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High stakes testing and teacher access to professional opportunities: lessons from Indonesia

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ABSTRACT

High-stakes testing regimes, in which schools are judged on their capacity to attain high student results in national tests, are becoming common in both developed and developing nations, including the United States, Britain and Australia. However, while there has been substantial investigation around the impact of high-stakes testing on curriculum and pedagogy, there has been very little research looking at the impact on teachers' professional opportunities. The current project used a case study approach to examine the impact a high-stakes national testing programme had on teachers' access to professional learning and their teaching allocations in four Indonesian public schools. It found that better qualified teachers were allocated to classes that would be sitting for the national examinations, and that these teachers were given much more access to professional learning opportunities than those teaching non-examined year levels. This in turn impacted negatively on the staff morale of less qualified teaching staff and potentially on their career trajectories. Findings suggest that school leaders should be wary of targeting better qualified and/or more experienced staff to year levels sitting for high-stakes tests, as this may lead to staff stratification within schools, limiting opportunities for staff to learn from one another and reducing the morale of less qualified and less experienced staff. They also add support to a substantial body of research that suggests policy-makers should be wary of the flow-on effects of using performance in high-stakes tests as the key means of judging school effectiveness.

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Introduction

Within dominant neoliberal policy frameworks, national and state testing programmes are an increasingly popular policy accountability tool for judging the performance of schools, teachers and systems. Such programmes exist in various forms in Australia, the United States and Britain, and have also been implemented in developing countries such as Indonesia and Chile. Those who seek the expansion of these programmes have argued that they provide clear benefits to schools, supporting the development of more effective instructional practices and better student learning (Crocker 2004; Jones 2007; Phelps 2006), while detractors have outlined a number of potential negative outcomes for schools and students (Abrams 2004; Au 2008; Cunningham and Sanzo 2002; Gregory and Clarke 2003; Rice et al. 2016). The sheer scope of these testing programmes means that their impact is felt by thousands of

schools and students, and underlines the importance of research to determine the exact nature and extent of both positive and negative flow-on effects.

The sections that follow will consider definitions of high-stakes testing, together with the potential benefits and drawbacks such regimes have for students. We will also highlight the lack of research on how high-stakes testing impacts on teachers' professional lives, this being the impetus for the study we will then describe.

Definitions of high-stakes testing

There are ongoing debates around what makes a testing programme high stakes. Johnson et al. (2008) have argued that a test or testing programme is high stakes when it has consequences for student grade promotion or graduation, teacher accountability, the reputation of schools or the funding of schools. Au (2008) argues that testing programmes are high stakes when performance in such tests leads to some form of sanction or reward for students, their teachers, school administrators, schools, local school regions or systems. Even where there are no direct sanctions attached to performance in state and national tests, some authors have argued that where school results are made public in systems that allow parents a choice of schools, the tests become high stakes. This is because parental movement of children to schools perceived to be high performers in the tests effectively punishes those schools perceived to have performed less strongly as they lose student numbers and resources (Ball 2008; Howe, Eisenhart, and Betebenner 2001; Lingard 2010; Lobascher 2011). For the purposes of this paper, Johnson et al.'s (2008) definition will be utilised.

Potential benefits of high-stakes testing

Supporters of high-stakes testing regimes point to the potential benefits for schools and students, and there is research evidence to support the notion that such testing programmes have some positive impacts. Phelps (2006) argues that the tests provide schools, parents and students with unbiased information that allows student learning to be judged against a broader cohort of peers than available at the local level, information that may be less likely to be influenced by teacher perceptions about student perceived effort, attitudes and other non-cognitive matters. Others argue that testing programmes support greater national and state alignment of the curriculum, sending clear signals to schools about what is most important to teach (Clarke et al. 2003; Crocker 2004; Jones 2007). Such testing programmes also allow transferability and comparability of results across jurisdictions (Santiago et al. 2011), so that when a student transfers schools or states, information on their achievement can travel with them. In addition, large-scale testing programmes can provide policy-makers with information that allows them to compare the relative performance of systems and schools (Santiago et al. 2011). Aggregate data from testing programmes can be useful for schools in helping them determine how well they are teaching various skills and areas of the curriculum, and so focus their professional development programmes for staff (Collier 2010).

There is more mixed evidence with regard to their impact on student achievement. Bishop (1998, cited in Jacob 2001), examining exit exam requirements for high school graduation, found that Canadian students in provinces with exit exams scored significantly higher in mathematics and science tests than students in provinces without such exams. Bishop, Mañe, and Bishop (2001) analysed data from the Trends in International Mathematics and Science Study (TIMSS), and found that countries in which students are required to pass exit exams demonstrate higher levels of student achievement, controlling for student social background, although it should be noted that these analyses did not focus on individual student achievement gains. Other research is much less conclusive. Amrein and Berliner's (2003) meta-analysis of US research, together with smaller scale studies of Klein et al. (2000) and Haney (2000) in Texas, suggest that achievement gains following the implementation of large-scale high-stakes testing programmes are largely a result of teachers teaching to the test.

Negative impacts from high-stakes testing

While there are undoubtedly some potential positives to be gained from high-stakes programs, and mixed research results on their influence on student achievement, there is also significant research evidence detailing a broad range of negative impacts from the implementation of large-scale testing programs.

Numerous studies in the US, Australia and Britain document that such programmes tend to lead to a narrowing of curriculum breadth to focus on assessed material and a decrease in time allocated to non-tested areas (David 2011; Jones, Jones, and Hargrove 2003; Madhaus, Russell, and Higgins 2009; Polesel, Rice, and Dulfer 2014; Reay and Wiliam 1999; Rentner et al. 2006). Researchers in Indonesia and the US have also documented changes in pedagogies due to high-stakes testing regimes, with high-stakes programmes leading to a shift to more teacher-centred instruction, and a focus on lower level cognitive skills (Chang et al. 2013; Pedulla et al. 2003).

