 students completed the follow-up survey questionnaire.

The interviews involved 20 open-ended questions about the students’ goals for improving their writing generally as well as specific aspects of writing such as rhetorical forms, grammar, composing processes, and so forth. The audio-taped interview format was a revised and expanded version of the instrument reported in a preliminary study in Cumming et al. (2002). The follow-up questionnaire about motivations for improving English featured nine items rated for personal importance on a 5-point Likert scale. We created the items after initial analyses of the interview data, aiming to consider the primary aspects of motivation that the students had mentioned frequently during the interviews as well key theoretical distinctions (specifically, mastery versus performance goals, integrative versus instrumental orientations, and intrinsic versus extrinsic motivation) that feature in, respectively, the theories of motivation advanced by Ames (1992b), Gardner (1985), and Ryan and Deci (2000). The wording of the items and their theoretical foundations are specified in Table 1 (in the Results section below). To further probe the students’ senses of self-efficacy (Bandura, 1986; Zimmerman & Bandura, 1994) for academic achievement in English, we asked them to indicate (a) the average grade they wanted to obtain in their university courses and (b) the average grade they actually expected to obtain.

The questionnaire about self-regulation of writing processes was developed by Zimmerman and Bandura (1994) for a study of freshman college students in the U.S. The instrument contains 25 items about self-regulation of key aspects of composing processes, self-evaluated on a Likert scale with 7 points ranging from not being able to perform the

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2The 13 students who completed the follow-up survey were the full number who enrolled in university programs locally and were willing to participate in the second phase of our research. Many of the initial 48 students enrolled in university programs elsewhere internationally, so we were not able to contact or interview them, and some did not meet academic or language requirements for university admissions right away. Although the sample of 13 is small, the fact that they all were successful in entering local university programs verifies that, at least to a minimal degree, they achieved their main aspirations for ESL writing improvement.
activity (=1) to being able to perform the activity very well (=7). The only changes we made to the original instrument were minor modifications to the wording of a few items to ensure that the ESL population would comprehend them fully (e.g., we changed “come up with” to “find” in item 1). The questionnaire items are listed in Table 2 below. Zimmerman and Bandura (1994, p. 849) stated that their questionnaire items “were developed from formal analyses of the writing process (Murray, 1990), consultation with faculty in the writing program, and knowledge of self-regulation of motivation.”

1.3 Analyses

We transcribed the interview data in full then coded all utterances using NVivo, a computer software program for qualitative data analyses (Richards & Richards, 2002), developing a unique coding scheme (elaborated from Cumming et al., 2002) to describe the goals for ESL writing improvement that the students expressed in their interviews. In collaboration with our full research team (our acknowledgement note), we refined the coding scheme over several

Table 1: Questionnaire responses from 13 ESL students, related to 3 motivation theories

<table>
<thead>
<tr>
<th>Item</th>
<th>Gardner’s integrative/instrumental</th>
<th>Ames’ mastery/performance goal theory</th>
<th>Ryan and Deci’s intrinsic/extrinsic motivation</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I want to learn new things</td>
<td>N/A</td>
<td>Mastery</td>
<td>Intrinsic</td>
<td>4.59</td>
<td>.66</td>
</tr>
<tr>
<td>2. I want to succeed in life</td>
<td>Instrumental</td>
<td>N/A</td>
<td>Intrinsic</td>
<td>4.53</td>
<td>.67</td>
</tr>
<tr>
<td>3. I want to make friends and contacts</td>
<td>Integrative</td>
<td>N/A</td>
<td>Intrinsic</td>
<td>3.84</td>
<td>.96</td>
</tr>
<tr>
<td>4. I want to discover as much as possible</td>
<td>N/A</td>
<td>Mastery</td>
<td>Intrinsic</td>
<td>4.03</td>
<td>.87</td>
</tr>
<tr>
<td>5. I want my parents to be proud of me</td>
<td>N/A</td>
<td>Performance</td>
<td>Extrinsic (introjected)</td>
<td>3.78</td>
<td>1.14</td>
</tr>
<tr>
<td>6. I want other people to think I am successful by completing a degree</td>
<td>Instrumental</td>
<td>Performance</td>
<td>Extrinsic (introjected)</td>
<td>2.72</td>
<td>1.34</td>
</tr>
<tr>
<td>7. I want to be satisfied with my knowledge and skills</td>
<td>N/A</td>
<td>Mastery</td>
<td>Intrinsic</td>
<td>4.16</td>
<td>.89</td>
</tr>
<tr>
<td>8. I want people to think I am smart</td>
<td>Instrumental</td>
<td>Performance</td>
<td>Extrinsic (introjected)</td>
<td>2.40</td>
<td>1.4</td>
</tr>
<tr>
<td>9. I want to find a good job</td>
<td>Instrumental</td>
<td>N/A</td>
<td>Extrinsic (external regulation)</td>
<td>4.47</td>
<td>.67</td>
</tr>
</tbody>
</table>

*These responses were to 5-point Likert scales (1 = not important, 3 = somewhat important, 5 = very important).
Table 2: Means and standard deviations on 25 questionnaire items: self-regulation of writing in English (adapted from Zimmerman & Bandura, 1994a, reproduced with the permission of AERA journals)

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 When given a specific writing assignment, I can find a suitable topic in a short time</td>
<td>4.81</td>
<td>(1.27)</td>
</tr>
<tr>
<td>2 I can start writing with no difficulty</td>
<td>4.26</td>
<td>(1.27)</td>
</tr>
<tr>
<td>3 I can construct a good opening sentence quickly</td>
<td>4.39</td>
<td>(1.03)</td>
</tr>
<tr>
<td>4 I can create an unusual opening paragraph to capture reader’s interest</td>
<td>3.91</td>
<td>(1.07)</td>
</tr>
<tr>
<td>5 I can write a brief but informative overview that will prepare readers well for the main thesis of my paper</td>
<td>4.83</td>
<td>(1.01)</td>
</tr>
<tr>
<td>6 I can use my first attempts at writing to refine my ideas on a topic</td>
<td>4.53</td>
<td>(.93)</td>
</tr>
<tr>
<td>7 I can adjust my style of writing to suit the needs of any audience</td>
<td>4.29</td>
<td>(1.24)</td>
</tr>
<tr>
<td>8 I can find a way to concentrate on my writing even when there are many distractions around me</td>
<td>4.06</td>
<td>(1.52)</td>
</tr>
<tr>
<td>9 When I have a pressing deadline on a paper, I can manage my time efficiently</td>
<td>4.58</td>
<td>(1.50)</td>
</tr>
<tr>
<td>10 I can meet the writing standards of an evaluator who is very demanding</td>
<td>4.33</td>
<td>(1.30)</td>
</tr>
<tr>
<td>11 I can find memorable examples quickly to illustrate an important point</td>
<td>4.84</td>
<td>(1.11)</td>
</tr>
<tr>
<td>12 I can rewrite my wordy or confusing sentences clearly</td>
<td>4.53</td>
<td>(1.09)</td>
</tr>
<tr>
<td>13 When I need to make a subtle or an abstract idea more imaginable, I can use words to create a vivid picture</td>
<td>4.21</td>
<td>(1.21)</td>
</tr>
<tr>
<td>14 I can locate and use appropriate reference sources when I need to document an important point</td>
<td>4.58</td>
<td>(1.24)</td>
</tr>
<tr>
<td>15 I can write very effective transitional sentences from one idea to another</td>
<td>4.46</td>
<td>(1.24)</td>
</tr>
<tr>
<td>16 I can refocus my concentration on writing when I find myself thinking about other things</td>
<td>4.48</td>
<td>(1.30)</td>
</tr>
<tr>
<td>17 When I write on a lengthy topic, I can create a variety of good outlines for the main sections of my paper</td>
<td>4.60</td>
<td>(1.12)</td>
</tr>
<tr>
<td>18 When I want to persuade a skeptical or doubtful reader about a point, I can find a convincing quote from an authority</td>
<td>4.35</td>
<td>(1.19)</td>
</tr>
</tbody>
</table>

(Continued)
months of grounded interpretations of the data and consideration of key concepts from goal
theory (e.g., Austin & Vancouver, 1996; Locke & Latham, 1990; Midgely, 2002) and activ-
ity theory (e.g., Engeström, 1999; Leont’ev, 1972; Weimelt, 2001). The main categories of
the coding scheme identified the objects, contexts, long-term aspirations, origins, and
responsibilities associated with each statement about goals that were made in the interviews.
The transcribed interview data were coded by four members of our research team after the
full research team agreed on the coding categories and the four members had established
inter-coder agreement of .92 (Cohen’s kappa) on samples of the transcripts. For the present
analyses we consider only the frequency of the main characteristics of the goals; more
detailed results are reported elsewhere.³

For data from the follow-up questionnaires, we calculated mean responses and standard
deviations then compared these to discern the aspects of motivation the students considered
most and least important. We also compared the students’ desired and expected course
grades. For the questionnaire on self-regulation of writing processes we conducted a prin-
cipal components factor analysis with two purposes. First, we wanted to establish whether the
pattern of factors that emerged for the present population compared to the pattern that
Zimmerman and Bandura (1994) found for freshman college students in the U.S. Second, we
included in the factor analysis the students’ scores from the Institutional TOEFL (a widely
used test of reading, listening comprehension, and vocabulary and grammatical knowledge

³Detailed accounts of the results of these analyses appear in Cumming (2001), Cumming, Eouanzoui, Gentil, and

Table 2: (Continued)

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>19 When I get stuck writing a paper, I can find ways to overcome the problem</td>
<td>4.64</td>
<td>(1.04)</td>
</tr>
<tr>
<td>20 I can find ways to motivate myself to write a paper even when the topic holds little interest for me</td>
<td>4.44</td>
<td>(1.20)</td>
</tr>
<tr>
<td>21 When I have written a long or complex paper, I can find and correct all my grammatical errors</td>
<td>4.15</td>
<td>(1.34)</td>
</tr>
<tr>
<td>22 I can revise a first draft of any paper so that it is shorter and better organized</td>
<td>4.55</td>
<td>(1.10)</td>
</tr>
<tr>
<td>23 When I edit a complex paper, I can find and correct all my grammatical errors</td>
<td>4.21</td>
<td>(1.31)</td>
</tr>
<tr>
<td>24 I can find other people who will give critical feedback on early drafts of my paper</td>
<td>4.51</td>
<td>(1.57)</td>
</tr>
<tr>
<td>25 When my paper is written on a complicated topic, I can create a short informative title</td>
<td>4.89</td>
<td>(1.20)</td>
</tr>
</tbody>
</table>
in English), aiming to see whether their proficiency in English appeared as a separate factor from their self-regulation of composing processes, or whether the ESL proficiency scores might combine, in the factor analysis, with certain items related to writing processes. Also, we wanted to see if the institutional TOEFL scores might behave in a similar manner, in respect to perceptions of self-regulation of composing processes, to the SAT (Scholastic Aptitude Test) scores that Zimmerman and Bandura (1994) had applied as indicators of verbal aptitude to their data from English-dominant American students.

2 Results and Discussion

2.1 Goals and Motivations for ESL Writing – Interview Data

The 45 students who participated in the interviews all indicated that they were motivated to improve their writing in English, verifying that this was a primary reason for their taking the particular ESL program. Among the 1409 statements that we identified in the interviews as overtly referring to their goals for writing improvement in English, one third (35%) focused on aspects of the English language (i.e., grammar and vocabulary). Many of these statements also focused on rhetoric or genres (27%) or the expression of ideas or knowledge (21%). Smaller percentages of the statements that the students made referred to goals for improving their composing processes (8%), developing their identity or self-awareness (4%), improving their affective states related to writing (3%), or aspects of learning while writing (2%).

The actions that the students described to achieve these goals centered on their studying course materials or completing assignments or activities (38% of the goal statements) whereas some indicated how they sought their teachers’ assistance (16%), used resources such as dictionaries or spell checkers (15%), or read extensively (13%). Less frequently reported were actions that involved self-regulation of composing processes (7%), seeking assistance from other people such as English-speaking acquaintances (7%), or stimulating themselves to write or improve their English (4%).

The immediate contexts described for these goals were mostly their ESL classes (80% of the goal statements), but many students also mentioned home environments (15%), including their friends or family members, as a context associated with their ESL writing goals. The long-term aspirations guiding these goals mostly related to preparation for future university studies (55%) or career intentions (37%) but some students also cited preparation for university entrance tests (8%) as another source of their aspirations. The students perceived themselves as having the primary responsibilities for formulating their goals for English writing improvement (87%), but they also recognized their teachers’ responsibilities in prompting some of these goals (12%). In turn, the students attributed responsibility for achieving their goals mainly to themselves (90%) but in some instances to their teachers (7%) or peers or family members who assisted them (<3%). Analyses of these sets of goals overall, reported in Cumming et al. (2004), showed students to cluster into several identifiable groups (e.g., those more oriented to studying and reading, to obtaining assistance from others, or to self-regulation goals) that remained relatively stable from the beginning to the end of the three-month ESL course.
2.2 Two Contrasting Cases

The nature of these goals and motivations for ESL writing is exemplified in the following extracts from interviews with two students who expressed either distinctly high or low levels of motivation in the interviews. Alfred, an Arab-background student from Israel, was planning to study psychology at university in Canada. He appeared to be intrinsically interested in interacting with people and pursuing actions that would realize his learning goals. In contrast, Boon-Hee from Korea wanted to study accounting at university in Canada then return to work in Korea. She did not seem to have particular goals for using English nor to have thought much about this.

In his first interview, Alfred exhibited motivations that so integrated conventional notions of extrinsic (to study psychology at university) and intrinsic (he likes to interact with people) motivation that it would be difficult to distinguish them as separate constructs (cf., Ryan & Deci, 2000).

Extract 1

Alfred (A): I am planning to finish my preparation. And then after that I start to study psychology at the University of X, undergraduate. And I have applied already for by using website [name of website] but I am trying to apply again, because I don’t know what’s happening with this.

Interviewer (I): What do you mean, [name of website]?

A: It’s [name of website], it is a kind of web. Through that you can apply to the universities. I used that before I came here, Canada.

I: So you want to major in psychology. Why do you want to major in psychology?

A: Just happened to personality. I like psychology. I like to listen to people, talk to people. All my friends look at me not only as a friend, just a-

In Extract 1, Alfred seems genuinely motivated in his goals for ESL writing improvement: He wants to learn English in order to study a specific major at a university. This conforms to Pintrich and Schunk’s (2002, p. 404) definition of extrinsic motivation as “motivation to engage in an activity as a means to an end.” However, after a little probing from the interviewer, Alfred relates his reason for pursuing a psychology major to his extroverted personality. This perception is more related to intrinsic motivation (i.e., “to engage in an activity for its own sake,” Pintrich & Schunk, 2002, p. 405) rather than extrinsic motivation. Thus, Extract 1 illustrates how ESL writing goals can be realized through multi-layered motivational constructs. This complexity poses difficulties in categorizing ESL writer’s expression of their goals into conventional dimensions of motivation theories.

Alfred’s expression of his goals in his second interview showed concerns for regulating himself as well as relevant others, such as pleasing his teacher; for making great efforts to improve his writing; and for achieving personal satisfaction from his achievements and his written texts.
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Extract 2

I: If you always feel good when you write in English, that’s even for the essay writing? I mean for poems, for songs, I mean, that’s your favorite, right? How about writing for teachers?

A: the truth is that I like, I like writing for the teacher because I like the teacher to be happy when I hand a teacher a very good piece of writing. I write, I try to, then I give that time, sometimes I sit for two or three hours and I was just keeping writing and reading it again and writing it again, trying to fix it, and except it is perfect, you can’t make the best way, I like it, because then when I finish it, and look at it, oh, ok, this time is better than the last time, that’s why I like it, because, that’s my goal to be better.

Even though Alfred stated explicitly that he writes to satisfy his ESL teacher, he also continued to express an interaction of extrinsic and intrinsic motivations. That is, the action of ESL writing, as motivated by external factors (i.e., to please his ESL teacher), is also perceived as an internally rewarding experience, evidenced by his final comment: “that’s my goal to be better.” The locus of Alfred’s causality in Extract 2 combines external regulation as well as internal motivation for ESL writing (involving his interest, enjoyment, and inherent satisfaction).

In contrast, Boon-Hee’s remarks about her goals for English writing showed some extrinsic motivation in her goals for writing (to get grades from her teacher) but little in the way of intrinsic interest in improving her writing or English. She even displayed a reticence to talk about such matters.

Extract 3

I: Alright, um...Um, who do you write for when you write in English?

Boon-Hee (B): Actually, it’s for my teacher. I mean, I have to follow her style. Everyone has different style so I have to remember what’s their, I mean, style, so actually for my teacher to get grade [laughs]

I: o.k. umm., are you trying to improve this? Are you trying to write for other people?

B: Um...uh...no. Actually, No.

Compared with Alfred’s heightened motivation and personal interest in writing in English, Boon-Hee’s statements about her goals for writing seem straightforward: to get grades in a course. In Extract 3, her goal appears to be solely externally regulated, showing no sign of internalization or intrinsic motivation. Similar indications of Boon-Hee’s extrinsic motivation for ESL writing appeared in her second interview.

Extract 4

I: Um, like so, how your teacher helps you. Do you want to improve that? Do you want to change that?
Motivations for ESL Writing Improvement in Pre-University Contexts

B: Oh yeah. If she give us some advice, yeah, then next time maybe I, I change to her style. I think you know it’s really hard because every teacher have different style, so I have to, every time depend on teacher, I have to change my style also, so it’s really hard, but just, mm. Maybe I will follow their style.

In Extract 4, Boon-Hee again states how she depends on her ESL teacher’s suggestions to determine her writing performance. Presumably, the ESL teacher, as a provider of authoritative information about ESL writing, compels students who lack relevant English knowledge to follow her advice. But in the face of this, Boon-Hee demonstrates little sense of autonomy or self-regulation about her ESL writing. She confines her goals primarily to these external regulations. Moreover, Boon-Hee expresses conflicting goals about learning English and improving her writing, and she seems unsure of how to regulate her own writing to do either.

Extract 5

I: Um, how do you feel when you write in English?

B: umm sometimes fun because I love English, I wanna..I mean I love writing but it’s painful and it’s really difficult but it’s fun. I really enjoy it. That’s why, maybe even if it’s painful, maybe later I just forget. Because I love..my work and I’m satisfied.

I: O.k. Umm..are you trying to change the way you feel about English..when you write?

B: No, no I like this feeling. ..[laughs]

I: O.k umm..can you give me an example of what you mean by feeling pain?

B: Umm..because sometimes just stop. I don’t know how can I write or I’m really don’t know, so it’s really painful, but it’s kind of very..um, good feeling. Because after I mean finish my reading I’m really happy even though it’s good or bad. I don’t care I just finish my writing I did something. I’ve done something, so it’s a really good feeling.

In contrast to Alfred’s conscientious goals for writing improvement and his combination of external regulation and internal academic pleasure (in Extract 2), Boon-Hee seems to make simple but conflicting links between her goals and emotional states. She claims to “love English” and that she is “really happy” whether her ESL writing is “good or bad.” Boon-Hee says she finds short-term pleasure in finishing a writing task, but this sense of satisfaction is not related substantively to any long-term formation of goals to improve her ESL writing. She just seems relieved to have completed a writing task. From the viewpoint of Ames’ (1992b) theory of educational achievement, Boon-Hee expresses performance goals but no mastery goals. 4 From the viewpoint of Bereiter and Scardamalia’s (1989)

4Ames (1992b, p. 262) defined mastery goals as those in which “individuals are oriented toward developing new skills, trying to understand their work, improving their level of competence, or achieving a sense of mastery based on self-referenced standards” and performance goals as those in which “learning itself is viewed only as a way to achieve a desired goal, and attention is directed toward achieving normatively defined success.”
theory of writing development, Boon-Hee expresses task completion goals to tell her knowledge in writing in English, as requested by her teacher, but no intentional orientation toward her own learning that could transform her knowledge or abilities toward expertise in writing.

Of additional interest is Boon-Hee’s expression of opposing emotions: “it’s really painful, but it’s kind of very … um, good feeling.” From the perspective of Weiner’s (1994) attribution theory, Boon Hee’s paradoxical emotional state can be explained as follows. Even though ESL writing is a demanding (and thus painful) task, she seems to perceive it as controllable through her own situational effort, which is an internally situated but unstable variable. Through extended efforts, Boon-Hee thinks she can accomplish writing tasks with positive outcomes (i.e., her own satisfaction), based on her previous similar experiences. Even though the effort involved in writing tasks in English induces pain, this pain may generate some of her interest in English writing tasks, and the expected satisfaction of completing them and her faith in her teachers’ guidance are sufficient to mitigate Boon-Hee’s negative emotions about doing them.5

2.3 Goals and Motivations for ESL Writing – Questionnaire Data

Japanese, and Korean population of fulfilling their family’s expectations for their academic and career success.\(^7\)

It is worth noting that for the three items that concerned performance goals (items 5, 6, 8), there was a discrepancy among individual responses, as the relatively high standard deviations for these items in Table 1 indicate: 5 students gave these items very low ratings (e.g., 1–2) and 6 students (including Boon-Hee) gave these items very high ratings (e.g., 4–5). Similar discrepancies appeared among the students’ estimations of their desired course grades and the grades they actually expected to receive for their courses. Six of the students stated they expected to receive course grades that matched their desired achievement, and all of these were grades of either A or B. Six other students stated that they expected to get course grades that were slightly lower than they desired, and these were either (for 2 students) an expected grade of B rather than a desired grade of A or (for 4 students) an expected grade of C+ rather than a desired grade of B. These results suggest the presence of sub-groups among this ESL population. That is, some students expressed relatively strong desires in all aspects of motivation, realistic senses of self-efficacy, and high aims for academic achievement. Other students confined their ratings to limited aspects of motivation or had less realistic senses of self-efficacy or expectations for academic achievement. As these results and the cases described above indicate, the polar distinctions that Ames, for example, ascribed to distinguish performance from mastery goals may obtain in some instances (such as Boon-Hee) but combine in other instances (such as Alfred). Indeed, Hidi and Harackiewicz’s (2000) critique of previous polarized conceptualization of motivation has suggested that “performance goals do not always have negative effects, even for individuals low in perceived competence” (p. 161) and “mastery and performance goals can interact positively to promote adaptive behaviors” (p. 162). We might even wonder if the highly motivated situation of international ESL students preparing themselves for university studies could prompt a synergy among various types of goals and motivations, as in the case of Alfred described above.

A further mixing of polar motivational constructs emerged among the items we had devised to distinguish Gardner’s (1985) constructs of integrative and instrumental orientations toward acquiring a second language. The present students rated as highly important certain items that reflected instrumental orientations (items 2 and 9, \(M=4.47–4.53\)), whereas they gave low importance to other items that we had also devised to reflect instrumental orientations (items 6 and 8, \(M=2.4–2.72\)). We might presume that these international students had mainly instrumental reasons for wanting to improve their writing in English (for the practical reason of studying at a Canadian university), but they also had some motivation for integration into select aspects of Canadian society, such as integration among their student peers for the duration of their university studies (item 3, “I want to make friends and contacts,” \(M=3.84\)), though not the motivation to integrate fully into the society that immigrants to Canada, for example, may experience. As these and other results above indicate, we might wonder if sub-concepts across theories of motivation share significant but subtle elements with one another.

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\(^7\)Yang et al. (2004) documented this tendency in detail in case studies of several Chinese and Japanese participants in our study.
another, and if so, if we should conceptualize motivation for the improvement of ESL writing in regards to the interface among multiple constructs of motivation and goal theories.

2.4 Self-regulation of Writing Processes in English – A Factor Analysis

As shown in Table 2, the responses of the 150 students in the ESL program who completed this questionnaire (\(M\) from 3.91 to 4.84, SD from 0.93 to 1.57) were generally in the same range as those produced by Zimmerman and Bandura’s (1994, p. 850) American college freshmen (\(M\) from 3.48 to 4.98, SD from 1.09 to 1.63). Most of their mean self-ratings were nearly identical, in fact. Where slight differences appeared between the two groups, the ESL students expressed more confidence in certain abilities to self-regulate their composing functions than the American students did, in particular, rating themselves higher on average than the U.S. college students on items that concerned starting to write (items 2 and 3), concentration while composing (items 8, 16, and 20), and outlining lengthy compositions (item 17). In turn, as might be expected, the ESL students rated themselves slightly lower than the U.S. freshmen on the two items (21 and 23) that concerned correcting their own grammatical errors in English. Some of these results might be explained by the fact that one-third of the ESL population had already completed a Bachelor’s degree in their home countries so may have had greater experience writing for university courses in those contexts than the U.S. students who were just starting university programs. Nonetheless, the ESL students’ senses of self-efficacy while composing in English were relatively high, and generally on a par with those expressed by the U.S. freshman students that Zimmerman and Bandura (1994) had studied.

Four factors emerged from the principal components analysis of the ESL students’ responses to the questionnaire, as shown in Table 3, and their institutional TOEFL scores emerged as a wholly separate factor. A first factor accounted for 26% of the variance, then each of the subsequent factors added distinct individual variance (of 6–15%) to the factor model, accounting in total for 70% of the variance in the questionnaire responses. After inspecting the questionnaire items that loaded onto each factor, to determine concepts they may have in common, we have labeled these factors as (1) planning and drafting, (2) editing, revising, and using sources, (3) concentration and motivation, and (4) meeting readers’ expectations. The students’ scores on the institutional version of the TOEFL emerged as a distinct, wholly separate fifth factor, which we have called ESL proficiency, accounting for an additional 7% variance in the questionnaire responses.

These results differ from those obtained by Zimmerman and Bandura (1994), although they similarly found several factors emerging from their principal components analysis, accounting in total for 79% of the total variance in their questionnaire responses from 95 American freshmen. For Zimmerman and Bandura’s (1994) analysis, almost all of the questionnaire items loaded (above 0.4) onto the first factor in their principal components analysis, which they therefore called “self-efficacy,” except for items 2, 9, and 20, which loaded distinctly, together with SAT scores, onto a factor they called “verbal aptitude” (p. 854). Zimmerman and Bandura also labeled two other factors “writing skill” (which included course grades) and “concentration and self-evaluation,”
but they could not ascribe labels to the other three factors because the questionnaire items that loaded on to them were more closely associated with the first factor rather than these subsequent factors.

We can summarize the results of the present analysis as follows. First, these ESL students preparing for university studies in Canada had perceptions of their abilities to regulate their composing in English that were generally on a par with American students

<table>
<thead>
<tr>
<th>Questionnaire Items (see Table 2)</th>
<th>Factors</th>
<th>Planning and drafting</th>
<th>Editing, revising, and using sources</th>
<th>Concentration and motivation</th>
<th>Meeting readers’ expectations</th>
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*Factor loadings at .4 and above.
beginning university studies at what Zimmerman and Bandura (1994, p. 849) described as a “highly selective university” in the U.S. The ESL students recognized limitations in their abilities to correct their errors in English, but for all other composing functions they rated themselves as highly as the U.S. freshman students did, and slightly higher than them on items related to starting to write, concentration while writing, and outlining lengthy papers. Second, the factor analysis indicated that the ESL students had relatively well-differentiated concepts of their abilities to regulate their composing behaviors in English, distinguishing their abilities into several discrete sets of composing functions – related to planning and drafting their texts; editing, revising, and using sources for these texts; regulating their concentration and motivation while writing; and writing to meet readers’ expectations. Third, these perceptions of self-regulatory efficacy for writing in English did not relate directly to the ESL students’ general proficiency in English as measured by the institutional version of the TOEFL, a standard test of English grammar, vocabulary, and listening and reading comprehension.

3 Implications

Although exploratory and descriptive of just one small population of ESL learners, the present findings point toward certain conceptualizations of motivation for writing improvement among visiting international students preparing for university studies in North America. These ideas, in turn, suggest several implications for educational policies, pedagogical practices, and future inquiry.

3.1 Conceptualizing Motivation for Pre-University ESL Writing

Motivation for this population needs to be viewed as a multi-layered set of concepts. ESL students preparing for university studies evidently have many distinct goals for their writing improvement in English. These goals may focus on the content of their English studies, involving aspects of writing commonly taught in ESL composition courses around the world (Cumming, 2003) – such as grammar and vocabulary, rhetorical and genre functions, or expression of knowledge, composing processes – but they also include subtle elements of self-confidence, transfer of learning from language classrooms to academic and career contexts, or developing new language identities. These goals are associated with many different actions that ESL students take to fulfill these goals, both within classes (through assistance from teachers, peers, and pedagogical activities) as well as outside of classes (through assistance from family and friends and uses of diverse resources). One could only encourage students to make use of these goals, actions, and resources productively and extensively, as most in the present population appeared to be doing.

Conventional constructs from motivation theory apply to these learners but in complex combinations rather than as simple, polar dichotomies. Students, such as Alfred, who demonstrate high levels of motivation to improve their writing in English appear to combine intrinsic and extrinsic motivations (cf., Ryan & Deci, 2000), performance goals as
well as mastery goals (cf., Ames, 1992b), and orientations to learning English that are instrumental as well as integrative (i.e., at least into selective academic contexts, cf., Gardner, 1985). Students, such as Boon-Hee, who may lack some aspects of motivation to improve their writing in English may have more extrinsic than intrinsic motivations, more performance than mastery goals, and more instrumental than integrative orientations to learning the language. But the complexity of these relations defies easy categorization, as the mixed results from our brief, follow-up questionnaire showed. Ethnicity, gender, and personality factors probably moderate these motivations, as Harackiewicz, Barron, and Elliot (1998) or Pintrich (2000b, p. 491) have suggested. In turn, the dynamics of classroom interactions, relative success on writing tasks, and other interpersonal relations probably have facilitative or constraining effects on students’ goals in ways that interviews or questionnaires cannot begin to depict (Marshall & Weinstein, 1984). Importantly, as Hidi and Harackiewicz (2000) have argued for education generally and as van Lier (1996, p. 111) put it for second-language learning, bipolar motivational constructs “may well start out as being separate … but converge and intertwine ever more closely, until it may well become impossible to tell one from the other most of the time.”

The specific goals for writing improvement expressed by the present ESL students include, but are more particular than, the aims of fluency, accuracy, and complexity that theorists such as Skehan (1998) have proposed be benchmarks for task design for second-language curricula. The factors that emerged from our principal components analysis of questionnaire results suggest that adult ESL students have relatively sophisticated and distinctive perceptions about their abilities to self-regulate their composing processes in English – distinguishing, for instance, between their abilities to plan and draft their compositions; to edit, revise and use sources in them; to meet readers’ expectations for their writing; and to control their concentration and motivation for writing. Moreover, the ESL students’ perceptions about these factors appear to be distinct from their current proficiency in English (as indicated by their scores on a standard test of English proficiency). This result supports Cumming’s (1989) argument that writing abilities are a general kind of expertise that develops separately from proficiency in a second language, particularly when advanced literacy or second-language proficiency are acquired in adolescence or adulthood (cf., Cummins, 1984).

3.2 Curriculum Policies and Instructional Practices

These interpretations suggest the importance of teachers understanding the particular goals that ESL students have for their writing improvement in pre-university contexts. An obvious way to act on these findings in classroom instruction is to organize courses so that students are prompted to define personal goals for writing improvement (e.g., using elements from the coding scheme developed for the present interviews), then to monitor and control their achievement of those goals over successive writing tasks, as described in action research projects by Cumming (1986) or Hoffman (1998). Individual goals for writing improvement also need to be related purposefully to the general curriculum standards or benchmarks that now dominate syllabi for language education around the world. Such standards or benchmarks are necessarily framed in general terms so as to apply to majority populations. Instructors need to help ESL learners personalize curriculum standards or
benchmarks, forming them into individually relevant performance and mastery goals for writing improvement. Students need themselves to define goals, and their motivations, for learning rather than to have these prescribed for them.

Taking a proactive approach to developing self-awareness, in which students define their own goals for writing improvement, and assume responsibilities for regulating their own learning in the context of writing performance, may be the only way to motivate students who, like Boon-Hee, may not appear to be motivated to do so. We suspect that ESL students like Boon-Hee are motivated, in a fundamental sense of wanting to succeed in their university studies, but they have not yet elaborated a full conceptualization of how to regulate their own learning productively. At the same time, the results of the present inquiry suggest that ESL learners from diverse cultural backgrounds approach their writing in English in ways that are fundamentally similar to those demonstrated by English-dominant North American students at university. They may recognize limitations in their knowledge about the English language and some of its rhetorical forms and cultural references, but the present group of ESL learners described their abilities to self-regulate their composing processes in English in ways that closely resembled, and in some respects were even more sophisticated than, those documented for American college students by Zimmerman and Bandura (1994). For this reason, we might conclude that the approaches advocated for motivation elsewhere in chapters in the present volume might apply equally well to students from ESL backgrounds aspiring to study at North American universities.

3.3 Future Inquiry

The approaches taken in the present analyses represent an eclectic mix of research methods commonly applied to research on motivation, including methods of data collection such as questionnaire surveys and interviews and of analysis such as interpretive discourse analysis and factor analysis. But to observe and analyze the processes and development of motivations in action and human experience, particularly in classroom contexts, research needs to extend to observations, analyses of discourse interactions, and longitudinal perspectives on group and individual change. Correspondingly, theoretical conceptualizations of motivation need to extend beyond polar dichotomies, self-report data, and correlational models (Kim, 2004). In this regard, adopting a situated, long-term perspective on the realizations of motivation in classroom and other contexts is particularly important to understanding the diverse institutional, social, and cultural milieux that ESL learners experience and that written literacy entails. Correspondingly, analyses that we are presently pursuing with the same ESL students, a year later, as they progressed into university studies, and interacted with professors and writing tasks in various academic courses, are further documenting and interpreting the relations between these learners’ (a) activities and motives, (b) actions and goals, and (c) operations and conditions in classrooms and communities (Cumming, 2006; Yang et al., 2004).

Acknowledgment

A preliminary version of this paper was presented at TESL Ontario’s Annual Conference, November 20, 2003 in Toronto. We gratefully acknowledge funding for the research from
the Social Sciences and Humanities Research Council of Canada, standard grant 410-2001-0791 to Alister Cumming as well as from graduate research assistantships from the Ontario Institute for Studies in Education to several members of our research team. In addition to the students and instructors who participated in this study we thank other members of our research team for their work on data collection, transcription, coding, and discussions of aspects of the data: Kyoko Baba, Michael Busch, Jill Cummings, Usman Erdosy, Cheryl Fretz, Guillaume Gentil, Luxin Yang, and Ally Zhou.
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Chapter 7

“Putting Things into Words” : The Development of 12–15-Year-Old Students’ Interest for Writing

Rebecca L. Lipstein and K. Ann Renninger

This chapter addresses three questions: (a) What is the relation among students’ interest for writing and their conceptual competence, goals, and strategies as writers? (b) What is the relation among students’ interest for writing and their perceptions of their effort, self-efficacy, and feedback preferences in their writing? (c) What conditions support students to be effective writers? Portraiture is used to depict students in each of the four phases of interest development identified by Hidi and Renninger (2006): triggered situational interest, maintained situational interest, emerging individual interest, and well-developed individual interest. Data from questionnaires and structured in-depth interviews with middle school students informed portrait development. Discussion centers on the relation among students’ phase of interest for writing and their corresponding motivational strengths and needs as writers. Pedagogical implications are considered.

Dewey (1913) wrote that where there is interest effort follows. He also noted that while teachers cannot make a student interested in subject matter, they can support students’ abilities to make connections between their prior experiences and the materials to be learned.

When students have interest for a particular subject matter, they are likely to be attentive to, able to set goals for, and have effective learning strategies for working with that subject matter (Hidi & Renninger, 2006). Moreover, student interest is likely to deepen and develop with reengagement. In the present chapter, the research literature on interest, motivation, and writing is overviewed as a basis for discussing findings from a qualitative

1Order of authorship is arbitrary. Work on this paper has been fully collaborative.

Writing and Motivation
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ISBN: 0-08-045325-2

“Putting things into words”: the development of 12–15-year-old students’ interest for writing
In G. Rijlaarsdam (Series Ed.) and P. Boscolo & S. Hidi (Volume Eds.), Studies in Writing, Volume 19, Writing and Motivation (pp. 113–140). Oxford: Elsevier
analysis of 12–15-year-old students’ interest for writing. Three questions informed this investigation:

1. What is the relation among students’ interest for writing and their conceptual competence, goals, and strategies as writers?
2. What is the relation among students’ interest for writing and their perceptions of their effort, self-efficacy, and feedback preferences in their writing?
3. What conditions support students to be effective writers?

Following a review of relevant literature, composite portraits of students representing four phases of interest for writing are presented. These portraits were developed using questionnaire and interview data, and they map onto Hidi and Renninger’s (2006) Four-Phase Model of Interest Development. The portraits provide the basis for an investigation of different phases in the development of student interest for writing. Commonalities and differences among the portraits are identified, and their pedagogical implications are then considered.

1 Background: Interest, Writing, and Motivation

1.1 Interest

In everyday usage, interest refers to the topic of a person’s engagement (e.g., an interest for writing or math) and is sometimes described as a characteristic of a person (Valsiner, 1992; Silvia, 2001). As a motivational variable, however, interest more precisely refers to interaction with particular subject matter content (e.g., writing, mathematics, soccer). In this sense, interest is located neither in the student nor in the subject matter; rather, it emerges and exists in the interactions between the student and the subject matter (Krapp, Hidi, & Renninger, 1992; Krapp, Renninger, & Hoffmann, 1998; Hidi, Renninger, & Krapp, 2004). Reengagement with particular subject matter provides a student with opportunities for developing stored knowledge and stored value for that content – or interest – as well as opportunities to recall positive feelings about previous engagement (Renninger, 1990, 2000).

In their discussion of interest development, Todt and Schreiber (1998; see also Tracey, 2001) report that students’ interests become increasingly focused from birth until about age 15. They suggest that this increase in focus is due to students’ social contexts as well as changes in their bodies and gender identification. Initially, according to Todt and Schreiber, the process of identifying interest is influenced by the structure of a person’s environment. This is followed by a process of identification that includes gender-typing of interest content and self-assessment of skills.

While existing interests become more stable in adolescence (Marcia, 1980; Vondracek, 1993), new interests can also develop. Moreover, even though drops in interest for school-related subject matter have been observed during adolescence (Eccles, Midgley, Wigfield, Buchanan, Reuman, Flanagan et al., 1993a; Gardner, 1998; Krapp, 2000), adolescents can have as many as five or six interests (Renninger, 1992). Much depends on the conditions of the environment (Renninger, Sansone, & Smith, 2004; Renninger, Ewen, & Lasher, 2002). For example, as Renninger and Hidi (2002) report in their developmental case study, an adolescent may have a well-developed individual interest for soccer and be in a position to acknowledge this interest. The same student may have a well-developed individual interest
for writing, but this interest may not be something he is able to articulate or willing to acknowledge because of gender expectations and other social pressures. He may also have only a passing, or situational, interest for science – until this interest is supported to develop (see case study reported in Renninger & Hidi, 2002).

The connections that students make with content to be learned can lead to serious reengagement, presuming that there is continued content for the student to engage. For example, a student who begins learning how to write in a “writer’s workshop” may have positive feelings about writing because this setting affords her choice about subject and genre and the ability to think about the content of her writing with others (Atwell, 1987). However, this student may not continue to feel positively or be led to deepen her appreciation for the possibilities that communicating through text can represent if she does not continue to write under similar conditions (see related discussion in Renninger, 2000). In discussions of adolescence, this situation is often cast in terms of heightened interest or apathy. The heightened interest associated with adolescence usually reflects developing talent (Csikszentmihalyi, Rathunde, & Whalen, 1993). The apathy associated with adolescence is typically attributable to someone else’s decision about what should be of interest to the students, without the kind of back-up support that interest development requires (Renninger & Hidi, 2002; Renninger et al., 2004). For example, it is possible that the decline of interest for subject matter during adolescence corresponds to constraints placed on students as learners that impede or interfere with interest development (Bruning & Horn, 2000). Such constraints could be related to what counts as writing (five-paragraph essays) and requirements for form and organization in the secondary school classroom, which differ from expectations and approaches to writing found in earlier grades (free writes, project-based learning, etc.) and again in college (choice of course content, instructors, etc.) (Hoffmann, 2002; Hidi, Renninger, & Krapp, 2004).

The supportive (or constraining) role of educators in determining whether and how students develop interest for a subject, and therefore an understanding of that subject, cannot be overlooked (Pressick-Kilborn & Walker, 2002; Renninger, Sansone, & Smith, 2004). Through their pedagogy, teachers construct learning environments that can contribute to student interest. For example, they can support students to feel positively about their efforts to learn. Students’ feelings about involvement with particular subject matter have been found to affect learning outcomes and to mediate the way in which students undertake assignments and questioning (Renninger & Hidi, 2002). Provision of choice (Flowerday & Schraw, 2003) project-based learning (Blumenfeld, Soloway, Marx, Krajcik, Guzdial, & Palincsar, 1991; Marx, Blumenfeld, Krajcik, Blunk, Crawford, Kelly et al., 1994), and group work (Hidi, Weiss, Berndorff, & Nolan, 1998) are techniques that support students to connect to the materials that they need to learn and presumably could provide a basis for interest development.

To date, research that addresses the role of interest in students’ writing suggests that teachers should expect variability in student writing, depending on the topic that they assign (Benton, 1997). Students have been found to have an increased motivation to write if topics they are assigned are of interest to them (Hidi & McLaren, 1990). In addition, if the topic about which students are writing is of interest to them, they have more to discuss (Hidi & Anderson, 1992).\(^2\) Also, students are more likely to write narratives that are well organized.

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\(^2\)As Bereiter and Scardamalia (1987) point out, having discourse and content knowledge relevant to a writing assignment also increases the likelihood that students have something to write about and that what they write is focused.
and logical (Benton, Corkill, Sharp, Downey, & Khramtsova, 1995), as well as more focused and topic-relevant (Albin, Benton, & Khramtsova, 1996), when they write about topics of interest. Furthermore, if a topic identified as an individual interest for a student is inserted as the context of a passage to be read, that student is likely to write more and attend more to meaning and sense-making (Renninger, Ewen, & Lasher, 2002). However, most studies of interest and writing have focused on the topics about which students write rather than writing as the domain of potential interest (Boscolo & Cisotto, 1997).

1.2 Interest and Writing

As Hidi and Boscolo (2006) point out, research on writing has typically had one of two foci. Either it has focused on cognition to the exclusion of motivation and affect, providing a basis for present studies of self-efficacy and self-regulation, or it has been based in socio-cultural theory in which writing is essential to students’ meaning-making. Similarly, research informing the teaching of writing has either centered on supporting students to develop the analytical skills required to write effectively (Durst & Newell, 1989), or emphasized the importance of establishing a context with which a student can identify and through which skills can be practiced (Graham & Harris, 1994a,b, 2000; Harris & Graham, 1992; Simmons, 1991; Stahl, McKenna, & Pagnucco, 1994). Usefully, both approaches to writing require attention, the ability to set goals, and effective learning strategies. However, only a few studies have focused on student interest for writing or students’ perceptions about “putting things into words” as support for developing attention, goal-setting, or effective learning strategies (c.f., Boscolo & Cisotto, 1997; Nolen, this volume).

In fact, some teachers (and students) do not think that it is possible for students to develop interest for particular subject matter (e.g., writing). They think that a student either does or does not have interest. Such perceptions logically lead to the conclusion that interest is immutable – a perspective that has no empirical support. A number of studies have suggested that teachers can effectively support students to develop interest (Renninger, 1992, 2000; Renninger Ewen, & Lasher, 2002; Renninger & Hidi, 2002, Renninger, Sansone, & Smith, 2004). Importantly, these studies indicate that, while interest can be triggered in the moment, it needs to be sustained if it is to have an impact on what students learn. Primarily, these studies have focused on changes that can be made to text to enhance its interestingness (Hidi & Baird, 1986) or concreteness (Sadoski, 2001). Other findings indicate that changes in instructional conditions will sustain student interest, for example, repeated and targeted development of connections between content to be learned and everyday tasks (Renninger et al., 2004); project-based approaches to learning (Blumenfeld et al., 1991); group work (Hidi, Weiss, Berndorff, Nolan, 1998); and provision of choice (Flowerday & Schraw, 2003).

Presumably, changing the task and/or instructional conditions will enable students to feel that they can undertake assigned work that they do not enjoy (Sansone, Weir, Harpster, & Morgan, 1992). If students do not have positive feelings about a task, however, it is not likely that they will connect to material, ask their own questions of it, or choose to return to it when it is not assigned (Hidi & Renninger, 2006). This does not mean that a teacher should praise everything students do or simply allow students to do what they want. Rather, students need to feel a sense of possibility about themselves as writers (Markus & Nurius, 1986) and about the utility of writing (Wigfield & Eccles, 2002b). Willing as well as recalcitrant students need
to see that they can “get” it. They need to understand that learning anything is a process that takes time, and they need to find the value of that process for themselves.

1.3 Interest and Motivation

The educational psychology literature has focused on two types of interest: situational and individual interest (Krapp, Hidi, & Renninger, 1992; Hidi, Renninger, Krapp, 2004). Briefly, situational interest refers to the shifting of attention to some content in the moment. Thus, loud noises, a topic that one does not know too much about, or a topic that a person does know something about could trigger a situational interest. Situational interest may last only a short period of time or it may be sustained – meaning that a person will continue to attend to the subject matter and may be led to set goals and/or explore possible strategies for working with it. Even if a person has positive feelings, however, a situational interest for a particular content, such as writing, is not typically sustained unless there are multiple instances of triggered situational interest (Renninger & Hidi, 2002) and encouragement of continued engagement (Hidi & Baird, 1988; Hoffmann, 2002; Renninger & Hidi, 2002; Renninger, Sansone, & Smith, 2004; Sadoski, 2002; Schraw & Lehman, 2001; Wade, 2001).

Individual interest, by contrast, refers to the likelihood that a person will reengage with particular content over time. Individual interest has been variously discussed as including both affective and cognitive components (see discussion in Hidi & Renninger, in revision). Importantly, support from other people and the environment is also necessary to sustain individual interest. While students with an individual interest for particular content are predisposed to return to that content over time, this predisposition can be supported or constrained by environmental conditions. These conditions include whether students are (a) given time to work through and revise ideas, (b) provided with alternate approaches for problem solving, and (c) offered opportunities to interact and think with others about ideas (Krapp & Lewalter, 2001; Renninger, 2000; Renninger & Shumar, 2002).

Situational and individual interest may mediate attention, goals, and learning strategies with respect to particular content, but this mediation occurs within a larger culture (e.g., family or school) (Hoffmann, 2002; Järvelä, 2001; Pressick-Kilborn & Walker, 2002; Renninger, Ewen, & Lasher, 2002). This context can, but may not, support interest development.

Recently, Hidi and Renninger (2006) suggested that, taken together, situational and individual interest describe a Four-Phase Model of Interest Development. The four phases are:

- Phase 1: Triggered situational interest.
- Phase 2: Maintained situational interest.
- Phase 3: Emerging (or less-developed\(^3\)) individual interest.
- Phase 4: Well-developed individual interest.

Each phase of interest is characterized by both positive feelings and cognition. In the first phase, *triggered situational interest*, a person perceives the content of interest, even if only fleetingly, and the positive feelings associated with this experience command his or

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\(^3\)Elsewhere, emerging individual interest has been discussed and studied as less-developed individual interest (Renninger, 2000). The phase of interest being discussed is the same. The label was changed in order to acknowledge that in terms of interest development, the less-developed individual interest is an emerging individual interest (Hidi & Renninger, 2006).
her attention in the moment. In the second phase of interest, *maintained situational interest*, a person re-engages with content and is typically supported by others to find ways to relate the content of interest to prior experience, other information, etc. In this phase of interest, a person also begins to develop value for content. In the third phase of interest, *emerging individual interest*, the person seeks repeated engagement independently, and he or she begins to pose curiositry questions about the content of interest. This questioning process leads to self-regulated activity, increased valuing, and the accumulation of discourse knowledge and more content-specific skills. In the fourth phase of interest, *well-developed individual interest*, a person continues to seek repeated engagement independently. This engagement is informed by curiosity questions, the self-regulation necessary to address these questions, value, and the ability to attenuate frustration and sustain creative thinking.

Based on their review of the literature, Hidi and Renninger (2006) suggest that interest emerges and continues to develop in relation to other motivational variables. It might be expected that, as interest develops and students begin to identify with and generate their own curiosity questions about writing, their (a) feelings of self-efficacy improve, (b) goals are modified, (c) ability to spontaneously self-regulate is heightened, and (d) sense of possibility is enhanced. Of particular importance here is the possibility that interest is not simply an outcome of self-efficacy, goal-setting, and self-regulation, but rather a mediator of attention that supports the development of self-efficacy, goal-setting, and self-regulation. In this sense, interest – or, more specifically, deepened interest – is an outcome of a developmental process. Thus, even though interest and motivation are often used in everyday discussions to describe student involvement, not all motivated behavior is interested behavior. Interested behaviors, however, are always motivated behaviors. If interest for writing does develop, that interest is likely to support students to attend to content, set goals, and employ learning strategies that should enhance their writing.

### 2 Students’ Perceptions of and Interest for Writing

In order to consider the relation among interest, writing as a domain, and student motivation, a combined questionnaire and interview study was conducted (Renninger & Lipstein, forthcoming). A familiar adult distributed an open-ended and forced-choice questionnaire to 178 (79 boys, 99 girls) students during their English classes. She explained that she was asking them to complete a questionnaire that would help her to help teachers know more about student writing. The last item on the questionnaire asked each student if he or she would consider participating in a follow-up interview. Follow-up interviews were in-depth, structured interviews that were recorded, transcribed, and coded. A total of 72 students (38 boys, 34 girls) participated in the follow-up interviews. Data from students’ questionnaires and the interview responses are the focus of the present analysis.

Students were purposefully sampled for interview participation based on their identified phases of interest for writing, gender, and year in school. Because gender and age did not distribute evenly across interest groups, students interviewed included 7 students (6 boys, 1 girl) identified as having only a triggered situational interest for writing, 36 students (21 boys, 15 girls) identified as having a maintained situational interest, 28 students
(10 boys, 18 girls) identified as having an emerging individual interest, and 1 student (1 boy) identified as having a well-developed individual interest for writing.4

2.1 Method: Portraiture

The present chapter draws on questionnaire and interview data from 12–15-year-old students at a selective, K-12, suburban, preparatory school. Portraiture is used to report and further examine students’ responses to open-ended questions assessing their (a) interest for writing, (b) conceptual competence, (c) goal-setting and strategy use, (d) effort, (e) self-efficacy, and (f) feedback preferences.

Portraiture is an interpretive and descriptive methodology that draws on participants’ accounts to provide an ethnographic narrative (Lightfoot, 1983). As adapted for this chapter, portraiture is a method of creating case descriptions that reflect the responses of a like group (e.g., all students with a maintained situational interest for writing). Unlike case studies, which single out a particular student and can be idiosyncratic, portraiture draws on commonalities across a group of students, providing validation for all reported characteristics. The portraits developed for this chapter present an informed, but fictitious, narrative of students who exemplify the characteristics of the group under examination. The portrait preserves the real students’ words and anecdotes; however, the narrative that presents them is written from the perspective of the researcher and not from the perspective of the student being described. Moreover, the researcher’s reporting on each group of students is informed by the questions of the study.

