



Office Communication Competencies for Vocational High School in Industri 4.0

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Abstract

This study aims to explore the information about industry needs for office communication competence in the 4.0 industrial revolution era. Competency suitability is one of the things supporting objective achievement of vocational education implementation. The development of office communication competencies also needs to be scrutinized and adjusted so that students can learn both at school and industry. This research is a case study research conducted using a descriptive method with qualitative approach and analyzed using the Miles & Hubberman model which includes stages of data reduction, data presentation, data verification, and data inference. The results of this study indicate that office communication competencies explicitly contained in the 2013 revised edition of the 2017 curriculum are still relevant to be taught in schools and are still needed in the industry. Several competencies need to be updated and added to support students' skills in dealing with the development of work in the industry related to office communications in the 4.0 industrial revolution era to improve the office work effectiveness, such as (1) information management using social media, web, and online application of goods or services sales; (2) mastery of communication using social media, the web, and online application of goods or services sales; and (3) mastery of international languages.

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INTRODUCTION

Vocational High School has specific objectives to prepare graduate competencies following industry needs. The development of industry needs in the 4.0 industrial revolution era which emphasizes the digital form of the economy, digital relationships, artificial intelligence, robotics technology, and big data technology needs to be observed by Vocational High School in Indonesia to prepare graduate competencies that are in line with industry needs (Hasanudin, Budiyono, & Asrori, 2019). In line with these developments, Vocational High School must be adaptive and be able to immediately adjust to the needs of the industry so that it can be in line with the preparation of the workforce in line with industry needs.

Clark & Winch (2007) state that in preparing graduate competencies, students must be given a series of experiences containing practical and technical abilities that are in line with the area of expertise learned. Sutirman, Muhyadi, & Surjono (2017) explained that vocational learning must be done by providing a lot of practical activities that are appropriate to the industry, so students can master certain competencies well. The competencies achievement for practical abilities owned by students that can be used to complete the assignments or workload in the industry is an achievement manifestation of vocational education goals.

Yoto & Widiyanti (2017) state that the implementation of vocational education is to prepare students who are ready to work, choose their careers, build competencies, and provide useful experiences for them in the workforce. Narwoto & Soeharto (2013) add that vocational education aims to prepare students to be able to work in certain fields or competencies following the chosen competency of expertise. Therefore, adjusting competence between industry needs and matters that are taught to students is very important for vocational education because it will affect the expertise of graduates created, and their acceptance as skilled workers in the industry.

Suranto Aw (2018) states that the 4.0 industrial revolution era resulted in many changes in communication, which is currently known as digital communication. It is very much influenced by technological developments that produce disruptive innovation in social communication. The development of communication is in line with industrial activities where each industry uses new forms, patterns, and types of communication that utilize the development of digital technology by using internet media to support them. Therefore, the development in this field of communication needs to be studied by vocational students so that, in the future, it can be used to support the completion of work in the industry.

According to Gaol (2008) communication is an information management process that is used for the benefit of organizational decision-making, both directly and indirectly. In line with (Suranto Aw; 2018), communication is defined as the process of information transfer that occurs in an organizational environment where the information is taken into consideration in taking decisions for the organization so that organizational goals can be achieved appropriately. Thus, communication competence is needed because it can influence organizational well-being (Moekijat; 1993). Moreover, today, office communication is mostly carried out using digital media, where the competency should be owned by each member and leader in the office organization so that it can help to complete tasks or work effectively and efficiently.

The digital communication has been carried out by almost all offices, both service and private, so that prospective graduates of Vocational High School of Office Automation and Management Program (OAMP) who will work in the office need to master it. In line with that, Eriansyah (2015) states that a company or organization is currently required to increase certain information delivered for both the members and the wider community. Nowadays, technological developments allow the industry to provide, and convey the information needed by the community so that

it can achieve the effectiveness and efficiency of delivering information to the target group precisely and quickly.