There is also a body of evidence suggesting a range of negative impacts on student well-being. These include reports by teacher, parents and students of increases in student stress and anxiety (Brown et al. 2004; Rice et al. 2016; Wyn, Turnbull, and Grimshaw 2013), a sense of futility among students (Gregory and Clarke 2003), behaviours such as exhaustion and crying (Madhaus, Russell, and Higgins 2009) and instances of students freezing in tests (Paris and McEvoy 2000). Perhaps unsurprisingly given these negative effects, there is also evidence that the tests tend to reduce rather than increase students' intrinsic motivation to learn, and decrease their opportunities to become self-directed learners (Sheldon and Biddle, 1998, cited in Amrein and Berliner 2003).

Impacts of high-stakes testing regimes on teachers

While the impacts on schools, on students and on teacher practice have now been well-documented, the impact on teachers themselves has been far less extensively explored to date. At an individual level, there is some evidence that such regimes may lower teacher satisfaction and morale due to the loss in teacher professional autonomy, decision-making capacity and creativity teachers experience as the result of high-stakes testing programmes (Wright and Choi 2005; Crocco and Costigan, 2007). There is also some research (although not conclusive empirical evidence) suggesting that, as a consequence of these effects, high-stakes testing programmes may contribute to teacher attrition (Crocco and Costigan, 2007). However, there is very little examination of how the implementation of high-stakes testing may influence the types of teaching and professional learning opportunities available to teachers, and subsequently any professional career trajectories that flow from this. Little is known about whether and how high-stakes testing programmes affect teacher allocation to classes within schools, nor whether they increase or impede access to professional learning among certain subgroups of teachers. It is also unclear whether teachers perceive high-stakes testing as having any impact on their professional trajectories and morale.

To increase our knowledge in these areas, this study set out to explore the answers to the following research questions:

- Do high-stakes testing programmes affect teacher allocation to classes within schools?
- Do they increase or impede access to professional learning among certain subgroups of teachers?
- If so, what do teachers perceive to be the impact of high-stakes testing on their professional trajectories and morale?

We utilised a multiple case study approach (Stake 2006) in 4 public schools in Indonesia to determine how national exams for students in Years 6, 9 and 12 were seen by teachers to impact on their teaching allocations (including class placements in primary schools) and professional learning opportunities. The research outlined was part of a broader project examining teacher pathways into teaching, teacher development and school quality in Indonesia.

Indonesia provides a particularly useful context in which to study such an impact for two key reasons. First, the Indonesian national testing regime covers a broad range of types of schools and year levels (in primary, secondary and vocational schools), allowing researchers to see if any effects are evident across different school contexts. Second, the distinct teacher entry pathways and defined teacher qualification levels in the Indonesian education system (discussed below) make it relatively easy to determine how perceptions of different qualification and skill levels in a high-stakes setting play out in teacher placements and professional learning opportunities.

The context: Indonesian schools and teachers

As the largest country in the south-east Asia region, Indonesia has the fourth largest education system in the world, with approximately 3.3 million teachers working in schools (The World Bank, 2010). Eighty-one percent of these teachers work under the Ministry of Education and Culture (MOEC). Of those teachers employed in government schools, around 95% of primary and 79% of secondary teachers are civil servants employed by the MOEC, the balance being contract or honorary teachers employed directly by the school (Chang et al. 2013).

There are three levels in the current Indonesian education system: basic, secondary, and higher (tertiary) education. Basic level education comprises six years of primary schooling and three years of junior secondary education. Secondary level consists of 3 years of education (Years 10–12) at high schools or vocational high schools.

Despite extensive reforms since the beginning of this century, the Indonesian education system has struggled to produce evidence of quality improvement (Suryadarma and Jones 2013). Over the past decade in Indonesia, there has been a tension between efforts to democratise and decentralise education and the flow-on effects of the implementation of the National Examinations at all schooling levels. The National Examinations were first implemented in 2002. The Examinations were conducted annually for all students in Year 6 in primary schools, Year 9 of junior secondary schools and Year 12 of high schools. Subjects examined were Mathematics, Indonesian Language and Science in primary schools, Mathematics, Indonesian Language, Science and English in junior high schools and Mathematics, Indonesian Language, English and three specific subjects depending on the high school students' major in senior high schools. Results are provided to schools, parents, the relevant education authorities and the public, and there is intense pressure on schools to perform well in these exams and improve on past results. So while the rhetoric around schools has focused on tailoring educational provision to local contexts, in reality, the National Examinations provide a strong mechanism that tends to homogenise educational focus and offerings in schools. Performance in the National Examinations is the key benchmark by which education authorities and the public judge the quality of school performance.

Teacher pathways and qualifications in Indonesia

The Indonesian teacher workforce in public schools comprises teachers from four key teacher entry pathways. Government teachers (GTs) are mostly recent graduates who have tertiary education qualifications and have successfully undertaken the required civil servant pen-and-paper recruitment test. These teachers are highly regarded by schools, being seen as having the skills and competencies to teach efficiently, although many are young and lack practical experience. Ex-Assistant teachers (EATs) generally have had considerable experience in teaching, and have then undertaken the recruitment test to become civil servants. However, these teachers are often perceived to lack rigorous professional training in education. Scholarship-Bond teachers (SBTs) gained their teaching positions many years ago while they were still completing their bachelor's degree due to the high demand for teachers in the 1980s, and typically do not hold an educational qualification. Due to government awareness of their lack of some pedagogical knowledge and skills, many SBTs were supported to undertake a very structured teacher development programme funded by the World Bank during the 1980s and 1990s. The last group is the Non-Permanent teachers (NPTs) who are recruited directly by the schools (in