In this chapter, portraits of students identified as being in different phases of interest for writing were developed using a six-step procedure informed by discourse analysis (Gee, 1999). First, students’ responses to the questionnaires were used to identify them as being in a particular phase of interest for writing. Second, all questionnaire and interview data were reviewed to identify content relevant to the questions and variables of this study. Third, patterns that emerged were identified for review. Fourth, all questionnaire and interview responses of students in a particular phase of interest were reviewed, and discourse analytic techniques were employed to identify patterns specific to that phase. Particular attention was paid to students’ ways of describing their experiences, including phrasing and anecdotes. These data provided the basis for portrait development. Fifth, portraits were developed that addressed the questions of the study. Each variable of the study was addressed in each portrait. Finally, the reliability of the portraits was established, and the validity of the portraits was checked against experience working with students in two similar school settings.

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4Because only 4 students (1 boy, 3 girls) in the population could be identified as having a well-developed individual interest for writing, their data were initially combined with students who are now identified as having an emerging individual interest. Students were selected for interviews based on the assumption that there were three phases of interest identifiable in the population (Krapp, 2002b). The process of reviewing data for the composition of the portraits, however, revealed substantive differences between students with an emerging individual interest and those with a more well-developed individual interest for writing. As a consequence, four phases of interest were identified, and four portraits are presented.
2.2 Variables Assessed

Tables 1 and 2 summarize information from study participants (see also Renninger & Lipstein, forthcoming). Student responses to questionnaire and interview items were used to identify students’ (a) interest for writing, (b) conceptual competence for writing,
(c) goal-setting and strategy use in writing, (d) effort, (e) self-efficacy as writers, and (f) feedback preferences. Reliability was established for all reported variables. Because the only significant gender difference in the present study was the disproportionate number of girls in the small group of students identified as having a well-developed individual interest for writing, gender was dropped from the analysis.

Interest Interest for writing was assessed using a set of Likert ratings and open-ended questions paralleling those employed by Renninger, Ewen, and Lasher (2002). Specifically, students were asked to rate their knowledge of and feelings about writing. In addition, they completed open-ended questions that addressed the types of writing in which they engaged outside of school. Based on these methods and this population of students, four phases of interest could reliably identified: triggered situational interest (Phase 1), maintained situational interest (Phase 2), emerging individual interest (Phase 3), and well-developed individual interest (Phase 4). Importantly, just as students with little or no interest for writing can experience a triggered situational interest, so students in all phases of interest development respond to triggered situational interest(s) (Renninger & Hidi, 2002).

Conceptual competence Students’ conceptual competence for writing was assessed using a modified version of Renninger and Lehman’s (1999) questions. Students were asked to describe what writing is, the types of writing that they do, and the ways in which they imagine using writing in the future. Of interest in coding student responses was whether these students conceived of writing as a process and an activity with a definite purpose. Students who understood that writing is a process and that there are structures and forms for communicating their ideas more effectively were expected to be metacognitively positioned to engage writing differently than students who only thought of writing as an assignment. Similarly, students who conceived of writing as a purposeful activity were expected to engage that activity differently than students who thought of it only as an assignment.

Four levels of conceptual competence were identified. Students who defined writing in terms of their feelings about writing rather than the nature of the task (e.g., “a very boring exercise”) were identified as having a low level of conceptual competence (level 1). Students who listed genres (e.g., “stories, poems, newspapers …”) were identified as having some conceptual competence (level 2). Students who described writing as either a process or as a purposeful activity (e.g., “a way to communicate”) were identified as having more conceptual competence (level 3). Students who described writing as both a process and as a purposeful activity (e.g., “writing is communication which is recorded”) were identified as having the most conceptual competence (level 4). As shown in Table 1, conceptual competence was not necessarily correlated with a student’s phase of interest for writing. Even students with only a triggered situational interest for writing could articulate a sophisticated understanding of what writing is. However, interview data suggested that, while some of these students offered more developed definitions, they were not yet applying them to their own writing. In addition, distribution of these data suggested that students in grade nine were likely to have high levels of conceptual competence (level 3 or 4). While many students in grades seven and eight also had high levels of conceptual competence, a number of students in these grades had lower levels of conceptual competence (level 1 or 2).
Goal-setting and strategies

Questions assessing students’ goal-setting and strategies as writers were informed by Hidi and Anderson’s (1986) discussion of summarization techniques, Zimmerman and Kitsantas’ (1999) discussion of revision and self-regulatory skill development, and Linnebrink and Pintrich’s (2000) discussion of the development of student goal-setting. Students were asked about the role of planning for writing, their efforts to edit or enlist the help of others to edit their work, and advice that they would offer younger students about writing. As depicted in Table 1, findings from students’ responses to these questions revealed that, the more developed a student’s interest for writing was, the more sophisticated his or her goals tended to be. Students with only a triggered situational interest for writing focused on “getting it done” or making small grammatical corrections with little idea of how to meet these goals. However, students with a well-developed individual interest worked to achieve personal and broadly accepted standards of excellence and enlisted the help of others. Students’ strategies for achieving their goals did not always increase as their interest for writing deepened, however. Students with only a triggered situational interest and those with an emerging individual interest for writing did not typically appear to make use of effective strategies for achieving their goals as writers. By contrast, students with a maintained situational interest and those with a well-developed individual interest for writing appeared generally to utilize effective strategies to meet their writing goals.

Effort

Student effort in writing was assessed using two questions on the questionnaire and students’ follow-up discussions of these questions in their interviews. Based on Renninger (2003) and Renninger and Hidi (2002), students were asked to evaluate the effort that they generally put into writing assignments. Then, they were asked to compare the effort that they expended on writing assignments with their effort on other school assignments (e.g., math homework). As depicted in Table 2, students with only a triggered situational interest for writing felt that all writing tasks were arduous and required a high degree of effort, whereas students with a maintained situational interest felt that writing tasks demanded only a moderate degree of effort. Students with an emerging individual interest and students with a well-developed individual interest for writing said that they were likely to exert a great deal of effort on writing tasks, but their efforts did not feel like hard work.

Self-efficacy

Students’ feelings of self-efficacy about writing were assessed using a modification of a scale developed by Renninger and Lehman (1999) that built on those used by Eccles and Wigfield (1995). Students were asked how well they thought they usually did on writing assignments, how successful they would be in a career that required writing ability, how they had been doing on recent writing assignments, and how hard writing was for them. As depicted in Table 2, findings from the questionnaires and follow-up interviews indicated that students’ feelings of self-efficacy corresponded to their phases of interest for writing. For students in less-developed phases of interest for writing, feelings of self-efficacy appeared to increase as interest deepened. Students with a well-developed individual interest, however, were more likely to have more complex feelings of self-efficacy than students with an emerging individual interest for writing. While the latter tended to be confident about their abilities, students with a well-developed individual interest had
Table 2: Phases of interest for writing and student perceptions of effort, self-efficacy, and feedback

<table>
<thead>
<tr>
<th>Phases of interest for writing</th>
<th>Effort</th>
<th>Self-efficacy</th>
<th>Feedback preferences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triggered situational</td>
<td>Most feel that writing takes a lot of effort; perceive even small tasks as arduous</td>
<td>Most feel that they are poor writers (this perception is often reinforced by low grades)</td>
<td>All want to be heard; want comments that require few changes and feel manageable; afraid of audience censure and being thought of as “stupid”</td>
</tr>
<tr>
<td>Maintained situational</td>
<td>Most do not feel that writing takes an over whelming amount of work; do not invest more effort in writing than other school assignments</td>
<td>Most are generally comfortable with their abilities as writers (this perception is often reinforced by high grades)</td>
<td>All want to hear positive feedback and specific directions to improve their work; look to teacher for standards of performance</td>
</tr>
<tr>
<td>Emerging individual</td>
<td>Most expend a lot of effort by choice and keep working until they are personally satisfied; do not feel that the work they put into writing is arduous</td>
<td>Most are confident in their abilities as writers (often, but not always, this perception is reinforced by grades)</td>
<td>All want their ideas to be heard and want honest feedback in any form, whether reactive or constructive criticism; prefer initial feedback on content, followed by feedback about technique</td>
</tr>
<tr>
<td>Well-developed individual</td>
<td>Most expend a lot of effort by choice and keep working until they and others are satisfied; do not feel that the work they put into writing is arduous</td>
<td>Most are confident in their abilities as writers; have a realistic sense of their abilities relative to peers and published authors; do not need to have their abilities confirmed by others</td>
<td></td>
</tr>
</tbody>
</table>

confidence as well as an awareness of the need for and benefit of feedback that could help them to improve their writing. They appeared to have a more realistic sense than their peers of their place in the larger community of writers and to understand that it was possible to further develop their writing skills.
Feedback preference Fish and White (1978–1979) found that students with more developed interest are positioned to benefit most from feedback. They also found that students with less developed interest for a content area are more receptive to positive feedback. In the present study, students were asked about the types of feedback that they received, the types of feedback that they preferred, and their use of feedback. As depicted in Table 2, students with only a triggered situational interest sought affirmation of their writing and had little interest or ability to work with feedback that asked them to rethink their efforts. They needed to feel “heard” and respected. Feedback needed to fit into their frame for thinking about writing. By contrast, students with a well-developed individual interest for writing also wanted to be heard, but they preferred feedback from which they could learn and develop as writers.

3 Portraits and Discussion

As noted earlier, a portrait of a student in each phase of interest was developed as a tool for further examining the relation among interest, writing, and motivation. The anecdotes and examples included in the portraits were drawn directly from student responses to the questionnaire and interview questions. Unless otherwise specified, student age and gender for each portrait were arbitrarily assigned. Discussions that follow each portrait address the relation among the student’s phase of interest, other motivational variables, conceptual competence, and feedback preferences.

3.1 Phase 1. Triggered Situational Interest for Writing: Ethan

The bell rings as Ethan skulks into English class with a binder and pencil case slung under his arm. As the more gregarious seventh grade girls choose seats toward the front of the classroom, Ethan selects a desk off to one side, not too close to the teacher, but not too far away from her either. Rarely one to speak up in English class, he is particularly concerned to blend in today: today, they are working on their essays.

Writing has never been one of Ethan’s favorite things. When he was younger, he did not mind it so much; in elementary school, they had written stories and poems, which had sometimes even been fun to write. They were simple and short. In recent years, however, his teachers have made him analyze stories instead of letting him write them, and he has had trouble getting the hang of it. What he considers analysis, his teachers deem paraphrasing. Increasingly frustrated and unable to see the difference, Ethan has all but given up on writing. In conversations with friends, he denounces English class, claiming that it ruins perfectly good stories by forcing students to “pick them apart.” Outside of school, it would never occur to Ethan to write for fun; the only writing he regularly engages in after school is instant messaging and e-mailing with friends.

Ethan slouches low in his chair and, at the teacher’s instruction, removes his essay from underneath his binder. He smooths a rumpled corner, the result of having shoved the paper haphazardly into his backpack that morning. Today’s assignment had been less
terrible than some; the teacher had asked them to write an essay on a topic of their choice. Initially, this task had proven daunting for Ethan; while his classmates had seemed to be brimming with ideas, he had stared blankly at his computer screen, unsure of where to begin. Concerned about his recent grades in English, his parents made an effort to brainstorm with him. With their help, Ethan had finally come up with what he thought was a brilliant topic: basketball.

Basketball is Ethan’s greatest passion in life. He plays on the team at school, practices with friends on weekends, and eagerly looks forward to returning to the sports camp he has attended for the past two summers. While Ethan lives and breathes basketball, it had never occurred to him to write about it. When his father suggested the idea, Ethan became excited. His fingers flew across the keyboard, trained for speed by hours of computer games and instant message conversations.

Looking down at his paper, Ethan feels a strange mix of pride and apprehension. While he is confident that he knows more about basketball than anyone in the classroom, he also feels unschooled in writing, at least in part because he tends to shut down whenever writing is discussed in class. He worries that his lack of skill may cause him to earn a poor grade. This fear has been nurtured by past experience – assignments that he felt good about but were returned marked with Cs and Ds.

At the teacher’s instruction, the students prepare for peer conferences. During these activities, Ethan always works with his friend Sam. While Ethan enjoys playing with Sam outside of school, his talent for writing makes him a daunting partner for peer conferences. As Ethan reads Sam’s paper on global warming, a number of thoughts run through his head: “This is really good …. Is basketball a stupid topic? .... Should I have written about something more important like Sam did? .... I don’t feel like I have anything to say to him about this paper. I mean, maybe he’s messed up commas and stuff, but I wouldn’t know if he did.”

Turning to Sam, Ethan says, “Cool paper, man. I really liked it.” Excited, Sam begins to rehash his points, asking Ethan if he agrees with some of his more controversial assertions. Relieved that he no longer has to run the conference himself, Ethan nods at the appropriate times, inserting the occasional “yeah” and “uh-huh.”

Then, it is Sam’s turn to provide Ethan with feedback. As Ethan waits for his friend to finish reading, watching him scribble notes to himself in the margins, his thoughts are a complicated mix. Hope that Sam will be able to fix his grammar mingles with doubts that any seventh grader’s feedback will ever be as valuable as the teacher’s. Sam looks up, ready to address his classmate. Ethan draws a quiet breath and awaits Sam’s verdict.

“You say a lot of cool stuff about basketball,” Sam begins.

“Thanks,” Ethan replies, relaxing slightly.

“I’m thinking, though, that it seems kind of random. See, there’s stuff here about professional players and there’s stuff over here about professional players, too.”

Instantly, Ethan bristles. This is not the kind of feedback he wants. Comments on organization overwhelm Ethan, making him feel like he has to rewrite his entire essay, a thoroughly unappealing prospect. Just fix my commas, he pleads silently. When teachers correct his rough drafts, he makes minimal revisions. He fixes the commas and other minor errors, but he leaves the broader issues unaddressed. His lack of enthusiasm for revision is
not due to laziness so much as uncertainty: what does the teacher mean by “awkward?” How can I make that paragraph “stronger?”

Rather than admit his confusion and risk seeming stupid to his friend, Ethan nods and pretends to make note of Sam’s suggestions. While his actions indicate that he is absorbing his partner’s feedback, something absent in his eyes belies this apparent engagement. Mentally, Ethan has shut down. Convinced that he will never “get this stuff” the way that Sam does, he has simply stopped trying.

The bell rings, and Ethan saunters gratefully toward the door. That evening, he takes out his essay, wrinkled beyond recognition, and thinks about it but does not know what to do. He decides to change one word and two commas. Several days later, the teacher returns his paper, marked with another C–.

**Discussion** Ethan’s tendency to disengage from writing tasks was characteristic of the responses of students with only a triggered situational interest. They reported almost no positive feelings or value for writing. They also expressed little confidence in their writing abilities and reported little to no engagement in writing activities outside school. They said that they turned in papers to meet deadlines or because “I have to;” however, they felt little investment in their work, and they had little will to improve.

While students with only a triggered situational interest for writing sometimes gave sophisticated definitions of writing, they rarely demonstrated visions of writing as a process or a purposeful activity. Many students dismissed writing outright as “a pain” or “a boring exercise.” Other students described it as an expressive or communicative tool, but they did not appear to use writing for these purposes. These students also indicated no goals to improve their abilities as writers.

Interestingly, students like Ethan typically reported engaging in hours of e-mail or instant message conversation. Convinced that writing must require effort, however, these students did not conceive of these activities as writing. In addition, these students held uniformly low feelings of self-efficacy as writers; they felt that they were not equipped to handle writing tasks as well as their more interested peers. As one student stated, “I have no idea [what advice I would give a younger student about writing] because I don’t know much about writing.” Another student said, “Help with spelling is all I can do.” Students manifested their low feelings of self-efficacy in two ways: by claiming that they had had inadequate writing teachers in the past, or by dismissing themselves as “bad writers.”

Not all students who had only a triggered situational interest for writing indicated that they had always disliked writing. Like Ethan, several students reported that they had liked writing more in elementary school, but, with the changing demands of middle and high school, they lost their interest for writing (Renninger & Lipstein, 2006). As one student said, “Once I started middle school, and we started having to actually analyze things, it just got really hard … and [at my old school], they don’t really teach you how to write, they just kind of assume that you know.” A diminished interest for writing appeared to be accompanied by a decrease in the student’s perception of its utility. While this student once saw a purpose for writing, she indicated that she does not find it useful now.

Possibly because they felt ill equipped to handle writing tasks, students with only a triggered situational interest conceived of writing as “work.” Some factors, however, appeared
to influence the perceived arduousness of the task. Although the paper on basketball felt like work to Ethan, he would likely admit that it took less effort than some of the other essays he had written. Once his interest was triggered, writing the paper became relatively painless: his ideas just started to flow. In interviews, several students in this phase of interest development suggested that a paper felt “easy” to write when it was based on a “good idea” or a “good topic.” In fact, when asked what made them want to write, these students indicated that “choice” and “a good topic” made a difference above all else (Flowerday & Schraw, 2003; Wade 2001).

Students like Ethan also typically disliked peer conferences, although this opinion was not characteristic of all students in this phase of interest development. Students reported that they wanted feedback that was manageable and specific (e.g., “You need a comma here”). Also, they reported disliking more general or seemingly daunting comments (e.g., “You should structure this paper differently”). In addition, in interviews, students indicated fears of audience censure. They worried that readers might think their work was poorly executed and might therefore assume that they were “stupid;” not surprisingly, these students were generally wary of sharing their work with others.

3.2 Phase 2. A Maintained Situational Interest for Writing: Jackie

As her teacher explains his expectations for the upcoming essay, Jackie nods attentively, making notes on an assignment sheet that is neatly placed in the “writing” section of her binder. Uncertain about one piece of the assignment, she raises her hand to ask for clarification. Throughout her teacher’s response, she continues to annotate the assignment. Soon the margins of the page are filled with careful lines of metallic purple notes, each written in the same meticulous hand.

Mr. Banks finishes his explanation and asks the students to begin brainstorming in pairs for the remainder of class. Obligingly, Jackie removes a fresh sheet of paper from her binder and turns to her neighbor. The assignment sheet in front of her says she is to write an opinion essay on an issue of her choice. Jackie raises her hand. When Mr. Banks makes it over to her desk, he asks how he can help.

“What should I write about?” Jackie asks.

“Well, what issues do you feel most strongly about?” he responds, answering her query with another.

“I don’t know,” she replies, hoping he will give her a topic.

“How about something related to issues in school? Maybe the dress code? Or, maybe something about politics, or what’s going on in the world right now?”

Jackie’s eyes light up. “Could I write about what’s happening with the war right now?” she asks suddenly.

“Sure!” Mr. Banks responds. “Just be sure that you have something to say about it. You need to argue something specific, not just talk about the war in general.”

“OK,” Jackie acknowledges, adding a few more notes to the sea of purple writing. “But that’s an OK topic?” she asks anxiously, wanting his approval before she begins to write.

“It’s a great topic,” he assures her.
Mr. Banks thinks of Jackie as a model English student, though he is often at pains to recall stand out moments that capture Jackie’s personality and contributions. Her report card comments reflect generic praise: she is simply an all around “good student.” In class discussions, she is a focused and active participant. Her written work is always neatly typed, generally well organized, and presents her ideas in a clear and coherent manner.

Enthused by the topic of the war and bolstered by Mr. Banks’ reassurance, Jackie turns to her partner and asks her what she plans to write about. After sharing their ideas, both girls set to work outlining, and occasionally trade inspiration as it strikes. Periodically, one will get stuck and ask the other for help. Although Jackie is capable of outlining the paper on her own, she is grateful to have a partner to help her through the tough spots. By the end of the period, Jackie has managed to complete a rough outline of her ideas.

The bell rings, marking the last period of the day, and Jackie heads off to volleyball practice. Several hours later, freshly showered and fed, she sits down to work on her essay.

She settles cross-legged into the computer chair and begins to type. At first, her typing is slow and deliberate; she is simply plodding through the assignment so that she can be done with it and focus on preparing for her science test at the end of the week. As she completes the third sentence of her introduction, a friend sends her an instant message. Deciding to take a quick break, Jackie pauses to chat with her friend. Fifteen minutes later, her friend is called away, and Jackie reluctantly returns to work.

Despite her initial reluctance, as Jackie continues to type, she finds herself increasingly absorbed by the topic. Forgetting her outline, she races ahead, expressing a complex mix of feelings. She has been following the war closely and has developed strong views on this subject. Writing an opinionated piece allows her to vent her frustrations and gives her a sense of control in a situation that she feels otherwise powerless to affect. While Jackie began writing the essay for her teacher, she ends up writing it for herself.

An hour later, she is curled up inches from the computer screen, reading back over what she has written. Her focus is so intense that she does not hear her mother enter the room and is startled when she tells her it is time for bed. Glancing incredulously at the clock, Jackie wonders where the evening has gone.

As she crawls into bed, Jackie continues to think about the issues she discussed in her essay. The fact that this essay has stuck with her is unusual; normally, she does not get so invested in her writing.

When she returns to revise the essay the following afternoon, she becomes absorbed in the content and focuses mostly on wording, breaking away from her usual focus on the paper’s organization, spelling, and mechanics. Much to Jackie’s dismay, Mr. Banks is not so willing to disregard these formal aspects of her writing; he gives her a “B–”, citing the uncharacteristically scattered nature of the paper as his primary concern.

**Discussion** Like other students with a maintained situational interest for writing, Jackie typically earns As because the form and organization of her writing are superior. She rarely develops her own perspective on the topics about which she writes, however. She is also very literal in her understanding of her teacher’s comments, and often does not fully understand why he has asked her to make certain revisions. As a result, she may, for example, try to include more quotations in her writing but choose quotations that do not necessarily support her thesis.
Compared with students who had either an emerging or a well-developed individual interest for writing, students like Jackie with a maintained situational interest were not passionate when they talked about writing in their interviews. Instead, these students described writing as “okay” or necessary to their current careers as students and the careers they hoped to pursue in the future. When asked to describe a particularly positive writing experience, however, many students described an experience like Jackie’s in which they got momentarily swept up in an assignment. Because the war is of interest to Jackie, she becomes more personally invested in her writing than she normally would (Hidi & Baird, 1988). In this moment, her priorities shift: no longer focused on writing for a grade or to please her teacher, she is concerned with expressing her opinions on the topic. One student described a similar experience: “My essay was not good. It was terrible. I really liked the topic …. I didn’t get a good grade on it, but I still really liked it. Just because, I don’t know; it was just cool!” Many students with a maintained situational interest for writing described this type of experience, but they also commented that it was something out of the ordinary for them. In general, their perceptions of writing appeared to be related to the conditions of each writing experience, including the topic they were assigned, the nature of their teacher’s feedback, and the clarity of the assignment.

When the student quoted above said that her essay “was not good,” she implied a definite idea of what constitutes “good writing.” Questionnaire and interview responses of students with a maintained situational interest for writing indicated a sense that “writing well” involved following a prescribed writing process to generate a well-organized and clearly structured final product. These students described their writing processes algorithmically, as following a series of steps to achieve a desired end. For many of these students, that end was success in school; when asked what motivated them to write for class, these students indicated a strong performance-orientation, mentioning “grades” noticeably more often than students in other phases of interest development. Their goals tended to focus on “doing it right,” where “right” was a standard of performance set by the teacher. Sometimes they spoke of improving their command of grammar or vocabulary, but they did not indicate a desire to improve their overall abilities as writers.

A part of Jackie’s desire to achieve good grades is a desire to please her teacher. When Jackie asks Mr. Banks which topic she should choose for her essay, she has not even made an attempt to come up with a topic on her own. Instead, she hopes that he will give her an idea of what he thinks is a good topic. In their interviews, students with a maintained situational interest for writing often expressed frustration with assignments that were too open-ended, claiming that such assignments made it difficult to figure out what the teacher wanted them to write about. They preferred to be given a topic because they thought that their teachers would enjoy their papers more if they were written about topics of the teacher’s choosing. As one student put it, “If I have to write something for someone else or for a class, then I need some guidance on what they want. I’m not writing for me – it’s not what I want – it’s about what my English teacher wants. I’m writing it for my English teacher.”

Unlike students with only a triggered situational interest for writing, students with a maintained situational interest reported that they sometimes chose to write on their own, outside of school. These students drew a distinction between the writing that they did for school and the writing that they did for themselves, however. They said they felt differently
about the two types of writing and approached them in very different ways. Similarly, when Jackie gets swept up in her essay about the war, she approaches a school assignment as personal writing. She uses a different writing process and employs different criteria for revision.

In general, Jackie’s desire to please her teacher and to receive good grades means that she pays close attention to directions and asks questions for clarification. This reliance on her teacher also means that she does not use peer conferences as effectively as she might; she turns to her teacher rather than her peers. Because Jackie wants to write as Mr. Banks would like her to write and about topics that Mr. Banks might enjoy, she does not typically become invested in her writing. Thus, while Jackie is more highly self-regulated and self-efficacious than Ethan, she is only able to follow the rules of writing. Students like Jackie appeared to have largely mastered writing conventions; however, their limited understanding of the possibilities that writing might afford meant that they were unable to take their writing to the next level and explore new ways of organizing, developing, and expressing their ideas.

3.3. Phase 3. An Emerging Individual Interest for Writing: Patrick

It has been a long day at school, and Patrick breathes out a sigh, relieved to finally be back in the sanctuary of his bedroom. He grabs his journal off the nightstand and settles in to write. While Patrick still hangs out with many of his middle school friends, he talks with them mostly about school, books, and video games – not anything personal. His journal allows him to vent his more private thoughts. In fact, he prefers writing about his thoughts to speaking about them; writing allows him to say what he really means without having to worry about being misunderstood. Unlike his classmates, Patrick’s journal does not judge.

Today, Patrick needs to vent about English class. He thinks that his teacher graded his essay too harshly, and he feels frustrated because he worked so hard on that piece. “A B,” he thinks. “A lousy B! If she thinks that’s all it is worth, then she clearly didn’t get what I was trying to say.” He had tried to stay after class to explain his argument to her, but she was pressed for time and had just repeated the comments she had written on the paper. Convinced that she still did not get it, Patrick had left class frustrated and bewildered. Even worse, he had had to bottle up these feelings all day because his friends would never understand why he was so worked up over a B.

The essay had felt great to write. The assignment had been to write an essay on how people define themselves. Because the topic was one that he cared about and was general enough to give him some freedom, Patrick had taken the assignment seriously. Drawing on his vast reading repertoire, he had cited examples of character development and discovery from numerous novels. He had also looked through his old journals and spent time thinking about how he defined himself. Each time he reread what he had written, new connections had occurred to him and he had carefully woven these into his argument. Finally, he had reviewed his word choice and sentence structure until each sentence sounded professional when he read it aloud. The final product had been six pages long, a full page beyond the suggested limit.

Whether he is writing for himself or writing for school, writing is one of Patrick’s favorite pastimes. He especially likes to write stories. Sometimes he bases them on legends...
or his favorite science fiction novels, and sometimes he just lets his imagination roam free. For essays, he chooses topics about which he feels strongly. He is especially fond of fiery rhetoric and works to make his writing sound passionate as well as professional. When he is assigned a topic that he finds unappealing, he usually tries to twist it in some way so that he can make it into an argument about which he feels strongly. Above all, he loves the process of writing: fashioning sentences, developing characters or arguments, and polishing his work for a reader. He thinks of himself as a writer, and he has even thought about pursuing a career as a playwright or a novelist. Patrick is also strongly invested in what he writes, presumably because he puts so much of himself into his writing.

While Patrick loves to write, he hates peer conferences. His prior experience with these conferences has led him to believe that his classmates will offer only two types of “help;” either they will try to correct his grammar or they will make suggestions about the content of his work. He considers the first type of suggestion to be a waste of his time. In his mind, grammar is the icing on the cake, not a crucial part of his writing. In fact, Patrick has sometimes written entire pieces without regard to punctuation or capitalization until his second or third revision. While suggestions about grammar irritate him, he particularly dislikes suggestions about content. For him, the ideas of his peers are unwelcome invasions. Each piece to which he signs his name should be uniquely his.

Frustrated, Patrick begins to recall his most recent experience with peer conferences. His teacher had required them for the essay on self-definition, and, he notes angrily, she had clearly penalized him for not incorporating his partner’s feedback into his revision. It was not that he did not want to revise the essay. He just figured that he knew how to do it better than his partner did. Because the essay had been so personal, Patrick had been frustrated by his partner’s comments. He had wanted a reaction to what he said, but he had not been prepared for a critique. As a result, he had not listened to what his partner had to say and had not used this information in his revision.

Instead, he had confidently made his own revisions and felt sure of the quality of his work. His teacher, however, was not as impressed. She said his ideas were wonderful, but that there were so many of them in the paper that it lacked a cohesive structure. In addition, she noted that his tendency to disregard grammar had resulted in several glaring errors, and these had caused him to lose credit.

As Patrick recalls these comments, his temper flares. Why can’t he write in his own style? Professional writers do not have to adhere to a five-paragraph-type format, so why should he? He is particularly frustrated that she did not mention any of his favorite parts of his essay, especially the connections he drew between real-life examples and those from various novels. He is proud of these points and cannot understand why she did not give him credit for them.

A call from his mother interrupts Patrick’s thoughts. Hurriedly, he finishes his sentence.

Discussion Like Jackie, Patrick is confident in his ability to write. What sets him and other students with an emerging individual interest apart from students with a maintained situational interest, however, is his investment in what he writes. Students with an emerging individual interest for writing described themselves as writers and considered writing to be part of their identities. Like Patrick, these students reported becoming personally attached to much of what they wrote; they thought of their papers as expressions and extensions of
themselves. Although many students in this phase of interest indicated that they had always loved to write, several students spoke of having become more interested in writing because of a positive writing experience (Renninger & Lipstein, 2006). For example, one seventh grader explained, “In third grade, kids said they liked my story about a space-ship and a little kid,” and he attributed his increased interest for writing to that moment.

Unlike Jackie, Patrick does not draw a strong distinction between writing for a class and writing for himself. Instead, he tries always to write for himself. Students with an emerging individual interest for writing reported that they wrote each piece to their own standards of perfection. While they acknowledged that some of their writing was done for an audience (like writing for class) and some was done for personal purposes (like Patrick’s journal entries), they did not indicate different levels of investment in these two types of writing.

These students reported that they rejected “the writing process,” preferring to employ their own processes instead. Almost all of them preferred not to plan essays in advance. Instead, they spoke of wanting to “see where a paper will take me,” and they enjoyed developing pieces without knowing what would come next. When asked to describe times when they had been required to submit outlines, some students with an emerging individual interest said that they had found the process of outlining helpful. Still, they chose not to outline unless an assignment required it because it was not part of “the way I write.” Students with an emerging individual interest for writing were particularly keen on their own versions of the writing process. Although they were metacognitively aware of their own limitations as writers, they did not usually view these as shortcomings, but rather dismissed them as “just the way I write.”

Perhaps the most striking characteristic of students in this phase of interest were their heightened feelings of self-efficacy. Students with an emerging individual interest for writing were very confident about their writing abilities, and some students even considered their own understanding of writing to exceed that of their teachers. However, students with an emerging individual interest for writing did not like peer conferences any more than students with only a triggered situational interest for writing. Like these students, they were either not able to or not inclined to work with peer feedback. Their dislike of peer conferences appeared to be linked to their heightened self-efficacy and investment in writing.

While Patrick dislikes peer conferences as much as Ethan, he is not reluctant to revise his writing. Students with an emerging individual interest were very willing to revise their work. They did not conceive of writing and revising as arduous, and they reported that they happily spent hours working on individual writing assignments. After polishing a piece, such students were often eager to share it with an audience. While these students claimed during interviews that they desired feedback from their audiences, further discussion revealed that they only wanted comments of a reflective or laudatory nature. They did not like feedback that was specific and critical. They indicated that more prescriptive comments would infringe upon their own creative roles as authors and might go against their preferred ways of writing.

For some students with an emerging individual interest for writing, doing things “their own way” appeared to earn them high marks on writing assignments: many spoke of earning As.

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5Students in this study used “writing process” to refer to the standard “outline, rough draft, revision” formula.
However, many students also mentioned that their teachers often commented on the lack of cohesion in their work or their lack of attention to grammar and other writing conventions. It seems that these students’ passionate investment in their work prevented them from stepping back from a piece. While the students spoke of making revisions until they were personally satisfied, they did not seem concerned with objective standards. In addition, while their intentions to produce excellent writing were evident, they preferred to work “their own way,” and did not necessarily employ strategies or suggestions from others.

Students with an emerging individual interest for writing typically indicated preferences for assignments that gave them as few restrictions as possible. Without a set genre or topic to limit them, these students enjoyed a sense of freedom and power. When they were confined to a particular topic, many students indicated that, like Patrick, they found ways to make this topic more appealing. These students generally spoke of this strategy in a confidential tone and indicated that they felt they were “tricking the teacher.”

3.4 Phase 4. Well-Developed Individual Interest: Maria

Exhausted from a long day at school, Maria flops on her bed and lets her overstuffed backpack fall to the floor with a thud. Blowing the hair out of her eyes, she stares absently at the poster of Orlando Bloom on her wall and begins running through homework assignments in her head, a habit that has become part of her daily routine. That English paper on Homer’s *The Odyssey* is due Friday. “I have three more days to put the finishing touches on it,” she thinks. Rolling off of her bed, she boots up her computer and opens the essay that she outlined and drafted last week.

An outgoing and vibrant person, Maria is a focused student who loves to write. In fifth grade, she wrote a short novel, which earned her teacher’s praise and sparked her ongoing love of writing. Although she might not admit it to her friends, she actually enjoys writing essays. She likes that writing helps her to develop her ideas. She also likes the fact that it allows her to share these ideas with others. Aware of her compulsion for rewriting and revision, Maria always tries to get a head start on assignments, so she can scrap as many drafts as she needs to and still turn out a satisfying product by the due date.

When Ms. Jennings said that she could design her own topic for the essay about *The Odyssey*, Maria got excited and instantly began brainstorming. She likes topics that allow her to develop her own ideas. If she is not invested in a topic, she feels like she has to approach the assignment as an actress, rather than a writer, adopting the voice that she thinks her teacher wants to hear.

Because she had not actually enjoyed *The Odyssey* very much, Maria employed a strategy that she discovered in the eighth grade for coping with books she disliked. She picked her least favorite aspect of the story and wrote about that. This tactic always gives her a lot to say because she feels so strongly about the topic. She began by brainstorming about Odysseus, a hero in whom she saw few redeeming qualities. As a modern-minded young

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6Maria’s gender and age were purposefully chosen. Out of the population of 178 students, only four were identified as having a well-developed individual interest for writing, and all four of them were in the ninth grade. In addition, three of the four were female.
woman, she found his infidelity offensive, especially since Penelope just waited at home for him all those years. As a result, she had written an essay arguing that Odysseus was not a hero at all. She had enjoyed bashing Odysseus while she wrote, and she hopes it will be as much fun to reread what she wrote about him now. As she reviews her draft on the screen, however, she thinks her words read more like a diatribe than a well-planned argument. Her essay is not as coherent as she would like it to be, and parts of it sound a little silly. Worst of all, her conclusion seems to contradict everything that came before and suggests that maybe Odysseus is not as bad as she originally thought. Despite the fact that this draft has already been through several revisions, she decides that she should scrap it and start over.

This process of drafting and then starting again from scratch is one in which Maria regularly engages. Although she sometimes finds it frustrating, she usually needs a few drafts to work out her ideas. Often there is at least one great sentence in the original, and she builds her new draft around that idea. In the case of *The Odyssey*, she zeros in on the idea of Odysseus not being so bad. “Where the heck did that come from?” she wonders. Reading through the old draft, she suddenly has an idea: maybe heroes do not have to be likeable. Maybe he is still a hero even though he is not a very good husband!

Excited by the idea of a thesis that would be a challenge for her to argue, Maria writes this new idea at the top of a clean computer screen and begins searching through the book for support for this thesis. She finds what she considers to be a good definition of a hero in the introduction to her edition, and then she begins making a list of the ways in which Odysseus fits that definition. As she works, she jots down ideas in rough paragraphs on the computer screen, making an outline of her thoughts. Satisfied that she has enough information to prove that Odysseus is a hero, she then begins work on shortening her points about Odysseus’ less heroic qualities from the previous draft of the paper. This time, as she reviews incidents from the text, she decides that Homer really does not make a big deal out of Odysseus’ infidelity. In fact, she decides that it does not seem to bother him at all. He *does* make a big deal out of Penelope being faithful, though. Maria gets another idea. She spaces down the page to make notes for a conclusion about the double standard between what makes a man heroic and what makes a woman heroic. Now she is really interested. This much better than her original draft.

Eagerly, she scoots closer to the screen and begins to reread what she has written. “This is good!” she thinks. She reads it through a few times, making changes as she goes. After dinner, she will come back upstairs and worry about things like style, sentence structure, and flow. Right now, she just wants to make sure her ideas make sense. Before she prints out her final copy, she will ask her parents to read it over. Maria typically uses her parents as a gauge for the effectiveness of her written work; she finds their comments about her organization and ideas helpful. She also seeks feedback from her teachers and peers. She loves to discuss her writing with others because it pushes her to grow as a writer.

Discussion Students with a well-developed individual interest, like Maria, shared a love of writing with students like Patrick. They also shared a developed understanding of what writing is. There are several important differences between Maria and Patrick’s approaches to writing, however. First, Maria holds her writing to an objective standard, and she understands that style, structure, and other aspects of writing are not just about personal expression: they are about making writing accessible to an audience. Students with a
well-developed individual interest for writing all shared this awareness. As one student in this phase of interest remarked, “[even if] in my mind it’s a key part of my argument, I need to not worry about it so much and make sure it makes sense to someone objective.” All of the students in this phase of interest for writing reported seeking outside support from parents or respected others to confirm the clarity of their writing. Like Patrick, Maria thinks of herself as a writer, and she believes that she is good at writing. Unlike Patrick, however, she also demonstrates a willingness to critically examine her own writing. She admits that sometimes what she writes is poorly argued, even if she has worked hard on it and enjoyed the process of writing it. In fact, students with a well-developed individual interest for writing simultaneously demonstrated feelings of self-efficacy about their abilities to write and an awareness of their own shortcomings as writers. They understood that, though they were talented, there was room for improvement, and they often mentioned things that they would like to keep working on in their writing.

Like students with an emerging individual interest for writing, students with a well-developed individual interest strove to improve each piece, often revising or rewriting numerous times before they were satisfied. Students in both phases of interest expended effort willingly, viewing it as a necessary part of writing. However, students with a well-developed individual interest seemed to focus more on procedural aspects of writing in their later drafts than did students with an emerging individual interest. In addition, these students reported a desire to improve their abilities as writers. When asked what makes her want to write for class, one student with a well-developed individual interest stated, “I want to write to improve my skill and ability to convey what I want to in words.” This comment contrasted strongly with a typical response from a student with an emerging individual interest: “I enjoy voicing my opinion or ideas in a piece of writing. It allows me to free my mind and let my thoughts loose.”

Perhaps because of their desire to improve as writers, students with a well-developed individual interest for writing were more receptive to critical feedback than students with an emerging individual interest. They appreciated comments on all aspects of their writing. However, they did prefer to receive comments in a particular order: they wanted initial feedback to focus on their ideas and the paper’s content, and they preferred to address more technical revisions in subsequent drafts.

4 Phases of Student Interest for Writing and Implications for Pedagogy

Data from the present analysis suggest that the pedagogical choices a teacher makes (e.g., whether to assign work with peer partners, how to provide students with feedback, what types of assignments to give) have a critical influence on whether students are likely to develop and deepen their interest for writing. The analysis presented here indicates that students who had difficulty thinking about and receiving feedback about their writing were not likely to work well with peers to get feedback. They were also likely to have only a triggered situational interest for writing. Conversely, students who could independently envision the possibilities that writing affords them were willing to work hard on their writing and seek feedback. These students were likely to have a well-developed individual interest for writing.
4.1 Conditions That Support Interest Development

Each portrait in this chapter depicts a student engaged in or reflecting on writing and conditions that could support the development or deepening of that student’s interest for writing. In addition, the portraits illustrate each student’s willingness to think seriously about writing. For Ethan (triggered situational interest), the opportunity to write about basketball temporarily triggers an interest for writing. This situational interest allows Ethan to become more involved in his writing and makes the process of writing his essay seem easier. To maintain his situational interest for writing, however, Ethan must continue to feel positively about writing. Unfortunately, the comments that he receives from his peer partner only reaffirm his existing feelings of inadequacy and negative feelings about writing. Had the comments that Ethan received been phrased so that they seemed manageable, this might have bolstered his self-confidence, and his positive feelings about writing might have been sustained (see Eccles et al., 1993a). Then, they might have evolved into a more developed interest for writing over time. Several students described this type of shift in their interest for writing; once their confidence in their own knowledge and abilities increased, their interest for writing deepened.

By contrast, students who received feedback that was too discrepant (e.g., too abstract, or requiring a lot of work) often spoke of becoming less interested in writing as a result. For these students, as for Ethan, the key to sustained interest for writing was the context or topic about which they wrote (Hidi & Baird, 1986, 1988). The content of basketball triggers Ethan’s interest for writing and may be a tool for engaging him in further discussion and thinking about writing (see Renninger et al., 2002). Engaging Ethan through the content of his piece could appeal to what he found interesting and enjoyable about this writing experience, which, in turn, could lead to more positive engagement with writing in the future.

For Ethan, triggered situational interest creates a temporarily positive engagement with writing. Similarly, Jackie (maintained situational interest) also experiences positive interaction with writing that stems from triggered situational interest. As Jackie’s interest is sparked by the topic of her writing, she takes on the appearance of a writer in the next phase of interest development; she discards her outline, becomes invested in the content of her piece, puts more effort into her work than she originally intended to, and enjoys herself in the process. The excitement of writing for herself leads her to write more like a person with an emerging individual interest for writing.

Whether Jackie is able to develop an emerging individual interest for writing depends on the quality of her continued interactions with writing. The excitement of being swept up in her writing about the war is a situational interest. Just as basketball might provide Ethan’s teacher with a way to engage him in further discussion about writing, so Jackie’s passionate engagement in this assignment might provide her teacher with a way to engage her in further discussion about writing. In each case, the topic of interest is not the exclusive focus of discussion; rather, it serves as a vehicle for engaging students in necessary discussions about their writing.

For example, assuming that Jackie’s heightened enthusiasm has resulted in a disorganized essay, there are three ways in which Mr. Banks might respond to Jackie’s paper: he might (a) comment that this paper is much more disorganized than her usual work; (b) praise her for the newfound passion she exhibits in this piece and not pursue questions of organization for
fear of stifling this level of engagement; or (c) acknowledge Jackie’s newfound passion and then phrase his comments about organization as ways to increase the impact of this already passionate piece. Data from the present study suggest that only the final approach is likely to foster the development of interest for writing. In interviews, students made it clear that classroom instruction had an impact on their interest for writing. One student reported liking a recent poetry unit so much that her interest for writing changed: “I like it more now than I did when I did the questionnaire … It’s now one of my favorite things.”

For Patrick (emerging individual interest) and for Maria (well-developed individual interest), the source of their investment in writing is not limited to a particular writing experience and its conditions. Unlike Ethan, whose interest for the topic of his writing sparks a situational interest for writing, Patrick has an interest for writing itself. What distinguishes his interest for writing from Maria’s, however, is his limited understanding of writing. Patrick perceives writing as a purely personal experience, and he has little if any regard for more objective standards. The key to supporting Patrick’s interest for writing lies in increasing the sophistication of his understanding of writing as opposed to nurturing his positive feelings for the writing he needs to do.

As Patrick’s rejection of his teacher’s feedback makes clear, it is not enough to simply tell him that he should conform to an objective standard. Like Jackie, Patrick needs to feel that the teacher understands why his work is meaningful to him before he is in a position to be receptive to other feedback. In the same way that interest could provide scaffolds for both Ethan and Jackie to engage writing, interest could also provide a scaffold for Patrick. Patrick needs to hear his teacher’s comments about grammar and structure. As his portrait suggests, however, Patrick is not likely to be receptive to these comments if he feels that the teacher is missing the point of his writing. If the teacher presents her comments about grammar and structure as ways that Patrick might increase the impact of his piece, however, she provides Patrick with a set of powerful tools for expressing his ideas—an approach that supports and makes use of his interest for writing.

Because of the nature of well-developed interest, it might be expected that Maria’s interest for writing is more stable and self-sustaining than those of Ethan, Jackie, and Patrick. Maria willingly involves herself in writing, seeks out challenges (defending a protagonist that she dislikes), and employs strategies to ensure positive writing experiences (building a thesis upon a topic in which she is invested). However, it is important to recognize that, while Maria’s interest for writing may be more stable than those of her less-interested peers, it remains a dynamic interaction. Continued challenges in writing are essential for her interest to continue and deepen. Students like Maria often only receive affirmation of their work because their strategies and conceptual competence enable them to write in a more sophisticated fashion than most of their peers. Affirmation alone, however, is not sufficient to support their interest to continue or deepen. They must also be challenged to grow as writers. If this condition is not in place, it is conceivable that their interest for writing could wane (Renninger, 2000; Renninger & Lipstein, 2006).

### 4.2 Shifts between Phases of Interest

Findings from the present study contribute to the literature that indicates that interest can shift and that, given supportive instructional conditions, students can develop or deepen
their interest for particular content (Hoffmann, 2002; Hoffmann & Haussler, 1998; Pressick-Kilborn & Walker, 2002; Renninger, 1992, 2000; Renninger, Ewen, & Lasher, 2002; Renninger & Hidi, 2002; Renninger, Sansone, Smith, 2004). As the portraits suggest, the conditions surrounding any writing experience have the potential to influence students’ interest for writing. The degree and direction of this influence appears to be impacted by the students’ experiences with generating text, their discussions with peers, and the assignments, support, and feedback provided by their teachers. Findings from this study further suggest that interest for writing and opportunities to develop a deeper understanding of writing contribute to students’ abilities to write more effectively. These findings also suggest that knowledgeable others, such as teachers, help to shape the conditions surrounding students’ engagement with writing.

The present chapter underscores the importance of meeting students where they are as writers and also supporting them to stretch – recognizing that the stretch may not immediately support them to look like the student with a well-developed individual interest for writing, although that is a possibility (c.f., Dewey, 1913; Bruner, 1966; Renninger, 1998). The portraits further indicate that simply matching instructional practices to students’ current phases of interest is not likely to be effective pedagogy. Instead, it appears that pedagogy should be structured with an awareness of students’ needs and preferences based on their current phase of interest for writing. This does not suggest that students should simply be told what they want to hear. For instance, only instructing Ethan to fix his commas would not advance his understanding of writing. In addition, Patrick’s understanding of writing would not be enhanced by praise without criticism. Rather, an awareness of students’ current needs and preferences may provide teachers with information about how best to help students tackle the challenges that they face as writers.

The portraits in the present chapter contribute to what is understood about how teachers might support students to shift their phase of interest in at least two ways. First, interest exists in the interaction of a student and writing. If the “writing” component of this interaction shifts because the student develops skills and feels positive about his or her experience, then interest for writing should grow. Second, interest is both a cognitive and affective motivational variable. As Bruning and Horn (2000) suggest, teachers can work to change students’ affect by providing a classroom environment that provides emotional support. Whether this type of support results in developing and/or deepening interest is an open question. Certainly the context for students to shift their phase of interest should be primed. Data from the portraits further suggest that teachers can support students to change their knowledge about writing, which may resonate with and/or result in changed affect and, in turn, lead to a deepened and/or developing interest for writing.

Earlier in this chapter, adolescence was described as being characterized by either heightened interest or apathy. It also was suggested that constraints on interest for writing might be cast in terms of what counts as “writing” and writing requirements. The portraits lend confirmation to students’ needs to develop an understanding of writing if they are to have interest for it. They also suggest a need to determine what developing a knowledge of writing involves.

Perry’s (1968/1971) model of adolescent development describes shifts in interactions that parallel and provide support for the present suggestion that interest for writing can
be supported to develop and that knowledge development serves as a vehicle for this. Indeed, Perry’s “positions” of adolescent development appear to map onto the four phases of interest development. Briefly, Perry draws on Piaget’s (1966) use of the terms assimilation and accommodation to link development to meaning making and interaction. He suggests that, initially a person’s understanding of content shows a basic duality: something is either right or wrong. For example, students with triggered and maintained situational interests might be expected to approach writing in terms of dualism: they assume that there is a “right” way to write – the way the teacher wants them to write. In Perry’s model, this position is followed by a verbal appreciation of multiplicity, in which students may acknowledge that there are alternative approaches to writing, but they also lack clarity about what this really could mean and do not feel entitled to generate something different. Students with maintained situational interest for writing may be on the cusp of this type of awareness when they describe a difference between writing for class and writing for themselves. Perry describes relativism as the next position. Relativism is marked by the complete rejection of dualistic thinking in favor of a worldview in which all approaches are equally valid. Students with emerging individual interest for writing may have shifted to this position: they reject their teacher’s way as the only right way to write, and they acknowledge a wide range of options. According to Perry, students sometimes seize upon one option as more valid than others in an effort to make sense out of the seeming chaos of relativism. The personalization of the writing process by students with emerging individual interest may be understood in these terms. What makes it valuable to them is that they have chosen it. Finally, Perry suggests that students may emerge from relativistic thinking or arbitrary commitments to a position in which they recognize that certain approaches are actually more valuable than others. This view characterized students with a well-developed individual interest: they acknowledged the importance of appealing to a more objective standard, not just their own personal preferences.

It is important to note that in Perry’s scheme, students may progress from one position to another, but they may also remain in a position for an extended period of time. In fact, students may even regress to a former, less sophisticated way of thinking. As the Hidi and Renninger (2006) review suggests, the same may be said of interest development. While certain conditions may foster a student’s interest for writing to develop or deepen, others may cause a student’s interest to remain constant or lessen. It appears likely that the way in which others support the development and deepening of students’ interest for writing will have a significant impact on whether interest develops and the type of attention, goal-setting, and learning strategies that students have as writers.

4.3 Relation among Interest, Writing, and Motivation

The portraits in this chapter provide detailed illustrations of students’ perceptions of their engagement with writing. They also provide support for Hidi and Renninger’s (2006) description of four distinct phases in the development of interest. In particular, the portraits reveal that each phase of interest development has a different set of relations with other motivational variables. They also suggest that interest is best described as both a mediator and as an outcome of motivation for writing.
As summarized in Tables 1 and 2, with the development of interest, students are likely to

- understand that writing is a process and has purpose,
- exert effort that does not feel effortful,
- experience increased self-efficacy about writing, and
- seek feedback that makes connections to ideas and form.

Prior studies of writing have not considered the conceptual competence of students as writers. Without a vision of what writing is and can involve, why should a student exert effort to write? (Bruning & Horn, 2000). Interestingly, with age, students seem to acquire higher levels of conceptual competence. This is consistent with the findings described by Bereiter and Scardamalia (1987).

The portraits further suggest that students in different phases of interest are each influenced by and concerned about the perspectives of other people. These valued perspectives include their teachers’, their peers’, and, in the case of students with well-developed individual interest, the larger writing community’s. The portraits also describe the excitement that writing can provide and the potential that situational interest has to scaffold students to stretch the ways in which they engage writing. In addition, the portraits point to the importance of the feedback that students receive in sustaining and deepening their interest for writing.

This chapter has focused on the use of portraits to explore the interaction between students’ interest for writing and other motivational variables. Students can be expected to develop and deepen their interest for writing when given conditions that meet their strengths, needs, experiences, and interests. What students need to learn about writing will vary (Sansone & Smith, 2000). Knowing more about the likely characteristics of writers in each phase of interest development should allow people who work with students on writing to better predict what might work and what complications might arise from their pedagogical decisions (e.g., choosing to use peer conferences or to provide students with feedback about grammar before acknowledging content). It is important for educators to recognize that interest for writing can develop, and that this process is likely to have stops and starts as students are supported to put things into words.