Based on some of the facts and opinions mentioned above, office work related to the delivery of information and communication has developed and evolved in line with technological developments in the 4.0 industrial era. Hermanto et.al (2019) states that there are jobs or new competencies in the industry which have not been fully learned in schools, where the competencies develop due to technological developments that fully support the office work to be more effective and efficient. In line with the thought, Widiyanto (2010) states that Vocational High Schools need to identify the needs of certain competencies in the industry appropriately, and these competencies are used as references to provide appropriate learning to students.

Supported by Jatmoko (2013), vocational high schools need to integrate vocational theory or practice material with competencies in the industry. For this reason, vocational education must be able to teach competencies that meet the future needs of graduates by looking at the reality of the workplace and developing technology. It is useful to support the creation of skilled workers by industry needs. Spencer & Spencer (1993); Widiyanto (2010), if someone graduates enter the workforce, the expected competence is a competency that can improve company performance, in this case, corporate performance in the globalization era refers to productivity to win a competition. So, the world of work requires input in the form of people who have technical professional abilities so that they can continue to maintain the sustainability of their production wheels in free competition.

The obstacle which has been experienced by Vocational High School according to Judisseno (2008) is that schools frequently do not want to pay attention and cannot adjust to industrial development so the learning cannot describe and provide appropriate knowledge and experience in line with the industrial competencies needed. Adjusting the curricu-

lum with new competencies in the office communication sector is needed, so it can be used by teachers and students to learn and practice the competencies appropriately, and it can be the skills owned by students to carry out and complete their work in the industry.

This research was conducted to adjust the curriculum with new competencies in the industry in the field of office communication to be learned by students to practice their skills so that they can be used to enter the workforce. Also, the adjustments are needed periodically to be able to prepare vocational graduates who are following industry needs. Besides, This study aims to explore information related to office communication competencies needed by industry in the 4.0 industrial revolution era which can be learned by students of the Office Automation and Management Program (OAMP) in preparing themselves before entering the industry. This study can also be used as a reference for schools or vocational education administrators to provide learning of office communication competencies that are in line with industry needs in the 4.0 era. Thus, this research needs to be done so that it can be used as a reference by teachers and educational institutions to provide learning by industry needs.

METHODS

This research is a case study research conducted using a descriptive method with a qualitative approach. This study aims to explore the information related to the learning needs of office communication competencies in the 4.0 industrial revolution era for vocational students of the OAMP in Yogyakarta. The subjects of this study were practitioners in the sector of communication who worked in public relations (PR), both public and private offices. The sample of this study is the public relations workers of Universitas Negeri Yogyakarta institutions, and the public relations workers in private companies, CV. Sinar Abadi Multimedia, Yogyakarta.

The subjects of this study were selected

by purposive sampling by considering the representation of public and private offices to describe the work which is relevant to the office communication competencies used in the office types during the 4.0 industrial revolution, completely. Data collection was carried out using interviews, observation, and documentation techniques. The data obtained through interviews and documentation were analyzed by using Miles & Hubberman (1994) model which included the stages of reduction, presentation, verification, and conclusion.

RESULT AND DISCUSSION

Competencies that must be achieved by students can be seen in the revised edition of the 2013 curriculum. Within these competencies, several sub-competencies that can support the achievement of skills possessed by students to support the completion of office work, one of which is office communication competency. Office communication competencies in Vocational High Schools are implicitly in the 2013 revised edition of the 2017 curriculum which is included in the subject of Automation in Public Relations and Protocol, and some basic competencies in the subjects of Simulation and Digital Communication, Administration, Office Technology, and Correspondence. Based on the results of documentation, and observations made by researchers at the Public Relations Office of Universitas Negeri Yogyakarta (UNY) and CV. Sinar Abadi Multimedia Yogyakarta, office communication competencies that are still relevant to the work carried out in industry can be seen in the following Table 1.

