



Model Of The 21st Century Vocational Teacher Competency Development

Jemmy A. Pakaja^{1(*)}, Waras Kamdi², Syamsul Hadi³, Yoto⁴

¹Postgraduate Students, State University of Malang; Information Technology Education, State University of Gorontalo, Indonesia

^{2,3,4}Mechanical Engineering education, State University of Malang, Indonesia

Abstract

Received : November 11, 2023
Revised : December 13, 2023
Accepted : December 31, 2023

The development of Information and Communication Technology (ICT) had changed our lives profoundly. The period known as the industrial revolution had forced various changes in all fields of knowledge. In facing the era of the industrial revolution 4.0, Human Resources development became an important factor. Human resources, mainly Vocational High Schools (Sekolah Menengah Kejuruan/SMK) graduates were one of the spearheads to fulfil the needs of the industrial worlds. To achieve this goal, it was necessary to improve the quality of education. Teachers, as one of the main components in the process of increasing the quality of human resources, were required to be professionals in their fields and possess competencies according to the needs of the times. In efforts to improve the quality of the education field, developing teacher competency is a top priority. The purpose of this study is to examine the theories and models of teacher competencies and their development, especially vocational teachers. This study used a literature review method. The initial study was conducted by examining and considering the results of previous research related to the competence of vocational teachers, then proceeded with the study of theories and models of teacher competencies and their development. The results of this literature review lead to a conceptual framework for the development of vocational teacher competencies. The conceptual framework offered can be used as a basis for reference and guidance for further studies conducted by researchers in the future.

Keywords:

Competency Development, Vocational Teacher, Conceptual Framework

(*) Corresponding Author: pakajajemmy@gmail.com

How to Cite: Pakaja, J. A., Kamdi, W., Hadi, S., & Yoto. (2023). Model of The 21st Century Vocational Teacher Competency Development. *JTP - Jurnal Teknologi Pendidikan*, 25(3), 630-640. <https://doi.org/10.21009/jtp.v25i3.48675>

INTRODUCTION

The rapid development of Information and Communication Technology (ICT) from year to year is impacting various aspects of human life. The era of industrial revolution 4.0 pushes for change and improvement in every field. Human Resources Development has become a crucial factor in facing the industrial revolution 4.0. To own human resources with a certain quality, it is essential to have sufficient education as the basis so that the nation can compete with other countries, especially in fulfilling the needs of the industrial world 4.0 and entering the age of technological disruption. For that reason, it is necessary to make efforts to improve



the quality of education, especially vocational education. As the place where trained and ready-to-work workers from secondary education learned, Vocational High Schools (Sekolah Menengah Kejuruan/SMK) were expected to counterbalance various development in the era of industrial revolution 4.0. Teachers, as central components in the process of increasing the quality of human resources, were required to be professionals in their fields and possess competencies according to the needs of the times.

The rapid development of education in the era of globalization, better known as the 21st-century education, brought consequences for vocational schools in preparing ready-to-work graduates who can compete and catch up with various changes that occur in the industrial world. According to Rahdiyanta (2014), graduates are expected to not only be able to work in their fields (hard competence) but also be required to master the ability to deal with change and take advantage of the change itself (soft competence). Teachers, as the vital components that determine the success of vocational education, are required to master and continue to improve their professional competence.

Programs to develop vocational teacher competency in various countries have been carried out to increase teacher competency to follow technological developments. In turn, it will have an impact on reducing the unemployment rate. Swaffield (2014) defined teacher professional development as teacher development as it can enhance knowledge, skills and attitude as an academic member to achieve brilliance for the teachers, students, society and country. Many studies had been done about teacher competency, both at the college level and vocational high school level, one of the results is the recommendation for teacher competency standards. Some of the researches can be seen in Table 1.