Acknowledgments

The authors would like to thank Vanessa Gorman for her editorial advice and comments. Support from the Swarthmore College Faculty Research Fund is also gratefully acknowledged.
Chapter 8

Writing Self-Efficacy and Its Relation to Gender, Writing Motivation and Writing Competence: A Developmental Perspective

Frank Pajares, Gio Valiante, and Yuk Fai Cheong

The purpose of this study was to provide a developmental perspective on students’ writing self-efficacy beliefs using data obtained from cohort groups of students ranging from age 9 to 17 (N=1266). Writing self-efficacy beliefs diminished as students moved from elementary school to middle school, and then remained at that level during high school. Girls reported higher self-efficacy at each level of schooling than did boys, but these differences were rendered nonsignificant when students’ gender orientation beliefs were controlled. Instead, femininity was associated with writing self-efficacy. Writing self-efficacy was positively related to adaptive motivation variables such as writing self-concept, self-efficacy for self-regulated learning, perceived value of writing, and task goal orientation, as well as to writing competence. Conversely, self-efficacy was negatively related to writing apprehension and performance-avoid goals. Findings are interpreted within the framework of A. Bandura’s (1986) social cognitive theory.

Historically, researchers in the field of composition have focused on the processes in which writers engage as they compose a text (Faigley, 1990; Hairston, 1990). Cognitive aspects have received particular attention, as investigators have attempted to understand the thought processes underlying the compositions of students (e.g., Flower & Hayes, 1981; Scardamalia, Bereiter, & Goelman, 1982). Hull and Rose (1989) noted that the more the researchers learned about the relationship between cognition and writing, the more complex the relationship seemed to be. During the past decade, researchers have attempted to address this complexity by investigating the motivational factors that influence writing. Students’ self-perceptions of their own writing competence, or self-efficacy beliefs, offer a particularly promising avenue of research for informing writing instruction. As a...
consequence, a number of researchers have explored the relationship between students’ self-efficacy beliefs about writing, other motivation variables related to writing, and various writing outcomes (see Pajares, 2003, for a review).

Research findings have consistently shown that writing self-efficacy beliefs and writing performances are related. Most of the early self-efficacy studies were conducted on college undergraduates (e.g., McCarthy, Meier, & Rinderer, 1985; Meier, McCarthy, & Schmeck, 1984). Effect sizes for the influence of writing self-efficacy on writing performance in multiple regression models ranged from .32 to .42. Another consistent finding was that neither writing apprehension nor other motivation variables were typically predictive of writing performance in regression models that included self-efficacy.

Recent findings support these results (e.g., Pajares, Miller, & Johnson, 1999; Pajares & Johnson, 1996; Pajares & Valiante, 1997, 1999, 2001; Rankin, Bruning, & Timme, 1994; Schunk & Schwartz, 1993; Shell, Colvin, & Bruning, 1995; Wachholz & Etheridge, 1996; Zimmerman & Bandura, 1994; and see Bruning & Horn, 2000). In general, results reveal that writing self-efficacy makes an independent contribution to the prediction of writing outcomes and mediates between previous and subsequent achievement in writing. This is the case even when powerful covariates such as preassessed writing ability or previous writing performance are included in statistical models. Effect sizes between writing self-efficacy and writing outcomes in multiple regression and path analyses that control for such preperformance assessments have ranged from .19 to .40. Correlations between writing self-efficacy and writing performances typically range from .30 to .50, often depending on the age and competence of the students.

Because self-efficacy judgments influence the choices students make, the effort they expend, the perseverance with which they approach new tasks, and the anxiety they experience, low self-efficacy beliefs provide one explanation for why students’ writing motivation and achievement can diminish as they pursue their education. Efforts to remediate writing skills will prove difficult if educators do not take into account the lack of confidence many students develop as a result of previous experiences, of current and ongoing academic difficulties, of faulty comparisons with peers, or of negative messages received. Once entrenched, negative perceptions of one’s ability are exceedingly resistant to change, and even subsequent academic success, however brought about, often fails to alter these beliefs (Bandura, 1986, 1997; and see Nisbett & Ross, 1980, on the perseverance phenomenon, the view that, once acquired, beliefs tend to persist even in the face of conflicting information).

Writing self-efficacy is also associated with motivation constructs that also predict writing performances, and these constructs have been prominent in self-efficacy studies. For example, academic self-concept beliefs are acknowledged to influence academic outcomes across domains (Skaalvik, 1997). Self-concept beliefs differ from self-efficacy beliefs in that self-concept includes judgments of self-worth. Also, self-concept is typically measured at a domain level of specificity whereas self-efficacy is more typically assessed at a skill- or task-specific level. A writing self-concept item such as “Writing makes me feel inadequate,” differs in tone and substance from a self-efficacy item that may ask “How sure are you that you can correctly spell all words in a one page story or composition?” Writing self-concept is not prominent in the motivation literature, but verbal self-concept has been a focus of studies. Researchers have reported significant relationships between
verbal self-concept and academic outcomes such as reading (Skaalvik, 1997). They have also reported modest but significant gender differences in verbal self-concepts favoring girls (Marsh, 1989), and these differences may exist even at very early ages (Crain, 1996). Correlations between writing self-efficacy and self-concept typically range from .40 to .60 (e.g., Pajares et al., 1999; Pajares, Britner, & Valiante, 2000; Pajares & Valiante, 1997, 1999). Moreover, researchers concur with the view that self-efficacy beliefs are a critical component of an individual’s self-concept (Bong & Clark, 1999).

Writing apprehension was first used by Daly and Miller (1975) to describe a form of writing anxiety that negatively correlated with SAT-verbal scores, perceived success in writing, and willingness to take writing courses. Recently, researchers have reported that although writing apprehension typically correlates negatively with writing performances, when self-efficacy beliefs are controlled, the influence of apprehension is nullified (Pajares & Johnson, 1996; Pajares & Valiante, 1997, 1999, 2001). These findings are consistent with Bandura’s (1986) contention that anxiety is mediated by self-efficacy beliefs; that is, feelings of anxiety are largely a result of the lack of confidence with which students approach a task. Similar findings have been reported by researchers exploring the role of anxiety in mathematics (see Pajares, in press, for a review).

Students’ self-efficacy for self-regulation, the confidence to use self-regulated learning strategies, also predicts writing competence (Harris & Graham, 1992; Schunk & Zimmerman, 1994; Zimmerman, Bandura, & Martinez-Pons, 1992; Zimmerman & Martinez-Pons, 1990); and see Zimmerman & Kitsantas, 1999; Zimmerman & Schunk, 1989). Students’ perceived value of writing has also been included in studies, and results indicate that, as with apprehension, the influence of perceived value on writing outcomes is nullified when self-efficacy beliefs are included in statistical models (Pajares et al., 1999; Pajares & Valiante, 1999; Shell, Murphy, & Bruning, 1989). According to expectancy-value theory, judgments of confidence and valued outcomes codetermine the tasks in which individuals will engage and the success they will experience (Wigfield & Eccles, 1992). According to Bandura (1986), self-efficacy judgments in part determine the value that people place on tasks and activities. Because the outcomes students expect largely depend on their judgments of what they can accomplish, Bandura (1986, 1997) contends that beliefs such as perceived value are unlikely to make an independent contribution to predictions of academic performances when efficacy perceptions are controlled.

Achievement goal orientations, the reasons that students have for doing their academic work, have received extensive study in the area of academic motivation (see Urdan, 1997). Researchers describe these goals in terms of task, performance-approach, or performance-avoid orientations. Task goals represent students’ concern with mastering material, challenge-seeking, and learning as an end in itself; performance-approach goals represent students’ concern with wanting to do well so as to display their ability; performance-avoid
goals represent students’ concern with wanting to do well so as to avoid showing a lack of ability. Researchers have reported that holding task goals in writing is positively related to writing self-efficacy whereas holding performance-avoid goals is negatively related (Middleton & Midgley, 1997; Pajares et al., 2000). Performance-approach goals have been found positively related to writing self-efficacy for boys but unrelated with self-efficacy for girls (Pajares et al., 2000).

The relationship between gender and academic confidence has been a focus of research in the area of writing, and findings have not been consistent. Some researchers have found no gender differences in writing self-efficacy across academic grades (Shell et al., 1995). Others have found that girls report stronger confidence in their writing capabilities than do boys, at least through middle school (Pajares et al., 1999; Pajares & Valiante, 1997, 1999, 2001; Wigfield, Eccles, Maclver, Reuman, & Midgley, 1991; and see Wigfield, Eccles, & Pintrich, 1996). These differences may begin at early ages (see Crain, 1996; Eccles, Wigfield, Harold, & Blumenfeld, 1993). Researchers have observed that girls experience a drop in their academic motivation and perceptions of competence as they reach high school (Bruning & Horn, 2000; Phillips & Zimmerman, 1990), perhaps because they begin to encounter classroom structures that emphasize a masculine form of discourse (Cleary, 1996).

Gender differences have also been found in the motivation constructs discussed earlier. For example, they are frequently reported in students’ perceived value of writing (Shell et al., 1995; Wigfield & Eccles, 1992), in the writing apprehension they feel as they attempt writing tasks (Pajares et al., 1999, 2000), in their achievement goal orientations (Pajares et al., 2000), and in their feelings of self-worth associated with writing (Marsh, 1990). Gender differences have also been found in students’ confidence that they possess various self-regulatory learning strategies (Zimmerman & Martinez-Pons, 1990). For example, girls express greater self-efficacy for self-regulation than do boys during elementary school (Pajares et al., 1999) and middle school (Pajares et al., 2000; Pajares & Valiante, 2001). Girls also express greater confidence in their capability to use strategies such as finishing homework assignments on time, studying when there are other things to do, remembering information presented in class and textbooks, and participating in class discussions.

Some researchers, including self-efficacy researchers, have argued that some gender differences in social, personality, and academic variables may actually be a function of gender orientation, the stereotypic beliefs about gender that students hold, rather than of gender (Eisenberg, Martin, & Fabes, 1996; Hackett, 1985; Harter, Waters, & Whitesell, 1997; Matsui, 1994). For example, gender differences in variables such as moral voice or empathy tend to disappear when gender stereotypical beliefs are accounted for (Harter et al., 1997; Karniol, Gabay, Ochion, & Harari, 1998). Researchers with an expectancy-value theory orientation have reported that gender differences in students’ achievement-related perceptions can be influenced by the stereotypes they hold regarding the gender appropriateness of the academic domain under consideration (see Eccles, 1987a; Meece & Courtney, 1992). Eccles’s (1987b) model of educational and occupational choice posits that cultural milieu factors, such as individuals’ gender role stereotypes, are in part responsible not only for differences in behavioral outcomes such as course and career selection but also for differences in expectancy beliefs and perceived value of tasks and activities.
Most research related to this hypothesis has been conducted in the area of mathematics and science, where researchers report that girls enroll in fewer mathematics and science classes in part because they sex-type mathematics and science as male domains (see Hackett, 1995, for a review).

To determine the degree to which gender differences in writing motivation and achievement are a function of gender stereotypic beliefs rather than of gender, researchers have asked elementary and middle school students to report how strongly they identified with characteristics stereotypically associated with males or females in American society (see Pajares et al., 1999; Pajares & Valiante, 2001). Results revealed that gender differences in writing self-efficacy were rendered nonsignificant when gender orientation beliefs were controlled. Instead, holding a feminine orientation was associated with writing self-efficacy beliefs. These findings support the contentions of researchers who suggest that gender differences in academic motivation may in part be accounted for by differences in the beliefs that students hold about their gender rather than by their gender per se (Pajares, 2003).

Some findings have shed light on the development of writing self-efficacy beliefs as a function of schooling. Shell et al. (1995) assessed the writing self-efficacy of students in Grades 4, 7, and 10 and found no differences, however, in their confidence that they possessed various grammar, usage, and composition skills. Since, again, older students are in better possession of those skills, one wonders why confidence in skills does not increase proportionately. Other researchers have reported that students in the first year of middle school report stronger confidence in their writing skills than do students in Grades 7 and 8 (Pajares & Valiante, 1999), again in the face of older students having greater writing competence. This pattern of decreasing confidence in language arts skills is consistent with findings from expectancy-value researchers who have reported that students’ self-concepts of ability in English decrease from start of Grade 6 to end of Grade 7 (Wigfield et al., 1991).

Studies using cross-sectional or longitudinal designs contribute to a better understanding of the role that critical variables such as school level and gender play in the relation between confidence and competence in writing. This understanding is deepened when the relationships between the motivation variables identified as related to self-efficacy on the one hand and self-efficacy, gender, and schooling on the other are examined. Our objective in this study was to contribute to this understanding and to shed light on the points of conflict between previously obtained results. With Bandura’s (1986) social cognitive theory as a framework, and in keeping with the findings reported earlier, the purpose of this study was threefold. First, we sought to provide a developmental perspective on students’ writing self-efficacy beliefs using data obtained from cohort groups of students ranging in age from 9 to 17. We sought to determine whether the strength of students’ writing self-efficacy beliefs changes as students progress through school. Second, we were interested in determining whether students’ writing self-efficacy beliefs differ as a function of gender and, if gender differences are detected, we sought to extend the findings that researchers have obtained by discovering whether these differences are a function of gender-stereotypical beliefs rather than of gender both for younger and for older students. Finally, we analyzed whether the changes in writing self-efficacy across school levels differ as a function of key competence and motivation indexes in writing, controlling for gender.
1 Methods and Data Source

Participants were 1266 students enrolled in Grades 4–11 attending one public elementary school (Grades 4 and 5) in the south, one middle school (Grades 6, 7, and 8) in the north-east, and one high school (Grades 9, 10, and 11) in the south of the United States (637 girls, 629 boys; 304 (24%) elementary school, 497 (39%) middle school, 465 (37%) high school). The socioeconomic status of the schools and of the areas the schools serve were middle class, students were primarily White, and only regular education students were part of the sample; gifted, special education, and English-as-a-second-language (ESL) students were not included. Instruments were group administered in individual language arts classes. Items were read aloud to students at the elementary school levels, and students completed the instrument jointly and one item at a time. The study took place during the second semester of the academic year.

1.1 Instruments

Instruments and variables used in the present study to assess the motivation variables have been used by researchers in numerous investigations of academic motivation (e.g., Middleton & Midgley, 1997; Pajares et al., 1999, 2000; Pajares & Valiante, 1997, 1999, 2001, 2002; Zimmerman & Bandura, 1994; Zimmerman & Martinez-Pons, 1990). With the exception of the writing self-efficacy scale, all scales asked students to provide judgments along a 6-point Likert-type continuum.

Writing self-efficacy was operationalized as students’ judgments of their confidence that they possessed the various composition, grammar, usage, and mechanical skills appropriate to their academic level. The Writing Skills Self-Efficacy scale consisted of 10 items asking students how sure they were that they could perform specific writing skills on a scale from 0 (no chance) to 100 (completely certain). The skills listed were identified by the students’ language arts teachers as the writing skills appropriate for middle school students at the school in which the investigation took place (sample items: “Write a strong paragraph that has a good topic sentence or main idea”; “Structure paragraphs to support ideas in the topic sentences”). Self-efficacy scores ranged from 0 to 100 (sum of responses to the 10 items divided by 10). Using a similar measure, Pajares and Valiante (1997) reported coefficient alpha reliability of .88 and positive and above .68 correlations between items and scale scores on a sample of Grade 5 students; Pajares et al. (1999) reported a coefficient of .85 with students in Grades 3, 4, and 5; Pajares and Valiante (1999, 2001) reported alpha coefficient of .92 with middle school students. We obtained coefficients of .88, .92, and .91 for elementary, middle, and high school students, respectively.

Writing self-concept was assessed with six items from Marsh’s (1990) Academic Self Description Questionnaire adapted for writing. Directions asked students to “use the following scale to respond to the following statements as you believe they apply to you” (sample item: “I have always done well on writing assignments”). Responses ranged from 1 (definitely false) to 6 (definitely true). Marsh obtained alpha coefficients ranging from .88 to .94 for the various academic areas with students in Grades 5 and 6. Other researchers have reported alpha coefficients of .86 and .89 in studies of writing (Pajares et al., 1999,
We obtained coefficients of .82, .88, and .84 at the elementary, middle, and high school levels, respectively.

**Writing apprehension** was assessed with seven items adapted from the Writing Apprehension Test created by Daly and Miller (1975), an inventory proven a reliable measure of writing anxiety (Reed, Burton, & Vandett, 1988) (sample item: “I am afraid of writing essays when I know they will be evaluated”). Directions to students read, “Below are some statements about writing. There are no right or wrong answers to these statements. Tell us how true or false each statement is for you.” Responses ranged from 1 (definitely false) to 6 (definitely true). In studies in which a similar measure has been used, Cronbach’s alpha coefficients have ranged from .75 to .93 (Pajares & Johnson, 1994, 1996; Pajares et al., 1999; Pajares & Valiante, 1997, 1999, 2001). We obtained a coefficient of .83 at each school level.

**Self-efficacy for self-regulated learning** was assessed using a 7-item scale adapted from Bandura’s Children’s Multidimensional Self-Efficacy Scales that assesses students’ judgments of their capability to use various self-regulated learning strategies such as finishing homework assignments by deadlines (Zimmerman & Bandura, 1994) (sample item: “How well can you finish your homework on time?”). Responses ranged from 1 (not well at all) to 6 (very well). A validation study by Zimmerman and Martinez-Pons (1988) revealed that a single factor underlay the items. In studies in which this scale has been used, Cronbach’s alpha coefficients have ranged from .69 to .87 (e.g., Pajares et al., 1999, 2000; Pajares & Valiante, 1997, 1999, 2001, 2002; Zimmerman et al., 1992). We obtained coefficients of .80, .83, and .80.

The variable that expectancy-value researchers call **value of writing** is typically composed of self-beliefs assessing perceived importance, interest, and enjoyment of writing. Our scale consisted of four items. The two important items are from the Student Attitude Questionnaire (SAQ) (see Eccles, 1983) and were used by Meece, Wigfield, and Eccles (1990). Students rate how important it is to them to be good at and get good grades in language arts. In addition, students were asked whether writing was interesting for them (see Seegers & Boekaerts, 1996) and whether they enjoyed it. Responses ranged from 1 (definitely false) to 6 (definitely true). Using a scale that incorporated these items, Pajares and Valiante (1999, 2001) obtained reliability coefficients of .92 and .91. We obtained coefficients of .72, .80, and .78.

**Achievement goal orientations** were assessed using a scale provided by Middleton and Midgley (1997) derived from the Patterns of Adaptive Learning Survey (PALS) (Midgley et al., 1996) (sample task goal item: “I like writing assignments that really make me think”; performance-approach goal item: “I want to do better than other students in my language arts class”; performance-avoid goal item: “I do my writing assignments so others in the class won’t think I’m dumb”). Reliability and validity of the survey has been demonstrated with middle school students (see Midgley et al., 1998). Middleton and Midgley reported that the three types of competence goals loaded on separate factors with loadings ranging from .68 to .87. Confirmatory factor analysis revealed that each loading was significant. Cronbach’s alpha coefficients were .84 for each of the goals. Middleton and Midgley’s scale used a 5-point Likert continuum; we increased it to 6 points so that responses would be consistent with those used for the motivation variables in our study. Pajares et al. (2000) conducted exploratory factor analysis of the scale and reported that the items loaded on
three factors. Factor loadings ranged from .73 to .79 for the task factor, .46 to .80 for approach, and .41 to .74 for avoid. The task factor correlated .47 with the approach factor which, in turn, correlated .42 with the avoid factor. Task and avoid were uncorrelated. They reported Cronbach’s alpha coefficients of .89 for the task scale, .77 for the approach scale, and .83 for the avoid scale. We obtained a coefficient of .81, .89, and .82 for the task items; .76, .77, and .70 for the performance-approach items; and .80, .83, and .82 for the performance-avoid items.

**Gender orientation.** Students’ gender orientation beliefs were assessed by asking students to report how strongly they identified with characteristics stereotypically associated with males or females in American society (Harter et al., 1997). Early on, researchers assumed that gender orientation was a unidimensional construct that could be adequately measured using a single score such that a low masculine score indicated high femininity. Modern researchers agree that gender orientation is not unidimensional. Rather, they contend that masculinity and femininity are orthogonal variables that represent two distinct dimensions of individuals’ self-conceptions. An individual can possess both high masculinity and high femininity (termed androgyny) or, conversely, low masculinity and low femininity (termed undifferentiated). For the present study, gender orientation was assessed with items used in various studies by Harter, Pajares, and their colleagues (see Harter et al., 1997; Pajares & Valiante, 2001) and adapted primarily from the short form of the Children’s Sex Role Inventory (CSRI) (Boldizar, 1991) (sample masculinity item: “I like building and fixing things”; sample femininity item: “I am a warm person and express these feelings to those I feel close to”). Pajares and Valiante (2001) reported that factor loadings for the seven items that constituted femininity ranged from .55 to .80; the loadings for the seven masculine items ranged from .43 to .66. The interfactor correlation was −.09. Factor 1 explained 70% of the common variance; factor 2 accounted for 30%. Cronbach’s alpha reliability was .76 for the final masculinity scale and .88 for the femininity scale. We obtained reliabilities of .75 for masculinity and .86 for femininity.

**Writing Competence.** Teacher ratings of students’ academic competence is acknowledged as a reliable assessment of students’ actual competence (Hoge & Butcher, 1984). For this study, the students’ language arts teachers were asked to rate their students’ writing competence in their language arts class on a 5-point scale (mirroring the grading scheme typically used in the United States). This assessment was made during the second semester, after teachers had become amply familiar with their students’ academic work.

### 1.2 Analyses

Analyses of variance and of covariance were used to determine whether the strength of students’ writing self-efficacy beliefs changes from elementary school to high school, whether students’ writing self-efficacy beliefs differ as a function of gender, and, if gender differences are detected, whether these differences are a function of gender-stereotypic beliefs rather than of gender. To test the relationships between writing self-efficacy and motivation and competence indexes, and to examine whether gender and school level moderate these relationships, we compared the fits of a series of regression models with and without the various interaction terms. We calculated incremental F-tests and employed Type II or hierarchical sums of squares (Fox, 1997, p. 150) to study the nature of these
relationships and to identify any two- or three-way interactions between the variables. Significant interactions were analyzed by examining differences in means and regression slopes. We used results from the parsimonious models when the exploratory runs suggested that no interaction effects were involved.

2 Results

Table 1 presents means and zero-order correlations for all variables in the study by gender. Girls reported stronger writing self-efficacy, \( t(1264) = 3.73, p = .0002 \), than did boys. Correlations between self-efficacy and the motivation and achievement variables were consistent with those previously reported. Note, for example, that, as previously reported by Pajares et al. (2000), the correlation between writing self-efficacy and performance-approach goals was significant for boys (.23) but not for girls (.08). Femininity correlated with writing self-efficacy both for the girls (.21) and for the boys (.31).

To test for gender and school-level differences in writing self-efficacy, we conducted a two-way analysis of variance. The analysis did not detect a significant gender by school-level interaction, \( F(2, 1260) = 2.77, p = .06 \), partial \( \eta^2 = .00 \). There was a significant main effect for gender, Wilks’ \( \lambda = .99, F(2, 1260) = 14.01, p < .0001 \), partial \( \eta^2 = .01 \). As we have noted, girls reported a higher level of writing self-efficacy than did boys. There was also a main effect for school level, Wilks’ \( \lambda = .97, F(2, 1260) = 17.37, p < .0001 \), partial \( \lambda^2 = .03 \). A test for homogeneity of variance was significant, \( F(5, 1260) = 5.12, p < .001 \), hence we used Dunnett’s \( C \) test to conduct pairwise comparisons between means at the three school levels. Students at the elementary school level (\( M = 81.6 \)) reported greater writing self-efficacy than did their counterparts at the middle school level (\( M = 75.0 \)) and at the high school level (\( M = 75.7 \)). Results are illustrated in Table 2 and Figure 1.

The ANCOVA conducted to discover whether gender differences were a function of gender orientation included grade level, masculinity, femininity, and their interaction. There were no significant interactions between gender and either masculinity or femininity. We detected multivariate effects only for school level, Wilks’ \( \lambda = .99, F(2, 1259) = 9.21, p = .0001 \), partial \( \eta^2 = .01 \), and for femininity, Wilks’ \( \lambda = .99, F(1, 1259) = 10.45, p = .0013 \), \( \eta^2 = .01 \). As hypothesized, and consistent with previous findings, gender differences in writing self-efficacy were rendered nonsignificant when femininity and masculinity were included in the model. Instead, a feminine orientation had a significant effect on self-efficacy. Results are illustrated in Table 3. To extend previous findings (Pajares et al., 1999; Pajares & Valiante, 2001), we analyzed data separately for elementary school and high school students. In each case, gender differences were rendered nonsignificant when femininity was included as a covariate. Because studies have already been conducted at the elementary and middle school levels, results from the high school students were of particular interest to us. In that analysis, gender was rendered nonsignificant, and femininity was the only significant predictor, Wilks’ \( \lambda = .98, F(1, 461) = 11.68, p = .0007 \), \( \eta^2 = .01 \).

To investigate the relationships between writing self-efficacy and the motivation and competence constructs, and to examine whether gender and school level moderated these relationships, we ran and compared the fit of a series of regression models. We calculated incremental \( F \)-tests (Fox, 1997; Kerlinger & Pedhazur, 1973) to study the nature of these
Table 1: Means, standard deviations, and zero-order correlations for variables in the study by gender

|     | Boys |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         | Girls |         |         |         |         |         |         |         |
|-----|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|     | M    | SD     | 1      | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 10     | 11     | 10     | 11     | 12     | 13     | 14     | 15     | 16     | 17     | 18     | 19     | 20     | 21     | 22     | 23     | 24     | 25     | 26     | 27     | 28     | 29     | 30     | 31     | 32     | 33     |
| 1.  | Competence | 2.0 | 1.1 | —      | .34*** | .28*** | −.22*** | .13*** | .09*   | .07    | −.05   | −.19*** | .01    | .04    | 2.3    | 1.1    |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| 2.  | Self-efficacy | 75.1 | 17.6 | .30*** | —      | .51*** | −.36*** | .45*** | .34*** | .28*** | .08    | −.21*** | .10*   | .21*** | 78.6   | 16.6   |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| 3.  | Self-concept | 4.2 | 1.1 | .24*** | .61*** | —      | −.48*** | .46*** | .61*** | .52*** | .11*   | −.19*** | .10*   | .26*** | 4.5    | 0.9    |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| 4.  | Apprehension | 2.6 | 1.0 | −.24*** | −.33*** | −.47*** | —      | −.29*  | −.28** | −.18*** | .20*** | .41*** | .11*   | −.08*  | 2.4    | 1.0    |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| 5.  | Self-regulation | 4.3 | 1.0 | .16*** | .50*** | .53*** | −.33*** | —      | .45*** | .49*** | .07    | −.15** | .16*** | .30*** | 4.5    | 1.0    |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| 6.  | Value | 4.4 | 1.2 | .14**  | .46*** | .61*** | −.25*** | .48*** | —      | .68*** | .18*** | −.03   | .19*** | .30*** | 4.7    | 1.0    |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| 7.  | Task goal | 3.9 | 1.3 | .05    | .40*** | .54*** | −.25*** | .52*** | .70*** | —      | .20*** | −.01   | .25*** | .34*** | 4.3    | 1.2    |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| 8.  | Approach goal | 4.2 | 1.1 | −.01   | .23*** | .23*** | .12*   | .21*** | .24*** | .35*** | —      | .47*** | .10*   | .16*** | 3.8    | 1.2    |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| 9.  | Avoid goal | 3.1 | 1.3 | −.22*** | −.08*  | −.08*  | .39*** | −.01   | .04    | .11*   | .48*** | —      | .07    | −.04   | 2.8    | 1.2    |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| 10. | Masculinity | 5.0 | 0.8 | −.02   | .17*** | .16*** | .07    | .25*** | .20*** | .26*** | .25*** | .12*   | —      | .12*   | 4.2    | 0.9    |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| 11. | Femininity | 4.4 | 1.0 | .09*   | .31*** | .35*** | −.06   | .37*** | .40*** | .45*** | .18*** | .05    | .26**  | —      | 5.1    | 0.7    |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |

*Note: Means for self-concept, apprehension, self-regulation, and value reflect the 6 points of the Likert scale. Means for self-efficacy reflect the 0-100 rating scale. Competence scores ranged from 0 to 4.

*p < .05, **p < .001, and ***p < .0001.
relationships and to identify two- and/or three-way interactions between the variables. Tables 4a and 4b provide results for the various predictors. Quadratic and three-way interaction effects were found only for the model in which performance-approach goals was entered as a covariate. Individual models in which writing self-efficacy was predicted by school level, gender, the motivation and competence variables, and appropriate interactions, accounted for 7% to 34% of the variance. Cohen’s (1988) criterion suggests that an $R^2$ of .13 can be considered moderate.

Significant two-way interactions were detected between school level and self-efficacy for self-regulation, performance approach goals, and writing competence. At the high school level, the relationship between writing self-efficacy and self-efficacy for self-regulation was significantly different from that at the elementary, $\beta = -.333$, $t = -2.15$, $p = .030$, or middle school level, $\beta = -.502$, $t = -3.98$, $p < .0001$. Figure 2 plots mean writing self-efficacy as a function of school level and two levels of self-efficacy for self-regulation (one standard deviation above and one below the mean). The relationship between writing self-efficacy and self-efficacy for self-regulation was weaker for high school students than for either

Table 2: Analysis of variance of writing self-efficacy as a function of gender and school level

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>5</td>
<td>14755.55</td>
<td>2951.11</td>
<td>10.98***</td>
</tr>
<tr>
<td>Gender</td>
<td>1</td>
<td>3763.85</td>
<td>3763.85</td>
<td>14.01**</td>
</tr>
<tr>
<td>School level</td>
<td>2</td>
<td>9331.68</td>
<td>4665.84</td>
<td>17.37***</td>
</tr>
<tr>
<td>Gender*school level</td>
<td>2</td>
<td>1485.89</td>
<td>742.94</td>
<td>2.77</td>
</tr>
<tr>
<td>Error</td>
<td>1260</td>
<td>338531.41</td>
<td>268.68</td>
<td>1.18</td>
</tr>
<tr>
<td>Total</td>
<td>1265</td>
<td>353286.96</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Model $R^2$.04.

*p < .05, **p < .001, and ***p < .0001.

![Figure 1: Writing self-efficacy as a function of school level](image)
elementary or middle school students. Mean writing self-efficacy scores were similar for students with high self-efficacy for self-regulation at the different school levels, but writing self-efficacy was lower at the middle school level than at the high school level for students with low self-efficacy for self-regulation.

As was the case with self-efficacy for self-regulation, the relationship between competence and self-efficacy was weaker for high school students than for either elementary, \( t=4.10, p<.0001 \), or middle school students, \( t=5.21, p<.0001 \). Figure 3 illustrates mean writing self-efficacy as a function of school level and high and low levels of competence. Note that at the higher level of competence, the writing self-efficacy score for high school students was lower than for elementary or middle school students. At the lower level of competence, the elementary school students had greater writing self-efficacy than did high school students, who in turn were more self-efficacious than were middle school students.

Gender moderated the relationship between writing self-efficacy on the one hand and writing value and each of the achievement goals on the other. As regards value, the slope for boys was significantly steeper than for girls, \( t=2.37, p=.018 \), which is to say that the relationship between value and writing self-efficacy was stronger for boys than for girls. As regards the achievement goal orientations, we found significant gender by task goals and gender by performance-avoid goals interactions. The positive relationship between self-efficacy and task goals was stronger for boys than for girls, \( t=2.66, p=.010 \). Figure 4 illustrates this difference. There was a negative relationship between self-efficacy and performance-avoid goals both for boys and for girls, but this association was stronger for girls than for boys, \( t=1.98, p=.05 \). Figure 5 illustrates this relationship.

Main effects without interactions were detected for the self-concept and apprehension models. As expected, holding school level and gender constant, writing self-concept was positively and linearly associated with writing self-efficacy, \( t=23.86, p<.0001 \). Writing self-efficacy was positively related to writing self-concept at every level of schooling and for all students. As regards writing apprehension, we found a linear but negative relationship between writing self-efficacy and writing apprehension, \( t=-.370, \)

### Table 3: Analysis of covariance of writing self-efficacy as a function of gender and school level, with masculinity and femininity as covariates

<table>
<thead>
<tr>
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</tr>
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<tbody>
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<td>37,033.65</td>
<td>6172.28</td>
<td>24.57***</td>
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<tr>
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<td>544.53</td>
<td>544.53</td>
<td>2.17</td>
</tr>
<tr>
<td>School level</td>
<td>2</td>
<td>4626.54</td>
<td>2313.27</td>
<td>9.21***</td>
</tr>
<tr>
<td>Masculinity</td>
<td>1</td>
<td>841.80</td>
<td>841.80</td>
<td>3.35</td>
</tr>
<tr>
<td>Femininity</td>
<td>1</td>
<td>2625.99</td>
<td>2625.99</td>
<td>10.45**</td>
</tr>
<tr>
<td>Masc*fem</td>
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<td>443.21</td>
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</tr>
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<td>Error</td>
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<td>31,623.30</td>
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<tr>
<td>Total</td>
<td>1265</td>
<td>353,286.96</td>
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</tr>
</tbody>
</table>

Note: Model \( R^2=.10 \).

\*p < .05, \*\*p < .001, and \*\*\*p < .0001.
Table 4a: Analysis of variance showing incremental $F$-tests for terms in the writing self-efficacy models with gender, school level, and variables in the study (COV) as predictors

<table>
<thead>
<tr>
<th>Term</th>
<th>Self-concept</th>
<th></th>
<th></th>
<th>Apprehension</th>
<th></th>
<th></th>
<th></th>
<th>Self-regulation</th>
<th></th>
<th></th>
<th>Value</th>
<th></th>
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<td>df</td>
<td>$F$</td>
<td>$p$</td>
<td>df</td>
<td>$F$</td>
<td>$p$</td>
<td>df</td>
<td>$F$</td>
<td>$p$</td>
<td>df</td>
<td>$F$</td>
<td>$p$</td>
</tr>
<tr>
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<td>.0004</td>
<td>1</td>
<td>4.56</td>
<td>.0330</td>
<td>1</td>
<td>2.98</td>
<td>ns</td>
</tr>
<tr>
<td>School level (SL)</td>
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<td>1.65</td>
<td>ns</td>
<td>2</td>
<td>15.85</td>
<td>.0001</td>
<td>2</td>
<td>2.66</td>
<td>ns</td>
<td>2</td>
<td>1.15</td>
<td>ns</td>
</tr>
<tr>
<td>Covariate (COV)</td>
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<td>570.43</td>
<td>.0001</td>
<td>1</td>
<td>206.14</td>
<td>.0001</td>
<td>1</td>
<td>33.56</td>
<td>.0001</td>
<td>1</td>
<td>208.79</td>
<td>.0001</td>
</tr>
<tr>
<td>COV*COV</td>
<td>2</td>
<td>0.73</td>
<td>ns</td>
<td>2</td>
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<td>ns</td>
<td>2</td>
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<td>G*SL</td>
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<td>.018</td>
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<tr>
<td>G*COV</td>
<td>2</td>
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<td>2</td>
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<td>.59</td>
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<tr>
<td>G<em>COV</em>COV</td>
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<td>.34*</td>
<td></td>
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<td>.19*</td>
<td></td>
<td>2</td>
<td>.25*</td>
<td></td>
<td>2</td>
<td>.18*</td>
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<tr>
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<td></td>
<td>2</td>
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</tr>
</tbody>
</table>

$p < .05$
Table 4b: Analysis of variance showing incremental F-tests for terms in the writing self-efficacy models with gender, school level, and variables in the study (COV) as predictors

<table>
<thead>
<tr>
<th>Term</th>
<th>Task goals</th>
<th>Performance-approach</th>
<th>Performance-avoid</th>
<th>Writing competence</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>df</td>
<td>F</td>
<td>p</td>
<td>df</td>
</tr>
<tr>
<td>Gender (G)</td>
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<td>School level (SL)</td>
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<td>2.21</td>
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<td>Covariate (COV)</td>
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<td>.44</td>
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<td>G*SL</td>
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<td>ns</td>
<td>2</td>
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<td>G*COV</td>
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<td>SL*COV</td>
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<td>2</td>
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<td>G<em>COV</em>COV</td>
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|                | R² |     |      |     |     |      |     |     |      |     |     |      |
|                |    | .15*| .08* | .07*| .16*|       |     |     |       |     |     |       |

Note: Indexes for the gender, school level, and covariate main effects resulted from tests comparing a model containing these three terms with models in which one of the terms was removed. Indexes for the two-way interaction effects resulted from a test comparing a model containing gender, school level, the covariate, and all two-way interactions with models in which one of the interactive terms was removed. Indexes for the three-way interaction effects resulted from a test comparing a model containing all main and interactive terms with a model in which the three-way interaction was removed. Our analyses revealed that significant quadratic effects existed only for the model in which performance-approach orientation was entered as a covariate.

*p < .05
The main effect for school level showed that, controlling for apprehension, elementary school students had higher writing self-efficacy than did middle school students, $t = 14.33$, $p < .0001$. The main effect for gender revealed that girls had greater writing self-efficacy than did boys regardless of their apprehension, $t = 2.85$, $p = .004$. There were no differences in self-efficacy by school level or gender when self-concept was controlled, clearly a result of the powerful relationship between self-efficacy and self-concept ($r = .51$ for girls; $r = .61$ for boys).

### 3 Discussion

We had three objectives in this study. First, we sought to provide a developmental perspective on students’ writing self-efficacy beliefs using data obtained from cohort groups of students ranging from age 9 to 17. In essence, we sought to determine whether
the strength of students’ writing self-efficacy beliefs changes as students progress from elementary to high school. Second, we were interested in determining whether students’ writing self-efficacy beliefs differ as a function of gender and, if such differences are detected, we sought to discover whether these differences are a function of gender-stereotypic beliefs rather than of gender. Finally, we analyzed whether the changes in writing self-efficacy across school levels differ as a function of key competence and motivation indexes in writing, controlling for gender.

Consistent with what other researchers have already discovered, we found that writing self-efficacy beliefs diminish as students move from elementary school to middle school, and then remain at that level during high school. It well may be that confidence in writing skills is not well nurtured as students progress through school, even in the face of the skills themselves being developed (see Cleary, 1996; Phillips & Zimmerman, 1990). If this is indeed the case, this is particularly unfortunate because the vast majority of students begin
school believing that they can write (Calkins, 1994). As researchers have documented, middle school seems to be the critical juncture at which academic motivation, in this case self-efficacy beliefs, decreases (Wigfield et al., 1991, 1996).

As have most researchers, we found that girls report higher self-efficacy in their writing at each level of schooling than do boys. Again, consistent with recent findings, these differences were rendered nonsignificant when students' gender orientation beliefs were controlled. Instead, femininity was associated with writing self-efficacy. In the area of writing, it seems clear that a feminine orientation is adaptive. Social cognitive theory does not endow gender self-beliefs with agentic and motivating properties (Bussey & Bandura, 1999), but neither does it endow gender itself with such properties. Researchers have long observed that fields in the areas of mathematics, science, and technology are typically viewed by students as being within a male domain (Fennema & Sherman, 1978; and see Eisenberg et al., 1996). In these areas, a masculine orientation is associated with confidence and achievement because masculine self-perceptions are themselves imbued with the notion that success in these areas is a masculine imperative (Eccles, 1987b; Hackett, 1985). Language arts in school is typically associated with a feminine orientation in part because writing is viewed by most students, particularly younger students, as being a female domain. As a consequence, a feminine orientation is associated with motivational beliefs related to success in writing. One challenge before language arts educators is to alter students' views of writing so that it is perceived as relevant and valuable both to girls and boys. A challenge for all educators, and for the broader culture, is to continue to expound and model gender self-beliefs that encompass both the feminine expressiveness and the masculine instrumentality that are critical to a balanced self-view.

Our third objective was to analyze whether the changes in writing self-efficacy across school levels differ as a function of key competence and motivation indexes in writing, controlling for gender. Before looking at the specific effects, it bears noting that, as expected and consistent with previous research, writing self-efficacy was indeed related to each of the motivation and competence variables across school levels and both for boys and for girls. Students' confidence in their writing skills was positively related to adaptive motivation variables such as writing self-concept, self-efficacy for self-regulated learning, perceived value of writing, and strength of task goal orientation. It was also positively related to writing competence. Conversely, self-efficacy was negatively related to writing apprehension and performance-avoid goals. Clearly, students' self-efficacy beliefs travel only in good company.

We also found that the association between self-efficacy for self-regulation and writing self-efficacy was weaker for high school students than for either elementary or middle school students. Given the importance of using self-regulatory strategies in school, the weaker relationship between confidence in those strategies and confidence in writing is not desirable for students. The relationship between competence and writing self-efficacy was also weaker for high school students than for either elementary or middle school students. The more competent high school students reported lower writing self-efficacy than did the more competent elementary or middle school students. For the less competent students, self-efficacy was higher at the elementary school level. Middle school students reported the lowest confidence, and students with lower competence reported lower self-efficacy beliefs at each level of schooling than did their more competent classmates. The finding is
in part intuitive. As we explained in the introduction, students develop their self-efficacy beliefs in part from their mastery experiences. It is logical that students with lower writing capability have experienced less previous success in writing and hence should have lower confidence in their abilities. It bears emphasizing that these are precisely the students who require not only additional instruction in writing skills but whose self-efficacy beliefs require attention and nurturing.

We have already noted that perceived value and task goal orientation were positively related to writing self-efficacy across school levels. We also found that gender moderated these relationships such that in both cases they were weaker for girls than for boys. Value and task goals typically tap into the same source of variance. Girls expressed greater value of writing and reported higher task orientations. It is logical that the self-efficacy of girls in a domain they perceive as gender-friendly should be more independent of the degree to which they value that domain or the strength of their task goal orientation. Alternatively, these variables are more “connected” for boys, which is to say that boys’ self-efficacy beliefs may be more dependent on the value they assign to writing and to the strength of their task goal orientations, and vice versa. The relationship between writing self-efficacy and performance-avoid goals was weaker for boys than it was for girls, illustrating that the confidence of boys in their writing capabilities was less connected to performance-avoid reasons than it was for girls.

Two decades of research on the influence of self-efficacy beliefs in academic functioning have strengthened Bandura’s (1986) claim that self-efficacy beliefs play an influential role in human agency. Consequently, an important pedagogical implication to emerge from these findings is that teachers do well to take seriously their share of responsibility in nurturing the self-beliefs of their pupils, for it is clear that these self-beliefs can have beneficial or destructive influences. Teachers and schools are responsible for helping students develop their competence and confidence as students progress through school. Bandura (1986) argued that educational practices should be gauged not only by the skills and knowledge they impart for present use but also by what they do to children’s beliefs about their capabilities, which affects how they approach the future. Students who develop a strong sense of self-efficacy are well equipped to educate themselves when they have to rely on their own initiative (p. 417).

As children strive to exercise control over their surroundings, their first transactions are mediated by adults who can either empower them with self-assurance or diminish their fledgling self-beliefs. Young children are not proficient at making accurate self-appraisals, and so they must rely on the judgments of others to create their own judgments of confidence and of self-worth. Teachers who provide children with challenging tasks and meaningful activities that can be mastered, who chaperone these efforts with support and encouragement, and who believe in their students and convey this belief help ensure that their students will develop a robust sense of confidence (see Mills & Clyde, 1991). Beliefs of personal competence ultimately become habits of thinking that are developed like any habit of conduct, and teachers are influential in helping students to develop the self-belief habits that will serve them throughout their lives.

It seems obvious that teachers should endeavor to prevent students from developing negative perceptions in the first place. Given the academic failure that some students experience, this is a challenging task. Nonetheless, it is evident that students should be able to face difficulties, or even fail, without losing the confidence required to try again and to
improve. Scheier and Carver (1993) argued that when students have little confidence in
their capabilities, a sense of pessimism and “negative thinking” can pervade their academic
endeavors. Students with positive expectations that result from a strong sense of confi-
dence approach tasks with optimism and continue to strive in the face of difficulty; those
with low confidence and few expectations for success are more likely to withdraw their
effort and give up on their goals.

Some self-efficacy researchers have suggested that teachers should pay as much atten-
tion to students’ perceptions of competence as to actual competence, for it is the percep-
tions that may more accurately predict students’ motivation and future academic choices
(Hackett & Betz, 1989). Assessing their students’ self-efficacy beliefs can provide teach-
ers with important insights. For example, researchers have demonstrated that self-efficacy
beliefs strongly influence the choice of majors and career decisions of college students
(Hackett, 1995). In many cases, unwarranted low confidence, rather than lack of capabil-
ity, is responsible for maladaptive academic behaviors, avoidance of courses and careers,
and diminishing school interest and achievement. Teachers and parents will readily attest
to the fact that there are situations in which inaccurate self-beliefs, rather than a weak
knowledge base or inadequate skills, are responsible for students shortchanging them-
selves academically. In these cases, identifying, challenging, and altering inaccurate judg-
ments is essential to academic success and adaptive functioning.

Writing programs such as the Writers’ Workshop endeavor to build students’ sense of
efficacy in writing in the belief that confidence is essential to skill improvement (e.g.,
Atwell, 1987; Calkins, 1994). Attention to children’s self-efficacy beliefs is made an
explicit feature of teacher education in such programs, and preservice teachers are taught
to assess both competence and the beliefs that accompany competence as part of writing
evaluations. In addition, students’ own self-evaluations include self-reflection geared to
understanding the affective and motivational self-beliefs that are an essential part of writ-
ing. McLeod (1987) rightly observed that because writing is as much an emotional as a
cognitive activity, affective components strongly influence all phases of the writing
process. She urged researchers to explore affective measures with an eye toward develop-
ing a “theory of affect” to help students understand how these affective processes may
inform their writing. It seems clear that students’ writing self-efficacy beliefs should play
a prominent role in such a theory.

Authors Note

Indexes for the gender, school level, and covariate main effects resulted from tests com-
paring a model containing these three terms with models in which one of the terms was
removed. Indexes for the two-way interaction effects resulted from a test comparing a
model containing gender, school level, the covariate, and all two-way interactions with
models in which one of the interactive terms was removed. Indexes for the three-way inter-
action effects resulted from a test comparing a model containing all main and interactive
terms with a model in which the three-way interaction was removed. Our analyses revealed
that significant quadratic effects existed only for the model in which performance-
approach orientation was entered as a covariate.
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SECTION III:

INTERVENTION STUDIES AIMED AT IMPROVING MOTIVATION TO WRITE
Chapter 9

Mark Twain’s Writers’ Workshop: A Nature–Nurture Perspective for Motivating Students with Learning Disabilities to Compose

Virginia W. Berninger and Suzanne Hidi

This chapter is dedicated to the memory of Bruce Dunn for his pioneering work on nature–nurture interactions in written language.

This chapter discusses motivation from the perspective of the interaction between biologically and socially constrained variables in understanding motivation to write in students who have a specific learning disability – dyslexia, which affects writing as well as reading. Pitfalls are highlighted in relying exclusively on external or internal attributions of motivation to write, only student (and not teacher) variables, and unidirectional causal influences of motivation on writing. A three-week, intensive instructional intervention for dyslexics in grades 4–6 is described in which results showed the following evidence of nature–nurture interactions in response to instruction in a population known to have genetic and neurological constraints on their learning processes: (a) treatment-specific effects at both the behavioral and brain levels for orthographic versus morphological spelling strategies; (b) significant trend toward improved written expression; and (c) indicators of improved self-efficacy. A model of reciprocal influences between writing outcomes and self-efficacy is proposed for understanding the learning processes and effective instruction in this student population.

1 Introduction and Organization of the Chapter

In this chapter we discuss perspectives on motivation and writing that are based on systematic research in teaching students with learning disabilities to write. Instead of viewing...
motivation as the precursor in the causal chain in learning, we support the view that motivation can be the outcome of success in learning. The more successful a student is in the learning process, the more engaged and the less avoidant the student becomes in future learning activities, thus increasing the likelihood that the success will persist and observers will infer that the student is “motivated to learn.” We further make the case that it is not warranted to conclude that disengaged, poor writers are necessarily unmotivated. We acknowledge like many other researchers (e.g., Hidi, Renniger, & Krapp, 2004, this volume) that motivation is not only a psychological process that resides in the mind of the learner, supported by the brain’s limbic and frontal systems (Isaacson, 1982; Stuss & Benton, 1986). Rather, we emphasize that motivation is a variable that emerges from as well as contributes to a dynamic, interacting system that includes the teacher and student(s) in the instructional environment. Not only student motivation but also teacher motivation must be considered when both learning and teaching are really hard.

The focus of this chapter is on the motivational issues in teaching students with a specific learning disability affecting their reading and their writing. Dyslexia is a disorder that not only affects word reading but also word spelling, and so dyslexics have difficulty with written expression as well as reading (Berninger, Abbott, Thomson, & Raskind, 2001). Some children do not have difficulty with reading but have difficulty with handwriting and/or spelling (Berninger, 2004). We take the position, and elaborate on it throughout the chapter, that for this population specifically (and probably problem learners in general) the importance of instructional variables is greatly increased in understanding and influencing motivational variables. That is, the quality and appropriateness of instruction is just as important as the psychological attributes and attributions of the learner in explaining motivated learning behavior in general and for writing in particular. We support the importance of the instructional component with an overview of the Mark Twain Writers’ Workshop conducted at the University of Washington (UW) in summer 2002. This study involved a joint collaboration between the UW treatment and brain imaging studies in a multidisciplinary center and related writing intervention project. The goal of these studies is to investigate the biological basis of dyslexia (and other learning disabilities) and effective teaching strategies that bring about evidence-based improvement in learning outcomes for students with dyslexia. The role of motivation is critical in designing such instructional intervention because many of these students have become aversive to participating in writing activities because writing is so difficult for them and associated with chronic failure.

At the same time we acknowledge that motivational processes have been investigated less than cognitive processes in development of writing skill (Boscolo, 1995; Hidi & McLaren, 1991; Miller & Meece, 1997) and research on the specialized instructional techniques for students with writing disabilities is necessary but not sufficient. Two motivational factors that should be investigated in students with writing disabilities are interest and self-efficacy (Hidi, Berndoff, & Ainley, 2002). Although research has shown that interest can facilitate writing performance (e.g., Albin, Benton, & Khramtsova, 1996), Hidi and colleagues (e.g., Hidi et al., 2002) have concluded that it may be more difficult to develop interest in writing than in reading for several reasons. One reason is that content knowledge can influence quality of writing and if a student writer is not interested in or does not have prior background knowledge of the topic on which the teacher requests a written assignment, the quality of the writing may suffer. However, it is of interest what the role
of interest and self-efficacy are in the population of students with learning disabilities who have the content knowledge (acquired through listening and viewing in stimulating home and school environments) and interest in writing but cannot express themselves in writing because of transcription (handwriting and spelling), attentional, or executive problems (see Hooper, Swartz, Wakely, deKruif, & Montgomery, 2002, and Table 1).

2 Biases in Internal and External Attributions

Rotter (1966) distinguished between internal and external attributions in explanations of motivated behavior. When people make internal attributions, they believe that outcomes are the result of their own actions. When people make external attributions, they believe that outcomes are the result of other’s actions. Using a clever experimental design, Johnson, Feigenbaum, and Weiby (1964) demonstrated that whether teachers make internal or external attributions depends on student learning outcomes. When students are successful, teachers tend to make internal attributions, crediting their own teaching for student learning outcome, but when students are not successful, teachers tend to make external attributions, blaming students for their lack of motivation or ability. Beckman (1970) in another interesting study showed that whether internal or external attributions are made also depends on who makes the attributions – an actor (the teacher) or an observer (someone other than the teacher who views whether students are succeeding or failing). In contrast to actors, observers tend to blame the teacher when students fail and credit the students when they succeed.