All of the office communication competencies learned at the Vocational School are appropriate and still relevant to be studied because the industry also does the competencies in the industry. It is just that sometimes some competencies have developed in line with the needs of the office and technological advances, but the basis of the development of these competencies is still relevant to be studied by students. It is also proved by the results of

interviews conducted by researchers in which the informants have been coded by their characteristics.

Table 1. Office Communication Competencies appropriate to the needs of the Industry

No.	Materials/ Subjects	Basic Competencies
1.	Automa- tion, Public Relations and Protocol	All Basic Competencies
2.	Simulation and Digital Communi- cation	Do synchronous and asynchronous commu- nication in the network Produce video, anima- tion, and digital music
3.	Administra- tion	Do communication at work
4.	Office Technology	Do Online Transactions Do Teleconferences Do information man- agement through a weblog (blog)
5.	Correspon- dence	Do Communication by telephone in Indone- sian, English or other foreign languages Do letter management

Sumber: Curriculum 2013 Revised 2017

Based on the results of interviews conducted, it can be seen that the office still uses telephone media to support the communication, besides, the office also uses certain mobile numbers as the support contacts to be connected to the Whatsapp (WA) application. For more details, it can be seen as follows:

”We also still use office phones to support office communication between employees and also serve customers, but sometimes we also use the office phone

number used for WhatsApp (WA) accounts.” (HUS)

”Nearly seventy-five percent of the basic competencies in question is still the working focus at UNY Public Relations office. We still use communication competence via telephone as well to support public information services.” (HUD02)

Due to significant changes in technology, office work has also evolved by utilizing technological development. Office communication competencies, public and private offices have utilized technology and networks as communication media both for customers and for the community. It is conducted by using photos, images, videos, and other media as material provided by the office for customers and the public through their social media, web, and youtube accounts. It is in line with the conveyed information by the informants as follows:

”... we often use videos and brochures to be uploaded on the web, our online stores on our online selling pages, and social media.” (HUS01)

”... UNY’s public relations indeed uses a lot of online-based media such as social media Instagram, web, Youtube as support for providing information to the public ...” (HUD02)

Based on the data, today, it can be seen that office communication uses social media, web, and other media that utilize networks to increase office work effectively. Sometimes, certain jobs have their system using network or internet media to support the office work conducted by the public relations office of Universitas Negeri Yogyakarta and CV. Sinar Abadi Multimedia, Yogyakarta, in providing information delivery services to the public and customers, as follows:

”... communication between employees is now more frequent using WA. sometimes orders also go by mail to us with

WA.... ”(HUS01)

”Our public information service also uses a variety of media... Besides, communication between sections also uses its system at UNY with certain codes ... Not only that, the academic system, the financial system, and others have used all online-based services to support information services to the community. ” (HUD)

Based on the result, media which is frequently used by public and private offices that can be used to support the disguise of information needed by customers or the public is social media, such as Facebook, Whatsapp, Instagram, online shop, and web. Besides, the telephone is also still used by public and private offices. The following are the results of the interview:

”Communication media often used is WA, telephone, web, FB, and accounts in an online shop. All of them are used to serve customer requests and receive complaints from customers. ” (HUS01)

”... online media based on social media like Instagram, Youtube, Facebook, the web, etc. ...” (HUD02)

Besides, the findings show that private offices in managing meetings are more flexible by using a network or internet media as a way to coordinate between employees, other offices, office branches, and their customers. It is also conducted at meetings where offices choose to use media which is more flexible and supports the effectiveness and efficiency, utilizing online meetings. In contrast, private offices, which have started to conduct an online meeting, prefer to keep using a meeting in person, as follows:

”We all have a team meeting once a month, but the marketing team briefing is every day. Sometimes we also do coordination via WA Group (WAG). Sometimes leaders also conduct coor-

dination meetings with each branch by teleconference, but usually only with the leaders of each branch. ” (HUS01)

”So far we have had a usual meeting, and someone records the results of the meeting and then reports it to the leader.” (HUD02)

Thus, it can be seen that office communication competencies learned in Vocational High School are still relevant to be taught to students in schools, completely. However, there are several competencies which need to be updated or added in the curriculum to support students’ expertise to deal with the development of work which is related to the effective office communication using technology in the industrial revolution 4.0, which are: (1) information management using social media, web, and sales applications or online services; (2) mastery of communication using social media, web, and the application of selling goods or services online; and (3) mastery of international languages.