Table 1. Researches About Teacher Competency and Its Results

Research	Result
Developing A Competency Framework For The Vocational Teachers In The 21 st Century. Nurhadi, D., Lyau, N-M. (2016)	<ul style="list-style-type: none"> - Professional attributes - Professional knowledge - Professional practice
Green Skills in Vocational Teacher Education – a model of pedagogical competence for a world of sustainable development. Diep, P.C. & Hartmann, M. (2016)	<ul style="list-style-type: none"> - Teaching competence - Educating competence - Professional competence - Competence of linking real work processes with professional learning processes - Communicative and language competence - Competence of self-reflection and improving the qualifications
Competencies of Vocational Teacher: A Personnel Measurement Framework. Arifin, M. A., et al. (2017)	<ul style="list-style-type: none"> - Teaching Competency - Professional Competency - Communication Competency - Personal Competency

Research	Result
Proposed Competency Model for Technical and Vocational Education and Training (TVET) Lecturers Teaching in Technical Colleges, Bauchi State in Perspective. Hamisu, M. A., et al. (2017)	<ul style="list-style-type: none"> - Organisational Competency - Thinking Competency - Application Competency
Determining the Elements of TVET Teachers Competency for Nigerian Higher Learning Institutions. Sern, L. C., et al. (2017)	<ul style="list-style-type: none"> - Thinking Competency - Organisational Competency - Application Competency
Developing a competency standard for TVET teacher education in ASEAN countries. Grosch, M. (2017)	<ul style="list-style-type: none"> - Planning and Preparation - Implementation - Evaluation
Standards of Tiered Teacher Competence As a Guide for Continuous Professional Development Of Vocational High School Teachers. Waluyanti, S. (2018)	<ul style="list-style-type: none"> - Professional attributes - Professional knowledge - Reflection/Evaluation
Competencies Of Future Vocational Teachers: Perspective Of In-Service Teachers And Educational Experts. Wagiran. et al. (2019)	<ul style="list-style-type: none"> - Soft skill Competency - Hard skill Competency - Knowledge Competency
Special Competence in the Structure of Vocational Pedagogical Integrity in the Sphere of Vocational Education. Fedulova, K. A., et al. (2017)	<ul style="list-style-type: none"> - Competence - System - Activity - Personality-oriented

Based on the table above, there are several competencies resulted from each research, namely: knowledge, teaching/learning, professionalism, communication, personality/attitude, planning/preparation, organisational, implementation, reflection/evaluation, and developmental competency. These competencies generally refer to the three essential competencies of teachers: knowledge, skills, and attitude competencies, which can be used as a reference in determining the competency of vocational teachers.

METHODS

Literature review methodology is used to study theories and models that are in line with the development of vocational teacher competencies. In general, this methodology was applied to identify, evaluate and synchronize the results of research that has been carried out, and is relevant to issues or problems of vocational teacher competency development. Information related to this topic is obtained from various research journals, seminars, books, and other electronic references.

RESULTS & DISCUSSION

Teacher Competency Development was vital for teacher professional activity and the development of graduate competencies. Kumar (2013) argued that professional competencies needed for a teacher and his teaching might be classified under the three significant competencies, as shown in Table 2.

Table 2. Professional Competencies Needed for A Teacher and His Teaching

Competency	Component
Instructional	- Conceptual Competencies
	- Context Competencies
	- Transactional Competencies
	- Competencies to develop teaching-learning materials
	- Competencies related to use of the latest information
	- Communication Technologies in the Teaching-Learning Process
Organisational	- Adjustment Competence
	- Competences that are related to identifying a resource.
	- Competences related to mobilize resource.
	- Competence related to organization co- curricular activities.
	- Competence related to working /dealing with parents.
	- Competence related to working with community and Community members
Evaluative	- Co-ordination Competence
	- Management Competence
	- Acquired new trends in evaluation
	- Assessment procedures
	- Construct evaluative items and Conduct tests
	- Interpretation of results

In addition to the three main competencies above, another professional competency needed by teachers for teaching in the era of the industrial revolution 4.0 is information technology. The presence of information and communication technologies force teachers to make various adjustments, especially in the learning and teaching process. At present, the learning and teaching process has made extensive use of Information and Communication Technology (ICT), which combines conventional face-to-face learning method, with learning methods using electronic media, or better known as blended learning. Powell et al. (2014) stated that blended learning practice is an essential instructional modality for the future of teaching. According to them, blending is an essential strategy for helping teachers in their professional activity and enabling students to reach the highest levels of educational mastery.

Pushing these competencies to a teacher must be accompanied by teacher professional development activities. According to Day (2002), professional development consists of all conscious and planned activities which are intended to provide a direct or indirect benefit to the individual group or school, and which contribute to improving the quality of education in the classroom. This activity was

a process wherein all components renew and enhance their commitment as agents of change to develop professionalism.