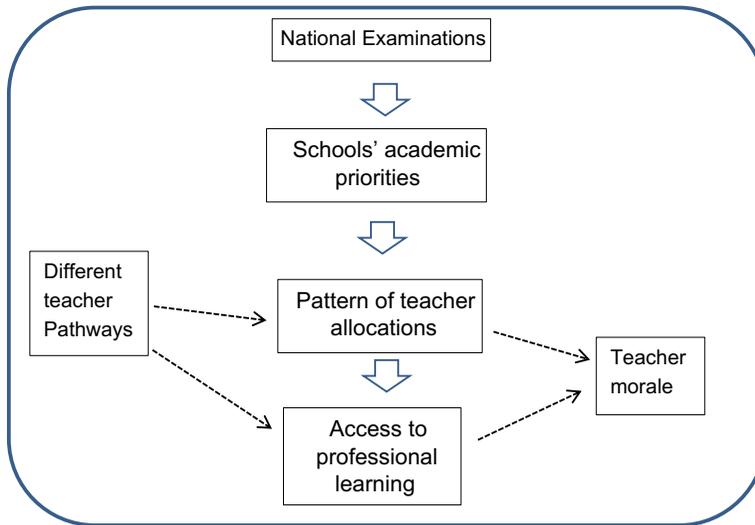


Figure 1. Conceptual framework.

contrast to other staff, who are recruited centrally), and paid through the Operational School Funds given by the government. NPTs work on a contract which is reviewed annually. Typically they have minimal or no formal teacher education background or qualifications.

Conceptual framework

We hypothesised that the National Examinations regime and its use to judge school quality would be reflected in the priorities of the school, as expressed by the principals and deputy principals in interviews. We further hypothesised that the strong priority given to National Examination performance would lead to staff from more highly qualified pathways being allocated to classes sitting for these exams. We further speculated that this was likely to be reflected in turn in differences in the professional learning opportunities available to teachers in each school, and that, if this were the case, teachers allocated to non-examined classes lacking professional learning opportunities would express dissatisfaction about their situation. This framework can be found in Figure 1.

Methodology

The current study took a qualitative approach (Creswell 2003, 18) in which the interview questions were designed to support participants to discuss their experiences, stories and views. Teachers have impressions, judgments and interpretations of the particular experiences they have lived because their knowledge is mostly formed through narrative accounts of experiences in order to construct a shared understanding of their work (Johnson 2009). Doyle (1997) notes that narratives can locate and link facts to one another and that the real meaning of truth lies in how phenomena are connected and interpreted by the participants. This type of study, according to Riessman (2008), also enables the unheard, unseen and undocumented – the ordinary, marginalised and silenced – to give voice.

Within this set of assumptions and qualitative approach, the impact of the National Examinations as a form of high-stakes testing was explored through rigorously analysing within and across the four case studies. In this way, the dilemma of understanding cases and the bigger phenomena or 'fountain' as Stake (2006) considered, can be addressed while at the same time incorporating thick description of the phenomena.

Sampling

Multiple case study design was chosen for its ability to accommodate the established research questions, the variability of cases and contexts, and a broad range of data. Schools were chosen using a maximum variation sampling strategy to provide insights into the impact of the testing programme across a range of settings. The study therefore targeted schools from each of the different levels: one primary school (Years 1–6), one junior secondary school (Years 7–9), one high school (Years 10–12) and one vocational school (Years 10–12). The sample was also designed to include schools with different socio-economic profiles: one school was an established middle class school, two schools had mostly lower middle class and working class students and one school was very poor. All schools were drawn from the public sector as this educates the vast majority of students in Indonesia. The participating schools are described below.

Johnstone is a primary school catering for students in Years 1 to 6. It has a student population of 240 and a staff of 34, and is located in an impoverished area. Marsden is a junior secondary school (Years 7 to 9) with 40 staff and more than 600 students. Students come mostly from lower middle class and working class families, and the school has increased its enrolments in recent years. Ashfield is a senior secondary school (Years 10 to 12) in a rapidly developing suburban area, and has a strong reputation. Its students are mostly drawn from the growing middle class. Students in each of these schools undertake a prescribed curriculum with an academic focus.

Delmont is a vocational senior high school with a staff of 72 teachers. There are around 260 students enrolled in each year level (Years 10 to 12). Primarily preparing the students to be skilled workers in the industrial world, the school provides three types of subject: Productive, Normative and Adaptive subjects. Productive subjects are vocational subjects that equip the students with the practical skills relevant to their major. The school has four Productive departments: Accounting, Sales, Office Administration and the newly established Fashion department. Adaptive and Normative subjects complement the vocational subjects. The Normative subjects are Religious Education, Civic Education, Indonesian Language, Sports and Arts. Adaptive subjects are English, Math, Science and Entrepreneurship. Students undertake whichever Productive subjects are part of their chosen vocational stream; Normative and Adaptive subjects are compulsory for all students. Students in vocational schools in Indonesia must also undertake the National Examinations in Mathematics, English, Indonesian and their vocational subjects. The sample for the study is outlined in Table 1 below.

Table 1. Study participants.