It is addressed to the results of documentation, observation, and interviews which are conducted by informants in which they put a lot of emphasis on the office-employee mastery of the information media and communication that utilize technological advances to support the public information and communication effectively and efficiently.

Based on the results of observation, and documentation above, it can be known that office communication competencies for vocational high schools are still relevant to be taught in schools and industries, however, to face technological developments in the industrial revolution 4.0, however it is necessary to update or add the competencies provided by educational institutions, educational practitioners, and industries to prepare vocational students to deal with the opportunities and challenges of office work in the 4.0 industrial revolution era.

Wollschlaeger, Sauter, & Jasperneite (2017) state that, today, office work in the industrial revolution 4.0 is more likely to use

IoT (Internet of Thing) and CPS (Cyber-Physical System) that aim to expand the scope by utilizing the interconnections which can be provided by the network. In line with the theory, Suranto Aw (2018) states that, nowadays, the communication competencies are strongly influenced by technological developments. Implicitly Suranto Aw (2018); Wollschlaeger et al. (2017) state that there have been developments in the communication sector in the office in line with technological developments. Therefore, it needs to be examined if we want to learn and develop office communication competencies for vocational school which can be learned by students both in schools and in industries.

Hasanudin et al. (2019); Margunani & Nila (2012); Widiyanto (2010) states that vocational school graduates who have competencies according to company needs will be extremely needed by companies. Because competence is an important element in the workforce, so the assumption that a person’s basic characteristics have a causal relationship with extraordinary work performance or with work effectiveness Spencer & Spencer (1993). Similar to Prahalad & Hamel (2009), competencies for business organizations have an interest in facing business competition known as the core competence. Therefore, the industry’s need for skilled workers makes a very big opportunity for Vocational High School to prepare a workforce that will fill those needs.

Also, Vocational High School graduates can prepare the skills they must have from the beginning because they already know the exact needs of the workforce expected by the industry. On the other hand, the main problem of Vocational High School is the incompatibility between competencies taught and industry needs (Ambiyar, Yulastri, Yupelmi, & Paryono, 2018; Slamet PH, 2011; Suroto & Hung, 2018). Thus, adjusting office communication competencies that are developed and will be studied by students will be able to improve their performance as office worker Ardilla & Pramusinto (2015), so the competency adjustments are beneficial for companies that

develop and use them.

Based on the results, it shows that there are several jobs in the communication sector in offices that have shifted, for instance: social media management using, web management using, and online application of goods or services selling. Both of these competencies are currently needed by all offices for the need to deliver information and communication to the target group. The main objective is the receipt of the information needed by the target group, moreover.

It can improve services, sales of goods or services, and the convenience of users of social media, the web, and the online application of goods or services selling in line with the objectives that they have. Therefore, the competency should be mastered by Vocational High School graduates, so it can be useful in their field of the industry, and it can provide more value to the Vocational High School graduates of OAMP because they can manage information and communication using social media, web, and online application of goods or services selling.

Triwidisari, Nurkhin, & Muhsin (2017) state that Instagram can affect someone to make important decisions for instance: the item purchasing, or the use of a particular service that he wants. It shows that social media influences the decisions which are made by the community so that the office employees or the graduates of OAMP need to understand and master information and communication management by using social media for office management. Thus, the Vocational High School of OAMP should teach information and communication management competencies using social media, the web, and online applications of goods or services selling.