Many efforts had been carried out in developing teacher professionalism in various countries, but they are still limited. It was very rare to find research about the development and education of vocational teachers. Yunos et al. (2016) and Loeb & Gustavsson (2018) mentioned that it was seldom to find a research article about the vocational teacher education program. In general, vocational teacher competency development was focused on pedagogic knowledge. A review of studies related to vocational teacher education was done by Loeb & Gustavsson (2018). They represented three countries, namely Denmark, Swedia, dan Norwegia, and illustrated that educational content was still focused on the challenge and development of vocational teacher's pedagogical structure. International Labour Organization (2010) had stated that teaching and training materials are often outdated and irrelevant to what is needed for specific skills in the vocational teacher training program. Collaboration and engagement with the industrial world are seen as a vital feature to improve vocational teacher professional development program, both in program content and relevance (UNESCO, 2015).

There were some theories and models that can be used for professional development, including reflective model developed by Wallace (1991). The main principle of this model is to connect reflection with experience to achieve professional competence (Ortiz, Duarte, 2014). Ma and Ren (2011) argued that reflective teaching is considered as a process with a significant role in the professional development of teachers, that could facilitate learning, teaching, and understanding. Many previous scientists have promoted reflection as a means of professional development in teaching, including Richards and Lockhart (1996) who stated that critical reflection of a person could trigger a deeper understanding of teaching and contribute to their professional development. The reflective model of professional development by Wallace can be seen in Figure 1.

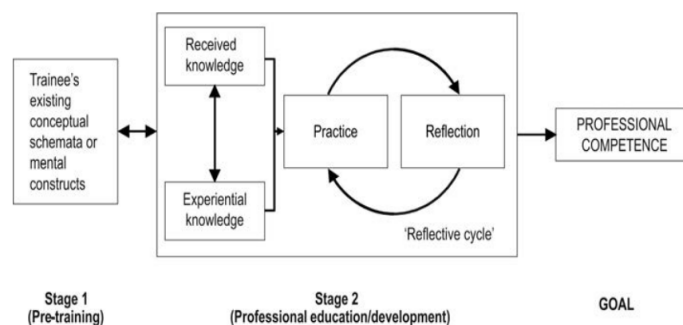


Figure 1. The reflective model of professional development by Wallace (1991)

This model offers two stages as follows: pre-training stage and professional education/development stage. Pre-training stage focuses on balancing the participants' conceptual or mental construction because entering professional training, and each participant brings their concepts, ideas, beliefs, and attitudes that shape their behavior in various ways. The stage of professional development connects received knowledge and experiential knowledge for decision making in order to bridge the gap between theory and practice, as well as corrective actions for reflection taken (Ortiz, Duarte, 2014).

Wallace’s model of professional development was still general and had not led to the development of vocational teacher competencies in the industrial revolution era specifically. The challenges of vocational teachers are very complex and are greatly influenced by technological developments. According to Churches (2008), 21st-century teacher has some defining characteristics, i.e. learner, visionary, leader, model, adaptor, communicator, collaborator, and risk-taker; which demand teachers be technologically creative and dynamic. Furthermore, Churches explained that as a communicator, the teacher must be able to use technology as a medium of communication in learning. In addition to technology, a partnership between institutions and industries are also one of the considering factors in professional development. Yunos et al. (2016) argued that the output quality of vocational education is profoundly affected by the partnership between institutions and industries because vocational education needs theoretical input from institutions and practical input from industries.

Based on the review of studies, theories, and models of teacher competency development that has been described above, a conceptual model or framework can be designed for the development of vocational teacher in the 21st century. The development of this model is based on the professional competence of teachers in their teaching, and the reflective model of professional development by Wallace, by adding several components to harmony with the development of the 21st century. This vocational teacher’s competency development model consists of two stages which become one interconnected unity and cannot be separated, as shown in Figure 2.

Stage 1

At this stage, an alignment process is carried out for participants’ conceptual or mental construction and attitudes. This stage also adds two components related to the mastery of ICT, as well as partnerships with industries for the necessary knowledge of market information and the need for industrial technology. This stage is essential for the effective development of vocational teacher competencies. According to Andriušaitienė (2014), problems related to providing precise information about the relevant industries qualifications and content, practical experience, and competency concerning the latest technology, cannot be resolved without dialogue and direct link between social partners (the education system and the business world).