Relying exclusively on internal or external attributions can lead to erroneous conclusions. In addition, learning is seldom the result of only instructional behaviors (teaching or pedagogy): Pedagogy may interact with individual differences in mental processing that students bring to the learning environment (Berninger & Richards, 2002; Berninger & Winn, 2006). Some students learn only when there is a careful match between how they learn and how they are taught. The careful match is sometimes needed because of biological constraints on learning differences; for example, some children only learn alphabetic principle if instruction focuses explicitly on correspondences between letter(s) and phonemes – they may not learn in a constructivist classroom in which they are expected to construct their own meaning without systematic teaching in these correspondences. The careful match is sometimes needed because of social constraints on learning differences; for example, two children in the UW instructional studies – one of a mixed Inuit and African-American heritage and one of Northwest Native American heritage – did not learn well in one-to-one individual tutorials and learned best in groups with other children after they were moved to group instruction at their own request, in keeping with cultural values and norms that emphasize others.

Admittedly, it is a great deal of work on a teacher’s part to make optimal matches between each student’s ideal way of learning and the classroom instructional program that must be adapted to the group – a large number of individuals. However, by acknowledging that some students are harder to teach and require very specialized instruction, teachers should be better able to understand that these students, who at first glance may appear not motivated, may struggle in writing not because of lack of motivation but because of biological constraints – genetic (for review, see Raskind, 2001; Thomson & Raskind,
2003) and neurological (for review, see Berninger & Richards, 2002) – that make it more
difficult, but not impossible, for them to learn. This view contributes to the transformation
of the actor’s (teacher’s) perspective to that of the participant observer’s (child’s self-
reflections and attributions based on observing other children in the classroom who seem
to learn more easily). Learning really is more difficult for some children and this learning
difficulty cannot be attributed to lack of motivation or laziness (Levine, 2003). Children
with chronic written output failure may learn to avoid writing because it is aversive (due
to repeated failure at it) rather than because they are not motivated. When writing becomes
less aversive because they can do it successfully, they are less likely to be writing-avoidant
(Berninger, Abbott, Whitaker, Sylvester, & Nolen, 1995).

At the same time, the task of the teacher in individually tailoring instruction for each stu-
dent in a large classroom or even small instructional group is enormous, if not impossible,
given the normal variation among all learners (Berninger, 1994; Berninger & Richards,
2002; Levine, 1992, 2002). However, by acknowledging this normal variation that requires
more than a single kind of pedagogy, it follows that parents, politicians, journalists, and the
public should understand that these teachers have an extremely difficult task; the way to
motivate the teachers to meet the daunting challenge is not to institute punitive measures for
holding them accountable, but rather to provide sufficient resources and support services to
optimize the achievement of a biologically and culturally diverse student population. This
view contributes to the transformation of the observer’s (parent’s, politician’s, journalist’s,
and public’s) understanding of the actor’s (teacher’s) perspective. Teachers are not always
responsible for students who do not achieve because some students really are more difficult
to teach. Nevertheless, teachers might be able to teach these students more effectively if
they were more adequately prepared to teach diverse learners.

Most students might learn more (know more and show it in more visible ways at the
day than beginning of the school year) if preservice teacher education programs more ade-
quate prepared preservice teachers with the conceptual and pedagogical knowledge
needed to deal with the enormous biological diversity that influences learning to write in
real-world classrooms, along with multicultural diversity (Berninger, 1994; Berninger &
Richards, 2002; Berninger, Dunn, Shin-Ju, & Shimada, 2004). The most motivated teacher
is unlikely to be able to teach writing effectively to the most motivated student with writ-
ing disabilities unless the educator understands the processes of writing development and
can implement effective pedagogy for students with a variety of learning trajectories and
learning differences. Therefore, the complex role of motivation for learning in individuals
with learning disabilities and for motivation of their teachers to teach them depends to a
large extent on (a) the nature of the instruction provided for the affected individuals and
(b) the nature of preservice professional development provided for the future teachers.
Motivating students to overcome dyslexia (Shaywitz, 2003) will ultimately depend on both
teaching the students and teaching the teachers.

3 Rethinking Motivation as a Causal Mechanism

William James, the eminent pioneer in American psychology, made the counter-intuitive
claim that we are afraid because we run; that is, we do not run because we are afraid
This claim illustrates how an explanation of an observable behavior may not accurately portray the direction of causality. In a similar vein we argue that motivation is not necessarily the antecedent behavior that causes learning. Motivation may more accurately portray a class of goal-driven behaviors that results from rather than causes behavior. Success can lead to motivation to engage in a task in the future. Chronic failure tends to lead to discouragement and disengagement from the learning process. However, some students overcome processing weaknesses by working harder than peers to complete their writing assignments despite the enormous difficulty they have with writing. Other students develop strategies for avoiding tasks at which they know they will fail. However, avoidance does not mean that they do not want to succeed at writing or that they are not willing to work hard to improve their writing. They simply are in touch with reality and know they do not know how to write successfully. They may also have given up hope that anyone can help them improve their writing. Complicating matters, their teachers may not have adequate training and experience in knowing how to teach writing effectively to students who struggle more than their classmates in writing successfully. In sum, students’ motivation to write is strongly influenced by both their biological predispositions and their individual interactions with the instructional environment.

The handwriting displayed in Figure 1 illustrates the importance of assessing those biologically constrained individual differences in student writers in planning interventions to change the interactions of the individual and the instructional environment. This middle school student was referred by a teacher for severe emotional and behavioral problems and lack of motivation to complete any written work. The school psychology intern administered a few simple tests of handwriting – printing the 26 alphabet letters in order from memory, copying a sentence containing each of the 26 alphabet letters, and copying a short passage. It is clear from the letter formations that this student has not mastered legible letter writing. Because these writing tasks were timed, the scores indicated that the letter writing was severely slow for his grade level. This student was not completing writing assignments because he had not automatized legible letter writing. He was acting out in the classroom because he was unable to manage the frustration of being unable to succeed at school and fear that he would never be able to earn his living as an adult. As he told the school psychologist, he thought he was doomed to be homeless and never have a wife and children. When the school psychology intern provided intervention that coupled individual and small group instruction in writing skills (aimed at transcription, text generation, and executive functions) and individual counseling and group work on anger management and social skills, the student was transformed from a disruptive, failing student to a successful writer. What was amazing was the effect it had not only on the student to keep trying to improve his writing but also the effect it had on the teacher. This “miracle” convinced her that it was possible to change struggling writers into successful writers in middle school.

4 The Nature–Nurture Perspective

Executive functions for making goals and plans for reaching goals and emotional behaviors related to motivated- (goal-) driven behavior have a biological basis (Berninger & Richards, 2002; Elliott, 2001). For example, although students with writing problems may
Figure 1: Letter writing of an eighth grade boy when asked to write the alphabet from memory and to copy a sentence or a short passage before writing instruction was introduced to teach letter writing automaticity and strategies for word spelling and composing (planning, translating, and reviewing/revising)
not have difficulty in initiating goal-directed behavior, they may have problems in sustaining attention to stay on task in performing goal-directed behavior over time. For example, UW Family Genetics Study results illustrate the difficulty dyslexics have in maintaining attention for tasks that require the integration of orthographic and phonological codes. On the first row of the rapid automatic naming (RAN) task for letters (or numbers) and rapid automatic switching (RAS) task for alternating letters and numbers, child dyslexics were significantly faster on row one than they were on the next four rows combined. The dyslexics were able to initiate goal-directed behavior in a temporally efficient manner but were unable to maintain the rate over time.

However, even if the dyslexics have a biologically based deficit in maintaining automatic language behaviors, they may learn to write successfully if the instructional environment is designed to help them overcome these biologically based vulnerabilities. Providing hope, eliciting or creating interest, and modifying instructional approaches are all important factors in designing an instructional environment to transform students with biologically based learning problems into successful, engaged students who do not actively avoid learning in a domain that is very difficult for them.

5 Role of Hope

Students with chronic school failure may lose faith that they can learn successfully. They may not lack motivation to write but rather conviction that they can learn to write or that teachers can teach them to write. Thus, we begin our instructional interventions with dyslexics in the upper grades (fourth, fifth, and sixth grades) with a story created to instill hope that (a) they can learn and (b) the teachers can teach them. This hope story, which is told the first day, is repeated and extended throughout the intervention. Often this hope story revolves around a hero such as a famous figure in the culture who illustrates with his or her life that initial lack of success can be transformed into success. For example, we have used the life of Albert Einstein for this purpose (see Berninger, 2000). The general public thinks of Einstein as a hugely successful adult, but when he was beginning formal schooling that was not self-evident to young Albert or his family. As we explained to the children, he had begun to talk later than other preschool children, had many behavioral problems early in his schooling, was almost repeated in first grade, and did not begin to like school until he was transferred to another school that taught differently. Although Einstein did not have dyslexia (specific to problems in reading and spelling words), he may have had a form of language learning disability (using language to learn) and was

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1The first author thanks Richard Wagner for suggesting that the RAN (Wolf, Balley, & Morris, 1986) and RAS (Wolf, 1986) be analyzed by rows. The results showed that RAN for letters ($F(1, 120)=1476.127, p=.000$) and for numbers ($F(1, 119)=1507.322, p=.000$) and RAS for alternative numbers and letters ($F(1, 120)=1099.892, p=.000$) had main effects for naming times across rows. Post hoc analyses then showed that in all cases the first row was significantly different from the combination of the next four rows and the first row was always faster than the next four rows which were not only slower but showed slower times of consistently comparable magnitude.
able to do his best thinking in nonverbal format, which he then translated into verbal expression (e.g., see Overbye, 2001; Paterniti, 2000). The child dyslexics quickly grasped the point that despite a slow start, Einstein reached great heights in his eventual accomplishments and that there is hope that school might eventually become a positive experience. They also grasped how other cultural heroes – the mutant Ninja turtles – demonstrated that normal genetic variation, like the genetic mutations causing dyslexia (a disorder of reading and spelling words) can result in special talents as well (Berninger, 2000).

Although attachment has generally been studied in relationship to mothers and their infants/toddlers, attachment (bonding) of students with their teachers plays an important role in the learning of school-age children. Attachment of students to their teachers or folk heroes like Einstein can also forge emotional bonds that re-encourage discouraged learners. Einstein’s life story has been well publicized within the learning disabilities community as an example of how an individual with a different kind of mind has achieved greatness in an area or areas of that individual’s strength. In the writing intervention described in this chapter, the life of Mark Twain was used to tell the hope story that continued from the first to the last day of the writers’ workshop. Rather than making the external attribution that the student is not writing well because the student is not motivated, the teacher can make the internal attribution that she/he as teacher should try hard to find a way to give the student hope that she/he can become a writer.

6 Role of Interest

Students with chronic school failure become disengaged from school learning. Such disengagement does not mean they are not motivated to learn, but it means that they need to be re-engaged in school learning. One way to accomplish this goal of re-engagement is through interest (Hidi & Harackiewicz, 2000). The University of Washington Learning Disabilities Center has used a variety of ways to teach literacy skills to dyslexics in learning contexts designed to arouse their interest and re-engagement in the learning process. These include science workshops (Berninger, 2000), drama (reading and acting play parts, unpublished data), Sherlock Holmes–Watson word detectives (Berninger et al., 2003), “You Got to Laugh” play with language and humor-building (Berninger, Abbott, Graham, & Richards, 2001), and virtual-reality problem-solving activities (designed and implemented by Winn, see Berninger et al., 2003). To interest the students in the writers’ workshop described in this chapter and thus engage them in the writing process, we used computer-assisted writing instruction in a social context with goal-setting and daily teacher feedback coupled with writing about topics such as autobiography before, during, and after school and the future world in the next millennium. Rather than assuming the student cannot learn because of a learning disability (an external attribution) and therefore excusing oneself from any responsibility in teaching the student, the teacher can assume an active role as educator (an internal attribution that the actor has responsibility) for designing an interesting and intellectually engaging
instructional environment to re-engage the student writer who has become disengaged due to chronic failure in writing.

7 Relationship between Interest and Specialized Instruction

Creating interest or capitalizing on topics that already hold students’ interest is necessary but not sufficient. Students also need to be explicitly taught the tools of effective writing. For struggling writers, the bottlenecks are often in low-level transcription skills such as handwriting and spelling (see Berninger & Amtmann, 2003). Therefore, not surprisingly, the most pressing concern of educators who teach writing to upper elementary and middle school students is how to combine explicit instruction in impaired transcription skills at the same time they provide instruction on the high-level composing processes such as planning, reviewing, and revising (Troia & Maddox, 2004). That is, how does a teacher both instruct and motivate student writers who can generate ideas and mental language but are very delayed for age and grade in translating what is in their internal mind into written language in the external environment via a pen(cil) or keyboard/word processing system? That is, how does the teacher help a motivated, interested writer to write when there is an enormous gap between transcription and text generation skills?

Creating interest and providing specialized instruction are separable variables. When both have been systematically manipulated in instructional experiments, results have shown that instruction improves writing, but in addition, general interest in writing and interest in specific writing genres also appears to be related to self-efficacy as a writer, and thus writing motivation (Hidi, Berndoff, & Ainley, 2002). Creating interest may be a bridge to engage students to sustain the mental effort, attention, and executive functions required, despite problems in transcription, to attend to explicit instruction in transcription and text generation sufficiently to master them in the service of high-level composing goals. We turn now to the role of specialized instruction in narrowing this gap between ability to generate ideas and internal text and ability to transcribe it externally.

8 Role of Specialized Instruction

As a first step, scientific research is needed to identify effective writing instruction, which is evidence-based because it led to statistically significant improvement in the mean achievement level in a treatment group compared to a control group or alternative treatment (Troia, Graham, & Harris, 1999; Troia & Graham, 2002, in press; Wong, Butler, Ficzere, & Kuperis, 1996, 1997; Wong, Butler, Ficzere, Kuperis, & Corden, 1994). As a second step, effectiveness of implementations of that writing research for individual student writers in specific instructional environments is needed. To the degree that the implementation is effective, the student writers with learning disabilities are likely to be motivated to continue to write. The first UW writing tutorial integrated instruction in handwriting automaticity, spelling, and the planning, writing, reviewing, and revising (PWRR) strategy for composing during the developmentally critical third-to-fourth grade writing
transition. Following the tutorial, the children in the treatment group reported less agreement than did the control group that statements describing writing-avoidant behaviors applied to them (Berninger et al., 1995). The writing intervention described in this chapter built upon seven prior instructional research studies using randomized control designs (Berninger & Abbott, 2003). It was designed to identify effective instructional strategies for transforming struggling writers into successful writers and thereby motivate them to continue to work hard to improve their writing. To summarize, teachers who make an internal attribution that they can make a difference in the writing of their students with learning differences can draw upon research-supported instruction to help their students write better. The Mark Twain Writers’ Workshop described in this chapter differs from the writers’ workshops used in process-writing instruction in many North American classrooms in that it draws upon research-supported, explicit, systematic instruction.

9 Mark Twain Writers’ Workshop

9.1 Participants

Twenty-two children (2 African Americans, 18 European Americans, and 2 Native Americans) participated in the three-week Mark Twain Writers’ Workshop at the University of Washington in summer 2002. On average, the children (6 girls, 16 boys) were 11 years 6 months old (range, 10 years 4 months to 13 years 2 months). They had just completed grade 4 (n=7), 5 (n=8), or 6 (n=7). Prior to the summer intervention the children were spelling and composing below expected level for age, grade, or Verbal IQ (M=111.95, SD=10.82 on Wechsler Intelligence Scale for Children, Third Edition, WISC III, The Psychological Corporation, 1991); M=85.14 (SD=12.90) on Woodcock Johnson, Third Edition (WJ3) Spelling Sounds Subtest (Woodcock, McGrew, & Mather, 2001); M=83.91 (SD=7.36) on the Wide Range Achievement Test, Third Edition (WRAT3) Spelling Subtest (Wilkinson, 1993); and M=87.50 (SD=10.27) on the Wechsler Individual Achievement Test, Second Edition (WIAT II) Written Expression Subtest (Psychological Corporation, 2001).

9.2 The Hope Story

On the first day of the workshop, the first author told the children the life story of Mark Twain (based on Ward, Duncan, & Burns, 2001). On a day when Halley’s Comet was approaching Earth, Samuel Clemens was born in a two-room shack in Missouri. Two months premature, he was a thin, sickly infant. His mother recalled that she “could not see any promise in him,” but clung to the ray of hope for her son’s future in that Halley’s Comet lit up the sky the night he was born. Sometimes the family had money and sometimes it did not. In those days there were no public schools but from time to time Sam attended three private schools. He was not a particularly good student and often played hookey. When he was in sixth grade, his father died and he had to drop out of school to help support the family. He left home to work on riverboats on the Mississippi. During this time of his life he gained many experiences he would later write about in his novel Huckleberry Finn. He also acquired a new name, Mark Twain, his pen name. When the Civil War between the North
and South began, Mark Twain turned West where he had several other careers such as printer, miner, and newspaperman. While working on the newspaper, reportedly an editor complained that Mark Twain had spelled the same word 10 different ways in one story. Mark Twain reportedly responded that he felt sorry for anyone who could not think of ten different ways to spell the same word! Eventually he moved East to marry and settle down in New York. There he wrote the first novel ever written on a typewriter – *Tom Sawyer*. However, because of financial troubles he turned to the lecture circuit and traveled all over the United States and the world giving humorous talks. He made his fame as a storyteller and entertainer and became the most famous American of his day and an Ambassador for America around the world. He died on a Christmas day when Halley’s Comet was leaving the Earth.

To instill in the children identification with Mark Twain, the hope story theme was developed throughout the three-week workshop. Children wore name tags with a humorous cartoon of Mark Twain standing on a world globe. They kept their work in a folder with pictures of Mark Twain as a writer at various stages of his life. Periodically teachers read excerpts from *Tom Sawyer* or *Huckleberry Finn* that illustrated Twain’s knack for writing the way people talk. In addition to the compositions children wrote in each session, they worked at home on a long-term project called Stars War/Star Peace. For this assignment, they were encouraged to travel in time to the future in contrast to Mark Twain who traveled to the past in the *Connecticut Yankee in King Arthur’s Court*. They were asked to travel to the next millennium and use their imagination to describe life at that time. They could choose a Star Wars or a Stars Peace theme – whichever they thought described the world at that time. They were asked to use Mark Twain’s style and tell a story that reflected how people thought, talked, and behaved 1000 years from now. They brought drafts of their stories to class at designated times to show their teachers who provided feedback. On the last day of the workshop each child chose either to read their Stars War or Stars Peace story to the class or to have a teacher (with acting experience and a flair for drama) read it to the class. At the very end of the workshop each child received a tee shirt with a picture of Mark Twain on the front and wording on the back which stated “I feel sorry for anyone who cannot think of at least 10 ways to spell the same word.”

9.3 Interest-Building Engagement

Combining technology and systematic, explicit instruction has been studied for two decades for its potential advantages in arousing interest in writing as well as using technology to improve writing instruction. The earliest computer-assisted writing lab studies were conducted at the University of Maryland (e.g., Graham & MacArthur, 1988; Graham, MacArthur, & Schwartz, 1995; MacArthur & Graham, 1987; MacArthur, Schwartz, & Graham, 1991). A series of computer-supported writing instruction for middle and high school struggling writers in school settings conducted at Simon Frasier University (e.g., Wong, 2001, Wong et al., 1996; 1997; Wong et al., 1994) provided the model used in the Mark Twain workshop. Explicit instruction included teacher modeling of specific aspects of the writing process, teacher–student and student–student dialogs, goal-setting in each session for the next session, teacher feedback for those goals, and use of computers for the revising process. Another programmatic line of research on computer-assisted writing labs
has been conducted at Michigan State University and translated into teacher-friendly guides for implementation (Nelson, Bahr, & Van Meter, 2004); it is a valuable resource for professionals who want to design writers’ workshops to facilitate both interest and writing development in those students who require specialized instruction.

9.4 Instructional Design

The writing workshop consisted of 14 two-hour sessions daily for three weeks. The 15th session was used for a celebration event (writers sharing their long-term writing assignment on Star Wars/Star Peace for the whole group) and posttesting. During the whole group sharing of long-term writing assignments, teachers made Wong Awards (in honor of Bernice Wong whose writing workshops served as a model for the Mark Twain Writers’ Workshop) for students who showed impressive gains in specific aspects of writing.

Alternative spelling treatments. Children were randomly assigned to one of two spelling treatments – morphological or orthographic. One hour of the two-hour block was devoted to spelling instruction. Overall each child received 14 hours of spelling instruction. The treatment groups did not differ before treatment began in age, gender, grade, Verbal IQ, or most pretreatment writing measures.

Constant composition treatment. Both treatment groups received the same composition treatment. One hour of each session was devoted to composition instruction.

9.5 Instructional Procedures

The first author wrote the Mark Twain Writers’ Workshop Curriculum consisting of 14 spelling lessons emphasizing morphological strategies, 14 lessons emphasizing orthographic strategies, and composition (planning, drafting, and reviewing/revising) and supervised the training of the teachers and testers. She also served as the lead teacher for each spelling treatment for large group instruction. Two certified, experienced elementary or middle schoolteachers served as lead teachers for the large group composition instruction. In addition to the lead teachers who provided the group lessons, each child was assigned a partner. Helping teachers were also placed in teams of two. Each teacher team was assigned to two child partners (four children). The teacher teams were present during group instruction for two purposes: (a) to monitor attention of students and redirect focus if necessary during the large group instruction and (b) to monitor fidelity of treatment of large group instruction by lead teachers and redirect that focus if necessary. All helping teachers had been given the curriculum and training in it before the workshop began and were expected to be highly familiar with it. The teacher teams also worked individually with their groups of four during the second half of the composition instruction when students worked on computers to revise their compositions. This model for instructional delivery utilized brain-based, research-supported instructional design principles (see Table 1). Teaching helpers were constantly available to provide executive function support for the student writers and for the lead teachers. This model also provided continuing education professional development for the helping teachers who were
learning the instructional procedures by applying them during supervised instructional practice.

**Common components of spelling treatment.** Given the importance of alphabetic principle in spelling, both treatments began with a 10-minute warm-up in which the substitutions (alternative 1- to 2-letter spelling units for representing each phoneme) were practiced using a substitution chart that listed the possible spelling units for each phoneme, which is illustrated in a set of pictured words (Berninger & Abbott, 2003). The warm-up consisted of the teacher saying a pictured word, making the target phoneme in it, and naming the letter or letters in the corresponding spelling unit. Children then imitated saying the word, making

<table>
<thead>
<tr>
<th>Brain system</th>
<th>Instructional approach</th>
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| Language system  | 1. Teach to all levels of language – subword, word, and transword (sentences and discourse structures) to create connections across levels of language and thus a functional writing system in which components work in concert.  
2. Teach to all levels of language close in time in the same lesson to create a functional writing system that overcomes temporal inefficiencies in the working memory system. |
| Attentional      | 1. Constant attention monitoring and redirecting if necessary by teacher system or teacher helper.  
2. Constant opportunities to respond (in writing, by talking, by walking and manipulating sorting cards). |
| Executive system | 1. Daily monitoring and feedback about learning yoked to specific instructional goals (e.g., transfer words and fluency rate).  
2. Metalinguistic awareness – set of directions (talk story) for each linguistic awareness task kept in work folder.  
3. Teach for both automaticity and reflection of transcription skills.  
   a. Teach automaticity of alphabetic principle (mapping phonemes onto 1- and 2-letter spelling units in a way that capitalizes on the synchronous timing of turn-taking in learning aural/oral language and makes both phonological and orthographic awareness and mapping explicit).  
   b. Teach for strategic transfer of alphabetic principle to word contexts that vary in phoneme-spelling predictability (using taught words and transfer words).  
   c. Teach for self-regulated application of alphabetic principle during independent spelling and written composition.  
4. Teacher modeling and scaffolding of planning, translating, and reviewing/revising processes. |

*Based on brain-based instructional principles outlined in Berninger and Richards (2002), Berninger and Abbott (2003), and Berninger et al. (2003).  
See Berninger et al. (2003).  
the phoneme, and naming the letters. The teacher and children alternated turns in this modeling-imitating process for a set of phoneme-spelling unit substitutions in each lesson. Following the modeling, children were given pictured words with target phonemes and were asked to write all the possible spelling units (alternations) that might go with the target phoneme.

*Morphological spelling treatment*. Children were taught two morphological spelling strategies, each of which was applied to a list of high-frequency words containing high-frequency morphemes. For the first morphological strategy, the teacher said:

Say, listen while I say a word part by part. These parts are morphemes or meaning units in words. They have spellings, sounds, and meaning. Some are root words or bases. Some are prefixes that go at the beginning of words, and some are suffixes that go at the end of words. I want you to use these word parts to build and spell a whole word. Please write the word, which you built from the parts you heard me say, on the worksheet for this lesson in your folder.

For the second morphological strategy, the teacher said:

This time I will say a word and I want you to break it down into its component meaning parts. These parts are morphemes or meaning parts in words. They have spellings, sounds, and meaning. Some are root words or bases. Some are prefixes that go at the beginning of words, and some are suffixes that go at the end of words. I want you to write the word part by part on the worksheet in your lesson folder. That is, leave spaces between the word parts.

Later in the session, students were asked to spell words in writing from each of the word sets practiced in the session. Teaching assistants check correctness of these probe measures. In addition, children completed word-building, word-dissecting, word-contracting, and spelling-rule activities from *SRA Spelling Morphographs* (Dixon & Englemann, 2001).

*Orthographic spelling treatment*. Two orthographic strategies were taught using Instant Words from Dr. Fry’s Spelling Program (Fry, 1996). For the first orthographic strategy, the teacher said:

Take out Word Set (designate) from you work folder and the two 3×5 card in your work folder. Use the cards to cover up the words above and below the target word. Look at (name the target word). Look carefully at each letter in the word as you name each letter moving in left to right direction. Now close your eyes and look at the word that is now coded in your mind’s eye by the photographic leprechaun who took a photograph of it. Most of the spelling units have a small sound called a phoneme that goes with it, as we discussed when we worked with the substitution chart for alphabetic principle. However, some letters do not (they are silent), or they have a very vague (reduced) sound that does not correspond in predictable way, or they are one of the predictable substitutions – but those letters must be memorized for a specific word. I will call those letters to your attention by asking you to name the letter or letters in specific word position. As soon as you know the answer, raise your hand. Remember to keep your eyes closed until I say we are working on a new target word.
Annotated lists designated the position(s) in which students should name the letter(s). For the second orthographic strategy, the teacher said:

Now we will learn a second strategy for creating a precise representation of a word’s spelling in long-term memory. Proofreaders use a similar strategy so we will call it the proofreaders’ secret trick. Open your eyes and take a good look at the target word and name all the letters in it. Now close your eyes again and look at the word in your mind’s eye where the photographic leprechaun put the snapshot of it. While holding that word in memory, I want you to spell it backwards, quietly naming each letter in reverse order, starting with the last letter and ending with the first letter. Open your eyes only when you name the first letter. Then check your reverse spelling against the target word in the word set in front of you. Then we will try the next one.

Teaching assistants monitored accuracy of reverse spelling. Later in the session, students were asked to spell words in writing from each of the word sets practiced in the session. Teaching assistants checked the correctness of scoring of these probe measures. In addition, children completed visual search (circle letters that spell a real word), anagrams (rearrange the letters to spell a real word), and proofreading (correct the spelling errors) activities in the SRA Morphograph Spelling Program (Dixon & Englemaann, 2001).

Composition instruction. During the first half hour, lead teachers modeled planning activities using graphic organizers and reflective discussions and the children wrote their first drafts. During the second half hour, teams of teacher helpers worked with student pairs in the computer lab. First, they did warm-up activities finding letters on the keyboard. Then the teacher used prompts to help children revise their compositions at the word, sentence, and text levels. Children then entered the revised compositions into the computer. At the end of the session, teacher helpers provided feedback about whether the students met goals set at the end of the previous session and set new goals for improving their compositions at the word, sentence, and text levels. The composing activities spanned creative writing to report writing. Many of the composing lessons have been published for teachers to use in the context of other lessons sets based on controlled, randomized design instructional experiments (Berninger & Abbott, 2003, Lesson Sets 4, 5, 7, 8, 10, 13, and 14). See the appendix for list of composition topics and corresponding published lesson set with details of lesson implementation.

Behavioral evidence of instructional effectiveness. These results may generalize only to students with dyslexia who have both reading and writing difficulties. Participating children met research criteria of a family genetics study of dyslexia (Berninger Abbott, Thomson, & Raskind 2001). Dyslexia is only one kind of specific learning disability. Children may have reading and writing problems for many other neurogenetic and/or instructional reasons.

Spelling. Treatment-specific effects were found. The time×treatment interaction was significant for WJ3 Spelling Sounds (pseudowords), $F(1, 20)=5.903, p=.025$, and for

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2Kenn Apel and Julie Masterson recommended the proofreaders’ trick.
WRAT3 Spelling (real words), $F(1, 20)=5.342, p=.032$. For WJ3 Spelling Sounds, the morphological treatment led to greater increase in pseudoword spelling ($M=79.91$, $SD=4.41$ to $M=90.00$, $SD=3.36$) than did the orthographic treatment ($M=90.36$, $SD=2.61$ to $M=93.00$, $SD=2.15$). This finding is consistent with previous findings in the UW Learning Disabilities Center that also showed that morphological treatment led to improvement in phonological judgments (Richards et al., 2002) and speed of phonological decoding (Berninger et al., 2003). One explanation for these findings is based on Triple Word Form Awareness and Mapping Theory (Berninger & Richards, 2002; Richards et al., in press). The neural processes underlying word recognition and spelling may involve computation of the interrelationships among phonology, morphology, and orthography in order to function efficiently. Therefore, the morphological training provided the missing puzzle piece so that the interrelationships among the phonological, orthographic, and morphological word forms and their parts could be computed for the encoding process of translating spoken words into written words. However, it is also the case that the two treatments started out at different beginning levels in spelling pseudowords; so the greater improvement associated with the morphological treatment may also be the consequence of that group having more room for improvement.

For WRAT3 Spelling, the orthographic treatment led to improved real word spelling (from $M=84.18$, $SD=1.57$ to $M=88.09$, $SD=2.26$), while the morphological treatment did not change real word spelling ($M=83.84$, $SD=2.81$ to $M=83.00$, $SD=3.15$). One interpretation of the result is that real word spelling requires more than computation of interrelationships among phonological, morphological, and orthographic mapping relationships underlying word decoding/encoding – it also requires access to a precise representation of all the letters in a word form that corresponds to a specific pronunciation and meaning. Thus, the treatment that encourages student writers to hold a written word in working memory while directing attention to parts of it (one or more letters) and naming them in forward and backward directions may have created more precise temporary representations that in turn created more precise spelling representations in long-term memory and thus real word spelling.

**Implications for brain processing in spelling.** Pugh et al. (2000) reported evidence for a fast ventral pathway that processes real words, and slower dorsal pathway that supports the decoding process in writing. For spelling, the ventral pathway may play a greater role in real word spelling, which was responsive to the orthographic treatment, and the dorsal pathway may play a greater role in pseudoword spelling, which was responsive to the morphological treatment. Analyses underway are exploring this possibility.

**Composition.** Prior research had shown a gender difference in that boys have lower levels of handwriting automaticity than do girls; it had also shown that partialing out individual differences due to handwriting automaticity removes gender differences in the quality of composing that favor girls (Berninger, Whitaker, Feng, Swanson, & Abbott, 1996). Thus, we used a pretest measure of handwriting automaticity as the covariate in an analysis of covariance (ANCOVA) for WIAT II Written Expression. The directional hypothesis (one-tail) was confirmed that the sample as a whole would improve significantly in quality of written expression over the three-week writers’ workshop, $F(1, 19)=2.82, p=.05$. Adjusted means for ANCOVA are not reported for the time effect because it does not involve between-group differences. Tutors working with the students were often amazed by changes
in the quality of composing on a daily basis. Initial inspection showed large individual differences not only in how fast children respond to the kind of composition instruction provided but also in the aspects of their writing that shows qualitative improvement.

Composing may also have improved during the course of the short three-week tutorial in ways that cannot be captured by a standardized test. A coding scheme is being developed to code the compositions produced in this and other UW tutorials for the same topics in order to evaluate the learning gains across lessons during a short-term intervention. For example, one middle school student who read and wrote on a second-grade level took to heart the discussions about Mark Twain’s genius lying in his ability to write the way everyday people talk. When his long-term writing project on Stars Peace 2003, written with teacher-scaffolding and computer-assistance, was read by one of the lead teachers (Belle Chenault) to the whole group during the Writing Fest the last day of the workshop, the entire group of student writers stood and cheered spontaneously. This young man’s writing talent, which had heretofore been masked by specific learning disabilities involving handwriting and spelling, had captured the recognition of his age peers because it had voice – he wrote about the real-world concerns of real adolescents his age and used language the way adolescents that age use language. He gained further peer recognition of his emerging writing talent when he was presented on the spot the Wong Award for Outstanding Writing (in honor of Bernice Wong’s pioneering work in taking computer-assisted, explicit process writing instruction to culturally diverse middle and high school classrooms in the inner city). Such public recognition in front of peers for successful writing that communicates to the intended audience is often the motivational hook that spurs the reluctant writer to keep working on improving the emerging writing ability. The teachers speculated that somewhere out there on the tail of Hayley’s Comet Mark Twain’s eyes may have twinkled if he was tuned into spaceship Earth at that moment of the universe’s space-time continuum.

Belle Chenault’s subsequent dissertation research showed that the improvement in composition gains can be accelerated over those reported in this chapter by two instructional modifications (Chenault, 2004; Chenault, Thomson, Abbott, & Berninger, 2006). The first is prior explicit instruction in paying attention – focused attention, sustained attention, selective attention, and divided attention (Thomson, Kerns, Seidenstrang, Sohlberg, & Mateer, 2001). The second was addition of attentional bridges to the composition lessons – to prompt children to attend to the phonological, orthographic, and morphological cues in words and to pay attention to teacher’s instructional language. It was the combination of the prior attention training with non-language stimuli during phase one and the attention training for linguistic stimuli during explicit writing instruction during phase two that was more effective than the contact control treatment that had a different phase one treatment (reading fluency) but the same phase two writing instruction. Given the multiple processes that must be juggled in writing, the effects of teaching supervisory attention/executive processes on written composition requires considerably more empirical research.

Emotional/motivational evidence of instructional effectiveness. Children were also asked about their beliefs about their own writing abilities before and after the Mark Twain Writers’ Workshop. (Questions were from a questionnaire reported in Wong et al., 1994.) Significant change from before to after the Mark Twain Writers’ Workshop was observed on four questions, each of
which required a response along a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). After the workshop, children were less likely to agree with the statement, “I would rather read than write,” $t(20)=2.68, p=.01$ (from $M=3.86$ to $M=3.12$). They were less likely to agree with the statement, “I avoid writing whenever I can,” $t(20)=2.09, p<.05$ (from $M=2.71$ to $M=2.38$). They were less likely to agree with “Writing is a waste of time,” $t(20)=2.41, p=.02$ (from $M=2.41$ to $M=1.60$). They were less likely to agree with “When writing a paper it is hard for me to organize my ideas,” $t(20)=3.31, p=.004$ (from $M=3.31$ to $M=2.55$). Taken together, these results suggest a significant trend toward greater interest in writing, less avoidance of writing, greater appreciation of the value of writing, and greater perception that they can organize their thoughts while writing. However, these findings for writing, which are consistent with results of large-scale studies showing that explicit reading instruction resulted in improved self-efficacy and self-esteem (Abt Associates, 1977), need to be replicated with other studies of effective writing instruction with other samples of students with reading and writing disabilities before firm conclusions can be drawn.

A body of research reviewed by Zimmerman and Risemberg (1997) has shown that individuals’ ability to write has been associated positively with students’ writing performance. Therefore, if teachers can intervene and change the writing performance to improve it, the effect on the student should be to increase his or her sense of self-efficacy as a writer – the belief that he or she can be a writer. The effect is likely to be reciprocal and cascade in that the greater the self-efficacy, based on improved success as a writer, the greater the sense that “I am a writer” and willingness to work hard at writing and not avoid it even when it is challenging. However, further research is needed for students with writing disabilities on the role of self-efficacy in writing in this interactive cycle of reciprocal influences of writing improvement and self-efficacy as a writer.

In another line of research with upper elementary and middle school students from diverse language backgrounds (Hidi et al., 2002), all students received writing instruction based on the past research showing what is effective in teaching persuasive essay writing. What was manipulated was the number of components designed to improve motivation. The component involving social collaboration was particularly motivating, especially for the boys. Considering the likely reciprocal relationships between self-efficacy and successful writing experience, future research on effective writing instruction for students with writing disabilities should explore which instructional components aimed at improving motivation to write have added value in addition to explicit, brain-based instruction (see Table 1). This issue should also be explored for English language learners and other students who have unique culturally based, linguistically based, or biologically based learning differences.

**Brain evidence for instructional effectiveness.** Previous research in the UW Learning Disabilities Center has identified brain differences between dyslexics and good readers in language processes related to reading before, but not after, instructional intervention (e.g., Aylward et al., 2003; Richards et al., 2002). More recent research has identified brain differences between dyslexics and good readers in language processes related to spelling before intervention (Richards et al., 2005, 2006). However, after the spelling treatment described in this chapter, treatment-specific brain changes related to the nature of spelling instruction occurred (Richards et al., 2005, 2006).

The kind of specialized instruction that dyslexics need may require teachers who have an analytic style (associated with lower alpha EEG brain wave activity, Dunn & Reddix,
1991; McKay, Fischler, & Dunn, 2003) rather than a wholistic style (which is associated with a different pattern of EEG brain wave activity). Contemporary teacher training practices (driving postmodern constructivism) may be geared more to wholistic than analytic teaching styles, thus the focus on “whole language” and constructing meaning in a global manner. Scientists, on the other hand, tend to be more analytic and dissect the functional language system to understand its contribution at different levels of neural architecture or different instructional components to processes in the learner’s mind. To the extent that some students have unusual difficulty in learning to write because of biological constraints and require specialized instruction, the role of the teacher’s brain may be as relevant as the role of the student’s brain to learning. That is, whether or not a teacher can adopt an analytic thinking style about the different components of language, attention, and executive functions (in the learner’s mind, see Table 1) and different instructional components (in their own pedagogy) may influence whether they can provide the kind of differential instruction that is needed to help dyslexics overcome their biologically constrained learning disabilities (see Berninger & Winn, in press; Shaywitz, 2003). Dunn and colleagues also differentiated between analytic and integrative styles. Integrative styles go beyond the narrow focus of a discrete research study and integrate across many research studies and the art of implementing research into practice. An integrative teaching style, implemented by a scientific practitioner (see Berninger, Dunn, Shin-Ju, & Shimada, 2004) may be necessary to deliver the kind of specialized, explicit instruction dyslexics require to motivate them to write and write more and become expert writers. That is the “real whole language.”

10 Conclusion

The results discussed in this chapter add to a growing body of research that offers hope that upper elementary grade children with dyslexia can improve their spelling and written composition skills. Effective instruction for achieving this goal appears to require a combination of instructional strategies that promote student interest and deliver explicit, specialized instruction. The results do not show that the writing problems of students with learning disabilities are cured in a quick or permanent way (see Shaywitz, 2003) but rather that these children are teachable and respond to specialized instruction. Such instruction may result in improvement in their writing achievement, their perceptions of their ability to write and thus their self-efficacy, their willingness to embrace rather than avoid writing, and specific brain processes related to writing. Drawing on research-supported writing instruction to help students become successful writers is a viable alternative to attributing the writing problems of students with learning disabilities falsely to their laziness (Levine, 2003).

Acknowledgments

Preparation of this chapter was supported by grant nos. HD25858 and P50 33812 from the National Institute of Child Health and Human Development (NICHD).

Space does not permit listing as co-authors all those who contributed in a substantial way to the Writers’ Workshop described in this chapter. Diana Hoffer and
Christina Johnson served as the lead teachers for the composition lessons. The following served as helping teachers, who in teams of two, were assigned to monitor two pairs of students throughout each two-hour session of the three-week workshop: Sylvia Abbott, Marci Anderson-Youngtrom, Rebecca Brooksher, Belle Chenault, Kate Eschen, Noelia Garcia, Sandra Hiramatsu, Lynn Junell, Julie Kim, Stephanie King, Cindy Lin, Rebecca Metzger, Heather Murphy, Jennifer Norton, Sue Palewicz, and Suzanna West. The assessment team who administered the pretests and posttests included Sylvia Abbott, Rebecca Brooksher, Belle Chenault, and Kate Eschen. Bob Abbott provided statistical assistance. Jennifer Thomson and Joan Waiss recruited participants. Greg Daigle and Kent Jewel provided administrative assistance. Dagmar Amtman, Fang Huang, William Winn, and Robert Abbott helped to create the computerized writing laboratories. William Nagy provided the word lists from which the word sets for high-frequency words with high-frequency morphemes were constructed.

Appendix: Composition Lessons

The lesson sets refer to those in *PAL Research-Supported Reading and Writing Lessons* (Berninger & Abbott, 2003).

1 “Describe a Computer to a Child Who Cannot See” (see PAL Lesson Set 7).
2 “Compare and Contrast: In What Ways Are Pencils and Computers Alike and Different?” (see PAL Lesson Set 7).
3 “Is It Easier to Write with a Pencil or a Computer?” (modification of lesson in PAL Lesson Set 7).
4 “Should Children Be Able to Watch TV Whenever They Want and Choose the Shows They Watch?” (see PAL Lesson Set 7).
5 “If I Ran the School” or “If I Was Class Clown” (see PAL Lesson Set 8).
6 “My Personal Robot” (see PAL Lesson Set 8).
7 “Autobiography: Life Before I Went to School” (see PAL Lesson Set 8).
8 “Autobiography: My Life Since I Started School” (see PAL Lesson Set 8).
9 “Autobiography: My Life After School” (see PAL Lesson Set 8).
10 “Reviewing and Revising to Publish 3-part Biography in Book Format”
11, 12 “Report Writing: Read and Take Notes from Two Sources” (see PAL Lessons 13 and 14).
13 “Integrating Notes from Multiple Sources: Outlining” (see PAL Lessons 13 and 14).
14 “Composing Three Well-Written Paragraphs from Outline Based on Two Sources” (see PAL Lessons 13 and 14).
Chapter 10

Fostering Students’ Willingness and Interest in Argumentative Writing: An Intervention Study

Bianca De Bernardi and Emanuela Antolini

The aim of the present study was to identify an educational intervention program that might lead students to have a different relationship with argumentative writing, taking into consideration not only cognitive, but also social, relational, and motivational components. The participants were 120 eighth graders. The investigation was articulated over a pre-test, intervention, and a post-test design with two forms of intervention. The intervention introduced small- and large-group discussions, peer construction of the procedural knowledge necessary to produce a good argumentative text, adequate supports to make the tasks real and significant, and both technological instruments and documents that favoured the students’ active intervention. Results showed that a specific learning training produced positive outcomes: individual writing performance improved significantly; students’ attitude to the argumentative text changed positively; and collaborative setting promoted intrinsic motivation, decreased anxiety about the activity and favoured a higher sense of self-efficacy.

1 Introduction

The argumentative text is one of the text types most often produced in school, especially from middle school onwards. Production of this text type is often a compulsory rather than a chosen task frequently presenting a high level of “distance” between the writer and the product, which leads to a lack of motivation and personal involvement. Often the aim of writing is not well defined, the reader (almost always the teacher) is also the evaluator, the topic is frequently unfamiliar or purely academic, and writing is usually an individual activity where the student has to show the ability to produce a text by himself/herself.
This complexity can often lead the student to produce an argumentatively weak text, and can cause a decrease in motivation and interest related to argumentative writing activity.

The aim of the present study was to investigate an educational intervention program that could lead to a different approach to argumentative writing, taking into consideration not only cognitive, but also social, relational, and motivational components as indicated in the most recent psychological and educational literature. Recent studies on writing have shown the positive influence of collaborative writing on learning, interest, and motivation to write (Dale, 1994; Dunn, 1996; Dysthe, 1996; Keys, 1994; Tynjälä, Mason, & Lonka, 2001). Some researchers (e.g., Keys, 1994; Hogan, 1999) have shown that knowledge negotiation within the group, and activities such as drafting summaries and elaborating concepts in a given domain carried out with peer collaboration, lead to improved specific competencies.

Recently, the role of intrinsic motivation, interest and beliefs about writing, and beliefs in one’s competence as a writer on students’ “willingness” and “enjoyment” of writing tasks has been intensively investigated (Benton, Corkill, Sharp, Downey, & Khramtsova, 1995; De Bernardi & Antolini, 1999; Hidi & Anderson, 1992; Hidi, Berndorf, & Ainley, 2002; Hidi & McLaren, 1990, 1991; Meece & Miller, 2001; Pajares & Johnson, 1994; Pajares, Miller, & Johnson, 1999; Pajares & Valiante, 1997, 1999, 2001; Pintrich & DeGroot, 1990; Shell, Colving, & Bruning, 1995).

Hidi and McLaren (1990, 1991) and De Bernardi and Antolini (1999) showed that different levels of topic interest did not necessarily lead to the production of texts with different structural complexity. On the contrary, complexity depended mostly on a writer’s knowledge of the topic. Addressing the relationship between writing, interest, and self-efficacy in the production of the written arguments, Hidi et al. (2002) verified the validity of an educational intervention aiming at creating a positive emotional setting. The intervention included class discussions, identification of the features of an argumentative text, and drafting a text also in small groups. The aim of the study was to develop young writers’ positive beliefs using authentic writing tasks. The study involved 180 sixth graders who were asked to complete questionnaires on interest in writing – in general, and regarding different text genres – and on their writing ability. Results showed a general significant improvement in the argumentative texts produced. In addition, it was observed that working in small groups led to further improvement in performance, especially in boys. The emotionally positive environment increased students’ interest and confidence in their own writing abilities. Students’ genre-specific liking and self-efficacy of writing were found to be closely associated and related to interest in writing. The study substantially confirmed that a learning context valuing the motivational and emotional aspects of writing could improve argumentative writing and facilitate the construction of a more positive self-image as a writer.

Based on the above results, the present study intended to verify the validity of an educational intervention programme aimed at developing further the positive emotions of the collaborative context. The intervention introduced small- and large-group discussions, peer construction of the procedural knowledge necessary to produce a good argumentative text, adequate supports to make the tasks real and meaningful, and technological instruments and documents that favoured students’ active intervention.
Writing an Argumentative Text: Constraints and Resources

Writing an argumentative text is a very complex task because of the demands of a series of competencies related to different types of knowledge that the writer must manage. An expert writer has to:

- know how to manage the planning, translation, and revision of the writing process. These phases cannot be activated in a linear, consecutive way as they need continuous checking during the whole process;
- be able to correctly identify the specific characteristics of a text genre (in this case, the argument), and succeed in trying to convince the addressee of the merits of the chosen position; and
- know how to activate specific strategies in order to make the text cohesive and coherent, using adequate linguistic forms and indices.

Many studies within the cognitive approach have analysed and emphasised the cognitive aspects of the writing processes in relation to different text types (e.g., Bereiter & Scardamalia, 1982, 1987; Boscolo, 1990; Harris & Graham, 1996; Hayes & Flower, 1980; Scardamalia & Bereiter, 1986). They have pointed out in particular the processes and subprocesses of a writing task, and have addressed other characteristics of the written text, such as structural aspects, elements that make it coherent, and idea organisation.

The written argumentative text is focused on relations between concepts and the cognitive matrix linked to judgement. Because of this, it is first of all based on reasoning. Moreover, argumentation is seen as an inferential process because conclusions, that can sometimes offer new solutions and perspectives, tend to be reached through deduction and justification. As a consequence, argumentation is related to the development of critical and informal reasoning. It can be defined as a macro-linguistic act carried out by the writer to persuade one or more addressees of the “goodness” of a stance (Grize, 1974; Voss & Means, 1991).

Over the last decades numerous studies on written argumentation have highlighted its components and the processes underlying its production (e.g., Brassart, 1988, 1990, 1996; Corrier & Golder, 1993; De Bernardi & Antolini, 1996a; Dolz, 1996; Feilke, 1996; Golder, 1992, 1996; Hillocks, 1987; Scardamalia & Paris, 1985; Schneuwly, 1996). In line with Toulmin’s (1958) study, some have proposed different systems of analysis to assess the degree of completeness, complexity, and persuasiveness of an argumentative text produced by subjects of different ages (Corrier & Golder, 1993; De Bernardi & Antolini, 1996a; Hillocks, 1987; Stein & Miller, 1993). These scholars agree that claim, counter-argument, data, warrants, and examples are all necessary components of this text type, but their mixture is peculiar, and each writer can highlight or exclude these components in different ways. In a recent study (De Bernardi, 2003), 407 elementary and high school students were asked to evaluate written argumentative texts and to rate the importance of some components or elements that could be included to make up a good argumentative text. The results showed a quite homogeneous picture of this text evaluation, independent of age. Most students concluded that good arguments must present correct and numerous justifications in favour of the assumed position and put less emphasis on the opposing position.
Some studies have also highlighted a developmental trend in the acquisition of argumentative skills: full argumentative writing competence is reached at about 16–18 years of age. The different elements of argumentation, such as causal justification (Orsolini, 1993), refutation, concessive and modal forms (Coirier, Coquin-Viennot, Golder, & Passerualt, 1990), and presupposition (Bassano & Champaud, 1989) are mastered at different age levels. However, this does not mean that this type of text should not be introduced in elementary or middle school. On the contrary, it would appear to be beneficial to approach argumentative text types by middle school in order to give students the opportunity to learn how to support their own opinions, organise their ideas, and refute a thesis. To produce a written argument students must have experienced a negotiation process and a dialogical situation with one or more partners. In particular, negotiation allows students to learn how to assume different points of view and strategically sustain them. It is a “space” in which individuals can dispute and convince or be convinced (Golder, 1996).

In recent years a constructivist approach to literacy has emerged highlighting the role of the sociocultural context in the learning process. Within this perspective, typically cognitive processes are revisited in relation to, and in interaction with, the context that presents specific cultural, historical, and institutional features (Carter, 1990; Cole, 1989; Flower, 1994; Hayes, 1996; Scribner & Cole, 1981). In argumentative writing, reasons, explanations, and justifications for events, facts, and opinions are linked to a series of socially and culturally shared values and beliefs. Thus, reasoning in argumentation is not only the result of acquiring a specific capacity or controlling cognitive processes; it is also an activity strongly characterised by negotiating specific concrete contents and domains of knowledge with others (Golder, 1996).

Finally, when an argument is produced, shifting from the oral to the written form implies the transformation of a dialogue into a monologue, in which the writer must anticipate and assume both his/her own position and the position of the addressee. The writer must think about possible objections and counter-arguments, and must choose the best way to convince or persuade. Only in this way can the written text keep and reproduce the polyphonic aspect of the discussion, that is, the different voices of many interlocutors supporting diverse positions (Coirier, 1996; van Eemeren & Grootendorst, 1999).