Social media, web, and online application of goods or services selling are used to provide information and communication services by offices for customers or the public. The main objective is to attract customers to buy the goods or services offered, and to provide attractive and good service to the public related to the delivery of information needed.

According to Taprial & Kanwar (2012), the use of social media, web, and online application has advantages that make it stronger than traditional media: (1) accessibility, easy to access because it no cost at all to use; (2) speed, content created in social media is available to all people who are in the network, forum, or community once it is published; (3) interactivity, social media can accommodate two or more communication channels; (4) longevity/volatility, content on social media can still be accessed for a long time or even forever; (5) reach, the internet offers unlimited reach to all available content.

It is relevant with Triwidisari et al. (2017) thought that customers or public have frequently used and made decisions based on information which is received by social media, web, and the online application of goods or services selling, so the office has requirements which are related to the management of information, and the use of communication affecting a decision making that can give benefit to the industry. Information management and utilization of office communications by industries are frequently to use social media, such as Instagram, Facebook, Whatsapp, Youtube, and some online shop applications.

Social media is considered more effective to be used by offices to convey information for customers or the public because it has a good level of effectiveness and is cheap to be used. In line with Assegaf (1982) and Novia (2013), in an organization or institution, social media is used as a communication tool to reach a wide audience because, in terms of cost and effectiveness, social media is considered the cheapest means to reach the desired public. So, channel or media selection for sending information through media are main factors that need to be considered because it affects the effectiveness of information delivery. According to Gibson, Ivancevich, & Jr. (2000), the perspective of effectiveness that emphasizes the central role of goal achievement as a criterion for assessing effectiveness. This resulted in almost all people are very aware and comfortable in using social media,

so the office prefers to use social media to provide information and communication services to customers or the public, today.

The use of social media for office communication competency needs to be studied specifically because the use of social media for office work needs special skills, social media management to make an account look attractive, so the information can be appropriately and accurately received by customers or public. It needs special skills to manage an account so it can give significant benefit to the office in providing services to customers or the public. Therefore, office communication competency which utilizes social media in the 4.0 industrial revolution era needs to be studied specifically for vocational students of OAMP to support their competence of effective social media management.

Besides, social media is also used by offices to communicate with employees, CV. Sinar Abadi Multimedia Yogyakarta in coordination with its employees. They use the Whatsapp group (WAG) for non-formal communication or coordination about the duty of the office which has to be finished by them. Sometimes, they also utilize long-distance meetings by using a network system which is called teleconference. In contrast, the phenomenon is not followed by the Public Relations Office of Universitas Negeri Yogyakarta, in which they still tend to hold meetings by facing directly. It is caused by the fact that teleconference is not needed in the meetings by utilizing a network system. Also, the public office requires the attendance of participants directly, so the results of the meeting can be recorded and accounted for by all participants.

The management of teleconference allows each person who is in different regions, countries, even continents to meet each other, so the mastery of this international language needs to be owned by office employees. Widiyanto (2010) states that only vocational education which can follow the needs of the industry can provide a chance for their graduates who will be employed by the industry. Therefore, the mastery of international lan-

guages is needed and must be taught by vocational schools specifically, in line to prepare graduates to enter the industry.

Besides, both public and private offices also use the web to provide information and communicate to customers or the public. Utilizing web competency is also not fully mastered by students or graduates of OAMP because they have not been fully taught until they have mastered it. Although it is already in the basic competencies of the 2013 curriculum, in the revised edition, students still cannot manage the web in line with the needs of the public and private offices. It was obtained through the results of observations to vocational students who were conducting industrial practice.

All of the things about the new competencies of communication are opportunities that can be utilized by vocational education practitioners to provide learning which is in line with industry needs. Gunadi, Usman, & Nugraha (2014); Suroto & Hung (2018); Wibowo (2016) state that Vocational Schools should make the industry as a partner in providing learning which is suitable for the industry needs. Also, students can practice their skills both in school laboratories and in industry, so they can directly learn and prepare their abilities to be appropriate with the work which is needed by industry.