School description	Leadership staff interviewed	Configuration of school teaching staff	Teachers in focus group interviews	Subjects examined in the National Exams
Johnstone Primary (Years 1–6)	Principal, 3 senior teachers, and 2 supervisors	67% GTs 20% EATs 13% NPTs	4 GTs 4 EATs 3 NPTs	Mathematics Indonesian Science
Marsden Junior secondary (Years 7–9)	Principal, 4 deputies, and 2 supervisors	55% GTs 10% EATs 15% SBTs 20% NPTs	4 GTs 2 EATs 4 SBTs 4 NPTs	Mathematics Indonesian Science English
Ashfield Senior secondary (Years 10–12)	Principal, 4 deputies, and 2 supervisors	62% GTs 15% EATs 7% SBTs 20% NPTs	3 GTs 3 EATs 2 SBTs 3 NPTs	Mathematics Indonesian English Sciences (Physics, Chemistry, Biology) Social sciences (Economics, Geography, Sociology)
Delmont Vocational senior secondary school (Years 10–12)	Principal, 5 deputies, and 2 supervisors	54% GTs 15% EATs 10% SBTs 21% NPTs	4 GTs 4 EATs 2 SBTs 2 NPTs	Mathematics English Indonesian Vocational subjects

Data collection

There were three data collection phases in the study. In the first stage, 4 principals, 17 deputy principals, and 8 school supervisors at the selected schools participated in 60-min individual semi-structured interviews. This phase aimed to highlight what leadership staff saw as the main educational priorities for their school and gain information on how staff were allocated their teaching responsibilities.

The second phase of the research consisted of four semi-structured group interviews with teachers from the four different pathways in each of the participating schools. Two to four teachers with varied demographic backgrounds were engaged in each of these group interviews.

Interview questions for school leaders participating in the study covered the following areas and the thematic analyses were based on the following categories:

- School priorities
- Teacher recruitment
- Responsibilities in relation to teacher development
- The school's development and allocation of its staff
- Impact of teacher pathways on school performance
- Views on teacher effectiveness

Group interview questions for teachers covered the following areas:

- Pathway into teaching
- The school's development and allocation of its staff
- Own capacity to develop as a teacher
- Impact of pathway into teaching on professional opportunities
- Views on teacher effectiveness
- Perceptions of career trajectory for self and other teachers in the school

Finally, artefacts dealing with the relevant cases were collected from each participating school voluntarily and from their website if applicable. These included school brochures, profiles, vision and mission, performance in the annual National Examinations and teacher awards. These documents provided important contextual information, supplementary data, a means of tracking change or development and evidence for corroboration from other sources (Bowen 2009). In this study, the artefacts were used as complementary data.

Data analysis

Data were analysed using a thematic analysis approach. Different stakeholder perceptions in each school case were grouped and explored for recurring themes and arguments. These were then compared with responses from other participants from the same pathway or group across the four schools to discover commonalities. Matrices, tables and mind maps were used to discern patterns in the data.

Findings

The findings section will consider, first, whether the National Examinations programme influenced school priorities, as without this precondition, teacher allocations and access to professional learning were unlikely to be affected. We will then outline the findings in relation to the influence of the National Examinations on staffing allocations in the schools, followed by findings on access to professional learning. Finally, the findings will outline the consequences of the patterns discerned on teacher participants' perceived career trajectories and morale.

The impact of the National Examinations on school priorities

Although there were some differences in terms of school level and type, leadership staff in all four schools identified success in the National Examinations as their main academic priority. The principal at Ashfield noted, *My priority is academic achievement, regardless of my general responsibility. The public only sees it from the academic side at the moment, the benchmark is the (results of the) National Examination.* The sentiment was echoed by Ellen, the school supervisor at Ashfield, who commented,

In high schools, the goal is not the final year, not to enter the job market but to prepare the kids to be able to perform in college well. Unfortunately, we are probably still busy with preparing (the students for) the National Examination first.

The importance of the school achieving score improvements in the National Examinations became the main focus of school efforts and, according to the two teachers teaching this year level, parents normally asked, *Who are the teachers [of the Year 6 classes]?* As a result, these teachers were seen as having the most important contribution to the school's focus. This pattern was replicated across all schools: the key aim was to improve school performance in National Examinations.

In keeping with research findings in other studies (David 2011; Madhaus et al. 2009), the importance placed on success in the National Examinations resulted in the Indonesian schools in this study narrowing their focus to those subjects examined in the programme. Participants also reported greater effort and more resources being spent on students sitting for the exams. In addition, students in these year levels spent a greater number of hours in classes than those in other year levels. Participants reported that there were additional teaching hours in Year 6 of Johnstone, Year 9 of Marsden, and in Year 12 of Ashfield and Delmont to prepare the students intensively for the National Examinations. One principal commented, *For school improvement, especially in Year Nine, it's true; there are additional classes for the four subjects for the national examination.*

Did the high-stakes testing programme influence teacher allocation to classes within schools?

The pattern of teacher allocation across schools was strongly shaped by the academic priority to excel in the National Examinations. The emphasis placed on examination success was reflected in the allocation of teachers to classes, with GTs and experienced EATs disproportionately allocated to year levels and/or subjects that would be sitting the National Examinations that year. NPTs had to accept marginal positions, sometimes being moved from grade teacher roles to subject specialist or extracurricular teaching roles. No matter how effectively they taught, they were aware that they would never be allocated to grade levels sitting for the National Examinations (Year 6, 9 or 12). Table 2 below summarises the pattern of teacher allocation across the four schools.

Participants clearly identified these patterns and were aware of the constraints on professional growth that they imposed. One primary EAT argued, *Year 4 teachers should not be stuck at Year 4 ... when Year 1 teachers are put in the same Year all the time, their knowledge, would be, what's it like, ... a never sharpened knife, blunt.* Participants were aware that these rigid allocation patterns resulted in a certain staleness among teachers, who could lose confidence in their capacity to teach other grades and were unable to access different teaching opportunities.

The perceived senior and competent GTs in Johnstone Primary School, such as Marsha and Dion, taught Year 6 students, who were required to sit the National Examinations. Harry, the principal of the junior secondary school, Marsden, valued what he perceived as *composure* and *seniority* among teachers and assigned the GTs and EATs to the Year 9 classes, who would be sitting for National Examinations. He and his deputies believed that they were most capable of increasing the school's performance in the exams.