3 Collaborative Context and Argumentative Writing

Students are involved in school learning situations that challenge their cognitive abilities, and also their interpretation of rules and roles and will to confront and share experiences and ideas with classmates. Recent literature has highlighted the connection between collaborative context and motivation in school tasks (Slavin, 1996; Boscolo, 1997; Pontecorvo, 1990; Hogan, 1999). Within the Vygotskian perspective, these authors and others consider the social dimension as the condition for increasing students’ motivational level, thus stimulating a series of processes such as curiosity to investigate and discover, shared decision-making, social sharing of individual personal beliefs, and implicit theories about the world and themselves (Mason, 2001). Collaborative work in the classroom means giving students a shared task or proposing learning activities to be undertaken in small and large groups. It also means stressing the importance of cooperative activity,
interdependence between participants, and individual responsibility. In a group setting the participants’ different levels of competence and knowledge are put into play in a situated learning context. Common aims are better defined, attention to the work is sustained (Resnick & Nelson-Le Gall, 1997; Wiemelt, 2001), and the cognitive load regarding the management and control of the writing processes is distributed between participants in the discussion/writing group. Many studies (e.g., Erkens, Andriessen, & Peters, 2003; Kneser & Ploetzner, 2001; Kumpulainen & Kaartinne, 2000; Wentzel & Watkins, 2002) have confirmed the positive effect of collaborative situations on a number of academic performances. In particular, Elbers and Streefland (2000) showed that when students were allowed to propose and critically discuss different positions and make their personal contribution, the acquired knowledge was qualitatively different from that acquired in a traditional setting. Isaac, Sansone, and Smith (1999) observed that individuals with high interpersonal orientation showed more interest in the tasks they were doing, and would become more engaged in the same type of activity in the future, when activities were carried out with peers. Several studies have also focused on the limitations of collaborative learning. For instance, Klein, Erchul, and Pridemore (1994), in instructional TV lessons, observed that students working alone were more successful than those working in collaboration. Those working independently obtained better results in the tasks, and also showed greater interest in the TV lessons and the activities requiring individual work. In addition, the students who had worked in a collaborative situation showed greater motivation for activities that required working with other students. The authors concluded that cooperative work might be especially problematic in settings that were originally designed for individual learning. According to Terwel, Gillies, van den Eeden, and Hoek (2001) level of ability is another component that seems to affect the usefulness of cooperative learning: high-ability students seem to benefit more from cooperative learning than low-ability students.

Regarding writing, experiences of coconstruction of texts can be extremely useful and interesting, as they favour the activation of different processes – for example, discussion and confrontation in groups and the acceptance of different points of view (Dysthe, 1996; Mason, 1998; Tynjälä, 1998; Veerman, Andriessen, & Kanselaar, 2002). Writing teams are essentially distributed cognitive systems, with each writer having skills, knowledge, and abilities that may complement and overlap those of the others. Yarrow and Topping (2001) compared the written production of 10- and 11-year-olds working in an interactive vs. non-interactive paired writing situation. Although both groups showed a significant improvement in their writing, those who worked collaboratively showed an even greater improvement. On the other hand, regarding the argumentative text in particular, writing in collaboration may not always produce a better text. De Bernardi and Antolini (1996b) found that the text produced by elementary and middle school children in small groups after a discussion, featured a simpler structure than might be expected from the content of the discussion. This could be due to the fact that the discussion, in which the various sustainable positions regarding the topic were analysed and compared, had led to general agreement on one of the positions, with the text being constructed around that position.

An important contribution to explaining young writers’ difficulties can be drawn from studies on the theory of mind and epistemological beliefs. Recently, some scholars (Kuhn, 1999; Moshaman, 1998) have highlighted the close relation between epistemological theories and argumentative reasoning. Argumentative competence appears to be connected to
beliefs about knowledge, knowing, and learning. Young people may think that knowledge is irrefutable and so find it hard to debate and contradict others’ opinions, especially that of teachers and adults. Depending on the epistemological theories that students have, hypotheses, assumptions, facts, and knowledge can or cannot be discussed and/or refuted. Writing a text becomes a very difficult task when the topic is either not well known or not politically or socially correct to discuss (Golder, 1996). To overcome this obstacle, young writers need to acquire meta-cognitive abilities that allow them to reflect on their own thinking processes and recognise the possibility of different positions regarding given information.

The collaborative condition allows students to consider and assume different points of view, disagree with a thesis or reason in support of it, appreciate the position(s) of their classmates, and understand that knowledge can be discussed. It can also help them become aware of the limitations and inadequacies of their own thinking (Arvaja, Häkkinen, Eteläpelto, & Rasku-Puttonen, 2000).

4 Motivational Aspects of Writing

In recent years, approaches to writing from a social cognitive perspective have attempted to study affective-motivational components and students’ self-concepts of their competence as writers, in general, and in producing a particular text type. According to Bandura (1986, 1997) students’ beliefs about their own academic abilities, or self-efficacy beliefs, affect their academic achievement. Self-efficacy is described as a mediating mechanism of personal agency, acting between other determinants of competence such as skills, abilities or previous accomplishments, and subsequent performance. Research on self-efficacy has shown that students’ confidence in their own writing abilities is a predictor of their competence, and the goals they set for themselves (McCarthy, Meier, & Rinderer, 1985; Pajares, Britner & Valiante, 2000; Pajares & Johnson, 1994; Pajares & Valiante, 1999; Zimmerman & Bandura, 1994). Pajares and Valiante (1997) tested the influence of writing self-efficacy, writing apprehension, perceived usefulness of writing, and writing aptitude on the essay-writing performance of a group of fifth graders. Self-efficacy was shown to be an independent predictor of performance despite a strong effect of writing aptitude. Zimmerman and Bandura (1994) addressed the role of self-efficacy in school attainment and regulation of writing, academic goals, and self-standards in writing course achievement with college freshmen. Results showed that individuals’ perceived self-efficacy in writing affected both perceived academic self-efficacy and personal standards. Both of these favoured the adoption of goals in order to successfully achieve good writing skills.

Regarding the gender differences that have often been found in various academic domains, Pajares and Valiante (1999), in a study of middle school students, observed that of the variables (which included writing self-concept, writing apprehension, self-efficacy for self-regulation, previous achievement, gender, and grade level), writing self-efficacy was the only motivational predictor of competence. Although boys were less competent writers than girls, gender differences in self-efficacy beliefs were not found. In a subsequent study (2001), the same authors found that gender differences in writing self-efficacy in favour of girls were mainly due to gender stereotypic beliefs, which became
non-significant when girls' orientation was controlled (see the chapter by Pajares, Cheoung and Valiante, this volume).

The many studies of writing self-efficacy beliefs have focused on either elementary or university students. Fewer studies have addressed the pre-adolescent and adolescent age group (corresponding to the middle school years), which is a "critical age" because of the changes that students must cope with on many different levels. In this age group, academic motivation decreases (Eccles, 1984; Wigfield & Eccles, 1994). In addition, the transition from elementary to middle school leads to significant changes in teaching–learning contexts, with regard to organisation and discipline, and the educational relationship between students and teachers. These changes stimulate students to restructure their ideas about themselves, and to review their beliefs in their own competence and sense of efficacy. From middle school, physical and social transformations and the change in institutional setting lead students to feel uncertain and initiate a self-evaluation, which often entails a subsequent decrease in self-efficacy.

The motivational factors that affect a learning situation also include interest, which positively influences performance by improving cognitive and affective motivational aspects (Schiefele, 1996, 1998; Renninger, Hidi, & Krapp, 1992; Ainley et al., 2002). Some studies have tried to analyse the type of relation between interest and writing. A distinction has been made between situational interest and individual interest. The former has been defined as a series of stimuli and conditions that determine an immediate affective reaction, which in turn activates attention that may or may not last in time, but certainly improves students' learning (Ainley et al., 2002; Hidi, 2000; Hidi & Anderson, 1992). Individual interest can be defined as an individual's inclination of stable, or in any case long-term activation towards a topic, activity, or knowledge domain (Schiefele, 1992). It leads to improvement in attention, acquisition of greater knowledge, persistence and continuation of commitment, and happiness about being involved. Hidi (2000) maintains that in text writing, topic interest can include both a situational and an individual interest, according to the task type and situation. Some research studies have found that an interesting topic does not always produce improvement in written text. Only when topic knowledge and topic interest are both present can an improvement in written performance be hypothesised. In a previous study (De Bernardi & Antolini, 1999) on argumentative writing and the role of interest we were able to confirm Hidi and McLaren's (1990, 1991) results, that is, the extent of topic knowledge is a critical element of written composition; knowledge of elements relevant to supporting or contradicting a position produces a better text, independently of the level of topic interest.

In the introduction, studies on the relation between interest and topic in writing tasks have been examined. We believe that the most reliable prediction of text production quality is a combination of three elements – topic knowledge, topic interest, and topic type. Topic type also has to be taken into consideration. In a previous study (De Bernardi & Antolini, 1999) conducted on elementary and middle school students, we examined the connection between topic type, interest, topic knowledge, and the complexity of produced text. Even if topic interest and topic knowledge were positively connected, mostly low-level reasons were reported in the texts when the topic was related to personal experience. On the contrary, the texts on socially or culturally shared and debated issues presented more complex structures as well as complete and general warrants.
Another teaching practice that may improve students’ motivation in a writing context is the use of the computer. Different texts can be constructed through word processing. By means of specific self-correction programs, spelling and syntax errors can be detected. Word processing offers the possibility to revise and manipulate texts which on paper is very complex. Changes while planning, drafting, revising a text are greatly facilitated by the cut-and-paste functions. Major changes can be made to the text, which remains “clean” and easy to follow, allowing the writer to focus his/her attention on the structure and logical sequence of ideas. Computer writing facilitates students working in pairs or groups and allows cooperative revision of the text, either via the Internet or by printing the document (Pontecorvo, 1993). In recent years, many research studies have underlined how the use of computer technologies improves the production of written texts and also enhances the pleasure of collaborative writing (e.g., Cornis-Pope & Woodlief, 2003; Erkens et al., 2003; Kaye, 1994; Karchmer, 2001; Scardamalia & Bereiter, 1993; Uribe, Klein, & Sullivan, 2003; Warschauer, 1999). The computer is indeed very suitable for pair work: doing things together is in itself strongly motivating, because roles and tasks can be shared and swapped, and responsibility for the final product can be distributed. In this respect, Uribe et al. (2003) found that the performance of individuals working in computer-mediated collaborative pairs was significantly better than individuals working alone. It was found that pairs spent significantly more time than individuals in the individual situation. Participants’ attitudes towards collaborative working, Internet-based instruction, and transfer of problem-solving skills were positive.

In addition to word processing, the computer also offers a wide range of other opportunities. The Internet provides unlimited possibilities for exploration and acquisition of miscellaneous texts and information. It is therefore a powerful means for quickly learning about a topic and its thematic developments. Karchmer (2001), for example, has underlined how the use of the Internet has changed the definition of literacy through the introduction of electronic texts, which incorporate aspects that are not usually found in written texts. Internet texts use graphic aspects (animated images, video images, hyperlinks, hypertext links, etc.) and other information that provide infinite resources for the development of a new literacy and new learning opportunities.

5 An Intervention Study

The aspects examined in the first part of this study are some fundamental elements in activating the motivational components of writing. As observed by Hidi et al. (2002), positive effects on the quality of students’ texts can be achieved. They suggested supplying students with involving activities so as to experience greater confidence in their abilities and competencies in written text production, and increase their self-efficacy. They proposed an intervention leading students to recognise and correctly use the characteristics of argumentative texts in order to increase their competence. They also designed collaborative activities for discussion and the production of arguments. Hidi et al. have also underlined the close relation between general interest in writing, enjoying writing in several genres, and feeling efficacious about such writing. To foster students’ willingness and interest in argumentative writing, we have developed an intervention
whereby the different components can stimulate a greater cognitive, and subsequently an increased emotional involvement by:

- utilising topics defined as interesting by pupils the same age as those participating in our study;
- promoting the construction of a text “schema” through the analysis of written essays presenting different text complexity and group discussions on the relevant aspects or components that must be present in a text for it to be “argumentative”;
- creating a collaborative writing context, working in small groups; and
- enabling the use of information and resources different from “memory” for content and ideas.

The hypotheses of the planned intervention were that: (a) a collaborative activity would increase motivation per se and lead to successful outcomes; (b) improved argumentative competence would foster self-efficacy as well as enjoyment of the writing process; (c) use of authentic writing tasks would enhance students’ engagement in argumentative writing; (d) use of different resources (texts, but also computers – the Internet in particular – which students know well and enjoy using) would enable students to seek information and increase their motivation to write; and (e) any existing differences in writing ability between boys and girls would be reduced or eliminated by the intervention.

5.1 Method

The investigation was carried out over a pre-test, intervention, and post-test design. The intervention introduced small- and large-group discussions, peer construction of the procedural knowledge necessary to produce a good argumentative text, adequate supports to make the tasks real and significant, and technological instruments and documents, aimed at favouring students’ active involvement. The use of these various information sources, Internet in particular, was intended to be a motivational component in addition to the collaborative activity.

5.2 Participants and Procedure

The participants were 120 eighth graders (69 boys and 51 girls; mean age 13 years 8 months) attending six classes in two schools in the area of Verona, a city in north-eastern Italy, situated in a wealthy agricultural area that also enjoys a healthy tourist industry. The majority of students were from similar backgrounds characterised by a high standard of living, which, however, was not matched by an equally high standard of education. Middle school students were chosen because they have already acquired some argumentative skills, and they make up a good sample to evaluate the efficacy of an intervention.

A survey was previously carried out with a few grade 6 classes to identify a list of topics that could be interesting and involving for students. The students were asked to list the topics they discussed most often with their friends, or thought would be interesting to their peers, and to indicate which ones they would like to do as homework. The most frequently mentioned topics covered personal problems and social and general issues, such as going to the discotheque before 14 years of age, and violent
football fans being banned from stadiums. In agreement with the results of a previous research (De Bernardi & Antolini, 1996a), which had shown a better argumentative text production when the title comprised sustainable positions, the topics were presented to the students in this format.

In the pre-test phase, which included two sessions of two hours each, the students were asked to:

(1) Evaluate their own writing ability by choosing between three possible answers to the question “Are you a good writer?” (1=Yes; 2=Quite good; 3=No), and indicate the reasons for their answers; to specify which type(s) of text among those most frequently used in school (expository, narrative, argumentative, and descriptive) and the more personal ones (letter, diary, poetry, etc.) they would like, or would not like, to write about, and why.

(2) Express their interest in the topic supplied on a 5-point Likert-type scale (from “not at all” to “very interested”).

(3) Produce an argumentative text on the following topic, chosen from those selected during the previous phase “Some boys and girls think they should be allowed to go to the disco under the age of 14. Others, on the contrary, believe it is better to go to the disco from the age of 18. Write what you think, and why”.

(4) Evaluate their own texts on a 5-point Likert-type scale (from “very poor” to “excellent”).

The intervention phases were as follows:

**Intervention phase 1** – This phase focused on analysing argumentative texts produced by others, and was developed over three sessions, each lasting about two hours. In sessions 1 and 2, through collective discussion in a class situation, the students were guided in identifying the characteristics, the units that make up, and the relationship between the different parts of a good argumentative text by comparing peers’ texts at different levels of complexity. The topic, supplied by the experimenters, regarded the compulsory use of a helmet when on a motorcycle (in other words, students were required to identify a sort of “argumentative text plan”). In session 3, students were presented with an argumentative text, written by an expert adult: “Teachers say that it is right to assign homework every day and during the holidays. Many students, on the contrary, think that this is not necessary and in some cases it is unfair. Write what you think, and why”. First, the students read the texts together and then divided into groups of five or six. They followed the procedure, this time helped by the schema they had produced in the previous session and the experimenters’ questions about the writer (“Who do you think wrote this text?”), the aim (“What is the aim of the text?”), and identification of particular argumentative moves (for example, “Is there an opposing thesis or counter-argument?”). The conclusions reached by each group were then discussed in a brief collective session.

**Intervention phase 2** – In the second phase, that was developed over six sessions, the students were divided in small groups on the basis of the pre-test results, and were asked:

(1) To write, guided by a checklist supplied by the experimenters, the reasons for and/or against one of the positions of the title “Some people think that it is better to go to work by public transport. On the contrary, other people think that everyone should be
able to use their car. Write what you think and why”. Students were expected to grasp the concept that a reason against the opposing position can be used as a reason in favour of the position being considered. They were then asked to list at least three examples of this type of reasoning. The same procedure was followed for the other position expressed in the title (session 4).

(2) To specify one or more possible text “schema”, indicating the content and the order in which it should be presented to form a “good” text (text simulation). One of the tasks, guided by another checklist supplied by the experimenters, was to recognise and list the most possible ways to present a thesis, opinion, or argument about a topic used in the previous session, and then to do the same with the opposing thesis, opinion or counter-argument (session 5).

(3) To draft a text, following the identification of some reasons for and/or against the two different positions which can be taken on the following topic: “Some teachers believe that students who break the rules should be reprimanded, punished, or even suspended from school. Others, on the contrary, think that these actions are ineffective and can be counter-productive. Write what you think, and why”. The text was written collectively by students in small groups after a discussion of the meaning and validity of the reasons (session 7).

(4) To draft, in the last three sessions, a text on the topic: “Given the mounting violence in football stadiums, some people think that people who have been involved in violent actions should be banned from going to the stadium again. Others, instead, think that it would be more useful to make them follow a re-education programme (such as engaging in voluntary social work) and then give them another chance. Write what you think, and why”. In two sessions (sessions 8, and 9), students worked with the aid of a variety of resources and information. Half the students were guided to seek information enabling them to study in depth the topic considered, to see for themselves that there are different opinions about it, and therefore to come into contact with different forms of argumentative text. This was done with the support of the Internet (Internet group). The students worked in groups of three and searched for a valid website which could provide information on the topic, surfed the Internet, downloaded only the material relevant to the task, read all the downloaded texts, and extracted useful information from them. The other students (document group) made use of different documents, such as books, journals, and newspapers. Both groups were invited to use their sources and to draw from them as many reasons as they could, and to write notes on cards that would be used to draft the text in session 9, where the sources would always be available to them. By having students compare texts of different structural complexity and different “goodness”, this procedure allowed them to recognise the necessary elements (claims, warrants, counter-arguments, etc.) to use and express in argumentative text construction. Students used the cards on which those elements had been written to create alternative schemata of text construction according to the different ways they arranged them. It was only in the last session (session 10) that the actual writing activity took place.

At post-test, the procedure was the same as at pre-test. Participants were given the following topic: “Some boys and girls think young people should be allowed to have a mobile
phone only when they are over 18 years of age. Others, instead, believe they should be allowed to have one at middle school age. Write what you think, and why”. Text writing was followed by administration of a brief questionnaire, which aimed to collect information on what students thought about the learning situation they had just experienced. The students were asked to:

- Evaluate any change they had seen in their own writing ability at the end of the intervention, choosing between three possible answers (1=yes; 2=quite a bit; 3=no) to the question “Do you think that you have improved your skills in writing argumentative texts?” and to indicate the reasons for their answers.
- Evaluate on a 5-point Likert-type scale (from “not at all useful” to “very useful”) each of the activities they had carried out during the intervention: class discussion, collaborative construction of the written text, and the use of the computer, the Internet and/or of external sources (other texts), to study the given topic in depth.

6 Results

Both qualitative and quantitative analyses were carried out on the collected data. The analysis of the written texts produced during the different phases was carried out by the authors according to a modified version of text types identified in a previous research (De Bernardi & Antolini, 1996a). Below the text typologies singled out are reported.

Text type 1: A position taken without any support: only the proposition is mentioned; neither the opposition nor the warrant appears in the text; there are no linguistic indices of comparison; sometimes the text presents characteristics similar to the narrative–descriptive text.

Text type 2: A position taken and poorly supported: only personal examples and/or data claims are used in the text to support the proposition.

Text type 3: Opposite positions considered independently and either supported or contradicted by data and one or more warrants: this is an “additive” text in which the two arguments are not co-ordinated or, at most, they are connected by simple conjunctions; in some case, the writer does not choose to support one of the two positions, he/she puts forwards both of them either supported or contradicted by data and/or warrants.

Text type 4: Somehow interrelated opposite positions supported or contradicted by data and one or more warrants: relations between the two propositions are developed by means of appropriate linguistic indices; very often a comparison is expressed between proposition and opposition, or the reasons supporting one argument become the reasons against the other; nevertheless, the text is mainly characterised by an “additive” structure.

Text type 5: Opposite positions, always interrelated on thematic nuclei, supported or contradicted by data and one or more warrants: between the two positions different comparisons are identified and expressed by means of appropriate linguistic indices; they are presented constantly nested between each other; often there is the recognition of a theme followed by comparison between proposition and opposition and between reasons for and against the two arguments; the text is characterised by a “recursive” structure and by the presence of casual links.
The first set of analyses focused on the texts produced individually at the pre- and post-test.

As can be seen in Table 1, in which the texts produced in the two phases are compared, almost all students have improved their performances. In fact, taking in consideration the whole sample, it can be observed that only 1.7% of the participants decreased the performance in comparison to the text produced in the pre-test phase, and 5.0% produced the same structure in both phases. If it is considered an improvement, it can be observed that among the students who wrote a text type 1 in the pre-test phase (52.5% in the whole sample), about 71.0% at the post-test produced texts in which both opposing positions were taken into consideration, related to each other, and supported by warrants. The same trend appears as regards texts 2 and 3 produced at the pre-test phase: the percentage of texts 4 and 5 increases (81.8 and 82.6%, respectively). A lesser improvement is observed when considering text 4 produced in the pre-test phase: in this case the percentage of text 5 is 66.7%, while 33.3% of pupils produce a text 4.

A LOGLINEAR analysis was carried out on the variables Text A (the text produced at the pre-test phase), Text C 1 (the text produced at the post-test phase), Gender and Treatment (Document group and Internet group). This analysis has shown a significant interaction both among Text A, Text C and Gender, and among Text A, Text C and Treatment.

Interaction Text A × Text C × Gender ($\chi^2 = 19.292; \text{d.f.} = 9; p < .03$). There is a significant difference between boys and girls as regards improvement in text production in the post-test phase (Table 2). This is mainly due to dissimilar distribution of performance. A higher percentage of girls who had shown a low performance at the beginning produced a well-structured text (type 5) in comparison with the boys (from text type 1, 24.1 vs. 5.9%; from text type 2, 20.0 vs. 0.0%). Of the girls who had produced a text type 3 at the pre-test phase, 22.2% supplied a text type 2 (worsening their performance) and none produced a text type 5, but there was a good percentage of text type 4 (77.8%). Of the boys, 28.6% presented a very complex text (type 5). As regards text type 4, 66.6% of both boys and girls improved their performance and produced a type 5 text.

Interaction Text A × Text C × Treatment ($\chi^2 = 17.283; \text{d.f.} = 9; p < .05$). As far as the treatment variable is concerned, the two groups showed a similar text production at the pre-test, displaying a comparable level of ability in argumentative text production at the beginning of the intervention (Table 3). On the contrary, a significant difference was recorded at the post-test phase. Interestingly, the Internet group, who showed a slightly
lower (but no significant)-level text production than the other group in the first phase, produced a higher-level text than the Document group at post-test. In particular, the Internet group participants present a larger percentage of complex texts, and consequently a greater improvement, in comparison with the Document group.

It is interesting to see whether there were any differences between texts produced at post-test and those of the last phase of the intervention. In the latter phase, the texts were produced by working together in small groups, and both the Internet and Document groups worked with the support of tools and technology that allowed them to source the “ideas to be utilised” in text production. It would also be interesting to check for differences between the texts produced using Internet and those produced on the basis of documents only.

A LOGLINEAR analysis was carried out on the variables Text B (the text produced at the last treatment session), Text C (the text produced at the post-test phase), and Gender and Treatment (Document group and Internet group). This analysis revealed a statistically significant interaction between the two texts, between Text B and Gender, and between Text B and Treatment.

**Table 2: Changes in the text type production from pre- to post-test by gender**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<tbody>
<tr>
<td>Boys</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>0.0%</td>
<td>5.9%</td>
<td>23.5%</td>
<td>64.7%</td>
<td>5.9%</td>
</tr>
<tr>
<td>2</td>
<td>0.0%</td>
<td>0.0%</td>
<td>25.0%</td>
<td>75.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>3</td>
<td>0.0%</td>
<td>0.0%</td>
<td>14.3%</td>
<td>57.1%</td>
<td>28.6%</td>
</tr>
<tr>
<td>Girls</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>0.0%</td>
<td>0.0%</td>
<td>27.6%</td>
<td>48.3%</td>
<td>24.1%</td>
</tr>
<tr>
<td>2</td>
<td>0.0%</td>
<td>0.0%</td>
<td>10.0%</td>
<td>70.0%</td>
<td>20.0%</td>
</tr>
<tr>
<td>3</td>
<td>0.0%</td>
<td>22.2%</td>
<td>0.0%</td>
<td>77.8%</td>
<td>0.0%</td>
</tr>
<tr>
<td>4</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>33.3%</td>
<td>66.7%</td>
</tr>
</tbody>
</table>

**Table 3: Changes in text type production from pre- to post-test by groups**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Document group</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>0.0%</td>
<td>7.4%</td>
<td>14.8%</td>
<td>63.0%</td>
<td>14.8%</td>
</tr>
<tr>
<td>2</td>
<td>0.0%</td>
<td>0.0%</td>
<td>60.0%</td>
<td>40.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>3</td>
<td>0.0%</td>
<td>13.3%</td>
<td>13.3%</td>
<td>60.0%</td>
<td>13.3%</td>
</tr>
<tr>
<td>Internet group</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>0.0%</td>
<td>0.0%</td>
<td>33.3%</td>
<td>52.8%</td>
<td>13.9%</td>
</tr>
<tr>
<td>2</td>
<td>0.0%</td>
<td>0.0%</td>
<td>5.9%</td>
<td>82.4%</td>
<td>11.8%</td>
</tr>
<tr>
<td>3</td>
<td>0.0%</td>
<td>0.0%</td>
<td>8.7%</td>
<td>75.0%</td>
<td>25.0%</td>
</tr>
<tr>
<td>4</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
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</table>
Interaction Text B × Text C ($\chi^2 = 12.147; \text{d.f.} = 3; p < .01$). In the last treatment session, pupils only produced very well-structured texts (type 4 and 5), whereas at the post-test more simplex textual structure (type 2 and 3) are present, even if with a low percentage (Table 4). The main difference is related to the fact that pupils who produced a text 5 at the treatment session, also produce, compared with those whose previously produced a text type 4, a larger percentage of the same complex text at the end (28.6 and 6.0%, respectively), and a lower percentage of text type 3 (12.9 vs. 26.0%).

Interaction Text B × Gender ($\chi^2 = 6.409; \text{d.f.} = 1; p < .05$). The difference is due to the inverse percentage in the production of the two types of text (Table 5). Indeed, while boys produce 68.1% of text 5 and 31.9% of text 4, girls, on the contrary, supply 45.1% of text 5 and 54.9% of text 4.

Interaction Text B × Treatment ($\chi^2 = 4.879; \text{d.f.} = 1; p < .03$). A significant advantage was found in favour of the Internet group (Table 6). Although all the participants, independently of their original group, produced well-structured texts (only text types 4 and 5), the group that wrote the text with the support of technology produced a statistically higher number of text type-5 texts compared with the other group (67.2 and 47.2%, respectively).

Text improvement was accompanied by the students’ increased awareness of their own performance, supported by a score for the post-test text evaluation, which was higher than

<table>
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<th>Text</th>
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</thead>
<tbody>
<tr>
<td>Text B</td>
<td>4</td>
<td>4.0%</td>
<td>26.0%</td>
<td>64.0%</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>2.9%</td>
<td>12.9%</td>
<td>55.7%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Boys (%)</th>
<th>Girls (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text B</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>31.9</td>
</tr>
<tr>
<td>5</td>
<td>68.1</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Document (%)</th>
<th>Internet (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text B</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>52.8</td>
</tr>
<tr>
<td>5</td>
<td>47.2</td>
</tr>
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that of the first text. Self-perception of competence played an important part in evaluating the intervention, as did the experience as a whole and its different steps. The mean score for text evaluation increased significantly from the first to the last text produced (Figure 1), as revealed by the repeated measure multivariate analysis of variance with gender and treatment as between-subjects factors. The difference between the two scores was statistically significant \((F(1, 116)=28.41; p=.000)\), whereas neither gender nor treatment produced a significant effect on the score.

From the analysis of responses, which varied according to the different genre, participants’ perceptions of themselves as writers appeared modified at the end of the intervention. This was true for the bad, medium, and good writers. While at the beginning, about 84% of students who defined themselves as “bad writers” declared that they had improved or greatly improved their writing ability. Similarly, 78% of the students who had initially defined themselves as “quite good” believed they had improved their performance. All subjects who had perceived themselves as “good” writers reported that they had improved. The reasons for improvement were closely linked to their better understanding of how to structure and write an argumentative text. Students stated that “they had learned how to think and reason” and therefore “wanted to write this type of text”; or that they had “learned a new way of thinking and writing”, and/or had “learned how to concentrate more effectively and order their ideas”. The intervention seems to have modified their attitude to the argumentative text, which would not have been chosen by most of them at the beginning as the preferred type of text. The experience itself was generally seen as positive, with a mean evaluation of 6.90 out of 10. An analysis of variance with gender and group as independent variables did not record significant differences. These data could depend on the fact that both conditions represent study situations, which are not often found in the school environment and thus are experienced by all students in a positive way. It is noteworthy, however, that the Internet group gave a slightly higher evaluation than the Document group (6.75) and that the girls gave a slightly higher evaluation than the boys. On average, the intervention was positively evaluated in all its aspects (discussion, use of new information sources, collaborative writing, work in small groups). The construction of an interactive setting through small- and large-group discussions was positively evaluated by students (mean score 4.12 out of a maximum of 6), as was

<table>
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<tr>
<th>self-evaluation pre-intervention</th>
<th>self-evaluation post-intervention</th>
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<tr>
<td>document group</td>
<td>Internet group</td>
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Figure 1: Pre- and post-intervention self-evaluation scores by intervention groups
the collaborative construction of the argumentative text (mean score 4.31 out of a maximum of 6). For these two elements of the experience, no statistical differences were recorded at the analysis of variance, which was carried out with gender and group as independent variables. Again, it is interesting to see that girls gave a slightly higher evaluation of group discussion and collaborative text construction than boys.

Although no statistically significant difference was revealed in the analysis of variance, the girls in the Internet group valued the use of new technologies such as the computer and Internet more positively than the boys (8.70 vs. 8.14 out of a maximum of 10). The possibility of extending this type of learning activity organisation to other situations or disciplines was also valued positively (mean score 7.48 out of a maximum of 10). In this case, the analysis of variance highlighted an effect of gender ($F(1, 116) = 4.15; p < .05$): both boys and girls gave a positive evaluation, but girls were more in favour than boys (8.00 vs. 7.10). Lastly, most students said they would recommend it to their friends: about 80% of students gave a score higher than 6 (out of a maximum of 10), with 35% of them giving a score higher than 9.

7 Discussion

Data analyses showed that the instructional intervention produced a positive outcome: individual writing performance improved significantly following the structured learning intervention. The texts produced at post-test had a complex structure that almost always included both positions, supported by warrants. Significant differences emerged regarding gender and the two conditions introduced in the last three sessions, that is, the use of Documents vs. the Internet as sources of information on which to base a written argumentative text. The differences between boys and girls in the structure of arguments produced post-test may be explained by the different level of involvement that girls express in evaluating the experience of working in a different way on text writing, by the increased awareness of their own performance, and by the increased positive attitude towards the argumentative text that girls, more than boys, state in the final questionnaire. It should be noted that at the initial evaluation of different text types, both boys and girls indicated the argumentation text as one they would least like to write, indicating it as the most difficult and the one that they felt least prepared for. As regards treatment, the differences in results between the Document and Internet groups may be explained by the high level of agreement for the Internet experience stated at the end of the treatment by the Internet group students. It must be noted that these different information sources were used only in the last three sessions of the study. A longer intervention would probably be able to make the differences observed between the two groups even more significant.

The data obtained can stimulate some interesting reflections. A significantly increased level of engagement in the writing activity was observed, owing to considering writing as something more than an individual activity. Participation in small-group discussions about the content and its organisation before and during text drafting, and the opportunity to write about topics important to students seem to have contributed to their improved writing performance and an improved image of themselves as writers. This was particularly true for those who had defined themselves as bad writers at pre-test.
The training focused especially on important aspects of writing acquisition, which as mentioned above, regarded the cognitive, social, and motivational components of the task. Attention to the cognitive effects was implemented with an accurate text analysis to single out the elements of the text structure and to identify possible alternative schemata for the construction of a good argumentative text. All this occurred in a context in which the discussion, be it guided or autonomous, had an important role, and contributed to stimulating and maintaining an adequate level of motivation to write. The present research included features of the environment that contributed to positive emotional factors such as the creation of an interactive learning context through small- and large-group discussions to facilitate collaborative planning; the drafting and revising of an argumentative text; the choice of topics that were interesting for the age group considered (13- and 14-year-olds), and the use of the computer and Internet (Bruning & Horn, 2000).

The construction of an interactive setting, through small- and large-group discussions, was evaluated positively by the students. Those who used the Internet as a research tool and looked at different argumentative structures produced more positive evaluations than the students who used books, newspapers, and journals. Group discussion between peers or with an adult seems to be an efficient method that can encourage and develop reflections, meta-cognitive strategies and argumentative abilities as well as improving the individual’s degree of activation, thus increasing students’ motivation. Students also gave a very positive evaluation of group work. Our results confirm the data of recent literature showing that collaborative work is very motivating in that it involves exchanging ideas with peers, sharing roles, tasks and the cognitive load, as well as responsibility for the final outcome. In addition, all this can engage students in an entertaining way. In sum, both the present and a previous research (De Bernardi, Antolini, & Rossi, 2003) confirm the validity of a collaborative setting to promote motivation, and also supports the acquisition of meta-cognitive strategies of control processes over writing, thinking, and studying. Nevertheless, a small minority of participants (5% of the group) who had a positive self-perception as writers and produced a well-structured text at the pre-test stated that when drafting a text they preferred to work alone, as they found the less competent peers to be a “dead weight” who slowed their flow of thinking and/or the activation of specific writing strategies.

Our results suggest that topic is a motivational factor, which is more complex than expected. Results have underlined how collectively argued topics were considered very interesting (mean score 5.1 out of 6) by participants, whereas those dealt with individually were not found to be as interesting (3.4). Yet, the titles had been proposed by students of the same age and socio-cultural backgrounds as the participants through class discussions and also indirectly by the participants themselves. The topics concerned issues linked to 13- and 14-year-olds’ personal experiences — whether going to the disco is a good thing or not, and the use of mobile phones. These are very topical issues at this age and can bring to the surface personal experiences that can become the basis of discussion in planning with peers and text production. In addition, the fact that the topics referred to personal experiences reduced problems of content, which students in the group might be more or less familiar with. Students could be daunted by the complex task of writing an argumentative text and might consider a topic uninteresting simply because they are conditioned by the difficulty of the task and consequently might fall into a situation of “nonactivation”, or
of “not knowing what to write”. A collaborative situation in which it is also possible to access different information sources to acquire knowledge and justifications about a topic, and the shared responsibility of the construction of a good text, somehow seem to decrease anxiety about the activity and favour a greater sense of self-efficacy. Many students viewed their improvement in text writing at the end of the intervention owing to increased motivation and the greater ease they felt in writing a text together with other classmates.

Participants found the use of the computer and the Internet as positive. The group using these tools had a very complex task to accomplish and all the students in these groups showed great enthusiasm and interest. Students may have enjoyed the tasks because they were able to use competencies they have learned outside the school setting, which they could not usually make use of in a “serious task” assessed by teachers. Thus, the use of technology turned out to enhance motivation and to facilitate the development of writing as a means of learning (Hartley & Tynjälä, 2001).

Students’ answers to the question asking whether they would suggest the same learning pathway to other students producing argumentative, and other types of texts, indicated their preference for the instructional intervention. About 80% of students gave a score higher than 6, with 35% giving a score higher than 9. The small minority who did not feel they could suggest the experience to others comprised the students who did not find the experience, as a whole, positive, saying that it hindered their individual experience, and also those who did not think their performance had improved. The main reasons supporting the positive evaluation usually involved the motivational-affective aspects of the experience: task sharing, the opportunity to discuss with others possible alternatives and reasons for and against, the possibility of using “external” supports to broaden their knowledge, and the sharing of responsibility for text drafting between all members of the group. All these factors reduced the fear of “not being able to do it” and at the same time allowed students to control and monitor the different phases and processes involved more effectively. This experience has certainly changed most students’ attitude to writing. To use a participant’s words: “Now, I enjoy writing more”.

Fostering Students’ Willingness and Interest in Argumentative Writing
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Chapter 11

The Role of Interest and Self-Efficacy in Science-Related Expository Writing

Suzanne Hidi, Mary Ainley, Dagmar Berndorff and Laura Del Favero

The investigation reported in this chapter was concerned with the relationship of measures of interest and measures of self-efficacy in the context of students’ expository writing on science topics. How differential access (electronic vs. hard copy format) to topic-related information influences writing performance was also investigated. Adolescents’ behavioral and affective responses were measured as they performed a science-related expository writing task. More specifically, interest and self-efficacy measures were collected prior to and subsequent to the writing task. The findings demonstrated that students’ interest in specific writing topics and their self-efficacy for the writing task were important factors that positively influenced their writing performance. Whereas the experimental writing conditions did not produce consistent differences in the adolescents’ writing quality or quantity across topics, there was some evidence that the web access as opposed to the hard copy condition contributed to students’ self-efficacy. In contrast, the findings indicated that the hard copy condition produced higher quality compositions than the two electronic conditions.

1 Introduction

In a previous study, we investigated how a combination of motivational and instructional variables can be best utilized to improve students’ emotional and cognitive experiences during argument writing (Hidi, Berndorff, & Ainley, 2002). One hundred and seventy-seven students at the junior intermediate level participated in a program involving a pre-test, intervention, post-test with two forms of intervention. In the first experimental
condition, students were given instructions on argument writing that incorporated strong motivational features. In the second condition, in addition to the instructions, students were required to participate in extended collaborative writing activities. We also examined the relationship between students’ general interest in writing and their genre-specific liking and genre-specific self-efficacy in writing. This investigation was one of the few studies we know of that specifically focused on the relationship between interest and self-efficacy in writing. The results demonstrated that the intervention programs contributed to a significant overall improvement in the quality of children’s argument writing. The findings also indicated that the students’ genre-specific self-efficacy in writing was closely associated with genre-specific affect (liking) and that both of these factors were also associated with their general interest in writing. For example, children who believed that they were relatively good writers also liked writing. The research reported in this chapter is an extension of the above study in that it focuses on how interest triggered by a specific writing topic, drawing on both individual and situational factors, is related to self-efficacy and self-efficacy to writing performance.

2 Interest, Self-Efficacy and Expository Writing

Although demonstrating that interest and self-efficacy for specific genres of writing were linked, our previous investigation (Hidi et al., 2002) did not explain why such an association occurred. Both interest and self-efficacy have been associated with similar aspects of students’ performance: increased effort, persistence and positive emotional reactions (see Bandura, 1997; Hidi, 2000; Renninger, 2000; Renninger & Leckrone, 1991; Zimmerman, 2000b). In order to explore the relation between interest and self-efficacy more closely, in this study we have taken a specific writing task, science-related expository writing, and monitored the relationships between interest and self-efficacy at several points within the same task. We focused on the connection between the interest that is triggered when students are first presented with details of their writing topic (topic interest) and their feelings of efficacy in relation to this specific task. These data were supplemented by recordings of the level of interest in the task (situational interest) reported immediately after the writing task has been completed, and self-efficacy measures taken at the same time, in terms of students’ confidence about the quality of their writing. We expected that the association between interest and self-efficacy observed in the earlier investigation when both were measured at the level of a general response to writing compositions of specific genres would also be observed when the measures were tied to specific writing topics.

A second focus of the current investigation involved the issue of the knowledge students have when asked to produce position papers and for present purposes we chose students’ science-related expository writing. An extensive body of literature indicates that interest in and knowledge of topics that students write on, are critical aspects of writing performances (e.g., Benton et al., 1995; Hidi & McLaren, 1990, 1991). As students often do not have adequate knowledge to write on the science topics assigned, in the present investigation we provided them with resource material in various forms that were designed to generate interest and increase their content knowledge. In one of the conditions students were also given opportunities to seek additional topic-relevant information.
As improving expository writing (including arguments) may hinge on providing information in a form that students find easily accessible, we also evaluated the effectiveness of on-line learning materials as aids to writing. Although computer-based learning has been one of the major innovations of the last two decades of the 20th century, there has been considerable debate over the effectiveness of computers in improving student learning (Ainley, 1998; Ainley, Corrigan, & Richardson, 2005; Clark, 1994; Kozma, 1994; Mayer, 1997; Molen & Voort, 1998). A wide range of studies have shown that computer presentation of learning materials arouses students' interest, although this is often akin to a response to the novelty of the medium and the elicited interest is not necessarily maintained (Ainley, Hidi, & Berndorff, 2002; Malone & Lepper, 1987; Mitchell, 1993). Thus, we examined the effectiveness of electronic presentations of resource materials as compared to hard copy on students' motivation and writing performance.

Hence, there were two main issues addressed in the research reported in this chapter. The first concerned the links between sequential measures of interest and self-efficacy in the context of students' expository writing on specific science topics. The second issue considered students' writing under conditions that allowed them access to different types of information to support their expository writing.

3 Accessing the Students’ Expository Writing Behavior

A cornerstone of our methodology was a modified version of the Between the Lines (BTL) computer program (see Ainley et al., 2002). The program automatically monitors and records, in real time, readers’ dynamic behavioral and affective responses such as time spent on a task and feelings reported, at various stages throughout the task. The BTL methodology helped Ainley and colleagues to clarify the psychological processes between interest and learning beyond what could be accessed by more traditional research procedures. Responses were measured in temporal sequence, allowing assessment of the critical contingencies between the processes that followed recording of topic interest ratings. In our current investigation of writing we have utilized the BTL program to measure dynamically students’ behavioral and affective responses while undertaking a science-related expository writing task.

The research focused on adolescents’ responses when writing position papers on science topics with social relevance, under varied writing conditions. The students wrote position papers during two classes, four months apart (winter and spring terms), on two different topics. They were provided with topic-related scientific texts as resource materials to inform their writing. Depending on the treatment condition, these texts were provided in either electronic or hard copy format and students wrote their position papers either on computer or on paper. In Condition 1 (W=Web access), students used the BTL program to access web pages (and embedded links) and wrote their position papers electronically. Condition 2 (ESR=Electronic Select Resource), also had the students interacting with the BTL program and writing their position papers electronically; however, in this condition, students accessed text written by the researchers. In Condition 3 (HSR=Hard copy Select Resource), students accessed the same researcher written texts as in Condition 2, however the texts were in hard copy and the students...
wrote their position papers on paper. Questions included in the BTL program to measure interest, affect and self-efficacy were presented as hard copy questionnaires for students with hard copy texts. Prior to beginning the study, students were told that position papers were to be graded by their teachers and included as part of various tasks that contributed to their final science mark. Students’ responses and position papers across the two topics on which they had written were compared. On the second writing occasion, students were randomly assigned to one of the two conditions that differed from their previous writing treatment condition. Participants were 143 Grade 10 Canadian students (mean age 15 years and 5 months). The school population consisted of primarily middle to upper-class students, most of whom had English as their first language.

4 Recording Interest and Self-Efficacy

The procedures started with a short paper-and-pencil questionnaire that was administered to all students prior to the main data collection. This included individual and general interest measures that are not the subject of this paper and will not be reported here. Subsequently, two class periods four months apart (winter term and spring term) were used to present the students with the BTL program or the hard copy version of the program, according to their assigned treatment condition. The specific measures that are the focus of this report were administered in the following sequence. First, students rated their topic interest. Next, the assignment to write a position paper on a specific topic was presented and students made ratings of their writing self-efficacy and their prior knowledge of the topic they had been assigned. The science resource texts were then made available. Students were asked to take notes while they read the texts and, subsequently, to write their position papers. Once they had completed their assignment, they were asked to rate their interest in the text that they had just read, and the question regarding their writing self-efficacy was repeated. Unless otherwise specified these measures were in the form of 5-point Likert-type rating scales. The following specific measures were recorded:

*Topic interest (TI)*. Both the BTL program and hard copy equivalent started with a topic interest measure. Students were asked “How interesting do you expect this topic to be?” Topics were: Insect Infestations: To spray or not to spray? and Intelligent Transport Systems: Are they worth building?

*Self-efficacy for writing task (SE1)*. A measure of self-efficacy in writing was obtained by asking students to rate “How confident are you that you will be able to write a good composition?”

*Prior knowledge (PK)*. Referring to the topic they had been assigned, students were asked “How much do you already know about this topic?” Their responses provided a self-report measure of prior knowledge about the topic.

---

1 Affect and its intensity were also measured through responses students gave to a panel of face icons (see Ainely et al., 2002) presented at the beginning when students knew which topic they were to write on, and again at the end after students had finished writing their position paper. Affect responses are not reported in this paper.
Situational interest (SI). After writing their compositions, students were asked “How interesting did you find the topic?”

Self-efficacy for completed writing task (SE2). The measure of self-efficacy after students had completed their composition asked “How confident are you that you wrote a good composition?”

5 Topics and Resource Texts

Topics. The topics selected were of general scientific and social relevance. Rather than focusing on student-centered topics, as was the case in our past investigations (Hidi et al., 2002), in this study, topics were chosen directly from the teachers’ curriculum materials (Ritter, 1999) and corresponded to the units (ecology and motion) that the teachers were delivering during the study. Students were assigned two topics overall, one in the winter and one in the spring term. The first assignment on the topic of “Insect Infestations: To spray or not to spray?” required students to write a position paper on whether or not pesticides should be used to deal with insect infestations. The second assignment asked the students to write on the topic of “Intelligent Transport Systems: Are they worth building?” This topic asked whether implementing major technological change to automate our cars and highways was a useful endeavor. Each assigned topic included a paragraph of approximately 75 words that introduced the topic.

The selection of topics included gender-balanced considerations. The topic on insect infestations with its ecological science focus was expected to be of greater interest to girls, whereas the topic on the automated highway systems was expected to be more interesting for boys. These decisions were based on findings in the literature on interest and gender (Hoffmann & Haussler, 1998; Hoffmann, Krapp, Renninger, & Baumert, 1998).

Resource texts. Three expository texts on each assigned topic were provided as resource materials to help students write their position papers. In Condition 1 (W), the texts consisted of three web pages including links that the students could access. The pages were actual web sites chosen by researchers to ensure that students in this condition had access to pertinent information on the assigned topic. The web pages also included pictures and graphics. The texts varied in length from 1000 to 3500 words depending on the web page (averaging approximately 1900 words). Students using these resources were required to select from a wide range of information those aspects that were relevant to their topic. In Conditions 2 (ESR) and 3 (HSR), the materials consisted of three researcher-written texts of about 600 words each in length. The texts were written to be clear, succinct and readily understood by average Grade 10 students. Although the content of the web page texts and the researcher written ones was not identical, it was comparable in that both types of texts provided students with multiple points upon which to base an argument for or against the issue assigned.

6 Evaluation of Position Papers

Four indicators were used for evaluation of the position papers: holistic scores, use of the given information, inferences made from the information, and length of composition in the form of a word count.
Holistic score: To evaluate the quality of the content of the position papers, a holistic rating scale was developed with scores ranging from one to five. Scores reflected the merit of the arguments that the students presented in favor of their position regardless of whether the students presented arguments that were based on information taken from the resource materials or from their own knowledge base. A score of five was given when students provided a number of good arguments that were important to their position and were well developed with supporting facts. Scores of four, three and two reflected diminished quality and/or number of arguments. A score of one was given when no reasonable argument was provided.

Given information score: This score reflected the quality and quantity of information from the resource materials included in the position papers. A score of five was given when students included in their position papers a number of important points that they had retrieved from these materials. Scores of four, three and two reflected successively diminished quality and/or number of points. A score of one was given when no information from the resource texts was included in the position paper.

Inference level score: This score reflected the quality and quantity of original ideas that were in the position papers. A score of five was given when students included a number of original ideas that were important to arguing their positions. Scores of four, three and two reflected successively diminishing quality and/or number of original ideas included. A score of one was given when no original thoughts were included in the position paper.

Approximate word count: To assess the length of the position papers, an approximate word count was determined. The number of words per several lines were counted and averaged and then multiplied by the total number of lines.

7 Results

Two issues were addressed in our analyses of students’ responses to this writing task. The first concerned the relationships between interest, self-efficacy and writing quality. In these analyses we also considered the effects of gender, topic and testing occasion on the level of interest triggered when students received the writing topics (topic interest). The second issue concerned the effects of the experimental writing conditions on the quality and quantity of writing in students’ compositions.

7.1 Interest, Self-Efficacy and the Quality of Students’ Writing

The experimental design involved students writing papers on two topics, one topic on each of two occasions. MANOVA was used to identify whether students’ interest in the specific topics (Topic 1: Insect Infestations; Topic 2: Intelligent Transport Systems) varied and was related to gender, or to the particular testing occasion (Time 1 and Time 2). All students made ratings of topic interest for both topics prior to being assigned their writing task each time, and so it was possible to get an indication of the effect of testing occasion on topic interest scores as well as differential interest in the two topics. The multivariate solution indicated that there were significant effects of testing occasion \((F(1, 136)=24.05, \ p<.001, \ \eta^2=.15)\), specific topic \((F(1, 136)=73.76, \ p<.001, \ \eta^2=.35)\), significant testing
occasion X topic ($F(1, 136)=5.79, p<.018, \eta^2=.04$) and topic X gender interactions ($F(1, 136)=15.65, p<.001, \eta^2=.10$).

Overall, interest in the topics was low to moderate. Topic interest scores were generally higher on the first testing occasion than the second, and topic interest scores were higher for the transport topic (Time 1: $M=3.21, SD=1.16$; Time 2: $M=2.99, SD=1.19$) than for the insect topic (Time 1: $M=2.58, SD=1.09$; Time 2: $M=2.06, SD=.98$). This effect of topic was the largest of all the significant effects. The significant testing occasion X topic interaction indicated a larger decrease in topic interest for the insect topic between Time 1 and Time 2 than was the case for the transport topic. However, this effect was relatively small. The topic by gender interaction indicated boys were more interested in the transport topic than were the girls and that differences in topic interest for the two topics were larger for the boys (Intelligent Transport Systems: $M=3.35, SD=.14$; Insect Infestations: $M=2.26, SD=1.08$) than for the girls (Intelligent Transport Systems: $M=2.80, SD=1.14$; Insect Infestations: $M=2.40, SD=.99$).

### 7.2 Interest and Self-Efficacy

Across the task students recorded a number of ratings of their interest in the topic and of confidence in their ability to write a good composition on their assigned topic (self-efficacy). Immediately after students were given the topics with a sentence of explanation as to what each topic was about, their topic interest (TI) was recorded. The requirements of the task were then explained in more detail and students were asked to indicate how much they already knew about the topic (PK), and how confident they were that they could write a good composition (SE1). After the composition was submitted students reported how interesting they found the topic (SI), and how confident they were about the quality of their answer (SE2). This allowed us to test the pattern of relationships between interest and self-efficacy ratings across the course of the writing task. Linear regression analyses were used to test the independent effects of gender, group, TI, PK, and self-efficacy (SE1) and students’ reflective judgments of how interesting the task was (SI) on how confident they were that they had produced a quality composition (SE2). Zero-order correlations between these variables for both composition topics are presented in Table 1 along with the variable means and standard deviations.

The pattern and size of correlations between these variables was similar across both composition tasks and indicated consistent positive relationships between successive interest ratings, between successive self-efficacy ratings, and between adjacent interest and self-efficacy ratings. The strongest correlations were between the pairs of self-efficacy ratings, i.e., self-efficacy prior to commencing the task and self-efficacy immediately after the task had been completed.