The information management needs which use social media, web, and online application of goods or services selling; mastery of communication using social media, web, the online application of goods or services selling; and mastery of international languages are the competencies needed to be given to students to support their skills to join the industry. Thus, Vocational Schools can provide office communication learning in line with the needs of the industry in the 4.0 industrial revolution era which will be useful for students when joining the industry.

CONCLUSION

Adjusting office communication com-

petence between the curriculum and industry is needed to be able to align learning implemented in school and industry. Today, there are several office communication competencies in the 4.0 industrial revolution era that strongly support student competencies if those are taught in learning at Vocational Schools, which are: (1) information management using social media, web, and online application of goods or services selling; (2) mastery of communication using social media, web, and online application of goods or services selling; and (3) mastery of international languages. With the learning which is suitable for the industry, Vocational School is expected to be able to prepare the competencies that are possessed by its students to conform to the needs of the industry, so vocational graduates' job readiness can be achieved by all students.

This research is limited to the problems that occur in the office which are the subject of this study, so the results cannot be generalized to the needs of office communication competencies in all offices in Yogyakarta or Indonesia generally. The following research should be carried out by using other research methods or broadening the subject of research, so it can be described completely as related to the learning needs of office communication competencies which should be provided by the Vocational School of OAMP in Indonesia.

REFERENCES

- Ambiyar, Yulastri, A., Yupelmi, M., & Paryono. (2018). Relevance of the Productive Course of Hair Beauty in Vocational High Schools to Industry Needs. *Jurnal Pendidikan Teknologi dan Kejuruan*, 24(1), 125–131. <https://doi.org/10.21831/jptk.v24i1.18388>
- Ardilla, N. D., & Pramusinto, H. (2015). Pengaruh Kepemimpinan, Komunikasi Internal, dan Motivasi Kerja terhadap Kinerja Pegawai BP3AKB Provinsi Jawa Tengah. *Jurnal Pendidikan Ekonomi Dinamika Pendidikan*, X(1), 53–66.
- Assegaf, D. (1982). *Jurnalistik masa kini*. Jakarta: Ghalia Indonesia.
- Clark, & Winch. (2007). *Vocational Education: International Approaches, Developments, and Systems*. London: Routledge.
- Eriansyah. (2015). Praktik Media Relations Humas Pemerintah Tanjung Jabung Barat. *Jurnal Komunikasi*, 9(2), 233.
- Gaol, C. J. L. (2008). *Sistem Informasi Manajemen*. Jakarta: Grasindo.
- Gibson, J. L., Ivancevich, J. M., & Jr., J. H. D. (2000). *Organizations: Behaviour, structure, and process*. Boston: McGraw Hill Companies. Inc.
- Gunadi, Usman, T., & Nugraha, B. S. (2014). Identifikasi Kompetensi SMK Program Studi Otomotif dalam Rangka Implementasi Kebijakan Kurikulum 2013. *Jurnal Pendidikan Teknologi dan Kejuruan*, 22(2), 155–162.
- Hasanudin, M., Budiyo, I., & Asrori, M. (2019). Model Development of Accounting Internship Efforts in Dealing Industrial Revolution 4.0. *Dinamika Pendidikan*, 14(2), 155–167. <https://doi.org/10.15294/dp.v14i2.22758>
- Hermanto, F. Y., Sutirman, Hidayati, B., & Sholikah, M. (2019). The Need of Practical Teaching in Vocational High School of Automation and Office Management Program in Yogyakarta City. *Jurnal Pendidikan Vokasi*, 3(3).
- Jatmoko, D. (2013). Relevansi kurikulum SMK kompetensi keahlian teknik kendaraan ringan terhadap kebutuhan dunia industri di Kabupaten Sleman. *Jurnal Pendidikan Vokasi*, 3(1), 1–13. <https://doi.org/10.21831/jpv.v3i1.1572>
- Judisseno, R. K. (2008). *Jadilah Pribadi yang Kompeten di Tempat Kerja*. Jakarta: PT. Gramedia Pustaka Utama.
- Margunani, & Nila, A. (2012). Pengaruh Praktik Kerja Industri dan Penugasan Mata Diklat terhadap Kesiapan Kerja Siswa SMK di Kabupaten Kendal. *Jurnal Pendidikan Ekonomi Dinamika Pendidikan*, VII(1), 1–7.
- Miles, M. B., & Hubberman, A. M. (1994). *Qualitative Data Analysis*. California: SAGE Publications.
- Moekijat. (1993). *Teori komunikasi*. Bandung: Mandar Maju.
- Narwoto, & Soeharto. (2013). Faktor-faktor yang