Another factor that shaped the pattern of teacher allocation in the schools apart from pathways and grade assignment was the subject that teachers taught. The four subjects examined nationally, Maths, Indonesian Language, English and Science, were emphasised in secondary schools for their

Table 2. The pattern of teacher allocation across schools.

Schools Pathways	Johnstone	Marsden	Ashfield	Delmont
GTs	On allocation to the school, often replaced NPTs as class teachers Were allocated to Year 6 (examined in the National Examinations)	Were allocated to Year 9 (examined in the National Examinations) depending on the subjects they taught	Had the option to teach Year 12 (the examined year) depending on the subjects they taught	Had the option to teach Year 12 (the examined year) Subject stream (Productive, Adaptive, or Normative) became a main factor in assignment
EATs	Were allocated to Year 6 only when there were no further GTs to fill teaching places at this level	Were allocated to Year 9 only when there were no further GTs to fill teaching places at this level	Were allocated to Year 12 only when there were no further GTs to fill teaching places at this level	Were allocated to Year 12 only when there were no further GTs to fill teaching places at this level Subject stream (Productive, Adaptive, or Normative) was also a factor in teaching assignment
SBTs	n/a	Repeatedly allocated to non-examined year levels	Repeatedly allocated to non-examined year levels	Subject stream (Productive, Adaptive, or Normative) became the main factor in assignment
NPTs	Moved from grade teacher roles to subject specialist or extra-curricular roles (e.g. music) on arrival of GTs. Never allocated to Year 6	Never allocated to Year 9	Never allocated to Year 12	Never allocated to Year 12 Subject stream (Productive/adaptive/normative subjects) was also a factor in teaching assignment

importance in increasing the school rank in National Examinations. This tendency created a hierarchy of subjects among teachers, students and school management. Despite coming through the GT pathway, Dwight (Vernacular) and Andrew (Religious Education) commented on the lack of attention from the school management to their subjects, which are not examined. In other words, allocation was somewhat biased for teachers of other subjects and their involvement in the school's main activities was also constrained.

Did the high-stakes testing regime influence access to professional learning?

We found that the narrowing of school focus to the National Examinations was reflected in teachers' access to learning opportunities. The teachers who taught nationally examined subjects were perceived in every school in this study as having more access to professional learning. They normally taught the final grades in every school, which were the ones sitting for the exams. Marsha commented in the focus group, *If you never teach upper grades, it will be difficult to get access to training sessions. Most of the materials [in professional learning offerings] are from upper grades.* In line with the National Education Policy, the central authority and the district tended to provide more professional learning workshops for teachers of examined subjects. Table 3 summarises the different degrees of responsibility and concurrent access to professional opportunities by pathway as reported by participants.

Teachers became segregated, because the schools tended to nominate permanent teachers (GTs/EATs/SBTs) for professional development activities. In the primary school, these teachers held roles as classroom/homeroom teachers, while the NPTs had to shift to become subject specialists (for example, music or art teachers or teachers with fewer responsibilities). The NPTs in all four schools were never given the opportunity to teach students in the year levels sitting for the National Examinations. As a result, their opportunities to access professional learning were minimal, generally consisting of access to professional learning discussion groups within the school. Participants with poor access commented frequently in focus groups about this lack of access. For example, two English NPTs in Marsden and Delmont, Debbie and Arty, expressed their disappointment in the lack of opportunities

Table 3. Teachers' access to professional learning in relation to their pathways.

Path	Roles assigned		Grade allocation	Access to professional learning
GTs EATS	Home room teachers	Examined/Non-examined subjects	Year level being examined in the National Examinations	Good access to professional learning opportunities
SBTs	Home room teachers	Examined/Non-examined subjects	A small number allocated to year levels being examined in the National Examinations) Lower grades	Modest access to opportunities – more than NPTs, but less than GTs and EATs
NPTs	Subject specialists or extra-curricular roles	Non-examined subjects	Lower grades	Weak access to opportunities

for professional learning despite teaching an important subject, English. Debbie commented, *I am involved in the school's subject teacher discussion group but it's only discussing small matters. When there are external [professional learning] activities, the school always sends Mr. Vito (GT)*. Different teacher pathways and proximity to the National Examinations in all school cases were employed as a factor in determining who would access external professional learning opportunities. Across the schools, the NPTs became the most marginalised group in terms of their limited participation in professional growth opportunities.

One of the EATs in Delmont, Angela, said, *Marty and I teach adaptive subjects and [we] are normally developed through Teacher Discussion Group [while] Productive subject teachers in this vocational school [whose subjects are examined], have more [varied] development opportunities. Another teacher who taught a non-examined subject, commented, To be honest, in the curriculum structure, I (my subject) belong to the local load [that is, my subject is not examined], so I can't dream about that [professional & career development]*. Being adaptive and normative teachers in the vocational school for them meant that they had to accept different conditions, fewer opportunities and stunted professional growth. Teacher allocation decisions and the school level and school leadership's desire to maximise exam results were compounded by a skewing in the professional learning opportunities offered by local education authorities towards examined subjects and year levels.

What did teachers perceive to be the impact of high-stakes tests on their professional trajectories and career satisfaction?

As noted, in all four schools, the allocation of teachers and their access to professional learning opportunities were strongly shaped by the focus on the National Examination results. This was even the case for the vocational school, Delmont, a school whose function is largely to prepare students for vocational pathways. This school's efforts were surprisingly also mainly allocated to preparing students for the National Examinations.

It was clear that many of the teachers with more restricted opportunities resented this. One typical comment from a teacher at Delmont school was, *Opportunities are available but they choose the same person (a teacher from certain a pathway) from time to time. We (EATs) also tend to have problems with [gaining] (principal) permission [to attend professional learning]*. As an EAT, she felt she was treated differently although some of the participants (her colleagues) acknowledged her as a young teacher who had real potential. Jane, one of the NPTs, commented that the school had once sent her to Jakarta to participate in a professional training because the previously chosen staff member (a GT) was unexpectedly unable to attend, which left her feeling 'second-best'. It was commonly perceived by the participants that certain groups of teachers had more teaching hours, resource allocations and development opportunities. These patterns were common across all schools irrespective of the level of education.