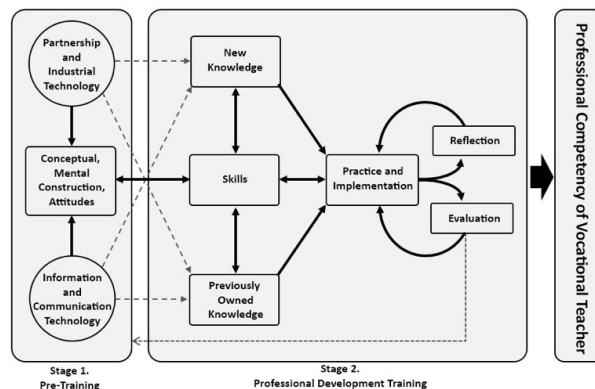


Figure 2. Model of the 21st Century Vocational Teacher Competency Development

The professional development process is carried out in this stage. The skills component is added between newly acquired knowledge and previously owned knowledge. The combination of the two components of knowledge can be used to improve professional skills, to be further practice in the teaching process. Two components in stage 1 related to ICT mastery, along with knowledge of market information and the need for industrial technology, can also have a direct or indirect influence on teacher professional knowledge and skills. The practice can be reflected and evaluated to make improvements, both in the teaching process, as well as in the competency development program itself. Ortiz and Duarte (2014) argued that reflective teaching helps teachers to have information about their teaching so that they can evaluate and improve aspects of their teaching and stages of professional growth.

CONCLUSION

The need for skilled graduates, and the demands for teachers who have professional competence, increasing the importance of vocational teacher competency development. Various studies have been conducted to identify the required competencies for a vocational teacher, and they serve as the basis for developing teacher competencies. This study used the results of research related to vocational teacher competence and theories about professional competencies required by teachers in their teaching. Also, the reflective model of professional development by Wallace (1991) was used as a reference in preparing the conceptual framework.

From the result of the conducted literature review, a conceptual framework for vocational teacher competency development was developed. The conceptual framework was divided into two stages, namely the pre-training stage; which consisted of a combination of components of industry needs, attitudes, and ICT; and the professional development training stage; which consisted of components of new knowledge, existing knowledge, skills, practice, evaluation and reflection. The results of this study are still limited to the conceptual framework that its effectiveness still needs to be proven and studied in the future.

REFERENCES

- Anam, S., Degeng, I.N.S., Murtadho, N., Kuswandi, D. (2019). The Moral Education and Internalization of Humanitarian Values in Pesantren. *Journal for the Education of Gifted Young Scientists*, 7(4), 815-834. <https://doi.org/10.17478/jegys.629726>.
- Antonicic, L. S. (2003). A New Era in Humane Education: How Troubling Youth Trends and a Call for Character Education are Breathing New Life into Efforts to Educate Our Youth About the Value of All Life. *Animal Law*, 9, 183-214.
- Arsih, F., Zubaidah, S., Suwono, H., Gofur, A. (2019). The Exploration of Educational Value in Randai Minangkabau Art, Indonesia. *Journal for the*