- Berpengaruh terhadap Prestasi Belajar Teori Kejuruan. *Jurnal Pendidikan Vokasi*, 3(2), 222–233.
- Novia, J. (2013). Efektivitas Media Komunikasi Internal SMAK Kolese Santo Yusup. *Jurnal E-Komunikasi*, 1(1), 1–10.
- Prahalad, C. K., & Hamel, G. (2009). The Core Competence of The Corporation. *Knowledge and Strategy*, 41–60. <https://doi.org/https://doi.org/10.1016/b978-0-7506-7223-8.50003-4>
- Slamet PH. (2011). Peran Pendidikan Vokasi dalam Pembangunan Ekonomi. *Cakrawala Pendidikan*, Th.XXX(2), 189–203.
- Spencer, L., & Spencer, S. (1993). *Competence at Work*. Canada: John Wiley & Son.
- Suranto Aw. (2018). *Komunikasi Organisasi*. Bandung: PT. Remaja Rosda Karya.
- Suroto, & Hung, N. T. (2018). Management of an Industry Standard Class. *Jurnal Pendidikan Teknologi dan Kejuruan*, 24(1), 46–51. <https://doi.org/10.21831/jptk.v24i1.14710>
- Sutirman, Muhyadi, & Surjono, H. D. (2017). Problems in Learning of Electronic Filing at Vocational School in Yogyakarta Special Region, Indonesia. *Journal of Education and Practice*, 8(5), 94–99. Retrieved from www.iiste.org
- Taprial, V., & Kanwar, P. (2012). *Understanding social media*. London: Ventus Publishing Aps.
- Triwidisari, A., Nurkhin, A., & Muhsin. (2017). The Relationships Between Instagram Social Media Usage, Hedonic Shopping Motives, and Financial Literacy on Impulse Buying. *Dinamika Pendidikan*, 12(2), 170–181. <https://doi.org/10.15294/dp.v12i2.13565>
- Wibowo, N. (2016). Upaya Memperkecil Kesenjangan Kompetensi Lulusan Sekolah Menengah Kejuruan dengan Tuntutan Dunia Industri. *Jurnal Pendidikan Teknologi dan Kejuruan*, 23(1), 45–50.
- Widiyanto. (2010). Strategi Pengembangan Kurikulum berbasis Kompetensi DUDI untuk SMK. *Jurnal Pendidikan Ekonomi Dinamika Pendidikan*, V(2), 103–116.
- Wollschlaeger, M., Sauter, T., & Jasperneite, J. (2017). The Future of Industrial Communication: Automation Networks in the Era of the Internet of Things and Industry 4.0. *Institute of Electrical and Electronics Engineers (IEEE)*, 11(1), 17–27. <https://doi.org/10.1109/MIE.2017.2649104>
- Yoto, & Widiyanti. (2017). Vocational High School Cooperation with P.T. Astra Honda Motor to Prepare Skilled Labor in Industries. *International Journal of Environmental & Science Education*, 12(3), 585–596. <https://doi.org/10.12973/ijese.2017.1249p>