Teachers who were not involved in teaching classes sitting in the National Examinations felt this relegated them to a lower status in their school, negatively impacting on morale. In relation to their

professional trajectories, Austin of Ashfield complained, *Even the supervisors do not care about us; they only pay attention to the GTs, EATs and SBTs*. Another NPT in Delmont, Arty reflected on her pessimism, *I can't expect more for I am almost 48 years old I think the chance [of me going further in my career] is very limited*. Lisa of Johnstone primary school was even more critical on the impact of NE on her professional trajectory. She commented, *(I hope the school) does not only focus on the NE, the non-academic matters also need to be developed, for example the kids rarely know about gamelan (traditional Javanese music instrument), dances and crafts so the subject I taught becomes important too*. Their experiences of persistent marginalisation in the allocation and access to professional learning led to a common discontent among the less qualified teachers in the study about their schools' lack of provision of learning and pathways, due to the focus on National Examination results.

While the three pathways of EAT, SBT and GT had mixed views regarding their professional trajectories and career satisfaction, most NPTs in the four participating schools were very negative about their restricted career prospects. Debbie and Yuri of Marsden were quite critical about the allocation of teachers in their school, in particular those teaching subjects for the National Examinations, both for professional reasons and career development. Although they recognised that they were not permanent employees, both teachers were keen to access opportunities for professional learning, and for equal access to these to be provided to all teachers regardless of their pathways.

Discussion

The findings from the study strongly suggest that the Indonesian National Examinations programme is leading to segregation of teaching career pathways in Indonesian schools and exacerbating the stratification of the profession. Teachers who were perceived to be less qualified and/or experienced were allocated to the teaching of non-examined grade levels or subjects, and also reported less access to professional learning opportunities, and these findings held true across all levels of the school system. Less qualified teachers reported a range of negative responses to these patterns, and were keen to have access to improved career options and professional trajectories.

While there are aspects of the findings that may be tied to the specific Indonesian context, the pattern of principals allocating teachers, who are more experienced, better qualified or perceived to be more effective to classes that will be taking high-stakes tests is not unique to Indonesian schools. A number of other researchers have found a tendency for principals to allocate staff in this way in the United States and Australia (Lamb *n.d.*; Neild and Farley-Ripple 2008). There are two, related concerns here. The first is that this type of staffing allocation demonstrates to some degree a very limited understanding of teacher impact on student achievement on the part of principals. The evidence suggests that the impact of a teacher with strong pedagogical skills tends to endure beyond their initial time spent teaching the students (Sanders and Rivers 1996, cited in Konstantopoulos and Chung 2011; Marzano 2003). A highly effective teacher who teaches a class the year before they are examined may well raise student achievement beyond what is expected, and allow the teacher who teaches the class the following year to commence their teaching from a higher starting point. The allocation pattern evident in this study suggests a need for a greater understanding among principals of the impact of the effective teacher. The second concern is that such allocations may have additional unintended negative consequences for both students and teachers. Neild and Farley-Ripple (2008) found that secondary schools which allocated their more experienced (and presumably on average more effective) staff more evenly across the school had lower levels of student dropout than those in which such staff were concentrated in the final year/s of schooling to maximise exam results. Presumably, distributing teacher effectiveness and experience evenly across a school supports better student engagement in all years of schools. With regard to teachers, providing a mix of staff at every year level potentially allows less effective, less experienced or less qualified staff to learn from their more capable colleagues as they work in teams. Concentrating stronger or weaker staff in certain areas or year levels may well be a recipe for stagnation and work against a school raising its achievement levels overall.

The lack of access to professional learning opportunities to those not teaching examined year levels or classes is concerning. It constitutes a clear example of the Matthew effect in adult professional learning (Rigney 2010), in which those with the strongest qualifications have most opportunity to build on them, while those with fewer qualifications are denied the chance to learn. Again, a failure to develop the skills of less qualified and/or experienced teachers may consign them to relatively low levels of effectiveness across their teaching career, having a negative impact on their students' learning over that time, and potentially reducing their own job satisfaction. At a broader system level, there are also questions of return on investment. The improvement in teacher efficacy gained by giving a poorly qualified teacher access to professional learning may be greater than the improvement to be gained by giving a well-qualified teacher additional training. So in addition to equity concerns with regard to the teachers involved, these patterns of access may in fact be an inefficient allocation of system resources, although this would need to be clarified by further research.

The stratification of roles within the schools in this study also raises questions about limitations this may place on collegiality and its benefits in such settings – where some teachers feel as if they are 'second-class citizens' within the school, their willingness to participate as team members and support the organisation in its goals might be diminished. The stratification evident in the study also appears to be associated with a lowering of teacher morale and satisfaction amongst those relegated to non-examined classes and denied opportunities for professional development. Other research in teacher satisfaction suggests that this may well lead to reduced teacher motivation, and in the longer term, may contribute to teacher attrition (Torff and Sessions 2008). Overall, the research suggests that school leaders working in systems with high-stakes testing programmes may need to reflect on their patterns of staffing allocation and the professional learning opportunities provided to staff. Assigning more experienced and/or better qualified teachers to classes that will sit for high-stakes tests may not be the best or most effective use of resources, may increase dissatisfaction among some staff, and may work against school improvement.