A series of linear regressions were used to identify the independent contributions of each of the prior variables on students’ self-efficacy ratings at the beginning of the task and again at the end of the task. In the first regressions (see Table 2), self-efficacy ratings at the beginning of the task were regressed onto gender, TI and the control variable of PK. For both topics, self-efficacy was significantly associated with TI. Self-rated PK was also a significant predictor of self-efficacy. Self-efficacy was not significantly related to gender. The treatment group for writing the first composition four months earlier was included in
the set of predictors for self-efficacy ratings at the beginning of the second composition task, the transport topic. Prior screening for differences in this self-efficacy variable indicated a significant difference in mean self-efficacy between the group who received the
hard copy resources (HSR: $M=2.76$) and the web access group (W: $M=3.27$), with the selected resource group in between (ESR: $M=3.12$). Therefore, in the regression analysis this treatment group variable was included using dummy coding; the hard copy group was used as the reference group for the dummy variables of select resource and web access (see Table 2). When compared to the students who experienced the hard copy condition for the first writing task, the students who experienced the web access condition reported higher self-efficacy at the beginning of the second writing task. Hence, there was some evidence that the earlier treatment experience was contributing to initial self-efficacy beliefs when students were presented with the second writing task.

Two models were tested for relationships between interest and self-efficacy at the end of the task. In the first model, TI and self-efficacy prior to starting the writing task (SE1) were tested as predictors of self-efficacy ratings made after the compositions were completed (SE2). The second model involved the addition of the SI variable to determine whether the level of interest maintained across the task made a significant increment to feelings of efficacy over and above that accounted for by the earlier variables. Gender and the control variable of prior knowledge were included in these regression analyses. Treatment group was not included as separate analyses indicated no significant relationship between treatment group and self-efficacy at the end of the writing task for either topic.

For the insect topic, TI in both models indicated a significant negative effect on the criterion self-efficacy variable (SE2). This suggested that a suppression effect was likely to be operating and so the regressions for the two models were repeated without the TI variable. Without the TI variable in the equation, the $r^2$ values were slightly lower, but the pattern of significant predictive effects for the self-efficacy rating recorded at the beginning of the task (SE1) and SI at the end of the task was very similar. No suppression effect was observed in the analysis for the transport topic where topic interest was not a significant predictor of self-efficacy at the end of the writing task.

The results of these regression analyses for each of the composition topics are shown in Table 3. Self-efficacy at the planning stage of the task (SE1) was predictive of self-efficacy when students were reflecting on their performance (SE2). These effects were similar for both composition topics. As expected the earlier self-efficacy rating was the strongest predictor of self-efficacy at the end of the task. When the SI variable was added to the equation there was a significant increase in the amount of variance explained, suggesting that SI independently contributed to the level of self-efficacy students’ reported after they completed their writing task. Not surprisingly, when this effect is compared across the two topics, the contribution of SI to the prediction of self-efficacy (SE2) was greater for the topic students rated as the less interesting of the two (Insect Infestations).

### 7.3 Self-Efficacy and Composition Scores

Self-efficacy was then considered in relation to students’ composition scores. Table 4 shows the zero-order correlations between students’ self-efficacy ratings at the end of the task, and their composition scores.

For both topics the pattern was similar. Self-efficacy scores were positively correlated with the holistic assessment of the students’ writing and with the length of compositions as
measured by the word count. That is, the quality of student compositions as assessed by holistic ratings and their length were significantly associated with students’ feelings of self-efficacy when asked to reflect back on the composition they had just written. Those feelings of self-efficacy were linked with students’ initial responses to the task in terms of the level of interest triggered by the topic, students’ confidence that they could perform the task required of them, and the level of interest maintained across the task. These results support previous findings (Hidi et al., 2002) that demonstrated the close association between individual interest in writing, interest in specific genres of writing and self-efficacy for writing activities.

Table 3: Regression analysis for interest and self-efficacy variables across writing tasks: insect and transport topics

<table>
<thead>
<tr>
<th>Topic</th>
<th>β</th>
<th>F</th>
<th>r²</th>
<th>r² change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Insect Infestations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 1. DV: Self-efficacy (SE2)</td>
<td>(3,168)=15.59, p&lt;.001</td>
<td>.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVs: Gender</td>
<td>-.10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prior Knowledge</td>
<td>.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-efficacy (SE1)</td>
<td>.45***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 2. DV: self-efficacy (SE2)</td>
<td>(4,167)=15.82, p&lt;.001</td>
<td>.28</td>
<td>.057***</td>
<td></td>
</tr>
<tr>
<td>IVs: Gender</td>
<td>-.12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prior Knowledge</td>
<td>-.05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-efficacy (SE1)</td>
<td>.42***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Situation Interest (SI)</td>
<td>.25***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Transport Systems</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 1. DV: self-efficacy (SE2)</td>
<td>(4,174)=18.64, p&lt;.001</td>
<td>.30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVs: Gender</td>
<td>-.08</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Topic Interest</td>
<td>-.03</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prior Knowledge</td>
<td>.01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-efficacy (SE1)</td>
<td>.56***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 2. DV: Self-efficacy (SE2)</td>
<td>(5,173)=16.41, p&lt;.001</td>
<td>.32</td>
<td>.022*</td>
<td></td>
</tr>
<tr>
<td>IVs: Gender</td>
<td>-.09</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Topic Interest</td>
<td>-.06</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prior Knowledge</td>
<td>-.03</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-efficacy (SE1)</td>
<td>.53***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Situation Interest (SI)</td>
<td>.16*</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05 and ***p<.001.
The science topics selected for this study were taken from the actual curriculum for these students, and their low-to-moderate topic interest recorded suggests (not surprisingly) that Canadian adolescents are not particularly interested in their science topics. However, the fact that we observed variation between topics, in particular, the higher interest for the topic dealing with how new technologies are being applied to problems of traffic management, suggests that within the curriculum topics there are some that adolescents find more interesting than others. The topic by gender interaction we observed showed that our prediction of the transport topic being of more interest to the boys than the insect topic was correct. However, the predicted preference of girls for the insect topic was not supported by these data. Like the boys the girls were also more interested in the transport topic, although the difference in interest between topics was smaller for the girls than for the boys. A range of previous studies have shown that there are significant differences in the interests of girls and boys in relation to academic tasks (e.g., Ainley, Hillman, & Hidi, 2002; Asher, 1980; Asher & Markell, 1974; Anderson, Shirey, Wilson, & Fielding, 1987; Hidi & Berndorff, 1998; Hidi et al., 2002; Hidi, McLaren, & Renninger, 1993; Hoffmann & Hausler, 1998). These studies have also indicated that boys’ interest varies more than girls’ and that their academic performance is more positively correlated with their interests.

Self-efficacy represents the individual’s beliefs about their capacity to deliver a certain level of performance on the nominated task. The positive correlations between successive ratings of self-efficacy on these writing topics are what one would expect for ratings on the same task. On the other hand, it is not out of the question to expect change in self-efficacy ratings when students’ expectations about the character or content of the task do not match what they actually find. However, the positive correlations between adjacent interest and self-efficacy ratings, i.e., the positive correlation between topic interest and self-efficacy, and situational interest and self-efficacy, suggest a close and consistent relationship between student interest and perceptions of self-efficacy. It is also of importance that higher topic interest was positively associated with students’ situational interest elicited by the topic and the writing task. There was a significant relationship between the interest triggered by the topic and the level of interest maintained across the course of the writing activity. In Hidi et al. (2002), it was suggested that both interest and self-efficacy are similarly content-specific and so draw on the same knowledge base. This pattern of relationships was confirmed in these data topic interest and prior knowledge were positively correlated and both contributed independently to the initial self-efficacy rating. The

Table 4: Self-efficacy (SE2) and composition quality scores for two composition topics

<table>
<thead>
<tr>
<th>Writing scores</th>
<th>Insect topic</th>
<th>Transport topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holistic</td>
<td>.26**</td>
<td>.23**</td>
</tr>
<tr>
<td>Given information</td>
<td>.12</td>
<td>.10</td>
</tr>
<tr>
<td>Inference</td>
<td>.20*</td>
<td>.06</td>
</tr>
<tr>
<td>Word count</td>
<td>.24**</td>
<td>.23**</td>
</tr>
</tbody>
</table>

*p < .05, **p < .01
final issue we examined in relation to writing self-efficacy concerned how students’ perception of their performance at the end of the writing task was related to their writing performance. As expected, for both topics the self-efficacy scores were positively correlated to the more qualitative holistic scores and also to the word count measuring the length of students’ compositions. Our results confirm previously reported findings of positive associations between writing self-efficacy and writing performance (e.g., Schunk & Schwartz, 1993a; Pajares, & Johnson, 1994).

7.4 Information Access and Composition Writing

The second research question focused on whether or not students’ compositions differed under the three information access writing conditions (W, ESR and HSR). Students’ papers were scored on four indicators: Holistic, Given Information, Level of Inference and Word Count. The mean scores for each of these measures are presented in Table 5.

Multivariate analysis of variance was used to assess the effect of the treatment conditions on students’ writing scores. Group and gender were between-subjects variables and the three qualitative composition evaluation scores the dependent measures. To control for effects of composition length, word count was used as a covariate. However, before entering word count into the analysis as a covariate the effect of treatment on word count was assessed using univariate MANOVA. Both group and gender were entered as between-subjects variables. For the insect topic the web access group compositions appeared to be shorter than the other treatment groups. However, this difference in

Table 5: Mean scores on composition evaluation measures for three conditions and two testing occasions (SD in parentheses)

<table>
<thead>
<tr>
<th>Topic — insect infestations</th>
<th>Holistic</th>
<th>Given Info</th>
<th>Inference</th>
<th>Word Count</th>
<th>Group</th>
<th>Holistic</th>
<th>Given Info</th>
<th>Inference</th>
<th>Word Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>3.81</td>
<td>3.66</td>
<td>3.13</td>
<td>267.87</td>
<td>W</td>
<td>3.39</td>
<td>3.13</td>
<td>3.04</td>
<td>255.68</td>
</tr>
<tr>
<td></td>
<td>(0.80)</td>
<td>(1.18)</td>
<td>(1.0)</td>
<td>(91.13)</td>
<td></td>
<td>(0.70)</td>
<td>(0.93)</td>
<td>(0.84)</td>
<td>(75.75)</td>
</tr>
<tr>
<td>ESR</td>
<td>3.90</td>
<td>3.34</td>
<td>3.53</td>
<td>310.28</td>
<td>ESR</td>
<td>3.51</td>
<td>3.32</td>
<td>3.19</td>
<td>280.26</td>
</tr>
<tr>
<td></td>
<td>(0.91)</td>
<td>(1.0)</td>
<td>(1.06)</td>
<td>(116.91)</td>
<td></td>
<td>(0.66)</td>
<td>(0.92)</td>
<td>(0.93)</td>
<td>(94.23)</td>
</tr>
<tr>
<td>HSR</td>
<td>3.58</td>
<td>3.16</td>
<td>3.45</td>
<td>306.11</td>
<td>HSR</td>
<td>4.10</td>
<td>3.66</td>
<td>3.54</td>
<td>323.50</td>
</tr>
<tr>
<td></td>
<td>(0.77)</td>
<td>(0.92)</td>
<td>(1.15)</td>
<td>(108.80)</td>
<td></td>
<td>(0.52)</td>
<td>(1.11)</td>
<td>(1.09)</td>
<td>(117.27)</td>
</tr>
<tr>
<td>Total</td>
<td>3.76</td>
<td>3.39</td>
<td>3.36</td>
<td>293.85</td>
<td>Total</td>
<td>3.70</td>
<td>3.40</td>
<td>3.28</td>
<td>289.85</td>
</tr>
<tr>
<td></td>
<td>(0.83)</td>
<td>(1.05)</td>
<td>(1.08)</td>
<td>(106.50)</td>
<td></td>
<td>(0.70)</td>
<td>(1.03)</td>
<td>(0.99)</td>
<td>(102.53)</td>
</tr>
</tbody>
</table>

Note: Experimental groups — W: Web access; ESR: Electronic Select Resources; HSR: Hard copy Select Resource.

*a,bCells with the same superscript are significantly different at p<.05.
composition length was not significant and there was no significant gender effect. The web access group for the transport topic also had the shortest compositions and for this topic the treatment group effect was significant ($F(2, 131)=5.68, p<.001, \eta^2=.08$). The hard copy select resource (HSR) group wrote significantly longer compositions than the web access (W) group (see Table 5).

The results of the MANCOVA analysis of the composition scores for the insect topic indicated significant relationships between the covariate (word count) and all three composition evaluation scores. There were significant multivariate effects associated with both gender ($F(3, 124)=3.01, p<.05, \eta^2=.07$) and group ($F(6, 250)=2.64, p<.05, \eta^2=.06$) but no significant gender X group interaction. The associated univariate tests indicated that there was a significant gender effect on the given information score ($F(1, 126)=4.88, p<.05, \eta^2=.04$) with female students ($M=3.73$) scoring significantly higher than male students ($M=3.25$). Significant experimental group effects were found for two of the three composition evaluation scores; holistic scores ($F(2, 126)=5.27, p<.01, \eta^2=.08$) and given information ($F(2, 126)=3.62, p<.05, \eta^2=.05$).

The results of the MANCOVA for the composition scores of the transport topic indicated significant relationships between the covariate (word count) and all three composition evaluation scores. As was the case with the first testing occasion there were significant multivariate effects associated with group ($F(6, 258)=3.55, p<.01, \eta^2=.08$) but no significant multivariate gender or gender X group interaction. Univariate tests indicated that there was a significant gender effect on the inference score ($F(1, 130)=4.57, p<.05, \eta^2=.03$). Although only a small effect, this was in the direction of male students ($M=3.36$) scoring higher than female students ($M=3.19$). A significant group effect was found for the holistic composition evaluation scores ($F(2, 130)=10.95, p<.001, \eta^2=.14$). This effect was the largest of all the differences in composition evaluation scores and was in the direction of the hard copy group gaining higher holistic scores than the other two groups.

As students were given two composition writing tasks four months apart and on each testing occasion they were placed in a different one of the three information access conditions (W, ESR and HSR), there were six different combinations of the treatments (Groups A to F). The structure of these experimental conditions is shown in Table 6 along with their mean scores on the four composition indicators.

Again the effect of the treatment combinations was assessed using MANCOVA with gender and treatment combination as between-subjects factors and three composition scores as dependent variables. Word count was entered as a covariate (separate analysis indicated no significant differences between any pair of groups on word count). The combination of experimental treatments over the two testing occasions had a significant multivariate effect ($F(15, 372)=2.20, p<.01, \eta^2=.08$). The univariate analyses indicated a significant effect on only one of the measures, the holistic scores ($F(5, 124)=4.80, p<.001, \eta^2=.16$). The two groups who had the hard copy select resources (HSR) at Time 2 had the highest holistic composition scores. Groups C, E and F had similar low composition scores. Groups E and F both had the hard copy select resources at Time 1, while groups C and E both had web access on Time 2.

A summary of the significant treatment effects at Time 1, Time 2, and for the combination Time 1/Time 2 groups, is presented in Table 7.
Each of the writing performance indicators was significantly related to the length of the answer, longer answers were assessed to be of higher quality. Gender differences were small and variable in that they were not consistently associated with any one measure of composition quality. Holistic scores were the only measure of composition quality consistently affected by the experimental treatments. However, the higher holistic scores were not consistent for any one type of resource condition across both topics. With the first topic, Insect Infestations, holistic scores were higher for the web and electronic select resource selected resource conditions than for the hard copy condition. For the second topic, Intelligent Transport Systems, students in the hard copy condition scored higher than students in the web access condition. When the combined Time 1 and Time 2 treatment groups were considered, there was some indication that higher holistic scores were associated with having the hard copy condition at Time 2. Having the information well structured and accessible throughout the writing task as in the hard copy condition appeared to be the most beneficial.

Table 6: Mean composition scores for combined treatments across two testing occasions (SD in parentheses)

<table>
<thead>
<tr>
<th>Time 1</th>
<th>Time 2</th>
<th>Combination</th>
<th>Holistic</th>
<th>Given Info</th>
<th>Inference</th>
<th>Word Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>ESR</td>
<td>A (n=20)</td>
<td>3.63 (0.60)</td>
<td>3.48 (0.99)</td>
<td>3.38 (0.86)</td>
<td>308.25 (83.77)</td>
</tr>
<tr>
<td>W</td>
<td>HSR</td>
<td>B (n=28)</td>
<td>4.18^abc (0.50)</td>
<td>3.43 (1.29)</td>
<td>3.70 (1.01)</td>
<td>315.68 (137.88)</td>
</tr>
<tr>
<td>ESR</td>
<td>W</td>
<td>C (n=17)</td>
<td>3.44 (0.58)</td>
<td>3.21 (0.83)</td>
<td>3.06 (0.79)</td>
<td>268.88 (69.93)</td>
</tr>
<tr>
<td>ESR</td>
<td>HSR</td>
<td>D (n=24)</td>
<td>4.00^ab (0.55)</td>
<td>3.94 (0.81)</td>
<td>3.35 (1.17)</td>
<td>332.63 (89.54)</td>
</tr>
<tr>
<td>HSR</td>
<td>W</td>
<td>E (n=21)</td>
<td>3.36^cd (0.79)</td>
<td>3.07 (1.03)</td>
<td>3.02 (0.90)</td>
<td>245.00 (80.23)</td>
</tr>
<tr>
<td>HSR</td>
<td>ESR</td>
<td>F (n=27)</td>
<td>3.43 (0.70)</td>
<td>3.20 (0.93)</td>
<td>3.06 (0.97)</td>
<td>295.52 (97.64)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>3.70 (0.70)</td>
<td>3.40 (1.03)</td>
<td>3.28 (0.99)</td>
<td>289.85 (102.53)</td>
</tr>
</tbody>
</table>


Cells with the same superscript are significantly different at p<.05.

Table 7: Summary of significant effects

<table>
<thead>
<tr>
<th>Time 1 topic (insect)</th>
<th>Time 2 topic (transport)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Word count (covariate)</td>
<td>**          ***         ***</td>
</tr>
<tr>
<td>Gender</td>
<td>*           *           *</td>
</tr>
<tr>
<td>Group</td>
<td>**          *           ***</td>
</tr>
<tr>
<td>Time1/Time2 Group Combination</td>
<td>***</td>
</tr>
</tbody>
</table>

*p<.05, **p<.01 and ***p<.001.
That this was not the case for the first topic suggests either a topic effect (there were significant differences in the level of interest in the two topics) or an effect of the previously experienced condition. A larger sample and a fully counterbalanced design would be required to separate these alternate explanations.

The second major issue of our research explored how conditions of information access influenced the quality of composition writing. Students were given differential access to relevant information on their composition topics. Following the current trend for students to have greater access to computers and to the Internet as information sources, we included a simulated web condition, a computer access condition and a hard copy information access condition in this study of composition writing. All three conditions provided information that students could use in their composition writing. Our finding that there were no consistent differences between the forms of information access is echoed by the results reported by De Bernardi and Antolini’s (2006) chapter in this volume.

One of the strong contentions in relation to improving students’ composition writing has been the need for students to have sufficient information to write about. Although the effectiveness of particular types of information access did not show a consistent preference for one form of information, when word count was entered as a covariate into the multivariate analyses of variance for both topics, significant positive relationships were found between composition length and all three other composition evaluation scores. These findings suggest that when students write longer compositions they not only include more information but also tend to write better and present more original ideas.

8 Conclusions

Students’ self-efficacy for writing and their interest in specific writing topics are important factors in writing performance. The findings of this study demonstrated that good composition writing is facilitated when students have confidence in their own writing ability and are interested in the required writing topic. In addition, our findings have demonstrated that the level of interest maintained across a writing task adds to students’ feelings of efficacy. Hence, the motivation of students’ composition writing is an important consideration for educators who are concerned to provide educational experiences that will help students improve their composition writing. Bandura (1997) has argued that providing mastery experiences is the most effective way of developing positive self-efficacy beliefs. At the same time, from the current findings it is clear that self-efficacy in composition writing draws on a number of sources, such as the prior knowledge students bring to their composition writing. It also draws on the level of interest triggered by the composition topic and the level of interest sustained across the writing task. Awareness of the combined influence of these three factors, self-efficacy with its implication of having experienced mastery in previous composition writing, a sound knowledge base for the topic in question, and a topic that triggers and sustains student interest, is important knowledge for those charged with the design and delivery of writing experiences for students.
Chapter 12

Observational Learning through Video-Based Models: Impact on Students’ Accuracy of Self-Efficacy Beliefs, Task Knowledge and Writing Performances

Mariet Raedts, Gert Rijlaarsdam, Luuk van Waes and Frans Daems

In this study, we present experimental evidence that observational learning is a powerful learning tool in academic writing education. Using a quasi pre- and post-test experimental/control group design we tested three effects of observational learning with first year university students (N=144). Both the students from the observational (N=72) and the control group (N=72) were given pre- and post-tests to benchmark and evaluate the accuracy of their self-efficacy beliefs, task knowledge and writing skills. The intervention consisted of three 1-hour sessions in which they learned how to write up a literature review, a genre that was unknown to them. The control group practiced the new text genre by four short and one longer writing exercise. The participants in the experimental setting did not complete any writing exercise during the writing course. Instead, they observed pairs of video-based peer models who were performing the last writing exercise of the control group. The results demonstrate that (1) observational learning had a more positive effect on the students’ self-perceptions of their writing performances in the observational group than in the control group; (2) observational learning enlarged students’ knowledge about how to write up a good summary from different sources; and (3) observational learning was effective for a complex writing task, such as the literature review: the experimental group linked the source material more often and wrote summaries with a better overall organization compared to the control group.

Writing and Motivation
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ISBN: 0-08-045325-2

In G. Rijlaarsdam (Series Ed.) and P. Boscolo & S. Hidi (Volume Eds.), Studies in Writing, Volume 19, Writing and Motivation (pp. 219–238). Oxford: Elsevier
1 Introduction

Observational learning occurs when people learn new skills from observing others, who act as models (Bandura, 1997). During the last two decades various studies have proven that learning-through-observation is an effective pedagogical tool with students of different ages and in various school subjects, such as mathematics (Schunk & Hanson, 1985, 1989; Schunk, Hanson, & Cox, 1987), reading (Couzijn, 1995, 1999) and writing (Braaksma, Rijlaarsdam, & Van den Bergh, 2002; Braaksma, Rijlaarsdam, Van den Bergh, & Van Hout-Wolters, 2004; Couzijn, 1995, 1999; Graham & Harris, 1994b; Zimmerman & Kitsantas, 2002).

Learning through observation involves more than 'blind imitation', it presupposes a process of four higher order thinking activities, namely: attention, retention, production and motivation (Bandura, 1997). The degree to which the observer has mastered these cognitive activities affects the effectiveness of observational learning. First and foremost, the observer must pay attention to the crucial (details in the) actions of the model. If learners concentrate on the wrong things or details, they do not benefit from the observed model. Because one usually does not duplicate the watched behavior immediately, the observer must be able to store the information in his memory in the form of rules and concepts for retrieval later. The third step involves the implementation of physical skills and the establishment of the necessary coordination to reproduce the watched behavior successfully. Finally, the learner must have the motivational desire to reproduce the behavior. Observed behavior that was evaluated as not useful or contra productive will probably not be imitated by the observer. If, however, individuals expect that imitation of the watched behavior will lead to some type of reward or reinforcement (e.g. a raise in academic performance), they are more likely to imitate the watched behavior.

This theoretical four-step pattern in observational learning was supported by Braaksma, Van den Bergh, Rijlaarsdam, and Couzijn (2001). They identified the elements of observation tasks that were effective when students were learning to read and write argumentative texts for the first time. Their study showed that students who were better in the identification of standpoints and arguments in the pre-test performed each of these activities better during the observational writing course. The researchers also found positive effects of peer evaluation and product elaboration activities on post-test writing performances. Observers who correctly evaluated the peer models turned out to be the better writers. The same was true for product elaboration. Students who more often commented correctly on the argumentative texts and structures of the models wrote higher quality argumentative texts.

Because modeling is a form of social comparison, it is hypothesized to be an important source of information about one’s level of efficacy (Bandura, 1986, 1997). Self-efficacy beliefs are defined “as personal beliefs about one’s capabilities to organize and implement actions necessary for attaining designated levels of performance” (Bandura, 1986, p. 391). According to Bandura’s (1986, 1997) Social Cognitive Theory, these perceived feelings of self-efficacy are important predictors for human behavior. They affect people’s motivational and self-regulatory activities in many ways (Pajares, 1997), and as a result determine what people actually do with their knowledge and skills. Consequently, according to social cognitive theorists, student’s self-efficacy beliefs are strong predictors for their level of
academic attainments. Students with high self-efficacy beliefs approach difficult tasks as challenges, they show greater intrinsic interest in the task at hand, set higher achievement goals for themselves and put in greater effort when they encounter difficulties during task performance. These students also experience less stress and anxiety before and during task execution and a greater willingness to change their task approach if things do not work out as they were supposed to (Pajares, 1996a).

Watching similar others successfully solve a task “can raise observers’ self-efficacy and motivate them to try the task themselves, because they are apt to believe that if others can succeed, they can as well” (Schunk, 1987, pp. 151–152). Schunk and Hanson (1985, 1989) and Schunk et al. (1987) demonstrated that observing peer models similar in competence led to higher self-efficacy with children learning mathematical skills.

Due to its solid theoretical grounding, self-efficacy has emerged as a major focus in research on writing motivation (Bruning & Horn, 2000). The positive link between writers’ self-efficacy beliefs and their writing performances has been reported repeatedly (e.g. Pajares, 2003; Pajares & Johnson, 1994, 1996; Pajares, Miller, & Johnson, 1999; Pajares & Valiante, 1997; Shell, Colvin, & Bruning, 1995; Shell, Murphy, & Bruning, 1989; Zimmerman & Bandura, 1994).

Moreover, analyses revealed that writing self-efficacy is associated with motivation variables such as writing anxiety, grade goals, perceived value of writing and self-efficacy for self-regulation (see, e.g. Pajares & Johnson, 1996; Pajares et al., 1999; Pajares & Valiante, 1997; Pajares, Valiante, & Cheong, this volume; Zimmerman & Bandura, 1994). Thanks to multiple regression models and path analyses self-efficacy researchers could also shed light on the direct and indirect effects of writing self-efficacy beliefs on writing performance (Pajares, 2003). Research also showed an association between writing self-efficacy and interest (see chapters in this book: e.g. Boscolo, Del Favero, Borghetto; Hidi, Ainley, Berndorff, & Del Favero).

In most studies in which students’ self-efficacy beliefs were related to their performances on a writing task, the essays were limited in length and complexity. Shell et al. (1989) and Pajares and Johnson (1994) let their students write a 30-min essay on the qualities of a good teacher. A two-paragraph essay on their favorite TV program was used as the yardstick to measure the students’ writing performance in the study of Shell et al. (1995). Finally, Pajares and Johnson (1996) assessed ninth graders’ writing capacities by means of a 30-min essay entitled “My Idea of a Perfect Day”. Bandura (1986, 1997) has repeatedly pointed out that the regulative potential of self-efficacy beliefs is influenced by the complexity of the task.

In comparison to lower complexity tasks, highly complex tasks require different skills necessary for their successful execution by placing greater demands on (a) required knowledge, (b) cognitive ability, (c) memory capacity, (d) behavioural facility, (e) information processing, (f) persistence, and (g) physical effort. (Stajkovic & Luthans, 1998, p. 241)

A multitude of (cognitive) demands in complex tasks does not lend itself to easy appraisal. People often have misleading ideas regarding how much effort needs to be put in, how long to sustain it, and when to make corrective actions (Bandura, 1986).
Besides, in most self-efficacy studies in the writing domain, self-efficacy scales only contained items that assessed students’ beliefs about grammar, spelling, punctuation and their ability to coherently organize sentences into a paragraph (Pajares & Johnson, 1994, 1996; Pajares et al., 1999; Pajares & Valiante, 1997; Shell et al., 1989, 1995). Content and process-related items were absent. Task dimensions such as ‘punctuation’ and ‘spelling’ are concrete and therefore relatively easy to contemplate, especially by students at high school level or university.

Raedts, Daems, and Van Waes (2003) however, studied the correlation between first year students’ self-efficacy beliefs and their actual scores on an academic writing task (i.e. a two-page literature review of nine scientific publications). Students were asked to assess their performances for correctness of referencing, quality and quantity of content and overall organization of the text. Results showed that there was no correlation between students’ feelings of self-efficacy and the quality of their literature reviews (measured by the same three categories as the items from the self-efficacy scale). Only one out of three students in the sample turned out to have realistic ideas about his writing capacities.

The degree to which students’ self-efficacy judgments reflect their actual competence has only received modest attention in the self-efficacy research area. According to Bandura (1986, 1997), the most influential self-efficacy beliefs are those that slightly exceed what one can actually accomplish. Studies in the mathematical domain seem to prove this assumption. When asked to rate their academic achievements, most students turn out to be somewhat overconfident (Pajares, 1996b; Pajares & Kranzler, 1995; Pajares & Miller, 1994, 1997). However, “how much confidence is too much confidence [and] when can overconfidence be described as excessive and maladaptive in an academic enterprise” (Pajares, 1996b, p. 565)? Research that dealt with students’ accuracy to predict their own writing capacities focused on learners with severe writing problems (for an overview, see Klassen, 2002). These studies proved that compared to skilled writers, writers with learning disabilities hold unrealistic high feelings of self-competence (e.g. Graham, Schwartz, & MacArthur, 1993; Graham, Harris, & Mason, 2005).

Overestimation can be affected by many factors. As stated earlier, task complexity hampers accurate assessment of one’s (writing) skills. Poor knowledge of task demands can also lead to misjudgments of competence. The assumption that knowledge about writing affects writing outcomes and writing approaches has been stated by a large body of research. McCutchen (2000) for instance, found that skilled writers have access to organized schemata of text structures in their long-term memory, which facilitate their actual writing process. Ferrari, Bouffard, and Rainville (1998) proved that skilled and poor writers differ in their discourse knowledge. Schoonen and De Glopper (1996) found that good writers attach more value to higher order text features (e.g. organization of text).

“Therefore, to determine whether people harbor exaggerated appraisals of their capabilities, one must also measure what they believe the task demands to be and the accuracy of those beliefs” (Bandura, 1997, p. 66). In the case of new and unfamiliar tasks though, it is likely that students have a wrong perception of which skills are required to perform the task successfully and which standards have to be met. Here, observational learning could be a strong pedagogical tool. Models may reveal task difficulty and potential caveats, so that the observers may change their self-efficacy beliefs to more accurate heights (Bandura, 1997). This improved calibration should result in better understanding
by students of “what they know and do not know so that they more effectively deploy appropriate cognitive strategies during the problem-solving process” (Pajares & Kranzler, 1995, p. 440). Studies in the writing domain have shown that students who use more self-regulatory processes during their writing process write more effectively and attain higher grades in writing (Zimmerman & Risemberg, 1997).

2 Aim of the Study

We sought to extend on previous research in the writing self-efficacy domain. We did not focus on the predictive and mediating role of self-efficacy beliefs in writing outcomes, as Pajares and his colleagues did. Instead, we set up an experiment to test, whether the instructional technique of observational learning through video-based models improves students’ calibration on a difficult and unfamiliar writing task. As far as we know, this is the first study in the writing domain that combines the issues of observational learning through video-based models and college students’ accuracy of their self-efficacy beliefs for unfamiliar writing tasks. The design and approach of our writing intervention course was highly inspired by that of Couzijn (1995, 1999) and Braaksma et al. (2002, 2004). The present study, however, expands from Couzijn and Braaksma in important ways.

Most important contribution of the present study is the inclusion of two measures as a result from observational learning: self-efficacy and task knowledge. Couzijn and Braaksma et al. assumed that learning by observation influences the students’ beliefs of writing competence in a positive way, but they did not support their assumptions with measurements of self-efficacy beliefs. Braaksma et al. (2004) suggested in their discussion that the effect of observational learning on writing could be attributed to higher awareness of ‘genre’ features and task operations (declarative and procedural knowledge). They advocated for further research to test the presumption that observational learning enlarges students’ knowledge base about the new writing task stronger than a more traditional writing approach.

Another difference is the target group of participants. Our participants were freshmen at university, not high school students as in Couzijn’s and Braaksma et al.’s studies. Consequently, we had to choose another type of writing task for our experiment. We decided upon the comprehensive literature review, a task commonly assigned in higher education (Perin, Keselman, & Monopoli, 2003). Belgian students are not familiar with this text genre when they enter university.

Research shows that undergraduate students often simplify the writing of literature reviews by repeating the content of the source material sequentially in their papers (e.g. Froese, Gantz, & Henry, 1998). This writing approach results in poor quality papers where “each paragraph outlines a particular article or study, with a description of what the source authors investigated and their results” (Granello, 2001, p. 298). Only a minority of the students at undergraduate level construct reviews that meet academic standards (Makovsky, 1985; Campell, Smith, & Brooker, 1998). Advanced quality literature reviews organize, integrate and evaluate the source texts (Bem, 1995). These kinds of papers are thematically organized and analyze the source materials for strengths and limitations. Contradictions and inconsistencies in research findings are acknowledged to the reader and explained.
By selecting the literature review as our critical writing task, we met Braaksma et al.’s (2004) recommendation to study the effects of observational learning for less structured and larger writing tasks. The writing tasks selected by Couzijn and Braaksma et al. were constrained: the participants wrote relatively short texts (one paragraph) based on pre-arranged argumentation structures.

To sum up, the purpose of the present study was threefold. Our first aim was to examine whether observational learning improves the students’ ability to predict their writing competence on a complex and new writing task. We hypothesized that the calibration between students’ writing self-efficacy beliefs and their actual writing performance would be better for students who learned to write a literature review by observation than for students in the learning-by-writing condition (Hypothesis 1). Second, we assumed that observational learning would expand students’ knowledge base of the new genre more than a writing course where students practice the new genre by means of short writing assignments. We hypothesized that students in the observational condition would expand their knowledge base about text genres and effective strategies for writing a good research summary more than students in the learning-by-doing condition (Hypothesis 2). Finally, we wanted to verify that observational learning is an effective instructional tool for large and complex writing assignments without a pre-arranged structure (such as the literature review). We hypothesized that students who learned to write a literature review by observing the products and writing approaches of peer models would outperform their colleagues in the control condition. In other words, on a writing test in which writers have to combine different source texts, students in the observational condition would link source material more often and organize their summaries better in comparison to the participants of the control group (Hypothesis 3).

3 Method

The experiment was carried out at a Flemish university, where the first author teaches as a writing assistant in the Faculty of Applied Economics. All first year students (N=211) enrolled for the course Research Methodologies & Psychology were obliged to participate in the study. Sixty-seven of them were excluded from all data analyses for various reasons: they were either non-native speakers of Dutch, or non-freshmen, did not show up at one or several sessions, or had already left university by the time the last sessions of the intervention study took place. Therefore, the final sample size was 144 students (M=87, F=57).

3.1 Procedure

We set up a quasi-experiment with a pre- and post-test control/group design. Because the data were collected during regular class sessions, we had to assign groups of approximately 30 students instead of individual participants to one of both conditions.

Data were collected in eight sessions. During the first month of the academic year pretests were administered in four separate sessions. In the second half of January, the experimental intervention took place. The intervention was presented to the students as an introductory course in academic writing (three lessons of 60 min). One day after the writing
course the post-tests were administered during one session of 180 min. Table 12.1 presents the general research design. The difference between the two conditions is situated in sessions 6 and 7.

As an incentive to show their best writing in the pre-test writing tasks, students were told their final mark for the course would be upgraded for each text that was above the average group level. Also for the post-test writing task, we tried to ensure and encourage students’ best performances. We informed students that those who scored above 55% on their writing test would be exempted from the written exam in March.

The instruments we used as pre- and post-test measurements and the writing course material for both the control and the observational group are presented in the following sections.

The pre-test phase During the first three weeks of the academic year students completed several tests to benchmark and to evaluate their cognitive ability, reading competence and writing skills. All tests were group administered.

Table 1: Overview of the general research design

<table>
<thead>
<tr>
<th>Session</th>
<th>Duration (minutes)</th>
<th>Measurement</th>
<th>C</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>120</td>
<td>Pre-test: intelligence test</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>2</td>
<td>120</td>
<td>Pre-test: reading skills</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>3</td>
<td>60</td>
<td>Pre-test: self-efficacy beliefs</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>writing skills (task 1)</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>4</td>
<td>60</td>
<td>Pre-test: self-efficacy beliefs</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>writing skills (task 2)</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>5</td>
<td>60</td>
<td>Pre-test: task knowledge</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Intervention: introduction theory</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>6</td>
<td>60</td>
<td>Intervention: four short writing exercises on the base of ‘4 index cards’</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>three observation exercises: observing pairs of peer models on CD-ROM</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>7</td>
<td>60</td>
<td>Intervention: one writing exercise on the base of five indexcards</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>three observation exercises: observing pairs of peer models on CD-ROM</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>8</td>
<td>180</td>
<td>Post-test:</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>task knowledge</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>self-efficacy</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>writing skills</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Note: C, control; E, experimental condition.
Cognitive ability Writing a literature review presupposes complex cognitive activities such as to determine similarities and contradictions in research results and articulating them clearly in your own words. Therefore, we included a test that measures students’ ability to discern abstract relations between verbal, mathematical and graphical units. The AH56-L intelligence test of Minnaert (1996) contains 72 multiple-choice questions of three different types (sequences, analogies and relations). The scores on the AH56-L intelligence test proved to be predictive for students’ overall grades at the second semester (Minnaert, 1996; Masui, 2002).

Reading ability We also included a measure of global reading strategies as a pre-test because writing a literature review involves selecting, interpreting and connecting the content of the different source texts. The reading test consisted of two short texts (approximately 400 words each). The first text was of general interest; the second dealt with a business topic. We included the results of the 10 questions that measured students’ ability to (1) extract the main point in both texts and (2) their global comprehension of the content.

Writing competence As a benchmark for students’ writing competence, we used two writing tasks of 60 min each. In both tasks we provided students with information that they had to reorganize and integrate in their own texts; in that respect both pre- and post-test for writing resembled. The first writing assignment was a business-writing task adopted from a previous study on the writing ability of 18 year olds (Leroy, Rymenans, & Daems, 1991). Students were provided with descriptions of three different business hotels. This information was presented to them in plain text form. It was the students’ assignment to evaluate the hotels on their suitability for a business meeting and to report their hotel choice to the general manager of the company in a formal e-mail, together with a summary table of the three hotels in an attachment file.

In the second writing task, we asked our students to write an argumentative text on ‘English as the lingua franca at university’. The argumentative text is a widespread writing task in writing research (e.g. Andriessen, Coirier, Roos, Passerault, & Bert-Erboul, 1996; Leroy et al., 1991; Pouit & Golder, 2002; Rijlaarsdam, 1986). Our participants all received the same list of 13 contra and 7 pro arguments and were instructed to take the position of the opposition. They were challenged to write a well-organized document using all 20 arguments. The purpose of the text was to convince the teaching staff not to switch to English as the language of instruction.

To grade students’ writing performance we used analytic scoring. It should be noted that writing performance was assessed on the basis of the students’ skills in rearranging the provided information and organizing their texts. We did not score grammar, style, punctuation and spelling. This choice was motivated by Renkema’s (1994) CCC-model for text quality. According to the model, good texts meet the following three criteria: correspondence between writer and reader and between text features, consistency and correctness at all text levels (hence CCC-model). These three criteria apply to five categories, decreasing in importance: genre, content, organization, formulation and finally presentation of the text. Hence, more weight should be attached to the correspondence of content than to the correctness of punctuation in the scoring instrument.

Quality of content was scored using guidelines that described the standards the information in the text had to meet. Organization was scored on 5-point scales. The texts were scored by one of the researchers and several undergraduate students in applied linguistics.
Scorers were unaware of the students’ identities and the scores they had received from the other scorer. Interrater reliability scores were measured per scoring item using the following formula: $K \times r / 1 + (K - 1) r$. Whereas $K$ stands for the number of raters per text (i.e. two), and $r$ for the Pearson correlation. The scores varied from 0.78 (cohesion between paragraphs) to 0.95 (content of the table in attachment) for the e-mail, and 0.74 (cohesion between sentences) to 0.96 (number of correct arguments) for the argumentative piece. Pearson correlation between the scores on both writing test reached 0.22 ($p=0.01$). In the data analyses, we therefore used the mean score for both texts as a measure for students pre-test writing performances.

**Writing self-efficacy** Before they wrote their e-mail and argumentative text, we asked the students to make self-efficacy judgments. The students rated their self-efficacy after they had read the complete assignment. In line with Bandura’s (1986, 1997) guidelines and most previous studies in the writing self-efficacy domain, we operationalized students’ self-efficacy beliefs as their judgments of competence for the various composition skills connected to the writing task. We asked students to estimate their writing skills on a scale from 0 (no chance) to 100 (absolutely certain). This format was chosen because Pajares, Hartley, and Valiante (2001) found that a writing skills self-efficacy scale with a 0–100-response format was psychometrically stronger than one with a 5-point Likert scale. The writing self-efficacy scale for the e-mail contained 10 items. The Chronbach’s $z$ measure of internal consistency reliability was 0.91. Item total score correlations ranged from 0.55 to 0.83. The writing self-efficacy scale for the argumentative text comprised eight items. We obtained a Chronbach’s $z$ of 0.89. Item total score correlations ranged from 0.55 to 0.78.

**Calibration for writing performance** The accuracy of students’ confidence judgments was computed by subtracting their actual scores on the two writing pre-tests (scores converted to 100) from their mean scores on the writing self-efficacy scale (possible range between 0 and 100). Underestimation was defined as scores below zero. Scores above indicate overestimation.

**The intervention** Mid-January, participants in both conditions followed a short course in academic writing, in which they learned how to transform information from different source texts into a research review. This text genre was completely new to them. The course material was especially developed for the experiment. The design and approach was inspired by Couzijn’s (1995, 1999) and Braaksma et al.’s (2002, 2004) research project.

In the first session (60 min) students of both groups received a syllabus, which contained a short introductory chapter on plagiarism, followed by the general APA-reference guidelines. Further, the syllabus demonstrated the importance of note taking during the reading stage of conducting a literature research and introduced a filing system on the basis of index cards. To stimulate active reading of the text material, students had to solve a short cloze test at the computer. At the end of the first session students had to hand in their syllabus, to make sure that all participants spent the same amount of time reading and studying the APA-reference guidelines. Students were told they would receive their syllabus back during the next sessions of the writing course.

**Second session, control group** Participants performed four short writing exercises at the computer. All students received four index cards. Each card entailed information about a research article on television violence and its effect on children’s fear reactions. The index cards all had the same layout and carried the same type of information from the
source text. The full references stood at the top. Underneath, details about the research method, the followed procedure and the composition of the sample (sex and age of the participants) were provided. The research results were listed in the next section. At the bottom of one index card, an excerpt from the original text was typed out. After they had read the information on the four index cards, the students were instructed to open a file that was stored on the computer. This file contained four short writing assignments with answer sheets. First, students had to summarize the research results of the study on the third index card using the APA-reference guidelines. In the second exercise students had to combine the research results of the first and the third index cards. These studies came up with contradictory results. Next, students had to write down the text excerpt on index card four as a quote and as a paraphrase. The last exercise consisted of combining the information of the four cards in one short paragraph. If students had completed an exercise before the provided time span, they were instructed to wait until they received a sign to move on to the next exercise. At the end of the session students were instructed to e-mail the entire document to the e-mail account written on the last page of the writing course.

Third session, control group

In the last session of the writing course, the students received five index cards. Each card entailed information of a publication on television violence and its effect on children’s aggressive behavior. Students were instructed to write up a summary with the information on the five cards using the APA-style for short references in academic texts. They were told that the research review should not exceed the length of one page and should meet the academic standards of the genre. The students had 50 min to complete the writing assignment and post it in an e-mail account.

Second session, experimental condition

The participants in the observational group received the same index cards on television violence and children’s aggression that were provided to the control group in the last instructional session. They were told to carefully read the information on the cards. Then they received a workbook and were informed about the video course they were going to see and the observation exercises they had to complete. The video course was stored on the students’ individual computers, so they could watch it at their own pace. All students had a headphone at their disposal.

The video course consisted of six fragments (three for each intervention session), which dealt with different aspects and writing phases of the literature review (e.g. comparing research results on the index cards, connecting studies with similar research results in the body of the text, integrating a quote or paraphrase in your own text, revision of the first draft). In each exercise, the students saw a pair of videotaped peer models. In fact, these were actors provided with a script and instructed to think aloud during their writing process. The scripts were written on the basis of think aloud protocols produced by first year students in an earlier phase of the research project. One of the models was a good writer; using effective writing strategies and writing a text that would lead to a knowledge transforming research review. The other model did less well. These students were using contraproductive strategies and producing a descriptive text without coherence.

The video fragments were recorded and produced with MORAE®. This software tool allows users to combine external video and sound recordings with recordings from the computer’s screen and edit and play them simultaneously afterwards. Figure 12.1 displays a fragment from the observational writing course.
In the observational course three types of information about the text production were presented to the students. First, the majority of the screen was filled with a (video) recording of the models’ text production in WORD. Thanks to these recordings, the participants in the experimental writing course could follow the on-screen writing activities in real-time. They could observe where models paused, scrolled through their texts and which revisions they made. They also saw the models, sitting at a desk behind their computer. These recordings were made by an external digital camera and added to the recordings of the text production in WORD using MORAE®. Thanks to this procedure ‘pauses’ in the writing process on the computer screen could be linked to ‘external’ writing activities (e.g. taking notes or rereading information on the index cards).

The models wore head phones with a microphone and where thinking aloud during text production. These recordings were also registered by MORAE® and added for the observational exercise. Because of this the observers got insight into the writers’ heads at different stages of the writing process.

Figure 1: Fragment from the video course produced with MORAE®

Effects of Observational Learning
the models used, they also heard what the models thought at specific moments in the writing process or how they tried to solve problems and difficulties during the writing process. We also showed the observants that writing a cognitively complex literature review does not result from a linear process that starts with reading the information on the index cards and ends with one revision round of the final text. The good models often interrupted their actual writing activities, to reread the information on the cards or to check, whether the text they had produced so far was still in line with an outline they had previously drawn.

The participants’ workbook consisted of six exercises that were all constructed in the same way. First, we guided the participants’ attention to specific text parts and writing approaches. We stimulated the students to take notes during their observation of both models. After having watched the video, we asked students to evaluate the texts and approaches of both models and to identify the weaker and the stronger writer. Then they had to pick out one writer and elaborate on his/her writing strategies, linking them to the quality of the final text. We expected that this intervention would motivate our students to reproduce the strategies of the better models in the post-test for writing. In other words, we tried to create a learning environment that met up with Bandura’s (1997) conditions for effective observational learning, by guiding students’ attention to important details, stimulating retention of the watched behavior, and consequently raising their motivation to imitate the strong model.

The length of the video fragments varied between 8 and 15 min. Consequently, observers did not see the entire writing process, only excerpts. In total, nine different models appeared in the exercises. If a model appeared in different exercises, it could be the strong model in one exercise and the weaker one in another. Consequently, students could not predict which of the two models was the better writer. We also alternated the order of appearance: sometimes the weaker writer came first, sometimes the stronger. In both conditions the total time spent on the exercises varied between 110 and 120 min, keeping the total learning time in both the control and the observational learning setting similar.

In the second session of the writing course, the students in the observational condition completed three observational tasks. First, they watched and compared two peers reading the information on the index cards. In the second exercise, the two models not only read the information on the cards, but also tried to write the first lines of their text. In the last exercise, the two models combined the information of two source texts. In each observational task, students did not see the entire writing process. What they saw were excerpts shown in a linear way. Between these excerpts a black screen appeared, indicating that there was a time interval between the two video fragments.

Third session, experimental condition At the beginning of the third session, the participants received the second part of the workbook. Just as in the previous session, they observed pairs of models writing a literature review. The first observation task dealt with integrating sources that are contradictory in research results. Next, the students saw both models trying to integrate the same piece of text from the index card into their own summary (either as a paraphrase or as a quote). The last exercise showed the final revision process of the models.
Post-tests

*Writing performance*  One day after the writing course all students wrote a summary of nine research articles on ‘adolescence and alcohol abuse’. The students received nine index cards (one per publication). Four cards also contained text excerpts from the original source text. Students were instructed to use four of these fragments in their own text: two as a quote and two as a paraphrase. Students’ texts were analyzed for organization (30 marks); rearrangement and interpretation of the various research results (50 marks); and correctness of the application of APA-reference guidelines (20 marks). These three text dimensions were scored on the basis of several 5-point scales. The texts were scored by one of the researchers and several undergraduate students in applied linguistics. Scorers were unaware of the students’ identities and the scores they had received from the other scorer. The scores for the interrater reliability varied from 0.81 (cohesion between paragraphs) to 0.96 (correctness of referencing).

*Writing self-efficacy*  After they had read the information on the nine index cards, we asked the students to assess their writing skills for the following nine text criteria: correct application of the APA-guidelines for references and quotes (two items), quality, quantity and consistency of content (three items), overall text structure and coherence, cohesion between sentences, construction of the introduction and construction of the conclusion. Again we used a scale with a 0–100 format instead of a traditional Likert format. We obtained an $r$ coefficient of 0.90. Item total score correlations ranged from 0.56 to 0.73.

*Calibration*  Following the same procedure as for the writing texts in the pre-test phase, the accuracy of students’ confidence judgments was computed by subtracting their actual scores on the post-test (maximum score 100) from their mean scores on the writing self-efficacy scale (possible range: 0–100).

*Task knowledge*  Task knowledge was measured twice: at the beginning of the writing course (session 1 of the intervention) and a second time just before the students completed the writing self-efficacy scale of the post-test for writing. We elicited the students’ task knowledge in an indirect way. The first time we asked students to make up two lists: one with at least four steps to write up a good literature review and one with at least four important text features of the text genre. For the post-test measurement we had the students write an e-mail to a peer student. In that e-mail they were asked to write down four effective writing strategies to write up a good literature review and four text features their peer student specifically had to draw his attention to. To write this e-mail the students had at their disposal their lists from the pre-test, to make sure that they did not interpret the second measurement as a memory test.

The list items and the advices in the e-mails were classified by means of a detailed coding scheme. The scheme was adapted from Schoonen and De Glopper (1996). Their coding scheme is hierarchically structured, and therefore allows classification of the students’ answers at four levels of specificity. Our scheme entailed two sections: *text features* and *writing processes*. Table 12.2 presents a small part of the coding scheme. The numbers between brackets refer to the specific codes.

Genre knowledge was subdivided in the following main categories: *content, organization and referencing*. We distinguished four main categories of writing processes: *handling of the data on the index cards, content and structure planning activities, text composing*
and revising. Task knowledge phrased in vague terms was assigned with 1 point (main category) or with 2 points (subcategories). More specifically phrased, genre text features or writing strategies got 3 points or 5 points (codes ending in a unit).

Between or interrater agreement was checked on the basis of 30 lists and e-mails. Cohen’s $\kappa$ was used to compute between or interrater agreement. Agreement measure was conducted at the level of the main categories. Agreement between both raters was high: $K_c$ was 0.86.

### 3.2 Data-Analyses

We used two different statistical tests in our analyses. Independent sample $t$-tests were used to compare differences between mean group results for both conditions in all pre- and post-test measurements. In the pre-test we used two-tailed measurements, in the post-test one-tailed measurements. We set the significance level at 0.05.