- Education of Gifted Young Scientists*, 7(4), 1225-1248. <https://doi.org/10.17478/jegys.605463>.
- Benninga, J. S., Berkowitz, M. W., Kuehn, P., & Smith, K. (2003). The Relationship of Character Education Implementation and Academic Achievement in Elementary Schools. *Journal of Research in Character Education*, 1(1), 19-32.
- Berkowitz Wolfgang dan Marvin. (2006). Moral Education and Character Education: The Relationship and Roles in Citizenship Education. *Journal of Moral Education*, volume 35, Desember.
- Bogdan dan Biklen. (2003). *Qualitative Research For Education: An Introduction Theory and Methods*. London: Allyn & Bacon, Incorporated.
- Creswell, John W. (2012). *Qualitative Inquiry and Research Design: Choosing Among Five Tradition*. London: SAGE Publications.
- Degeng, I Nyoman S. (2013). *Ilmu Pembelajaran: Klasifikasi Varibel untuk Pengembangan Teori dan Penelitian*. Bandung: Aras Media.
- E.Tung. 2005. *Changing Political Scenario in Hong Kong and Its Impact on Education after July 1997*. Paper presented on the Australian Association for Research in Education, Brisbane. Retrieved on April 18 2005 dalam <http://www.aare.edu.au/97pap/tunge502.htm> (diakses 02 Maret 2017).
- Fawait, A., Setyosari, P., Sulthoni, Ulfa, S. (2020). Identification of Factors Affecting of Character Education Program on High School Students' Self-Regulation Skills. *Journal for the Education of Gifted Young Scientists*, 8(1), 435-450. <https://doi.org/10.17478/jegys.683165>.
- Fragar, Robert. (2005). *Hati, Diri dan Jiwa: Psikologi sufi untuk Transformasi*. Terj. Hasmiyah Rouf. Jakarta: Searambi.
- Gani, A. (2019). Urgency Education Morals of Sufism. *Journal for the Education of Gifted Young Scientists*, 7(3), 499-513. <https://doi.org/10.17478/jegys.603574>
- Gerlach dan Ely. (1971). *Teaching & Media: A Systematic Approach*. Second Edition, by V.S. Gerlach & D.P. Ely, 1980, Boston, MA: Allyn and Bacon. Copyright 1980 by Pearson Education.
- Gina M. Almerico. (2014). Building Character Through Literacy With Children's Literature. *Research in Higher Education Journal*, Volume 26 – October, 2014.
- Hamid, Hamdani dan Beni Ahmad Saebani. (2013). *Pendidikan Karakter Perspektif Islam*. Bandung: Pustaka Setia.
- Izzati, U.A., Bachri, B.S., Sahid, M., Indriani, D.E. (2019). Character Education: Gender differences in Moral Knowing, Moral Feeling, and Moral Action in Elementary Schools in Indonesia. *Journal for the Education of Gifted Young Scientists*, 7(3), 547-556. <https://doi.org/10.17478/jegys.597765>.
- Kemp., Jerrold E. (1995). *Instruction Design: A Plan for Unit and Course Development*, Belmon: Feron.
- Lickona, Thomas. (1993). The Return of Character Education. *Journal of Educational Leadership*, Vol. 3, No. 3, November.
- Lickona, Thomas. (2012). *Character Matters: How to Help Out Children Develop Good Judgment, Integrity, and Other Essential Virtues*. Penerjemah Juma Abdu Wamaungo & Jean Antunes Rudolf Zien. Jakarta: Bumi Aksara.