The findings from the study also point to some possible future actions for both researchers and policy-makers. With regard to research, this study was undertaken in the Indonesian context with a small sample of teachers, and there is a need for the findings to be tested in other contexts, and for larger scale quantitative research using a broad teacher sample. Together, these would provide a degree of confidence in generalising the results to other teacher populations. If the findings are confirmed within larger samples, there is a need to also explore the impact of high-stakes testing programmes on a range of teacher decisions and school effects with regard to teacher perseverance in teaching, teacher motivation for learning and staff collegiality.

For policy-makers, the results raise further concerns around high-stakes testing programmes. The findings described here clearly indicate that high-stakes testing regimes can impact negatively not only on student experiences and learning opportunities (impacts now well-established in the literature) but that they may potentially influence teachers' teaching allocations, learning opportunities, professional satisfaction and morale. The problem here, of course, lies not so much in the assessment of student learning per se, which is a necessary part of any educational endeavour, but in the ways in which this is done and the use of the test results, most particularly, in the facility with which test results are used to make questionable judgements about the quality of specific schools or even teachers. They point to a need for a better understanding among policy-makers, school leadership and the general public about the limitations of testing programs and test data. Further, they signal the need for the development of much more nuanced, complex and multifaceted approaches to measuring school effectiveness that might incorporate, but not depend heavily on, test score data that measure only one small part of what schools do and achieve, at one point in time. The findings add to the growing body of evidence about the capacity of high-stakes testing regimes, when used as the sole or central measure of school impact, to distort the experiences of all those working in schools, to the detriment of students, teachers and the broader society.

Conclusion

High-stakes testing regimes have become a prevalent feature of the education policy landscape, both in first-world and developing countries. This study of Indonesian schools and teachers found significant impacts on teachers' teaching allocations and professional learning opportunities, with potential negative flow-on effects for overall school effectiveness and teacher morale. Findings suggest that school leadership staff need to resist the temptation to allocate classes sitting for high-stakes tests to their most qualified and experienced teachers, as this leads to staffing stratification, fewer opportunities for staff to learn from one another and lower morale among staff teaching non-examined classes. Policy-makers need to be aware that implementation of testing regimes where results are used to make judgements about school effectiveness may impact negatively not only on students' learning opportunities, but also on teacher opportunities and professional satisfaction.

Disclosure statement

No potential conflict of interest was reported by the authors.

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References

- Abrams, L. M. 2004. *Teachers' Views on High-stakes Testing: Implications for the Classroom*. Arizona: Policy Brief: Education Policy Studies Laboratory. Arizona State University College of Education.
- Amrein, A., and C. Berliner. 2003. "The Effects of High-stakes Testing on Student Motivation and Learning." *Educational Leadership* 60 (5): 32–38.
- Au, W. 2008. "Between Education and the Economy: High-stakes Testing and the Contradictory Location of the New Middle Class." *Journal of Education Policy* 23 (5): 501–513.
- Ball, S. J. 2008. *The Education Debate*. Bristol: The Policy Press.
- Bishop, J., F. Mañe, and M. Bishop. 2001. "How External Exit Exams Spur Achievement." *Educational Leadership* 59 (1): 58–63.
- Bowen, G. A. 2009. "Document Analysis as a Qualitative Research Method." *Qualitative Research Journal* 9 (2): 27–40.
- Brown, D., J. Galassi, and P. Alos. 2004. "School Counselors' Perceptions of the Impact of High-stakes Testing." *Professional School Counseling* 8 (1): 31–39.
- Chang, M. C., S. Al-Samarrai, A. B. Ragatz, S. Shaeffer, J. De Ree, and R. Stevenson. 2013. *Teacher Reform in Indonesia: The Role of Politics and Evidence in Policy Making*. Washington, DC: World Bank Publications.
- Clarke, M., A. Shore, K. Rhoades, L. Abrams, J. Miao, and J. Li. 2003. *Perceived Effects of State-mandated Testing Programs on Teaching and Learning: Findings from Interviews with Educators in Low-, Medium-, and High-stakes States*, National Board on Educational Testing and Public Policy, Boston College. <http://www.bc.edu/research/nbetspp/statements/nbr1.pdf>
- Collier, J. 2010. "Ranking by NAPLAN Results Rates a Fail." *The Age*, 3 February, Viewed 13 September 2011. <http://www.theage.com.au/opinion/politics/ranking-by-naplan-results-rates-a-fail-20100202-nay4.html>
- Creswell, J. 2003. *Research Design: Qualitative, Quantitative, and Mixed Method Approaches*. Thousand Oaks, CA: Sage Publications.
- Crocco, M., and A. Costigan. 2007. "The Narrowing of Curriculum and Pedagogy in the Age of Accountability Urban Educators Speak Out." *Urban Education* 42 (6): 512–535.
- Crocker, L. 2004. "Teaching for the Test: How and Why Test Preparation is Appropriate." In *Defending Standardized Testing*, edited by R. P. Phelps, 159–174. New Jersey: Lawrence Erlbaum Associates.