Because the $p$-value cannot be used to infer the size of the treatment effect, we also calculated effect sizes, which indicate to what extent the differences between the control group and the experimental group were explained by the intervention course. There are two different ways to express effect size: Cohen’s $d$ and $\eta^2$. The $d$ index ranges from 0 to $\infty$. The larger the $d$ index, the larger the difference between our both treatment groups. Values of 0.2, 0.5 and 0.8 are respectively small, medium and large effect sizes (Cohen, 1988). The $\eta^2$ index ranges from 0 to 1, and allows a more useful interpretation. For example, $\eta^2$ of 0.5 means that 50% of the variance in the differences between both groups can be attributed to the observational course. $\eta^2$ seldom reaches this level though. According to Cohen (1988) $\eta^2$ values of 0.01, 0.06 and 0.14 represent respectively small, medium and large effect sizes for $t$-tests.

Before comparing the differences between both groups on the post-tests for calibration, task knowledge and writing performance, we checked for a priori differences between the conditions. Table 12.3 presents the mean scores, standard deviations and $t$-test results for both groups for all pre-test measurements.

Table 12.3 shows that there were no significant initial differences in students’ cognitive ability, reading skills, writing ability, accuracy of predicting their writing competence for

<table>
<thead>
<tr>
<th>Section</th>
<th>Main category</th>
<th>Subcategory</th>
<th>Item</th>
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<tbody>
<tr>
<td>Text</td>
<td>Content (1000)</td>
<td>Quality of content (1100)</td>
<td>Factuality: general (1110)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Information must be correct (1111)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Information must be scientific (1112)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Define key terms/concepts (1113)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Use quotes (1114)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Quantity: general (1120)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Do not give to many details (1121)</td>
</tr>
</tbody>
</table>
writing tasks they were familiar with and task knowledge about the academic text genre of
literature reviews.

4 Results

4.1 Observational Learning and Its Effect on Students’ Calibration

The first focus of our study involved the issue of students’ calibration between self-perceptions of competence (i.e. their self-efficacy beliefs) and actual writing performances on an academic writing task that was new to them. Pre-tests had revealed that students of both conditions were well calibrated for the first writing task (e-mail with attachment), but over-estimated their writing capacities by almost 10% for the argumentative text on English as the lingua franca at university (see Table 12.3). These differences can be explained for by the differences in task difficulty of both pre-test writing assignments.

The first writing task was shorter and cognitively less complex than the second task. If students succeeded in extracting the most important hotel features in a linear text and compared them in a table, they obtained a high score. The second writing task demanded greater effort and more self-regulation activities from the students. They had to start with organizing and rearranging the 13 contra and 7 pro arguments before they could integrate and contrast them. Students also had to write a clear introduction and conclusion. Poor calibrated writers were those who had simplified the writing assignment to a text that listed the 20 arguments.

Writing a literature review that meets academic standards compels students even more to make full use of their cognitive capacities. Students not only had to write a text with overall good organization but had to take into account the APA-reference guidelines as well. Just as in the argumentative text, students not only had to organize and integrate the different research results, but also had to evaluate the quality of the nine publications. The pitfall with this writing assignment was that students would not link source material across articles, but present each publication as a stand-alone piece of information.
We expected that the observational writing course would help the observants to better grasp task difficulty. Because the portrayed video models were thinking aloud during text production, they implicitly revealed task demands and necessary self-regulatory strategies to write a summary at a cognitively advanced level. In the observation exercises we explicitly asked students to make connections between effectiveness of writing approach and the quality of the written product. Therefore, observational learning should change the observers’ self-efficacy beliefs to a more accurate level. The data indicated that this was the case. Students in the experimental group were better calibrated than their colleagues in the control group ($t=2.393, df=142, p<0.009$, one tailed). The mean group score for students’ calibration was 0.86 (SD=14.7) in the experimental group, and 6.71 (SD=14.6) in the control group. In other words, the students from the observational course succeeded in predicting their actual writing scores on the research review almost perfectly. The students from the control condition overestimated their own writing competence on average by almost 7%.

As mentioned above, the $p$-values do not give indications about the effect size of the observational course on students’ calibration between self-efficacy beliefs and writing performances. We calculated $r^2$ and obtained a value of 0.04. This result can be interpreted as follows: 4% of the differences in students’ abilities to predict the writing scores on their first literature review are due to the type of writing instruction. According to Cohen’s (1988) standards this is a small to moderate effect.

In conclusion, our results indicate that an experimental intervention of 120 min where students do not write but observe peers is sufficient to bring their self-efficacy beliefs regarding the new writing task to an accurate level. Consistent with our expectations, students in the control condition overestimated their writing capacities. An overview of the number of underestimators, overestimators, and well-calibrated writers in both conditions is presented in Table 12.4.

A $\chi^2$-test revealed significant differences between both conditions ($\chi^2=7.58, df=2, p=0.02$). We defined students as overestimators when they overestimated their writing capacities by more than 10%. Students were considered to be underestimators when their scores on the writing task were 10% higher than their self-efficacy scores. As can be seen in Table 12.4 the number of well-calibrated writers is much higher in the experimental group. About half of the students of the experimental group were able to predict their writing scores. In the control condition only one out of three students was well calibrated. Overestimators are clearly overrepresented in the control group (48.6% of all students in that group). Only one out of four students who learned to write by observation was too

<table>
<thead>
<tr>
<th></th>
<th>Control condition</th>
<th>Experimental condition</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underestimators</td>
<td>11 (15.3%)</td>
<td>16 (22.2%)</td>
<td>27 (18.8%)</td>
</tr>
<tr>
<td>Well-calibrated writers</td>
<td>26 (36.1%)</td>
<td>37 (51.4%)</td>
<td>63 (43.8%)</td>
</tr>
<tr>
<td>Overestimators</td>
<td>35 (48.6%)</td>
<td>19 (26.4%)</td>
<td>54 (37.5%)</td>
</tr>
<tr>
<td>Total</td>
<td>72 (100%)</td>
<td>72 (100%)</td>
<td>144 (100%)</td>
</tr>
</tbody>
</table>
optimistic about his or her writing capacities for the new writing task. In the observational group, 16 students underestimated their writing capabilities. In the control group, the number of underestimators was smaller, but this difference was not significant.

4.2 Observational Learning and Its Effect on Task Knowledge

To examine the effect of observational learning on students’ task knowledge base, we first compared the post-test task knowledge base of both groups. Table 12.5 presents the mean scores, standard deviations, and t-test results for pre- and post-test measurements. As mentioned above, we split up task knowledge in knowledge about text features (genre knowledge) and knowledge about relevant writing strategies (knowledge of writing processes).

Opposite to what we had expected, students in the observational condition did not have more detailed knowledge of what a good literature review should look like than students in the control condition (t=0.245, df=141, p>0.05, one tailed). Their knowledge of effective writing strategies however, was significantly more extensive: t=4.410, df=141, p<0.001, one tailed. By calculating $\eta^2$, we could interpret the differences in task knowledge for writing strategies in terms of effect size. The $\eta^2$ index ($\eta^2=0.12$) showed that 12% of the differences in the students’ task knowledge of effective writing strategies can be ascribed to the type of writing instruction. These results come close to what Cohen (1988) considers to be a large effect size.

Yet, when we look at the knowledge of writing strategies in more detail, we see that there are substantial differences for the four types of strategies (information gathering, planning, composing and revision) between the students of both conditions. Separate t-tests for the four writing strategies (Table 12.6) show that the instructional intervention caused effects for strategies concerning information gathering and planning of the text, but no effects for strategies concerning text production and revision. The effect of the observational writing course on task knowledge for strategies about planning the content and overall structure of the text is slightly larger ($\eta^2=0.09$) than for strategies about identifying and rearranging the information on the index cards ($\eta^2=0.08$). Both values indicate moderate effect sizes. In both cases, almost 10% of the differences in students’ task knowledge can be attributed to the instructional condition.

Table 5: Group differences for task knowledge between both conditions on pre- and post-test

<table>
<thead>
<tr>
<th>Task knowledge</th>
<th>Control condition</th>
<th>Experimental condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text features pre-test</td>
<td>M=9.47, SD=5.32</td>
<td>M=8.01, SD=4.26</td>
</tr>
<tr>
<td>Writing strategies pre-test</td>
<td>M=10.99, SD=5.78</td>
<td>M=11.62, SD=6.11</td>
</tr>
<tr>
<td>Text features post-test</td>
<td>M=11.56, SD=5.50</td>
<td>M=11.82, SD=7.13</td>
</tr>
<tr>
<td>Writing strategies post-test</td>
<td>M=13.23, SD=5.63</td>
<td>M=18.11, SD=7.47</td>
</tr>
</tbody>
</table>

*p<0.001.
In conclusion, it seems that observational learning mainly influenced the students’ knowledge about writing strategies that take place in the beginning of the writing process. Our results also indicated that our observational writing course had no effect on students’ production strategies. These results are surprising though. Only two of the six exercises in the observational writing course focused on pre-writing activities.

4.3 Observational Learning and Its Effect on Writing Performance

The third aim of our study was to determine whether observational learning is also an effective instructional tool for writing tasks that are complex and not pre-structured. We hypothesized that a pedagogical intervention in which students observe and evaluate the written products and writing strategies of peer models leads to higher quality research reviews than a more traditional writing course in which students practice the text genre by means of several short writing exercises. Therefore, we compared the mean group scores of the observational group with the mean group scores of the students of the control group. Consistent with related research, we observed that students in the observational condition (M = 57.85%, SD = 10.38) outperformed the participants of the control group (M = 52.65%, SD = 12.83). A t-test of independent samples indicated that this difference in text scores was significant at the 0.05 level (t = 2.672, df = 142, p = 0.004, one tailed). The effect size of 0.047 is close to a moderate effect size (Cohen, 1988). This means that almost 5% of the differences in students’ text scores can be ascribed to the observational writing course.

5 Discussion

Researchers in the field of writing and self-efficacy have mainly focused on the predictive and mediational power of students’ writing self-efficacy beliefs regarding their writing performances. The primary aim of our study was to examine whether or not observational learning in an academic writing class influences students’ capabilities to predict their writing scores for their first literature review. We set up an experiment with two groups: a control group that learned to write a literature review by doing short writing exercises and an experimental group that observed pairs of peers performing the last exercise of the control

<table>
<thead>
<tr>
<th>Task Knowledge</th>
<th>Control Condition</th>
<th>Experimental Condition</th>
<th>t</th>
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<tbody>
<tr>
<td>Information gathering</td>
<td>M = 7.67, SD = 4.54</td>
<td>M = 10.44, SD = 4.80</td>
<td>3.568*</td>
</tr>
<tr>
<td>Planning strategies</td>
<td>M = 1.99, SD = 2.58</td>
<td>M = 0.90, SD = 3.30</td>
<td>3.877*</td>
</tr>
<tr>
<td>Composing strategies</td>
<td>M = 1.82, SD = 2.17</td>
<td>M = 1.89, SD = 2.85</td>
<td>0.165</td>
</tr>
<tr>
<td>Revision strategies</td>
<td>M = 1.70, SD = 2.42</td>
<td>M = 1.88, SD = 2.75</td>
<td>0.869</td>
</tr>
</tbody>
</table>

*p < 0.001.
condition under think aloud conditions. The results indicate that the students in the observational condition as a group were better calibrated for self-efficacy than their colleagues, who learned to write up a summary from different sources by doing exercises. About 50% of the students in the observational group were able to predict their scores by a margin of 10%. Students in the control condition on the other hand, were more biased toward over-estimation. The effect size of the instructional intervention on students’ calibration is relatively low though. Only 4% of the variance in the mean group scores for calibration can be attributed to the experimental intervention.

A second aim was to examine the effect of observational learning on students’ task knowledge of the new text genre. The results show that our 2-hour intervention course did not influence students’ knowledge about relevant text features, but that there was a significant effect on the students’ knowledge of writing strategies. About 12% of the differences in students’ knowledge of writing strategies could be attributed to our intervention course. When we analyzed our data in depth, it turned out that our instructional intervention significantly influenced students’ knowledge about pre-writing activities only, although the course entailed three exercises concerning text production and one exercise on local and global text revision. Planning activities are generally associated with higher ratings on academic writing tasks (Piolat & Roussey, 1996; Torrance, Thomas, & Robinson, 2000).

Finally, we found that students of the experimental condition outperformed the students of the control condition. These results indicate that an instructional method in which students do not write themselves, but observe excerpts from peers’ text production strategies helps them to write cognitively more complex literature reviews, that is texts that combine the source material of different sources rather than describing research results in a linear way. These results are in line with previous research on the effects of observational learning in the writing domain (Braaksma et al., 2002, 2004; Couzijn, 1995, 1999). When we compare the obtained effect sizes, the results show that the experimental course influenced students’ task knowledge base stronger than their writing performances and the accuracy of self-efficacy beliefs.

Several limitations need to be addressed. First, we only analyzed the quality of students’ written products. These data cannot explain why the experimental intervention sessions lead to better literature reviews. Social Cognitive Theory (Bandura, 1986, 1997) postulates that learning through observation raises students’ self-efficacy beliefs. Students with (realistic) strong self-efficacy beliefs approach difficult tasks as challenges. Such a positive orientation fosters interest and the motivation to carry out the task as good as possible. However, a reciprocal relation between interest and self-efficacy cannot be excluded (Hidi, Berndoff, & Ainley, 2002), that is, observing a video performance may be situationally more interesting. These students also set themselves challenging goals and maintain strong commitment to them. Finally, writers with high self-efficacy beliefs invest a great deal of effort in what they do and increase their effort in the face of failures. Future research should therefore look into the writing processes of writers, and study how self-efficacy beliefs also influence the actual writing process (McCarthy, Meier, & Rinderer, 1985; Zimmerman & Risemberg, 1997; Zimmerman & Kitsantas, this volume).

Studying the actual writing processes of students who learned through observation is also necessary to link instructional type to writing outcomes. We assumed that the students in the observation condition imitated the good models. A previous study of
Braaksma et al. (2004) demonstrated that the effects of observational learning on learning products can be attributed to effects on task processes. To measure whether the gain in writing performance of the participants in the experimental group could be attributed to their writing approaches in the post-test, all participants wrote the same argumentative text under think aloud conditions. Analyses of these protocols provided evidence that the ‘observers’ indeed orchestrated their writing process differently than the writers who had learned by doing. The experimental group for instance used more knowledge-transforming strategies (Bereiter & Scardamalia, 1987): these students showed more metacognitive activities such as goal orientation and analysis at the beginning of the writing process and more text-producing activities (e.g. writing, rereading) in the second part of their writing process than their counterparts in the control condition. Writers who had learned by observation also showed more planning activities during the entire writing process.

Another limitation concerns our measurement of students’ task knowledge. Because this research project focused on written products, we assessed students’ knowledge of text features and writing strategies in an indirect way. We do not know which knowledge and how much of that knowledge they actually used during the writing process. Conditional task knowledge, i.e. the ability to use appropriate writing strategies at the right time during the writing process, is an important condition for text quality (cf. Breetvelt, Van den Bergh, & Rijlaarsdam, 1994).

We hope that this study will generate more research that examines the impact of observational learning on motivational variables and task knowledge of novice writers. Such research would extend our understanding about the influence of different instructional types on the affective and cognitive aspects of writing, because “the knowledge, attitudes, and beliefs that students hold about writing play an important role in determining how the composing process is carried out and what the eventual shape of the written product will be” (Graham et al., 1993, p. 246).
SECTION IV:

LONGITUDINAL STUDIES OF THE DEVELOPMENT OF WRITING MOTIVATION
Chapter 13

The Role of Literate Communities in the Development of Children’s Interest in Writing

Susan Bobbitt Nolen

This chapter explores how interest in writing develops in social contexts, and in particular, within the classroom community. I argue that the social context canalizes interest through constraints on the purposes of writing, on who comprises the audience, and on whose norms are used to judge the writing. I use the concept of “literate communities” to describe classrooms in which reading and writing serve a central social function, providing opportunities to develop identities as writers and to experience writing as a means of self-expression and communication. These literate communities are contrasted to classrooms where writing is treated as one of several school subjects, with teacher as sole audience and judge of what counts as “good writing.” The role of teachers and implications for both practice and future research are discussed.

In the real world outside of school, writing is an act of social communication. We write letters (or email) to friends and colleagues, we write stories and reports to entertain or inform other people; even when we write to remember things we are writing to someone: our future selves. In schools, students write mainly to the teacher who will evaluate their work. Yet, even in schools, the social context frames the nature of writing, its purpose, and its place in the classroom community. Therefore, the development of students’ interest in writing as an activity cannot be fully understood without taking into account the contexts in which that development occurs.

Cazden (1988) contrasts classroom spoken interaction sequences in which “genuine” questions which elicit genuine responses (“What time is it, Sarah?” “Half past two.” “Thanks.”) to the initiation-response-evaluation (IRE) sequences typical of most classrooms (“What time is it, Sarah?” “Half past two.” “Right.” p. 30). Like IRE sequences, most writing for school is done in response to the teacher’s direction (“Write a story about your favorite animal.”) and assumes an evaluative response in the form of comments or a grade. The student writer’s goal is to meet the teacher’s expectations. When reading and writing
are allowed to serve a more communal function in classrooms, interests can develop and spread through shared experiences of exploration, communication, and enjoyment.

In this chapter I outline the role of the community in students’ writing interest development, as observed in two longitudinal studies. I use the notion of “literate communities” to describe those classrooms in which literacy activities form a social core that helps establish and maintain the relatedness of individuals. Literate communities have social norms that facilitate the development of interest in literacy by establishing the group’s shared identity as readers and writers. In these classrooms, writing is constituted as communication and self-expression, and is embedded in the development of a caring, interdependent community of learners. Writers and readers switch roles frequently, and the resulting communication of feedback and ideas affords multiple opportunities for interest development. In contrast, traditional writing instruction focuses more on teaching the skills of writing, where the main purpose for becoming literate is because it is an important school subject. This narrower focus entails particular social relationships between writer (student) and reader (teacher) that can restrict opportunities for interest development. After framing the analysis with theories of both interest and social context, I present cases from longitudinal research in classes that vary in the way writing instruction relates to the classroom community (Nolen, 2001, 2003, in preparation).

1 Interest and the Social Context of Classrooms

Interest has largely been studied as a phenomenon residing in the interaction between an individual and a particular class of contents (objects, texts, etc.) (Krapp, 2002b). Studies of interest in literacy have primarily focused on the influence of interest on learning from text (Hidi & McLaren, 1991; Schiefele, 1990, 2001) or quality of writing production (Benton, Corkill, Sharp, Downey, & Khramtsova, 1995; Hidi & Berndorff, 1998; Hidi & McLaren, 1991). In these studies, individual interest (sometimes called personal interest, e.g., Schiefele, 2001) is defined as a stable aspect of the individual that can manifest across contexts. Situational interest is generally conceived as describing the interaction of the individual with an interest object in a particular context. In research using a cognitive psychology approach, context is often treated as an influence on interest, “catching” or “triggering” an affective and cognitive engagement through particular tasks in situational interest (Mitchell, 1993), or tapping into an existing individual interest through particular topics or task structures.

Research, from a cognitive perspective treats context as a variable or group of variables that can influence motivation (e.g., Bogner, Raphael, & Pressley, 2002). Sociocultural and sociohistorical perspectives require a more situative approach, in which all activity is considered to take place within a social context and all participation to embody the identities, relationships, and positioning of the actors within that context (Cobb & Bowers, 1999). Researchers studying motivation and interest have begun to employ this more situative approach in conceptualizing the role of context (Hickey & Grenade, 2004; McCaslin, 2004; Pressick-Kilborn & Walker, 2002; Volet, 2001; Walker, Pressick-Kilborn, Arnold, & Sainsbury, 2004). Pressick-Kilborn and her colleagues have argued for the importance of treating classrooms as “communities of practice,” which “play important roles in assisting
or constraining the development of interest” (Pressick-Kilborn & Walker, 2002, p. 155) and argue that a situative approach is particularly appropriate for studying the development of interest and motivation over time (Walker et al., 2004).

The study of writing development has a longer and more elaborated tradition of using sociocultural approaches (Daiute & Daulton, 1993; Schultz & Fecho, 2000). In their review of social contextual research on writing development, Schultz and Fecho conclude that writing development reflects not only local classroom contexts with their curricula and pedagogies, but that it is shaped by the social interactions and identities formed within both local and sociohistorical contexts. Writing, as a form of language, is itself a social tool through which writers negotiate their identities and position within the community. The extent to which this tool can foster the development of a child’s identity depends in part on whether the author’s self-determination is supported (Reeve, Deci, & Ryan, 2004). Such development can occur through the communication of ideas and the self-expression of feelings in writing, but must be understood within the community’s enacted social norms. Is this function of writing encouraged within the community, or is writing just another way of increasing and displaying academic competence? Does the definition of “good writing” used include creative self-expression and the author’s voice, or are criteria focused on grammar and structure? In classrooms, the teacher’s evaluation can serve to highlight particular criteria and render others inconsequential. The teacher can also support or suppress the importance of other readers’ responses, thus expanding or limiting the extent to which children can use writing to negotiate a position within the community.

Over the course of the first few years of schooling, students progress in writing skill at different rates. Some children gain reasonable fluency with producing readable text as early as age five, while others develop competency later; a few still struggle to write fluently in grade 3 and beyond. In the longitudinal study from which the cases discussed here are selected, students appeared to adjust the nature of their motivation as their fluency increased, as well as in response to instructional emphases (Nolen, 2003, in preparation). Mastery of writing (primarily construed as sentence production fluency) was important to children through grade 2. By grade 3, when most children had become reasonably fluent, children in a class using a writing workshop approach continued to suggest that mastery was a goal of writing, while most of those whose teacher used a more traditional approach no longer mentioned mastery as a reason to write. What it meant to “get better at writing” seemed to be different in the two classes.

The definition of writing competence socially constructed within classroom communities has important implications for children whose literacy skills lag behind their peers’ (Nolen, 2001). If communication of thoughts and feelings is emphasized, children’s oral language can serve as a bridge to competence, through the assistance of more capable others or technology (Daiute & Daulton, 1993; Quinlan, 2004). Writing is “good” when it captures and communicates the intent of the author to the reader, thus it depends on feedback and revision. When the emphasis is on the mechanics of sentence and paragraph construction, competence depends on being able to produce “correct” text, preferably on the first draft. For struggling writers, definitions of success and failure shape the meaning students assign to specific tasks and to the act of writing itself, as well as their identities as writers and position within the community. Some have questioned whether instructional environments that rely on authentic tasks, scaffolding, and apprenticeship
are motivationally optimal for all students (Vauras, Salonen, Lehtinen, & Lepola, 2001), and suggest that individual differences need to be taken into account in describing the impact of social contexts on the development of motivation. The cases described below are all students who had been identified as being at risk for or having difficulty learning to read and write, and so may shed some light on how individuals' interest develops within particular social and instructional environments.

2 Literate Communities and Motivation

In some sense, all primary classrooms are communities. Children spend six or more hours, five or six days a week, interacting with teacher and peers in a particular physical space. Relationships and identities are negotiated, power is established, norms are developed or set. Over time, the social fabric of the classroom community is woven. The nature and importance of various school subjects is established through the specific ways in which teachers structure student engagement in particular kinds of tasks. Vadeboncoeur and Portes (2002) state

Identifying the self within a particular community allows the subject a common understanding or conception of what is good or desirable. Here the subject finds reciprocity, loyalty, commitment and shared vision with others “in mind.” In turn, the subject finds his or her identity dialectically constituted in the social relations of the community ...

(pp. 94–95).

In literate communities, reading and writing are constituted as important parts of the social fabric. Students and teachers come to identify themselves as writers through a classroom focus on the social purposes of writing and creative self-expression. Student (and teacher) writing is shared, discussed, and celebrated within a caring and interdependent community of learners. Writing is collaborative, not only in terms of jointly authored texts, but as peers and teacher serve as respectful and critical audiences and provide feedback that authors use to inform their writing. Literate communities do not exist in every primary classroom, despite a common concern with students' reading and writing development. In many, writing is something that is produced for the teacher in order to demonstrate skill. Although these classrooms, too, are communities of practice, literacy is not central to their social structure.

3 Developing Interest in Literate Communities

Although one can describe certain features of literate communities, less is known about which aspects are most important in fostering interest and motivation (Bruning & Horn, 2000). If, as McCaslin (2004) suggests, “curriculum opportunity is essential for learning motivation and informing identity” (p. 270), which aspects of the curriculum shape children’s beliefs about the nature of writing and their identities as writers? How do the ways in which teachers and students use and value writing in the community canalize interest development? How do their beliefs about writing develop through literate interaction within the community? And most importantly, what do students themselves say about the
nature of writing and their interest in it? (Bruning & Horn, 2000; Nicholls, 1992; Silva & Nicholls, 1993; Thorkildsen & Nicholls, 2002). Possible answers to some of these questions are sketched below with the data from four years of observation and interviews in primary classrooms.

In considering how social contexts shape interest, the concept of canalization, or the channeling of interest is useful (Pressick-Kilborn & Walker, 2002). In any classroom, opportunities to engage in particular kinds of writing are afforded while other activities are not available. If interest develops through interaction with interest objects (Krapp, 2002), it is important to consider the types of writing activity children experience during that development and the social purposes that writing serves within the community. To the extent that children come to believe that writing is an important vehicle for communicating their thoughts and feelings, their interests in communication should lead to interest in writing (Bruning & Horn, 2000; Graves, 1983). In the next part of this chapter, the role of the community in the development of interest is described, focusing on (1) community affordances and constraints arising from teachers’ beliefs about writing and writing instruction, (2) the interactions of teachers and students within the community which canalize interest at the “experiential interface,” and (3) the identities available to struggling writers in the community and their connection to interest development.

3.1 Teachers’ Beliefs about Writing Shape Interest through Instructional Approaches

 Teachers’ beliefs about school subjects play an important role in shaping the opportunities children have to interact with those subjects (Bruning & Horn, 2000; Cobb, Yackel, & Wood, 1989). This was the case for teachers in the longitudinal studies of literacy motivation. Several teachers emphasized the importance of motivation in their approaches to teaching writing.

“Wendy Jordan,” a veteran kindergarten teacher, found a new way to communicate her beliefs about writing to her students while attending a two-week workshop on literacy development (Nolen, 2001). Each morning, literacy work began with the children sitting on the rug, watching the teacher plan and write a journal entry. Students were then encouraged to write their own journal entry about something that happened to them. The following observation is typical.

(February 3) The children settle down as Ms. Jordan tells them how she hunted for moles in her garden last night with her mole hole tool.
One of the kids exclaims, “On Mole Day!”
“Groundhog Day,” corrects the teacher. She continues, drawing a picture of a “mole patrol” in her journal, then writes “I leveled out the mole mountains,” while kids watch. “It ... took ... me ... a long ... time,” she reads as she writes, while kids supply possible words.
Next, she asks the children what they are going to write about in their journals. Chrissy says, “I got a cat last night.”
“When you write about your cat are you going to write some details?” asks Ms. Jordan. Chrissy nods. The teacher calls on other kids with their hands up.
Karen says, “Uh, I saw Kevin at the store once.”
Anton says he saw a robin on the way to school. This leads to an excited discussion of robins among the children. Karen calls out, “He has red on his tummy!”
The teacher dismisses them to get their journals and begin writing. At the end of the year, Ms. Jordan explains how her approach to teaching writing now more closely reflects her beliefs and uses of writing in her own life. “I think for the writing from the summer [workshop] where the kindergarten teacher came in and talked about doing journals and modeling the journaling, and journals are really an important part of my adult life. And I’m thinking, yeah, this is a way to share the value! It’s one thing to use your words and say “Yeah, this is really important you go do it,” and another to say “Yeah, this is really important, look, I’m doing it, and I’m getting pleasure.” And so they get to see me go through that process and be a learner, a discoverer, a writer, a communicator, that whole thing is just opened up. Doing that mental, the thinking out loud with my kids? It was such a natural forum.”

In the same school, “Ms. Norman” and “Ms. Oliver” team-taught a first-through-third grade multiage classroom of around 45 children (Nolen, 2003, in preparation). Ms. Norman, who taught reading and writing to the first graders and some of the second graders, described her goals for her students’ writing. She emphasized her notion of writing as communication, and seeing that as a key to encouraging her students’ motivation.

The writing is a little tougher because I feel like you’ve got more conventions to work with but it’s kind of basically the same thing – do they want to write? Can they communicate their ideas in print? And then once they start getting the idea, then you can start saying well, for instance, start with capital letters and that type of thing, but it’s getting them to think that what they’re writing is making sense so somebody else can understand what they have written down.

Ms. Norman’s methods of teaching writing also revolved around the use of daily journals. Students were sometimes given a prompt or topic on which to write, and sometimes given complete freedom to choose, but the point was always for children to express their own ideas in writing. Journal entries were shared with at least three other children, who were responsible for asking questions of the author to clarify meaning. Authors then were encouraged to revise their entries in order to improve the communication of their ideas. Finally, children volunteered to read their journal entries to the class. The practice of reading to others and receiving feedback fit in with Ms. Norman’s general approach to establishing a positive and caring community. She frequently exhorted her students to help each other, and gave specific guidance on how to do this without usurping the control from the less-skilled student. “This is a place where we’re all here to learn and we’re all going to keep practicing and we’re all going to get better,” she explained in her interview. “That’s sort of a philosophy of our whole [multiage] classroom.”

Her partner, Ms. Oliver, shared many of the same beliefs about teaching, but her beliefs about the process of learning to write changed her practices in response to her experiences with the students in the third and final year of the study. She described her writing...
instruction in earlier years as more spontaneous, emphasizing student voice and creativity while urging students to write. In the second year of the study, she had about two-thirds of the second graders in her classroom with the third graders. In her end-of-year interview, she said,

I think that we’re trying to define too much what kids write, what kind of genre they’re using in everything, where I think at second and third grade you still want them just to write. So I’m more put your pencil on the paper and keep writing so that you know you can write. And I think that we do define it down too far for that age level.

The next year she described working in a much more structured way because “Unfortunately with this group, had to work a lot on just writing complete sentences.” Despite her belief in the importance of voice and self-expression, she seemed to have a conflicting belief, which emerged through interaction with the children, that students needed to be able to write good sentences before she could concentrate on teaching other, more expressive aspects. When students wrote extended text, she often prescribed the content and emphasized structure (Nolen, 2003, in preparation). Most of the children’s writing observed was done for Ms. Oliver’s evaluation and correction. Although students read some of their creative writing to the group in an “author’s chair,” Ms. Oliver was observed to be the first to critique and suggest improvements, followed by one or two students. Children in this class tended to emphasize writing as a school task when asked open-ended interview questions such as “how is writing this year,” describing their work in terms of obligation (e.g., “We have to write book reports.”) As a social tool, writing was primarily used in interaction with the teacher to fulfill student obligations and provide an opportunity for instruction and evaluation.

Another participant in the study, “Ms. Donovan,” also taught third graders in a multiage classroom. Her beliefs about writing and writing instruction focused on both motivation and identity. When asked what her goals were for the students’ writing, she explained, “I have to say that to have the kids really feel like writers, not just ‘Oh, we need to write this assignment?’ but to really feel like a writer by going through the workshop.”

She enacted these beliefs by creating, with her students, a literate community in which literacy (especially writing) was a major part of the class identity. Students claimed that Writers’ Workshop was most students’ favorite subject. Students were given the option of collaborating on several projects, and co-authoring became a way for friends to interact around their common interests. Gary, who had struggled with writing the previous year, described collaborative projects with friends which seemed to combine both linguistic and physical play.

Gary: Me and my friends started this story and we finished it and it was really fun.
Interviewer: Cool. And you did that at home?
Gary: Yeah, we started it at home. I really like adventures and sports kind of things, and comics. I did a comic with my friend, it was about my rat and my two – my friend’s two superheroes, and that was more of an adventure story. And then we
wrote about an adventure again, a comic about my rat and his friend that was a 
gecko and I put them in the NAFL, the National Animal Football League? And the 
teams were kind of different, and me and my friend did that and we pretended we 
were the two characters.

Where Ms. Oliver’s students tended to speak of writing in obligated terms (i.e., “we have 
to write ...”), Ms. Donovan’s students expressed themselves as privileged (i.e., “we get to 
write …”) (Nolen, 2003, in preparation). Ms. Donovan explained that the students were so 
interested in writing that she had to limit “Writers’ Workshop” to two days per week. 
“When they’re writing, they’re so excited about it. They wanted Writers’ Workshop eight 
hours a day.” Her student Martha mentioned this in her interview as well, “Well, Writers’ 
Workshop isn’t every day, it’s Tuesdays and Thursdays, but it kind of makes me excited 
for those days.” When asked later in the interview whether everyone should learn to write, 
she emphasized both self-expression and communication: “Yes, because I enjoy reading 
other people’s ideas. And how people think about the world.”

3.2 Teacher–Student Interaction as a Context for Interest Development

General instructional approaches grounded in teacher beliefs can establish a common 
framework for literacy’s place within the classroom community. The role writing has as a 
social tool within that community is played out, in part, in teacher–student interactions 
during instruction, conferencing, and the sharing of written products. Because of the 
authority claimed by the teacher, such interactions can be particularly powerful shapers of 
students’ notions of “good writing.” It is in these interactions that teachers have the great-
est opportunity to adjust their teaching to the needs and developing interests of their stu-
dents, as students adjust to their perceptions of the teacher, the task, and its place within 
the social structure. Volet calls this the “experiential interface (Volet, 2001, p. 62).” She 
suggests that when teacher and student are attuned both to the affordances of the context 
and to the cognitions, motivations and emotions of the student, student learning and 
engagement are supported. Boekaerts (2001), using the similar concept “context sensitiv-
ity,” argues that those interested in situated motivation should investigate the stable 
changes that occur as students adjust to environmental supports and demands in pre-
dictable ways. In a teaching interaction, the student is presumed to appraise the congru-
ence of their needs and the affordances of the interaction; their perceptions then guide their 
participation. In the following examples, teachers who are attuned to this process make 
instructional moves that both capitalize and facilitate positive changes in students’ interest, 
skill, and conception of writing.

“Ms. Adams,” a first grade teacher participating in the longitudinal study, capitalized on 
her deep knowledge of this developmental period. Knowing that six-to-seven year old stu-
dents like rhymes and simple sound- and word-play as well as surprising topics, she used 
poems like Jack Perutzky’s “Rat for Lunch!” to work on reading skills while inspiring fur-
ther word-play. When the move “Titanic” became a focus of great interest to her students, 
she gathered children’s books on the historical disaster and used the topic to teach research 
skills and approaches to expository writing. The day before the following observation, 
Ms. Adams and the class brainstormed a bulleted list of Titanic facts gleaned from their
research, and the children began writing “stories” (reports) using facts from the bulleted list as desired.

(December 10) The class is gathered on the floor. Carrie stands in the front and reads her Titanic story very fluently. “Oh, fabulous,” exclaims Ms. Adams. “Let’s give her a round of applause.” Everyone claps. “You know what I liked about what you did? You took the bullets that I wrote up on the board and turned them into really terrific sentences.”

In this public evaluation, Ms. Adams takes the opportunity to reinforce her standards of “good report writing.” Although the exchange is with a single student, the delight expressed by the adult authority, combined with an exhortation for the community to join her in applause, sends powerful messages about the importance of good writing to the community.

Several more students read, then she leads them through a review of the bulleted list.
“What are bullets for?” she asks.
“They remind us of stuff,” volunteers a student.
“They remind us what we learned,” Ms. Adams elaborates. “Who can read the first one?” Many hands shoot up. To support their enthusiasm, she decides “You know what, let’s just read it everyone together.” The class reads the list in unison. Next Ms. Adams holds up a “popup” picture of the Titanic created by a former student. “This person really looked carefully at the book.” Ms. Adams points out various features and reads what the student has written. She tells them that when their writing is all done, they can choose to do a popup if they want.

In this project, the teacher capitalized on the fact that many students had a situational interest in the movie “Titanic” and the disaster on which it is based. Children discovered their own facts through reading, parents, and the Internet, and brought them to share with others. Ms. Adams then took this interest in telling others about the Titanic and channeled it into report writing. The bulleted list provided a forum for idea sharing that feeds into more “telling” through the reports children write. Finally, the opportunity to create a three-dimensional representation of this fascinating ship created an opportunity to combine writing with art, extending the context in which this interest played out.

Young children have a strong urge to show what they know, a need that can be channeled into an interest in writing. As Graves (1983) points out, some teachers ignore this, instead taking control from the students and placing “unnecessary road blocks in the way of their intentions. Then we say, ‘They don’t want to write. How can we motivate them?’” (p. 3). Wendy Jordan, however, built on that urge to create authentic reasons for her kindergarten students to write, establishing writing as an important social tool within the classroom community. When a student would run up to her with burning news, such as “Teacher! I saw Paul at the grocery store yesterday!” she would reply, “Cool! Are you going to write about it in your journal?” Once her students began to see their journal writing as a chance to “tell” their important news, Ms. Jordan redefined a traditional show-and-tell time to create a venue for children to read their news from their journals. Interest in journal writing
increased as students realized that they could communicate their news to others via the written word (Nolen, 2001).

For Marty, one of Ms. Jordan’s students who had been identified as at-risk for reading and writing difficulty, journal writing was a chore to be avoided. He was observed regularly doing replacement activities (e.g., pencil sharpening, gazing into space, playing with his eraser) during writing time. Soon after the switch to show-and-tell as journal reading, however, he experienced an unexpected fun event at school, and event about which there was much curiosity among his peers. “What was it like, Marty?” they wanted to know. Marty, a solitary little boy, often played alone despite invitations from others. He seemed shy, or perhaps unsure of how to interact in a group. On his return from the unexpected event, he immediately began to write in his journal, and shared it that very day in show-and-tell. His audience was appreciative, asking questions and applauding at the end. This was a watershed; once Marty realized that through writing he could communicate interesting ideas to an appreciative audience, he became a writer. Upon entering the classroom each morning, he went first to his journal and wrote and drew until he was satisfied with his entry. His interest in writing and sharing his stories continued into the next year at school, where he was observed until he moved away mid-year.

Graves (1983) argues that, in order to link children’s urge to tell to a developing interest in writing, teachers should focus on helping children communicate their intended meaning. In Ms. Jordan’s class, the kindergarteners’ ideas regularly outstripped their ability to produce legible text independently. During journal-writing time, the main occupation of Ms. Jordan, her aide, any other adult volunteers (and even more capable children) was to “scribe,” or write the journal entry to the author’s dictation. Children were encouraged to express their ideas fully, and to use supports like scribes and invented spelling rather than becoming mired in mechanics. Figure 1 shows two journal entries: one using a scribe and one using invented spelling.

![Combination of child and adult scribe writing](image1.png)

![Children writing with invented spelling](image2.png)

Figure 1: Two journal entries: one using a scribe and one using invented spelling
In order to help children see writing as the expression of their own interests and ideas, it is natural to build on existing interests in particular topics or genres, as in the preceding examples. However, sometimes students’ individual interests lead to writing that teachers deem inappropriate. Several times during this study, teachers had to deal with the inclusion of violent acts in children’s stories and poems. If the classroom norm is that writers have creative control over their texts, an interest in violence can create a tension between maintaining a safe and positive classroom climate and allowing students’ autonomy. In the following excerpt from field notes, “Ms. Norman” operates at Volet’s (2001) “experiential interface” to resolve this tension as she helped a second grade author. The students were writing fictional dog stories in response to a book they had recently read. Ms. Norman had just told the class that it was okay to use their imaginations and even be “a bit silly,” referring to the fact that one student was writing a story about a green dog.

(May 13) Neil asks if he can have a secret agent. Ms. Norman asks him to talk to her after the others get started, “So I can figure out what you mean.” In that private conference, she tells him that he can have a secret agent as long as he is solving a problem or doing something interesting and fun. “But sometimes your stories are really violent, and that’s not going to be OK for this story.” In a few minutes, she follows up on this conversation, discussing some possible settings to include and some general plot ideas. This is all conducted within the framework that the author retains creative control.

Ms. Norman’s task here was to channel the student’s interest away from violence while maintaining the place of writing within the community as a mode of self-expression. She could have simply told this student, “No secret agents” or “no violence,” leaving him to figure out how change his characters and plot to fit her restrictions. Instead, she helped the child retain both his self-determination as an author and as much of his original idea as possible, while exploring options that fit within the safety norms of the community. The interest in secret agents could be separated from the interest in physical aggression. The fact that her suggested strategies remained options that the young author could choose to use or reject promoted autonomy while serving to maintain the function of writing in the community as creative self-expression.

### 3.3 Interest and Identity Development for Struggling Writers in the Community

In classroom communities, individuals must negotiate their identities in relation to other members and to valued attributes and activities. McCaslin (2004) describes this as the “coregulation of opportunity, activity, and identity formation in personal development” (p. 250) and pays particular attention to the role of teachers and peers and their interactions with individuals in shaping the affordances and constraints of the community. In classrooms, discourse practices within particular subject-matter areas shape children’s notions of that discipline (Cobb et al., 1989; Herrenkohl, Palincsar, DeWater, & Kawasaki, 1999). In a literate community, writing is both a valued subject of this discourse and part of the discourse itself. The discourse of and about writing provides the context within which students participate in the community and develop their identities as writers (Turner, 2001).
Differences in opportunities and constraints on participation in writing can also arise from individual differences in writing skill. Vadeboncoeur and Portes (2002) argue that the development of “at-risk” identities must be understood as co-constructed in the social contexts of schooling. Depending upon the community’s definition of “good writing,” struggling writers may find only limited identities available to them. In classrooms where long, complex stories are celebrated as the *sine qua non* of authorship, or where correct spelling, punctuation, and grammar take precedence over communication of meaning, children who have difficulty in planning and producing text have multiple opportunities to learn their position in the hierarchy. By the time children are in third grade, they are capable of comparing their work to classroom norms (Nicholls & Miller, 1984) and can become discouraged if they find themselves and their compositions consistently weaker than their peers. To the extent that cooperation is encouraged, these students may find themselves consistently on the receiving end of help, reinforcing their identity as poor writers. To fight against this identity, some children learn to draw attention away from their lack of ability and shift it to areas of strength, while limiting their opportunities to improve in their areas of weakness.

“Gail” was such a student. In second grade, as she began to notice her reading ability lagged behind others in her class, her teacher noticed both withdrawal from reading and writing and bids to claim high relative ability in other areas, including spelling and math. Field observations confirmed this pattern, but also revealed some of the ways her opportunities to be identified as literate were foreclosed by the community. In small-group round-robin reading, for example, peers jumped in to supply words at the least sign of hesitation on Gail’s part, precluding her attempts to decode the word herself. Gail chose to read last, resisting some pressure to read earlier, limiting both the time she spent being corrected and her opportunities to improve her fluency. A month later, when her bid to join in a small-group discussion of a Great Book is ignored by the others, she resists later questions by claiming not to remember the answers. In third grade with the same children, Gail experiences a “literate community,” in which writing becomes valued by children and collaboration and cooperation are the norm. As most students were beginning to write more complex stories, Gail’s remained very simple and short. Although the teacher encouraged her progress and attempted to support her growth as a writer, Gail resisted this, claiming “I know that, I just forgot,” when the teacher tried to instruct her in some aspect of writing. Further, she used her social skills and popularity to initiate and sustain off-task interactions with other children during writing time. By the end of the year, she was beginning to take some risks in her writing as Ms. Donovan “called her bluff” and attempted to normalize the need for help. She also seemed to be spending more time on task during Writers’ Workshop, and more time with others who were interested in writing.

Ms. Donovan had introduced “Writers’ Workshop” soon after she arrived as a replacement for the original teacher, who went on leave four months into the school year. In order to fulfill her goal of having students “own” their writing and develop identities as writers, she and her partner restructured writing instruction to make it a more authentic part of the community. In addition to teaching the steps of process writing (prewriting, drafting, revising, editing, publishing), she provided for authentic audiences for student work, including peers and parents. The class worked toward creating a body of work to share in an end-of-year Authors’ Tea for parents and families. As noted earlier in this chapter, most students
embraced Writers’ Workshop as an important part of their classroom identity, and were eager to tell me about their favorite genres or topics, often referring to particular pieces they had written in class.

In contrast to Gail, other students who had developed “struggling writer” identities the previous year began to negotiate new writer identities through the affordances of the literate community. In particular, collaborative writing allowed for sharing of complementary strengths as students co-authored illustrated stories and comics beyond their individual capabilities (Daiute & Daulton, 1993). “Nate” had struggled mightily with penmanship in second grade, and by the third grade had developed many ways to avoid writing and to avoid displaying his writing to others. As the focus shifted in third grade to composition, his identity as a “poor writer” made it difficult for him to fully participate in the community. Through collaboration with peers and adults, Nate’s creativity and voice were his contribution to shared products that earned the appreciation of the community when Ms. Donovan read one of these stories to the class, without revealing the author. It became a favorite part of the class library, and eventually Nate was able to reveal his authorship to the class, stepping into a new identity as a writer. At the year-end Authors’ Tea, he was an eager participant with his peers, volunteering to read his poetry aloud to the assembled parents and students.

Casting these two cases as cases of identity development is admittedly speculative; it is difficult to interview young children about who they think they are; a researcher cannot enter the mind of the child and see her self-concept. It would be possible to constrain the analysis to more traditional motivational variables, referring to the roles of perceptions of ability, self-efficacy, and the like. However, it can be argued that continuing interest in writing is both an aspect of self-definition and a statement of social connection. The same classrooms did not have the same “effect” on the development of these two children’s relationship to writing, their peers, and their teachers. Although the identities they had been developing in second grade were similar, the particular affordances in the third grade classroom were not quite the same. Nate discovered that his friends shared his developing interest in creating comic books and adventure stories; this provided a safe place within the larger community to grow as a writer. Gail created positive social interactions that took her away from writing tasks; only at the end of the year did she show signs of joining her peers in writing.

4 Conclusion

In this chapter, I have argued that interest in writing develops in social contexts, and in particular, within the classroom community. Teacher, peers, and the individual child develop relationships over time that direct or canalize interest through both affordances and constraints on writing. The notion of “literate communities” was used to describe classrooms in which reading and writing serve a central social function, providing opportunities to develop identities as writers and to experience writing as a means of self-expression and communication.

Classroom contexts shape interest development in at least three major ways defining the nature of literate activity: through constraints on the purposes of writing, on who comprises the audience, and on whose norms are used to judge the writing. In some classrooms, writing is primarily defined as an important school subject. Writing is something
one does when it is assigned, to the teacher’s specifications. The main audience for student writing is the teacher. When student writing is shared with peers, the teacher’s feedback is the most important and the writer must respond with changes if that feedback points out weaknesses. “Good writing” consists of legible, grammatically correct composition fitting a particular text or paragraph structure. This restricted definition of writing limits children’s opportunities to develop interest in the activity of composition. To the extent that the teacher controls the writing process, opportunities to write about topics or in styles that are personally interesting are necessarily limited.

In other classrooms, including those I have called literate communities, the teacher may set some constraints on purpose, topic, or form, but the choices within those constraints afford opportunities for creativity and self-expression. These opportunities, in turn, make it possible for students to tap into existing needs and interests. The writing of others, both published authors and other members of the community, can also provide sources of interesting subject matter and techniques. During the writing process, both peers and teacher serve as important audiences and can provide feedback young authors can use to refine their message. The author retains control over which feedback is used in revision. Finished compositions may be “published,” given a place in classroom libraries, and even presented at special events for parents and family members. When writing has an important place in the community’s identity, these opportunities can influence the construction of individual literate identities (Who do I want to be? How do I fit in the community?). To the extent that the norms for “good writing” include successful communication of ideas that are important to the self, collaboration and scaffolding are natural parts of the process, and even struggling writers can produce good writing. They are afforded the opportunity to develop and interest in writing and to become identified as authors.

Teachers play an important role in the “experiential interface” (Volet, 2001) between what children bring to the writing task and what they find in the classroom context. Obviously, they must create many of the conditions for interest development described above through their control of assignments, processes, norms, and the roles of community members. Some may choose to model writing their own compositions, arrange for external audiences, or retain tight control over what counts as writing. Even the chance to write extended text (as opposed to short answers to worksheet questions) can afford an opportunity for students to develop an interest in writing as an activity, rather than just as a means for completing schoolwork. In addition to these contributions, teachers can help students become more context-sensitive (Boekaerts, 2001), pointing out the ways in which the context affords opportunities for self-expression, creativity, and communication. Where necessary, the teacher can either provide or encourage peer collaboration that provides the scaffolding necessary for struggling writers to experience the pleasure of communicating something important, entertaining, or unusual to an appreciative audience.

5 Implications and Further Questions

The arguments in this chapter were based on two longitudinal studies of young children’s motivation and interest in literacy. The design of these studies allowed for the investigation...
of children’s interest and motivation in social contexts which were themselves developing over time. By following children from year to year, it was also possible to examine developmental change that occurred as teachers, peers, or both were replaced. Both kinds of changes are important to study if we are to make the comparisons necessary to understand the roles social context plays in the development of interest and motivation. Seeing interested activity in different contexts with the same developing person, it becomes possible to explore the role of each context plus possible cross-context mechanisms.

The ideas presented in this chapter have implications for the study of interest in processes or activities. Writing is among a number of important activities that are by nature social enterprises: others include working in small groups to solve problems in the workplace, the practice of medicine, teaching, scientific research, and many more. Expertise and interest in these activities require time to develop, and more longitudinal studies of how that development unfolds should be undertaken. We know little about how interest in writing develops in later school years, when the demand for directed, academic writing increases. It is important that research on writing and other social activities take into account the role of the social context in facilitating or limiting the development of interest.

**Authors Note**

Preparation of this manuscript was supported in part by Grant No. P50 HD 33812 from the National Institute of Child Health and Human Development.
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Chapter 14

A Cross-Case Study of Writing Motivation as Empowerment

Penny Oldfather and Cyndie Hynd Shanahan

Through a social constructivist lens, this chapter reports findings of our longitudinal and cross-cultural work, about ways in which writing motivations are supported within particular cultural contexts. Such contexts can include the classroom, the school, community, and/or the larger sociohistorical, sociopolitical context. Here we compare findings from a six-year longitudinal study on student motivation in Southern California and from a three-year effort, called the Reading and Writing for Critical Thinking (RWCT) Project in the Republic of Georgia (part of the former Soviet Union). In both contexts, with shared ownership of knowing, deep motivations to write were supported when writers had opportunity for meaningful self-expression that connected to their identities, to what they cared about, and to empowering experiences. Writing motivations were also enhanced through learning specific strategies or tools that stimulated idea production and through opportunity for meaningful collaboration. The cross-cultural work with the RWCT project in the Republic of Georgia provided us with new perspectives on the vital role of schools in preparing students to be able to think critically and to apply those abilities in emancipatory ways in their writing. These abilities provide a bedrock for the healthy functioning of a democratic society.

1 Purpose of the Chapter

Our aim in this chapter is to describe what we have learned through our longitudinal and cross-cultural work about ways in which writing motivations are supported within particular cultural environments. Specifically, we view intellectual agency as a dynamic (but of course, not the only) dimension of writing motivation. Through the description of our...
cross-cultural research, we show that intellectual agency – or what Oldfather (1992) calls *epistemological empowerment* – is influenced by not only the cultures of the classroom and school, but also through social, cultural, political, and historical forces. We acknowledge with Paris and Turner (1994) that motivation is also highly personalized and situated. However, we believe that in order to understand motivation to write, researchers and educators also need to attend to cultures. Therefore this is a case not of *either/or* – but of *both/and*.

Both of the settings examined in our work reveal that deep motivation to write occurred when writers had something to say that connected to their identities and to what they cared about, and to emancipatory experiences. In both settings, the participants were provided with specific tools or strategies that stimulated idea production, collaboration in meaning construction, and opportunities for empowerment through self-expression. Written self-expression, as we conceptualize it here, has to do not only with expression of feelings, as expected in various forms of creative writing, but encompasses any form of authentic writing through which authors document their own ideas, constructions, conceptualizations, or beliefs. Therefore, self-expression can be embodied in academic writing as well as through poetry, narrative, and so forth.

It is vital to recognize in these considerations of writing motivations that writing is about thinking, and is bound up with broader dimensions of literacy, including reading, speaking, and other tools for thought (Bakhtin, 1981; Vygotsky, 1978; Gee, 1996). People who are deeply engaged in cultural contexts that support the development and exchange of rich ideas and that honor the self-expression of those ideas are more likely to experience intellectual agency, to experience ability to make sense of the world, and to believe that they can participate, explore, and construct new landscapes of possibilities.

These are the dreams of a democratic society. Ideally, students within democratic societies are prepared to take up their roles as informed voters and responsible citizens who engage in dialogue about the central issues of the day. In democratic classrooms that exemplify goals of the larger society, students are prepared for this dialogue by learning to consider multiple points of view, understand complex issues, engage in thoughtful self-expression, and have a voice in their learning. Unfortunately, as we have seen in the United States and elsewhere, these dreams are often not fulfilled.

That is the backdrop for our considerations in this chapter. We now examine why writing motivation is often an issue in schooling (and perhaps for many outside schooling). We begin with some insights and wisdom from writers who describe their own struggles with writing motivation, many of which have to do with the nature of writing, itself. From there, we move into analysis of concerns pertinent to motivation within classroom cultures, as well as within the context of larger social, cultural, political, and historical forces. Next, we provide background about the two contexts upon which our cross-case comparison for this chapter is based (i.e., a six-year longitudinal study in Southern California and a three-year project in the Republic of Georgia), and illustrate ways in which participants described writing motivations in those different settings. Finally, we present specific recommendations for teachers wishing to support students’ writing motivations and summarize our conclusions regarding the relevance of empowerment for writing motivations within democratic societies.
2 Why is Writing Motivation a Problem?: Views of Two Writers on the Struggles Inherent in Writing Motivation

Why is writing motivation a problem? Just consider your own writing. As professional educators, most all of us struggle with motivation at times. Ironically enough, even as we approach writing this chapter, it is challenging to carve out time, get focused, and face the struggles that we know will come with our efforts. We have taken comfort and inspiration from other writers, as we have prepared to take on the task. Annie Dillard (1989, p. 52) describes her writing process:

I do not so much write a book as sit up with it, as with a dying friend. During visiting hours, I enter its room with dread and sympathy for its many disorders. I hold its hand and hope it will get better. This tender relationship can change in a twinkling. If you skip a visit or two, a work in progress will turn on you. A work in progress quickly becomes feral. It reverts to a wild state overnight. It is barely domesticated, a mustang on which you one day fastened a halter, but which now you cannot catch. It is a lion you cage in your study. As the work grows, it gets harder to control; it is a lion growing in strength. You must visit it every day and reassert your mastery over it. If you skip a day, you are, quite rightly, afraid to open the door to its room. You enter its room with bravura, holding a chair at the thing and shouting, “Simba!”

Wild animals also seem to haunt Ann Lamott (1994), as she describes her experiences as a writer:

“... you try to quiet your mind so you can hear what that landscape or character has to say above the other voices in your mind. The other voices are banshees and drunken monkeys. They are the voices of anxiety, judgment, doom, guilt. Also, severe hypochondria. There may be a Nurse Ratched – listing of things that must be done right this moment: foods that must come out of the freezer, appointments that must be canceled or made, hairs that must be tweezed. But you hold an imaginary gun to your head and make yourself stay at the desk. There is a vague pain at the base of your neck. It crosses your mind that you have meningitis .... Yet somehow in the face of all this, you clear a space for the writing voice, hacking away at the others with machetes, and you begin to compose sentences. You begin to string words together like beads to tell a story. You are desperate to communicate, to edify or entertain, to preserve moments of grace or joy or transcendence, to make real or imagined events come alive. But you cannot will this to happen. It is a matter of persistence and faith and hard work. So you might as well just go ahead and get started.” (pp. 6–7).

And so we shall.
Students’ motivation to write is problematic for many different reasons. These can stem from the nature of writing itself, the characteristics, knowledge, and skill levels of the
individual learner, and the context of the writing effort. As Dillard and Lamott both describe, the nature of writing is inherently difficult. Why is it difficult? In the first place, writing is about thinking — and thinking is hard. As we write, our thinking deepens, our perspective changes, and often we arrive at an entirely unexpected place. We have learned so much! But this process requires that we understand that the first draft is not the final draft. What patience is required! Dillard (1989) illuminates the uncertainty, ambiguity, of the writer's journey:

When you write you lay out a line of words. The line of words is a miner's pick, a wood carver's gouge, a surgeon's probe. You wield it, and it digs a path you follow. Soon you find yourself deep in new territory. Is it a dead end, or have you located the real subject? You will know tomorrow, or this time next year. (p. 3)

The nature of writing is also made difficult for students by the fact that others will read and evaluate many school writing assignments. In light of the challenges of “facing this lion,” asserting mastery over it, and then having the anxiety of possible critical external evaluation, many students may be quite understandably resistant to the process.

Writing motivation is especially difficult for perfectionists. Since writing is a process in which we need to be able to lay down what Lamott calls a “shitty first draft” (Lamott, 1984), this task becomes quite a struggle for those who have a difficult time turning off the internal editor in the early stages of writing.

I think perfectionism is based on the obsessive belief that if you run carefully enough, hitting each stepping-stone just right, you will not have to die. The truth is that you will die anyway and that a lot of people who are not even looking at their feet are going to do a whole lot better than you, and have a lot more fun while they are doing it (Lamott, 1994, p. 28)

Sometimes it is hard not to look at our feet!

3 When Writing Motivation Problems Stem from the Cultural Context

There are myriad answers to the question, “Why is writing motivation a problem?” We do not pretend to be able to address the question fully here. In addition to those problems mentioned by Dillard and Lamott, however, we make the case that educators need to be aware of the power of the cultural context in supporting or hindering writing motivations. Below, we focus on problematic aspects of the cultures of some schools and classroom in relation to writing motivation. We are somewhat uncomfortable with this, because we know that there are many fine teachers of writing, and we emphasize that we are not intending to characterize all classrooms in this way. That said, we make the case in this chapter that problems in writing motivation may stem from the cultural context for writing. This may be the culture of a specific classroom, the school, and/or the community, and can also involve the particular sociocultural, political, and historical elements of the larger
society or nation. Issues in classroom culture that may be problematic for supporting writing motivations include the following:

- A sense that writing is not an activity that has to do really with their own sense-making or who they are as human beings; that it is not about self-expression of one’s ideas, knowledge, or opinions; it is not about their own power (Oldfather et al., 1991; Glasser, 1986).
- A climate in which the focus is on getting the “right” answers (those of the teacher), rather than on seeking meaning (Duckworth, 1987).
- Focus on correct form as the main priority of writing (Graves, 1999).
- Lack of support for intellectual risk-taking (Amabile, 1989; Torrance, 1995).
- Little freedom of choice within classroom structures about topics for writing and pacing of writing (Paris & Turner, 1994; Tomlinson, 2003).
- An “egg crate” format in which students feel isolated in their own desks from others and in which they have little opportunity for interactions with others to talk about ideas, to read each others’ drafts, and to get help from each other.
- Emphasis on grades and other extrinsic rewards, rather than the interest that emerges from the writing process (Csikszentmihalyi, 1990; Deci & Ryan, 1991; Thomas & Oldfather, 1997).
- Limited formative or summative responsiveness from teachers or peers about writing efforts (Calkins, 1986; Oldfather & Dahl, 1994).

Many of the issues mentioned above are echoed by (or often stem from) the culture of the larger society or nation. As we have learned from the cross-cultural work described in this chapter, writing motivations can be deeply influenced by the culture of fear, distrust, and powerlessness that are established under oppressive regimes such as in those countries that were part of the former Soviet Union. Historically, there are many examples of those who have experienced various forms of oppression and who, refusing to submit to them, have yearned deeply for freedom and/or empowerment. These individuals’ inspired writings serve as evidence of how emancipatory impulses have been deeply motivating. Some of the examples are from those who have made their marks as historically important personages (e.g., Paine, 2003; Stanton, 1867; Anthony and Cady Stanton, 1992;, DuBois, 1996; and Nhat Hanh, 2001).

Another example can be found in Nafisi’s (2003) exquisite narratives *Reading Lolita in Tehran*. The true story describes how Nafisi and seven young Iranian women experienced and processed both oppressions and their impulses for freedom. Through their experiences of reading, journaling, and discussion in a secret book club, reading forbidden works of Western literature, they developed a sense of voice and self (Belenky, Clinchy, Goldberger, & Tarule, 1986) and wrote with emancipatory passion in their journals.

Students in traditional classrooms often feel powerless for a variety of reasons. Many teachers are working to find ways to share (not abdicate) responsibilities with students in classrooms. In the end, the most salient aspects of these issues of self-determination have to do with how individuals perceive their own sense of agency or ability to make choices, to share ownership of the learning agenda (Deci & Ryan, 1987). The teacher’s intentions or the perspective of the so-called objective observer are, in the end, irrelevant to the student’s intrinsic motivations. What counts is how the student perceives his/her own power or lack thereof.
Those who have never experienced oppression are not likely to have a deep understanding of what it means to be oppressed. Issues of empowerment are less salient for those who do not have to struggle. As a result of the work we describe here, we have new understandings of ways in which desires for self-expression in contrasting learning cultures can give rise to writing motivations.

4 Two Contexts for Writing Motivation

4.1 Background

The ideas discussed in this chapter stems from previous work in the United States and in the Republic of Georgia (part of the former Soviet Union) and from the sociocultural and sociopolitical perspective we bring, taking into account issues of power and voice. Oldfather and her colleagues have examined participants’ perspectives on writing motivation and other forms of literacy and the ways in which classroom cultures support or fail to support literacy engagement (Oldfather, 1992, 1993; Oldfather & McLaughlin, 1993; Oldfather & Dahl, 1994; Oldfather & Thomas, 1998). A six-year longitudinal study revealed that students’ desires for self-expression for writing (and other literacy activities) was spurred, in part, by classroom cultures that supported their sense of intellectual agency or epistemological empowerment (Oldfather et al., 1999). This summative article was co-authored with the student co-researchers. Another critical dimension of the classroom culture was focus on meaning and writing related to real-world purposes.

Oldfather and Hynd (1999) carried this work into cross-cultural arena through participation over three years in an international project in the Republic of Georgia. This effort was through the Reading and Writing for Critical Thinking (RWCT) Project sponsored by the International Reading Association and the Open Society Institute funded by George Soros. RWCT is a multinational project aimed at helping teachers in former Soviet countries (and various other struggling democracies) involve their students in active learning and creative and critical thinking. Participants in the Georgian project had experienced years of Soviet control and oppression in which their self-expression had been stifled.

When presented with opportunities for self-expression and with specific strategies for literacy development that supported their sense of agency, Georgian teachers and their students experienced a blossoming of motivation to write. This cross-cultural comparative work helps make visible the role of sociocultural and sociohistorical contexts in motivation in writing. Below we will describe these two educational contexts and how they have taught us about issues of writing motivation.

4.2 California

The first year of the longitudinal research was conducted in a suburban academic community in Southern California in a fifth- and sixth-grade classroom of a teacher, Sally Thomas. The focus of the research was to examine students’ reasons and purposes for being (or not
being) engaged in learning activities. Specifically, the effort was to understand what kinds of classroom cultures engage students in finding their own passions, discovering what they care about, owning the learning agenda, and finding ways in which they could connect their identities to their school learning. Oldfather sought to uncover students' emic perspectives on their learning. That is, she tried to understand the perspectives held by students as the insiders of their classroom culture. The original classroom was selected as the research site because the teacher was widely recognized by administrators, parents, and students for her outstanding ability to engage students as active learners. Out of the 31 students in the classroom, 14 focal students were selected as participants. The goal was to select students who represented diverse abilities and backgrounds and varying levels of motivation as indicated by the professional judgment of the teacher, who knew many of them well, as she had taught several of them the previous year in this multigrade classroom. There were average students, gifted, learning disabled, slow learners, and a child with serious hearing loss. The students’ heritages included European American, African American, Mexican American, and Pacific Islander, and they were from diverse socioeconomic groups. The students participated as co-researchers in the inquiry during their elementary years.

The research continued across a six-year period to track students’ school experiences throughout their junior high (Oldfather & McLaughlin, 1993) and high school years. Sally Thomas became a research collaborator during the last five years of the research. During high school, eight of the students became even more engaged in all aspects of the research and conducted participatory action research on literacy motivations and schooling in collaboration with their high school teachers (Oldfather & Thomas, 1998; Oldfather et al., 1999). From the time the students were in junior high school, they were actively engaged in writing and presenting their research findings to teacher education classes, their school board, and academic audiences, such as the American Educational Research Association, the National Reading Conference, and National Conference of Research on Language and Literacy. Students published a research article with Sally Thomas in an issue of *Theory into Practice* on Learning from Students Voices (Garcia, Kilgore, Rodriguez, & Thomas, 1995).

Sally Thomas’ classroom was filled with books, including her own permanent classroom library of more than 500 volumes as well as school library books. The walls were covered with students’ writing and artwork. Her classroom was a bustling, busy place in which students were engaged daily in skillfully structured reading and writing workshops. The curriculum was thematically organized and often based on themes of real-world consequence, such as “Survival” and “Ways of Seeing” (a focus on both optics and multiple ways of seeing the world). Students were given choice within structure for the topics they chose within the required content areas. For example, when studying South America, they were given choices about which particular countries they would specialize in for their “country reports.” They also were often allowed to select the particular products through which they would show their learning. Students had “Big Discussions” about issues of the day, and were encouraged to express their ideas verbally and in writing. During these “Big Discussions,” Sally would get things started – and then remove herself to the back of the classroom and the students would proceed to conduct these conversations in an unmoderated, but generally orderly manner, recognizing differences of opinions in basically respectful ways that had been modeled by their teacher.
Sally’s teaching specialty was language arts. She read aloud to her students daily, both from selected pieces of literature and from the students’ own writing. Within this classroom in which Sally’s goal was to promote a “rich broth of meaning,” the students were offered many ways to explore ideas in their own heads as a basis for their writing. They learned to use webbing/or “mind mapping,” brainstorming, and story boards. They were regularly involved with peer editing of their writing, and they received extensive informational feedback on their writing from Sally. There were no grades given in the school. Report cards were in narrative form. Students wrote dialogue journals back and forth with Sally responding to what they were reading. They wrote poems. They wrote short stories and some even got involved with writing “chapter books,” often in science fiction or fantasy genres.

In this classroom, students considered it “cool” to be good writers. For 11 of the 14 student co-researchers, writing was their favorite school activity. Data analysis indicated, in fact, that students within this classroom culture found that the most compelling aspects of their school experience were in relation to various forms of self-expression. The main and most beloved mode of self-expression was writing. But there was also passion for other forms: oral expression (e.g., the “Big Discussions”), the visual arts, and theater projects. This finding led Oldfather to examine further what it was about Sally Thomas’ classroom culture that encouraged self-expression. Stepping back, it was clear that this was a deeply responsive classroom. Sally had created a culture of honored voice in which students understood that their teacher and their fellow students would welcome their ideas and would give them constructive, informational feedback. However, Oldfather still did not have the larger picture about what had enabled Sally to develop this classroom culture. The turning point for her understanding came in an interview with 12-year old Paul, who was philosophizing about learning and knowledge. He explained that, “The only thing you can own is thoughts, just thoughts …. The way you say things. I think that’s the only thing you can really own, and that’s how you see the world. How you say the world is” (Oldfather & Dahl, 1994, p. 152). At that point, Paul helped Penny begin to see that in Sally’s classroom, many of her students had developed a sense of intellectual agency. They understood that they were sense-makers.

Oldfather identified this as epistemological empowerment (Oldfather & Dahl, 1994), which is defined as “a sense of intellectual agency and ability to know that emerges from a strong sense of the integrity of one’s process of constructing meaning” (p. 152).

Those who are epistemologically empowered do not look to external authorities such as teachers or printed materials as sole sources of knowledge. They feel compelled to make sense of things from their own critical standpoints, although understanding that there are multiple viewpoints or constructions on many issues. Conversely, those who do not have this sense of intellectual agency, or epistemological empowerment, believe that the ability to know or make sense lies outside their minds. They may view knowledge primarily as consisting of independent facts transmitted through external authorities.

Those who experience epistemological empowerment are likely to have more ownership of their processes of constructing meaning; they are more likely to experience learning as connected to their own lives, their own identities. Because epistemological empowerment has to do with a sense of intellectual agency, it is qualitatively different from other forms of agency. For example, a person might have a sense that one can set and accomplish goals or that one can make a difference in the world, but not feel a sense of power to know, or to construct knowledge (Thomas & Oldfather, 1997, p. 111).
What made this possible for Sally’s students? Sally was a social constructivist “to the bone.” The starting point of her teaching was, therefore, a probing to understand the students’ constructions of meaning. She respected the integrity of their minds. She was a connected knower (Belenky et al., 1986). She shared the *ownership of knowing* with her students; she honored their voices, and established a classroom culture that conveyed deep respect for students’ sense-making as readers and writers (Oldfather, 1993, p. 680; Oldfather & Dahl, 1994). Students had opportunities for conceptual learning (Guthrie et al., 1996) and their heads were full of the rich ideas supported by the thematic, conceptual curriculum and loved sharing those ideas with others through their writing.

The students’ writing and their talking about writing helps make clear how voice and choice were woven into the motivational fabric of Sally Thomas’ classroom. We offer just a few examples here of what that looked like. The class had investigated fairy tales across cultures. They examined the then-current issues of censorship being debated regarding the use of fairy tales in a reading series and considered Bruno Bettelheim’s (1976) defense of fairy tales. Their next step was to interview parents and community members for their view points on these issues. As a result of her concern, Abigail, a fifth grader, wrote a letter to the Los Angeles Times expressing her indignation (Oldfather et al., 1991, p. 141). Abigail’s writing demonstrates her passionate effort to push against the oppression of censorship of stories she loved.

Dear Censors: I have heard about banning fairy tales and I don’t like it! These parents think that it is lying to children, and ‘will make them believe black magic, but it’s not. Fairy tales are part of growing up and learning how to cope with real life, and it’s also our imagination. If they get away with banning fairy tales children are going to be boring. Also, fairy tales are everywhere. The only way to get rid of fairy tales is for kids to stare at a blank wall. And still they’ll get away with imagining. No matter what you do, fairy tales will live forever. And if fairy tales are gone, there won’t be such a thing as a kid anymore.

(Signed) Abigail, Disagreeing young reader

Abigail’s letter did not come out of the blue. In this case, Abigail and her classmates had had extensive opportunities to become familiar with and appreciate fairy tales, to consider the issues about fairy tales through reading Bettelheim’s ideas and through conducting their own research. They had participated in discussions with classmates. It was within this environment of reading, talking, and thinking about various perspectives that Abigail was so motivated to express herself, first through activities and discussion and finally through her writing.

Writing was not a separate subject, but was woven into the curriculum as an integral part of the students’ days, although time was set aside daily for writing workshop. Writing motivation grew out of the students’ experiences in developing their ideas, in this context in which their teacher was able to provide a rich scaffold. Sally respected her students as knowers who were in the process of meaning construction and they internalized that sense in themselves. This is an example of epistemological empowerment. Paul, a sixth grader, summed up how their teacher “primed the pump,” scaffolded their thinking, and helped them understand their roles as meaning makers. These experiences then bore fruit in their writing.
What she does is, she lets all of us talk. She says, “If you have any ideas” or – well most teachers say, “If you have any ideas, raise your hand.” Mrs. [Thomas] will start us to say stuff. She’ll give us examples or give us ideas, and then we build off of those ideas and say our ideas, final ideas. I don’t think this is really a final idea because every time you think about something and then you think about something else for it and then you think that’s your thought but then there’s something else about that…. You can express yourself (Oldfather, 1993, p. 675).

Florencia was very clear when she described in the fifth grade how her desire to express her feelings was important to her writing motivation. She had compared her experiences as a writer with those as a reader, and explained that writing was her favorite. Penny asked her “why?” and she reported,

Well, I can express my feelings. In reading a book, the feelings are already there, and you get to read the feelings of the author. In math there isn’t very much feeling. And in writing you get to express your feelings. I just enjoy the writing the most because sometimes I can be funny in stories and sometimes I can really get what’s in my mind.

Nicki was a sixth grader when the research began. Her passion for writing as well as her struggles as a writer were evident as she described her processes. Penny had asked her how she felt as she wrote a particular story.

Nicki: At the beginning it captured a lot of confusion and frustration. It was kind of a matter of teasing it out. Some people plan writing and make a chart and work it out ahead of time. I wrote this story as it came to me. If the character was doing a certain thing then I felt how he was feeling and knew what would be coming next. For me, if you have an idea, it’s not really hard. I was really excited about working on it. I took it home sometimes to write. Sometimes I wrote lots, lots, lots. Other times I had to stop and think.

Penny: How did you feel about the writing when you had to stop and think?

Nicki: When you stop and think, sometimes you really go blank. You want to start writing, but you don’t know what to put. Sometimes the very words come into your head. Sometimes just the idea and then you have to find the words.

Penny: How do you decide what to write next?

Nicki: It depends on the feelings the characters is getting

Penny: You can feel the feelings of the characters?

Nicki: Sometimes a good writer communicates with the characters in the story, like looking sad or greedy or confused. You get a picture – like it’s running through you. You’re so scared you kind of feel like crying. You kind of get – the vision looks up to you. You almost get that same feeling. It goes through you and down to the page.

As the students moved into junior high school, they encountered quite a different school culture (Oldfather & McLaughlin, 1993). Florencia explained,
In junior high, you are looking at the teacher more. They like to be in charge. They don’t want people talking about things, or getting out of hand, or whatever. They want to be the people up there and in charge. They would rather not have us in it so much.

In contrast to elementary school, the junior high had grades (Thomas & Oldfather, 1997). There was very little informational feedback on writing assignments. Of course, this is not uncommon with the junior high school structure, as teachers may have 125 students each day across six different periods. In this setting, the students came to view writing as an assignment, rather than as an opportunity for self-expression. There were fewer choices, more teacher control, less student involvement, and little flexible pacing for their writing.

Florencia reported that she did very little writing during this period of schooling, and, as she said, “They took away the paper, and my mind went blank.” (p. 13). Of course, they did not literally take away the paper, but Florencia no longer had the choice, the informational feedback, and the other rich experiences she had in Sally’s classroom to support her writing motivation.

In conducting the comparative study, Penny asked the co-researchers to consider TV shows for metaphors to consider the elementary and the junior high school experiences (Oldfather & McLaughlin, 1993). Brian felt that the elementary school was like *The News Hour* (on PBS), and that the junior high was more like *Jeopardy*.

At Willow, it’s more like a conversation, like you’re talking between students .... It’s kind of the news where someone interviews a person, like tonight it’s all about the Iraq war or something, and they are interviewing different people with different points of view. So [elementary school] is probably like the *News flour* and [junior high] is probably like a game show or something (p. 15).

The longitudinal work in California continued into the students’ high school years. This next phase was initiated by 8 of the original 14 students who wanted to conduct their own research on motivation (Oldfather & Thomas, 1998; Oldfather et al., 1999). Each student invited a high school teacher to collaborate and to explore literacy motivations and schooling. In one of our early research team meeting, as students were discussing the goals of the project, Florencia (Oldfather et al., 1999) summarized as follows:

What we want to do is we want to get teachers more aware of the students’ [perspectives] and students also more aware of the teachers’ perspectives. We want to establish how we think students could get motivated better. What motivates teachers?... What we’re trying to do is, we’re trying to make the [high school] classes more interesting.

As students conducted their own participatory research projects, Oldfather and Thomas studied what happened throughout the work. The students not only initiated the projects, they were involved in multiple levels of the research. They applied literacy strategies, including writing, of course, as they were involved as question posers, methodologists, interviewers, data analyzers, presenters, writers, theory builders, and change agents. The
findings from that study are too complex to report here (see Oldfather et al., 1999). We did learn a good deal about the enormous motivational benefits that result from students being engaged in systematic inquiry across time about their own motivations. Students were extensively engaged and motivated through the authentic tasks involved in this research for six years in applying their skills as writers, readers, speakers, and listeners. We propose that these various dimensions of literacy are inextricably intertwined as follows:

Students read, carefully and critically, a wide range of texts: academic papers, transcripts of interviews and research team meetings, speeches, formal essays, and informational reflections in preparation for discussions.

Students wrote formal speeches, field notes, interactive journals, quick writes, articles, and personal imaginative responses in the form of extended metaphors, poetry and art.

Students spoke through formal presentations as well as interactive dialogues with researchers, teachers, administrators, other students, and research team members. They interviewed others and were themselves interviewed.

Students listened more carefully than we ever imagined possible. They took very seriously their responsibility to fully understand what another was saying, nonjudgmentally, from that person’s perspective. (Oldfather et al., 1999, p. 311).

In this work, over the six-year period, the research team developed its own culture – within the larger culture – that supported the literacy motivations of the participants. Not that there were not down times and times when the writing came hard and became like Dillard’s (1989, p. 52) “lion in the cage.”

Across all phases of the longitudinal work in California, we believe that there are key dimensions of the culture that supported writing motivations through epistemological empowerment.

- Collaborative construction of meaning took place as participants listened to each other and shared ownership of knowing.
- A “rich broth of meaning” was created.
- Specific empowering strategies for meaning making and self-expression were provided and employed.
- Students felt that they had a chance to make a difference in the world.

The interactions of these elements within the culture facilitated deep interest and engagement with many different forms of writing.

4.3 The Republic of Georgia

Our work with the RWCT project began in 1997. The RWCT leadership assigned groups of four educational professionals from various countries (mostly the United States) to work with members of the Open Society Institutes in each of a number of former Soviet countries in order to plan and deliver professional development workshops for teachers. We were part of the team chosen to work in the Republic of Georgia. The two of us spent
approximately two weeks, twice a year, for three years in Tbilisi, the capital of the
Republic of Georgia, working with groups of teachers and with the Open Society Institute
staff. Two other educators also met with the teachers twice a year, so that the teachers par-
ticipated in workshops four times in a year.

Our goals for that first year were to teach the teachers about critical thinking and active
learning strategies through a pedagogical framework focused on Evocation, Realization
of meaning, and Reflection (ERR), and to support their use of the strategies in their own class-
rooms (Klooster, Steele, & Bloem, 2001). During our trips to the Republic of Georgia that
first year, we conducted two of the four, four-day workshops with 27 teachers from six
regions of the country, visited teachers’ classrooms, and discussed teachers’ perceptions
through a series of in-depth interviews with some teachers who volunteered to be inter-
viewed. During the time when were we were back in the United States, the teachers con-
tinued to try strategies in their classrooms and met with each other at least once a month.

The second year’s goals were to provide support for the same group of 27 teachers in
their attempts to begin conducting their own workshops in the RWCT (as part of a train-
the-trainers model) and to promote the sustainability of the program through workshops
for education faculty members. The RWCT leadership team believed that infusing criti-
cal-thinking strategies into institutions of higher learning would mean that the teachers
who came out of those institutions would be practicing those strategies with their stu-
dents. Thus, engaging these new higher education cohorts was a critical part of the RWCT
strategy. The group of 24 higher education faculty members also came from different
regions of the Republic of Georgia. The workshops were similar to the ones we conducted
with the group of teachers in our first year. The higher education faculty members, like
the teachers, were committed to trying the strategies in their classes and to meeting every
month with their colleagues in their respective regions between our visits. One major dif-
ference was that the teachers from the first cohort group worked with us to conduct the
workshops and gradually took over responsibility for teaching the group of faculty mem-
ers. During our last visit in the third year, we watched proudly as members of the first
and second cohort groups assumed the responsibility for working with an entirely new
group of teachers.

In our work with these teachers, we facilitated development of intrinsic motivations for
writing in many of the teachers and their students. We did this through a variety of means.
For one, we taught participants a framework for thinking (ERR) that supported both read-
ing and writing as forms of literacy development. The workshop participants practiced and
reflected on strategies tied to that framework such as brainstorming, think-pair-share, activi-
ties for thinking at higher levels of Bloom’s taxonomy, and various cooperative learning
and discussion group strategies. We encouraged metaphorical thinking by asking partici-
pants to create metaphors of teaching and learning for critical thinking. Once they had prac-
ticed these strategies, they taught them to their students and to other educators. Participants
wrote in a variety of genres for different purposes throughout the three-year period, as did
their students. They engaged in informal reflections on their learning, responded to text,
prepared for more formal writing using brainstorming and mapping, and, as they continued
their participation, wrote about their own students and the result of their instruction using
the RWCT strategies, rewrote the guidebooks we used, infusing their own ideas and mate-
rials into them, created their own curriculum materials, and wrote proposals and articles. We
saw our first cohort group of teachers blossom, taking positions of leadership not only in the RWCT project but also in their respective schools and even in the country as a whole. In our last year of work with them, they had managed to convince the Ministry of Education to make the RWCT strategies a part of the agenda for school improvement across the nation. They could not have been so influential in national policy if they had not been intrinsically motivated to write, and one of the things that made them so enthusiastic, they told us, was the change they saw in their own students’ motivations to write.

We began this project naively, not knowing much about the country’s rich cultural heritage despite a beleaguered political and economic history. The teachers and staff we worked with made sure that we learned. They shared with us the tradition of the Supra, for example – where family and friends gather around a feast and the Tamedan (the head of the table) leads the group through a series of poetic toasts to the country, to ancestors, to the family, and to individuals. We experienced their poetry and literature, we learned about the succession of foreign occupations they had suffered, we danced, and we sang. We danced and sang despite the severe economic conditions that existed throughout the country and in the participants’ own lives. They only had electricity a few hours every day, lived in cramped, crowded, and rundown apartments, and did not make enough money teaching to live on (often earning less than $30/month and sometimes going months without pay). Governmental corruption was a constant intrusion in their lives – those who drove us from one venue to another were continually stopped by policemen who extracted bribes. Despite those hardships, or perhaps because of them, they pursued RWCT’s aims with both determination and joy.

Our interviews, informal conversations, and analysis of participants’ work helped us to understand the empowerment they felt and that they observed in their students. Our interviews were conducted with a fairly large percentage of the participants in cohort one and a smaller group in cohort two. By the third year, our interviews had narrowed to a key group of approximately 10 individuals, some of the most motivated participants from the first two workshops – those who had been chosen to lead the train-the-trainer efforts. But all of the interviewees were very eager to tell us the sources of their motivation, most often commenting on the following motivating elements:

The importance of what they were doing. Participants said that they believed that reading and writing for critical thinking were essential attributes of democracies. They commented that, even though they had not reached the democratic ideal, they believed that their students, if they learned to think, read, and write critically, could solve their seemingly unsolvable political problems. They also believed that students would learn more if they could think critically about what they were learning. Irena, who taught chemistry, for example, said, “My students are becoming good chemists. That is good for the economy and for the country.”

Agency. Teachers often discussed that the sense of agency RWCT afforded them. From the beginning, participants felt “special” because they had been chosen to participate in the work. When they took these strategies back into their classrooms, other teachers in their schools noticed, often because students asked their other teachers to use the same strategies. They invited teachers and administrators into their classrooms and shared their learning.
Thus, they were viewed as “experts” and were often given new decision-making status by their administrators. In fact, one of the more disquieting elements of our experience was that the very best RWCT teachers were sometimes taken out of the classroom and put into administrative positions to insure that their expertise would reach a wider audience. We would be remiss, too, if we did not mention that teachers received some compensation for their work as trainers. Thus, their RWCT participation afforded them ways to increase their status among their peers, and this increased status seemed to result in an increase in feelings of self-efficacy. They also gained self-efficacy from their newfound success in the eyes of their students. They often shared their stories of increased student interest and accomplishments and even adoration.

The teachers, in turn, fostered environments in which students could feel a sense of agency. They often mentioned the raised status the students felt as a result of their changes in teaching, saying that their students felt on the same level as their teachers instead of subordinate to them. One teacher explained, “I’m not the ‘truth’ anymore. Students like having their ideas be equal to the teacher and being equal, they feel more responsibility for being well prepared for the lesson.”

Deep knowledge about emancipatory strategies. When we first began working with the teachers, we quickly realized that they knew about critical thinking on a theoretical level. During the very first workshop, participants dutifully expounded on the works of their famous pedagogical theorists. However, they had little knowledge of how to teach it or what it really was to engage in it. By far the most common feedback we received from participants about the workshop is that they finally had the specifics about how to put the theory into practice. We made sure that the teachers engaged themselves in the strategies before they taught them, and we always had them reflect on their experiences both as a student learning the strategy and as a potential teacher of the strategy to others. Finally, they had to teach the strategies to other teachers. At this stage, participants, in order to be fully prepared, went back into the guidebooks and restudied the theoretical background and practical sequence of activities involved in understanding and teaching the strategies, often commenting that they came away with new insights by engaging in that work. Alexander and colleagues (Alexander, Kulikowich, & Jetton, 1994) discuss the way in which individuals, on the way to expertise, begin with fragmented or unstructured knowledge that is poorly related to central concepts. As knowledge, strategy use, and interest increase, they become able to organize concepts around central principles, learn new concepts more easily, and eventually create their own knowledge. We observed the growth of such expertise in our workshop participants. The ERR framework may have been helpful in fostering that growth, because it allowed participants to organize and think about the strategies within a few central ideas. Pati said, “I graduated from college, and I learned what to teach, but I didn’t know how. I had lots of thoughts in that direction (of the RWCT pedagogy), and some things were not quite new, but you gave me a structured and systematized whole that helped me ...” Nino felt freed by her newfound knowledge, exclaiming, “I feel like a bird.” We found it poignant that, in the process of creating metaphors for teaching and learning, one member of the second-year cohorts drew a picture of a birdcage with the door open but the bird not budging. He explained that this was what it felt like to understand that things can and must change but not to know what to do about it.
Conceptual conflict and struggle. When we first began our workshops, we encountered a good deal of resistance from teachers and teacher educators. They had numerous reasons why the strategies could not be used within the context of their schools: the curriculum was too tightly packed, students would become unruly, the materials they used did not lend themselves to different instruction, and so on. We understood from their descriptions of teaching and learning and from our classroom observations that we were asking them to do something different. In a typical classroom, teachers would stand in front of the classroom and lecture. The lecture would be interrupted by times where teachers would ask students to engage in recitation. Students would volunteer for those recitations, stand beside their desks, and show that they had memorized particular facts or the words to a particular poem or other piece of writing. We were amazed to find out that students typically were required to memorize lengthy works of prose and poetry. As we note later in this chapter, some of the teachers in our workshop had not even thought of picking up a piece of chalk to write on the board. The lessons the teachers taught were oral recitations, as well. We knew, then, that part of our work was going to be getting these teachers to consider changing their styles of teaching and learning. Although we thought we had made headway by the end of the first workshop as a result of their practice and reflection about the strategies, our first real breakthrough came after participants took the strategies into their classrooms. You will understand the transformative power of this act when you read Mzia’s story, later in the chapter.

Culture of listening. Our first workshop experience with the participants was somewhat unnerving. Working with translators was difficult enough, but we found we also had to deal with the fact that volunteers to talk often launched into long, arduous recitations of theory that were only vaguely related to the topic at hand. During the time when these individuals were engaged in recitation the rest of the students would talk quietly to each other, walk around the room, and pay little, if any, attention to what was being said. We asked Paata, an Open Society Institute staff member and teacher, what we were doing wrong, and he explained that what we observed was typical, and, he thought, an outgrowth of living in a communist regime. Evidently, citizens would risk punishment if they did not show up for political meetings or rallies, but they did not actually have to listen. So communist party members would make long, arcane speeches and the crowd would tune out. Bloome and Argumedo (1985) called this behavior “procedural display.” Participants were going through the motions of interacting around issues of teaching and learning, but, in reality, did not care about the quality of communication. On the basis of that explanation, we set out to develop among our participants a “culture of listening.” Our work involved teaching participants to think and write before speaking (as in the think/pair/share activity), reduce their comments to a few sentences reflecting the most important elements of their ideas, share the floor with others (we introduced a “talking stick” to be passed among speakers), and practice reflecting on (orally and in writing) on what others said. We did extensive modeling of listening and speaking, and we asked our other U.S. team members to continue the work. They taught the idea of productive discussions – that interactions among workshop members needed to result in some sort of product, such as a new understanding, a teaching material, or a piece of writing. We felt our work, in turn, was productive – one of the most striking elements of our interview data is that participants said they had developed a sense of community. Nino, for example, said that, “while working in groups, I felt
that my fellows were sharing my ideas.” The participants also believed their students were learning to listen. Irena said, “They are more used to listening to each other, to taking each other’s ideas into consideration.”

As we relate the complex story of our experience in the Republic of Georgia, some readers may wonder whether the work we did has implications for writing motivation. We argue that it does. As we assert, writing is about thinking and communicating that thinking with others, and motivation to write is never divorced from the larger context within which that thinking occurs. If writing is to be motivating, it is best fostered in contexts in which individuals believe that the content of what they say matters (it represents important work), and others in a shared community will listen, and in contexts where they feel a sense of agency and epistemological empowerment. The content of that writing is motivating if it represents ideas with which they are grappling and, in the end, come to deeply understand. In the Republic of Georgia, RWCT participants used writing as a means to social and political power when they rewrote guidebooks, created curriculum, developed policy proposals, and so on. They were successful in that endeavor largely because they had ideas they understood and strongly believed, and they supported each other in their efforts to communicate them.

Readers may also wonder why we are discussing the motivations of teachers rather than the motivations of students. It is our strong belief that, as we saw in Sally Thomas’ class, the environment in which writing takes place is critical for student motivation. Without teachers who believe in and have experienced the power of the very principles of motivation we outlined above, environments in which students listen to each other, feel a sense of agency, do important work, and have a deep knowledge of what they want to say, will not be possible. In other words, if teachers, themselves, are not experiencing intrinsic motivation to write, they are not likely to foster that motivation in their students. As you will find in Mzia’s story below, fostering such environments can have huge implications for students’ motivations. We have come to understand that part of the powerful nature of emancipatory strategies is the emancipatory effect those strategies has on others.

4.3.1 Mzia’s story Mzia, a schoolteacher in one of the most outlying regions of the Republic of Georgia, approached us during our second visit, eager to tell us about her experiences with teaching since she left our first workshop. Here is her transformative tale of a lesson with her eighth grade students.

It was a very big decision I made. I understood I had to do something new. When I came from the workshop, I had this decision with me. I remembered when I entered the classroom I asked for a piece of chalk, which I had never done before. The children were looking at me in surprise, because I hadn’t warned them beforehand, and I could feel that the children were prepared for something new also. Before that time, I was in quite a static role. I was explaining the lesson and enjoying myself, my rule, my speech. Actually, I wasn’t very interested in the other counterpart in the classroom. The important thing was that my role was successful, that I was efficient in the implementation of my role. I was sort of using my students for expressing my own ability and skills as a teacher. And now I was quite convinced that this had been my teaching process.
After the experience (the workshop), I started teaching and provoking my students’ thought. My role became more dynamic. I involved my students. Before those times, I never used chalk and blackboard, and they became a central part of my teaching. Through the blackboard I had very close contact and communication with my students. That was the first time I applied these methods. I was using the method of evocation. The topic was one of the short stories of a 20th-Century Georgian writer. The questions were: “What do you know about women’s role in society? What is your perception of a woman as a mother?” I told them that my next lesson would be about the life of a woman. And very interesting material came from the students. And we tried to put it up on the blackboard. Of course, they were also writing in their notebooks. All of them were trying to participate, to contribute somehow to the lesson. I couldn’t make any division between excellent or poor students. Before the lecture that day, I had always somehow divided the class in my mind between excellent and poor students, and now that division was eliminated. And actually … I was speechless. I was enjoying the lesson, and I was amazed at the knowledge of my students. In the past, I would never have believed that they would have known so much. So, the students became my partners. There were no boundaries between students and teacher. Actually, I used the whole class period for evocation – the whole lesson! We filled up three blackboards and five pages in students’ notebooks. We have never done that much before. And it was such a busy environment. You could near the notebooks, turning pages, making noise. It was very busy. Everybody was trying their best. And after the lesson was over, I felt great exhaustion. I must say that the lesson you taught (in the workshop) encouraged me to discover a new type of teaching (Holschuh, Hynd, & Oldfather, 2001, pp. 108–109).

Mzia described how a shift in her role as a teacher had a large impact on her students’ involvement and critical thinking and writing fluency. She also described the influence this shift had on her understanding of her students, their abilities, her relationship to them, and their motivations for learning. This story illustrates several points about motivations to write. For one, it shows what happens within a culture of listening. Among the outcomes of Mzia’s listening is the rise in status of students when they are engaged in sharing their own knowledge (“the students became my partners;” the division between good and poor students disappeared). Also, it illustrates that knowledge of emancipatory strategies such as evocation is an essential part of creating motivating environments. If Mzia had not already engaged in evocation as a workshop participant, she would have been less likely to use the strategy with her students.

4.3.2 Paata’s story

Paata Pataava, one of the Open Society Institute staff members and a teacher himself, worked closely with us as a facilitator, a participant in the workshops and, later, a trainer, and finally as the coordinator of the RWCT program. In the following interview excerpts, Paata describes the change that RWCT had meant for education in the Republic of Georgia:

… I always expected that something in the methodology [in Georgian schools] needed to be changed, and I found a lot in this [RWCT] content to use. When I mention change, I’d like to say that the whole paradigm of educational relationships – the
whole educational paradigm had to be changed. I found [potential] in the [RWCT] program. I started using it, and I had changes in my own classroom children, so my new role was a practical user of RWCT methods in the classroom ….

Paata went on to explain how the change in his classroom methods led to more changes in his life, in that he took on more and more responsibility for RWCT. Later, Paata returned to the idea of change.

Paata: The name itself (RWCT) really describes the changes we can achieve. If people start, and young people also, thinking critically in Georgia, then we can guarantee some changes. I first learned that at Tbilisi State University in the Department of Philosophy. Young students there understood that a healthy way of thinking was to establish an army of healthy thinkers. We understood that people had lots of stereotypes, and that something in education had to be changed to free our people.

Interviewers: Was there a particular event that helped students understand?

Paata: There was a lecturer who was acquainted with student-initiated learning. The first lesson by this man was absolutely amazing. Being students, we knew what had to be changed, but we didn’t know the strategies because we didn’t have any experiences. And suddenly this man came into the room and provided an absolutely different kind of lesson. He put a couple questions to us about our personalities, and we had group work, and we understood that it was something different, and we learned that people could listen to each other. I still remember that we were absolutely excited about the form of the lesson ….

Paata: When I attended the RWCT workshop, from the very beginning, I clearly identified that this was something similar to what we did there, so this was a turning point …. So, now we have teachers, lots of teachers, who understand it, not only the overview but also the whole content of the program. Now people work actively and there is a good team, and the program develops …. We have teachers and colleagues who understand it. We have students who understand it. I mean children and university students who understand it …. These days I’m absolutely optimistic, and this has continued for several years. There was a time I wasn’t like that, but now I am. First of all, I see lots of young people thinking this healthy way. And I see the future in their hands.

Paata also discusses the changes in himself – especially in his ability to communicate:

Paata: I’d say I became open to the needs and interests of people.

Interviewers: Why did that come about?

Paata: Because we’re pretty much the same, but pretty much different at the same time with different needs and motivations, and if you don’t understand that, you’re definitely closed.

Interviewers: Did becoming more open change anything in you?
Paata: Yes. I became much more psychologically, much more joyful. Sometimes people say I am a serious man, but I became much more joyful – enjoying life and savoring communication.

Paata also discussed the need for a community of thinkers:

Paata: When you start thinking like that, you need to have some others thinking like that around you. You need friends speaking the same way. Again, this is a big change in the whole society. So when children start developing this (way of thinking), people may consider them to be a white crow in the group, and it changes their whole approach to everyday life and their vision of the future and the past.

Paata’s interview illustrates that his motivations developed out of his desire for change and from his experience in being listened to as a university student. His motivations are at once personal (he feels more joyful), social (he communicates with others more and understands the need for a community of critical thinkers), and political (he is hopeful that their will be a change in the entire country). He had deep motivations for writing, and he did write – proposals for funding, strategic plans, guidebooks, etc. He felt a measure of responsibility for broadening the influence of RWCT to the rest of his country, so his writing activities were tied to something about which he felt deeply committed.

5 Recommendations for Pedagogies that Support Writing Motivations

In thinking about the two contexts – Sally Thomas’ classroom and the RWCT project in the Republic of Georgia – we see that the lessons we have learned have practical implications for teaching writing and learning to write.

Central to this section is the notion that teachers should have opportunities to experience the kind of emancipatory contexts that promote writing motivation. We believe that it is important for teachers to understand the kinds of activities and attitudes that trigger their own sense of agency in order to know how to foster that sense in their students. In our view, teachers should both experience and teach the following:

A culture of listening. One of the most emancipatory elements in classrooms appears to be that individuals are listened to. Oldfather describes students in Sally Thomas’ class has having “honored voices.” Paata described his university experience of being listened to as a turning point. Listening requires dialogue among students and between students and teachers. In both the Californian and Georgian contexts, there was an intense focus on thinking and understanding, and the ownership of knowing was shared. Listening and thinking co-exist in such environments. One way we have learned to foster this dialogue is through a think/pair/share strategy, whereby individual students think about what they believe, discuss it with another person (which involves listening as well as talking), then share their paired
thoughts with an entire group of students. In writing workshops, another context for building a culture of listening, students listen and respond to what other students have written. Students who understand that they are listened to will feel a sense of agency that will surface in their writing as well as in their communication with others. We have found that it is important to show students, through modeling, what it is like to listen thoughtfully to the ideas of others.

**A focus on ideas and critical thinking.** When students are engaged in thinking about real issues and solving real problems, their work takes on an importance it does not have if it represents a mere exercise. In addition, when students think critically about important ideas, they are engaging in the processes that are valued in a democracy. We recommend that students have extended opportunities to explore ideas before they formally write about them. One strategy we use is called Corners. In this strategy, students brainstorm the possible perspectives one might take on a particular issue. They then engage in free writing about the perspective that they wish to take. Next, they go to a corner that most closely represents their perspective, and all of the students who have gone to that corner discuss the reasons why they have that viewpoint. A spokesperson from each group shares their perspective and the reasons they have adopted it with the whole group. At any time, students may change their “corner,” if they like what another group says. After participating in “Corners,” they can engage in writing. At that point, they have had opportunities to think deeply about their own opinions and the opinions of others and to change their opinion, if warranted. They may have, indeed, gone through some struggle with their own ideas and ended up in a very different place than where they began. Students who engage in Corners generally have quite a bit to say, perhaps because of that struggle. Alternately, students can use Alvermann’s (1991) discussion web strategy. In this strategy, pairs of students write down arguments for both sides of a “yes/no” question, then try to reach consensus about what they think. They join another pair and engage in more consensus building, and end with a whole class discussion. We suggest, following Tomlinson (2003), that students be given some choice in exploring ideas for writing. For example, if a student’s father has just left for Iraq, then that student may need to write about that rather than what seems important to everyone else.

**A focus on the “how to.”** The deep learning through and about strategies for teaching critical thinking was transformative for the participants in the RWCT program. Students felt emancipated (“I feel like a bird”) when they gained a sense of competence. Thus, teachers should help students understand how to write in particular genres and to understand the different conventions associated with them. Providing good models of writing and giving specific guidance through writing frameworks are helpful. Kenneth Koch (1999), an artist in the schools, for example, helped students to create wonderful poetry, published in *Wishes, Lies, and Dreams* by providing them with structural prompts that tugged poignantly at their worlds, their identities, (e.g., I used to be “…. But now I’m …”) without constraints of rhyme.

**Opportunities to practice.** Students cannot gain a sense of competence unless they have opportunities to get good at what they are trying. We recommend that students have
numerous opportunities to write for different purposes and to different audiences. Students can write to themselves or their best friend, they can communicate to a group of peers or a larger audience. Students who engage in brainstorming, free-writing, writing constructive responses, and writing multiple drafts, students who write letters and poems and reports and critiques and advertisements for important purposes are gaining in writing competency and, in turn, are developing a sense of themselves as empowered.

6 One Step Back for a Larger View

Through our cross-cultural comparisons examining cultures that support writing motivations, we have found common themes, as well as unique dimensions of each context. We have made a case that it is vital to consider the impact of cultural context as an influence on writing motivations. This can include the culture of a classroom, a school, or even the sociocultural and historical heritage of a nation. We have illustrated ways in which writing motivation is bound up with views held within the culture regarding authority of knowledge concerning what counts for knowledge and whose knowledge counts. We summarized research on how a social constructivist teacher who shares ownership of knowing with students can support their understandings of themselves as knowers, as collaborative sense makers, as people who have the right for a turn to speak or to write and whose words are to be taken seriously. These experiences, along with opportunities to conduct participatory research on motivation in their high school supported the development of students’ epistemological empowerment and precipitated a love of writing and persistence as writers through their high school years (Oldfather et al., 1999).

We saw how students in Sally Thomas’ classroom experienced school learning in general, and writing, in particular, as authentically connected to who they were and what they cared about. We saw how participants in the RWCT project in the Republic of Georgia were yearning for ways to escape the constraints of the oppressive heritage as part of the former Soviet Union. Our workshops offered them many of the same experiences that Sally offered her students. Through activities and discourse, the group shared the ownership of knowing. Many began to shift away from ingrained habits of not listening to each other, and participants felt that they had created a culture of listening. RWCT participants gained strategy knowledge, as Sally’s students had done; they experienced these strategies first within the initial workshops, and later they confirmed and expanded their understandings of strategies through teaching them to the next cohorts of RWCT participants. The strategies for applying critical thinking to literacy activities served them and their colleagues and their students in emancipatory ways. The participants and their students wrote, and wrote, and wrote, and often expressed amazement at their newly gained fluency and newfound passions for writing. As one participant explained, “I feel like a bird” (Holschuh et al., 2001). This was not about grades – either for the student co-researchers, or for the participants in the Republic of Georgia. It was about self-expression, identity, and emancipation.

Both of these studies provide examples in which literacy motivations were sustained over a substantial period of time (six years in the case of the student’s research collaboration and three years on more in the RWCT project in the Republic of Georgia). We can only theorize
about why this was possible. Our guess is that there was a unique and interactive set of factors as work in both settings that included (but were probably not limited to) the following:

1. Participants’ developed a sense of epistemological empowerment or intellectual agency, which was gained through participation in a culture of listening and a shared ownership of knowing.
2. Participants’ developed identities as writers and experienced writing as a means of meaningful self-expression.
3. Participants were part of vibrant, supportive communities that involved sharing ideas, collaboration, and fun.
4. The longitudinality of the projects provided enough time to have an impact on participants’ relationship to writing.

The strategies were so simple. They were activities that we had come to think of as everyday ways of teaching. But when we saw through the Georgians’ eyes what a major shift these approaches created in the culture of our workshops and then in the cultures of their schools, we were amazed. As a result of our work in Georgia, we gained new appreciation for the importance of knowledge of specific strategies for promoting active learning, critical thinking and writing. We began to understand that for the Georgians, these were emancipatory strategies. We continue to receive reports from Paata about the ongoing and widespread use of the RWCT strategies in Georgia and the continued enthusiasm of the educators who continue that work there.

On another level, we have understood, in fresh and deeper ways, the vital role of the schools in preparing students to be able to think critically and to be able to apply those abilities in emancipatory ways in their writing. These abilities provide the bedrock for the healthy functioning of a democratic society.
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