- Cunningham, W., and T. Sanzo. 2002. *Is High-stakes Testing Harming Lower Socio-economic Schools?* National Association of Secondary School Principals NASSP Bulletin, June, 62–75.
- David, J. 2011. “What Students Need to Learn: High-stakes Testing Narrows the Curriculum.” *Educational Leadership* 68 (6): 78–80.
- Doyle, W. 1997. “Heard Any Really Good Stories Lately? A Critique of the Critics of Narrative in Educational Research.” *Teaching and Teacher Education* 13 (1): 93–99.
- Gregory, K., and M. Clarke. 2003. “High Stakes Assessment in England and Singapore.” *Theory into Practice* 42 (1): 42–50.
- Haney, W. 2000. “The Myth of the Texas Miracle in Education.” *Education Policy Analysis Archives* 8(41). <http://epaa.asu.edu/epaa/v8n41>.
- Howe, K., M. Eisenhart, and D. Betebenner. 2001. “School Choice Crucible: A Case Study of Boulder Valley.” *Phi Delta Kappan* 83 (2): 137–146.
- Jacob, B. A. 2001. “Getting Tough? The Impact of High School Graduation Exams.” *Educational Evaluation and Policy Analysis* 23 (2): 99–121.
- Johnson, D. D., B. Johnson, S. Farenga, and D. Ness. 2008. *Stop High Stakes Testing: An Appeal to America’s Conscience*. Lanham, MD: Rowman & Littlefield.
- Johnson, K. E. 2009. *Second Language Teacher Education: A Sociocultural Perspective*. New York: Routledge.
- Jones, B. D. 2007. “The Unintended Outcomes of High-stakes Testing.” *Journal of Applied School Psychology* 23 (2): 65–86.
- Jones, M. G., B. D. Jones, and T. Y. Hargrove. 2003. *The Unintended Consequences of High-stakes Testing*. Lanham, MD: Rowman & Littlefield.
- Klein, S., L. Hamilton, D. McCaffrey, and B. Stecher. 2000. What Do Test Scores in Texas Tell Us? *Education Policy Analysis Archives*, 8(49). <http://epaa.asu.edu/epaa/v8n49>
- Konstantopoulos, S., and V. Chung. 2011. “The Persistence of Teacher Effects in Elementary Grades.” *American Educational Research Journal* 48 (2): 361–386.
- Lamb, S. n.d. *Unpublished Data on Teacher Allocation in Victorian Schools*. Melbourne: University of Melbourne.
- Lingard, B. 2010. “Policy Borrowing, Policy Learning: Testing times in Australian Schooling.” *Critical Studies in Education* 51 (2): 129–147.
- Lobascher, S. 2011. “What Are the Potential Impacts of High-stakes Testing on Literacy Education in Australia?” *Australian Journal of Language & Literacy* 34 (2): 9–19.
- Madhaus, G., M. Russell, and J. Higgins. 2009. *The Paradoxes of High-stakes Testing: How They Affect Students, Their Teachers, Principals, Schools and Society*. Charlotte, NC: Information Age Publishing.
- Marzano, P. 2003. *What Works in Schools: Translating Research into Action*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Neild, R., and E. Farley-Ripple. 2008. Within-school Variation in Teacher Quality: The Case of Ninth Grade. *American Journal of Education*, 114 (3) 271–305.
- Paris, S., and A. McEvoy. 2000. “Harmful and Enduring Effects of High Stakes Testing.” *Issues in Education* 6 (1/2): 1–8.
- Pedulla, J., L. Abrams, G. Madaus, M. Russell, M. Ramos, and J. Miao. 2003. *Perceived Effects of State-mandated Testing Programs on Teaching and Learning: Findings from a National Survey of Teachers*, Chestnut Hill, MA, Center for the Study of Testing, Evaluation, and Educational Policy, Boston College.
- Phelps, R. P. 2006. “Characteristics of an Effective Student Testing System.” *Educational Horizons* 85 (1): 19–29.
- Polesel, J., S. Rice, and N. Dulfer. 2014. “The Impact of High-stakes Testing on Curriculum and Pedagogy: A Teacher Perspective from Australia.” *Journal of Education Policy* 29 (5): 640–657.
- Reay, D., and D. Wiliam. 1999. “‘I’ll Be a Nothing’: Structure, Agency and the Construction of Identity through Assessment [1].” *British Educational Research Journal* 25 (3): 343–354.
- Rentner, D. S., C. Scott, N. Kober, N. Chudowsky, V. Chudowsky, S. Jofus, and D. Zabala. 2006. *From the Capital to the Classroom: Year 4 of the No Child Left behind Act*. Washington, DC: Center on Education Policy.
- Rice, S., N. Dulfer, J. Polesel, and C. O’Hanlon. 2016. NAPLAN and Student Wellbeing: Teacher Perceptions of the Impact of NAPLAN on Students. In *National Testing in Schools: An Australian Assessment*, edited by B. Lingard, G. Thompson and S. Sellar, 72–85. Oxford: Routledge.
- Riessman, C. K. 2008. *Narrative Methods for the Human Sciences*. Los Angeles, CA: Sage Publications.
- Rigney, D. 2010. *The Matthew Effect: How Advantage Begets Further Advantage*. New York: Columbia University Press.
- Santiago, P., G. Donaldson, J. Herman, and C. Shrewbridge. 2011. *OECD Reviews of Evaluation and Assessment in Education*. Paris: OECD.
- Stake, R. E. 2006. *Multiple Case Study Analysis*. New York: Guilford Press.
- Suryadarma, D., and G. W. Jones. 2013. *Education in Indonesia*. Singapore: Institute of South East Asian Studies.
- Torff, B., and D. Sessions. 2008. “Factors Associated with Teachers’ Attitudes about Professional Development.” *Teacher Education Quarterly* 35 (2): 123–133.
- World Bank. 2010. *Transforming Indonesia’s Teaching Force. Volume II: From Pre-service Training to Retirement: Producing and Maintaining a High-quality, Efficient, and Motivated Workforce*. Jakarta: World Bank.

- Wright, W. E., and D. Choi. 2005. *Voices from the Classroom: A Statewide Survey of Experienced Third Grade English Language Learner Teachers on the Impact of Language and High-Stakes Testing Policies in Arizona*. Tempe, AZ: Education Policy Studies Laboratory, Language Policy Research Unit, Arizona State University. <http://files.eric.ed.gov/fulltext/ED508521.pdf>
- Wyn, J., M. Turnbull, and M. L. Grimshaw. 2013. *The Experience of Education: The Impact of High Stakes Testing on School Students and Their Families*. Sydney: Whitlam Institute, University of Western Sydney. http://www.whitlam.org/__data/assets/pdf_file/0011/694199/The_experience_of_education_-_Qualitative_Study.pdf