- Lickona, Thomas. (2012). *Educating for Character How Our Schools can Teach Respect and Responsibility*. Penerjemah Juma Abdu Wamaungo. Jakarta: Bumi Aksara.
- Lincoln & Guba (1995). *Naturalistic Inquiry*. New Delhi: Sage Publication, inc
- Majid, Abdul dan Dian Andayani. (2017). *Pendidikan Karakter Perspektif Islam*. Bandung: Remaja Rosdakarya.
- Megawangi, Ratna. (2007). *Pendidikan Karakter*. Jakarta Heritage Foundation.
- Miles&Huberman. (1992). *Analisa Data Kualitatif*. Penerjemah: Rohidi, R. T. Jakarta: UI-Press.
- Peter Lang. Tt. *Towards an Understanding of Affective Education in a European Context*, dalam <http://conference.nie.edu.sg/paper/new%20converted/ab00566.pdf>. (diakses 02 Maret 2017).
- Reigeluth, C.M. (1979a). TICCIT to the Future: Advances in Instructional Theory for CAI. *Journal of Computer-Based Instruction*, 6 (2), 20-46.
- Reigeluth, C.M. (1983a). Instructional Design: What Is It and Why Is It?. Dalam C.M. Reigeluth (Ed). *Instructional-Design Theories and Models: An Overview of Their Current Status*. Hillsdale, N.J.: Lawrence Erlbaum Associates, 3-36.
- Reigeluth, C.M. dan Merrill, M.D. (1978). A Knowledge Base for Improving Our Methods of Instruction. *Educational Psychologist*, 13, 57-70.
- Reigeluth, C.M. dan Merrill, M.D. (1979). Classes of Instructional Variables. *Educational Technology*, 19 (3), 5-24.
- Tortop, H. S. (2015). A Comparison of Gifted and Non-gifted Students' Self-regulation Skills for Science Learning, *Journal for the Education of Gifted Young Scientists*, 3 (1), 42-57. <http://jegys.org>, DOI: 10.17478/JEGYS.2015112017.
- Umami, I., Gani, A., Waskitor, T. (2019). Proposal of Character and Moral Andriusaitienė, D. (2014). Model of organization of VET teachers' technological competences development – the lesson of social partnership. *Procedia - Social and Behavioral Sciences* 110, 647 – 657
- Arifin, M. A., Rasdi, R. M., Anuar, M. A. M & Omar, M. K. (2017). Competencies of Vocational Teacher: A Personnel Measurement Framework, *International Journal of Academic Research in Business and Social Sciences*, Vol. 7, Special Issue - 4th International Conference on Educational Research and Practice.
- Churches, A. (2008). Welcome to the 21st Century, from <https://carawayschool.ca/files/2017/02/21st-century-teaching-and-learning.pdf>, Retrieved December 3, 2019.
- Day, C. (2002). *Developing Teachers - The Challenges of Lifelong Learning*. London, Routledge.
- Diep, P.C. & Hartmann, M. (2016). Green Skills in Vocational Teacher Education – a model of pedagogical competence for a world of sustainable development. In: TVET@Asia, issue 6, 1-19. Online: http://www.tvet-online.asia/issue6/diep_hartmann_tviet6.pdf (retrieved 30.01.2016).
- Fedulova, K. A., Fedulova, M. A., Kirillova, Y. S., Vagina, A. I., Kuznetsov, T. M. (2017). Special Competence in the Structure of Vocational Pedagogical Integrity in the Sphere of Vocational Education. *Eurasian Journal of Analytical Chemistry*, 12(7b):1265-1273.

- Grosch, M. (2017). Developing a competency standard for TVET teacher education in ASEAN countries. *Jurnal Pendidikan Teknologi dan Kejuruan*. Vol. 23, No. 3.
- Hamisu, M. A., Salleh, K. M., Sern, L. C., Adamu, B. Y., & Gambo, K. (2017). Proposed Competency Model for Technical and Vocational Education and Training (TVET) Lecturers Teaching in Technical Colleges, Bauchi State in Perspective, *Traektoriâ Nauki: Path of Science*. Vol. 3, No 9.
- International Labour Organization. (2010). *Teachers and trainers for the future – Technical and vocational education and training in a changing world*. Geneva.
- Kumar, V. Dr M.S (2013). The Influence of Teacher’s Professional Competence on Students’ Achievement. *IOSR Journal of Engineering (IOSRJEN)*, Vol. 3, Issue 11, PP 12-18.
- Loeb, I. H., Gustavsson, S. (2018). Challenges and development in and of vocational teacher education. *Nordic Journal of Vocational Education and Training*, Vol. 8, No. 3, iii-x.
- Ma, J., Ren, S. (2011). Reflective Teaching and Professional Development of Young College English Teachers—From the Perspective of Constructivism. *Theory and Practice in Language Studies*, Vol. 1, No. 2, pp. 153-156.
- Myint, A.A. & Win, M. (2016). The implementation of the Myanmar Teacher competency standards framework. *AsTEN Journal of Teacher Education*, 1(2)
- Nurhadi, D., Lyau, N-M. (2016). Developing A Competency Framework For The Vocational Teachers In The 21st Century, Asian Academic Society for Vocational Educational and Training International Conference, National Yunlin University of Science and Technology – Taiwan.
- Ortiz, J. Z. P., Duarte, E. G. (2014). Bridging the Gap Between Theory and Practice in a B.A. Program in EFL. *HOW, A Colombian Journal for Teachers of English*, Vol. 21, No. 1, PP 122-137.
- Powell, A., Rabbitt, B., Kennedy, K. (2014). iNACOL Blended Learning Teacher Competency Framework. iNACOL, The International Association for K-12 Online Learning.
- Richards, J. C., & Lockhart, C. (1996). *Reflective Teaching in Second Language Classrooms*. Cambridge University Press, New York.
- Rahdiyanta, D., (2014). Tantangan Pendidikan Teknologi Kejuruan dalam Era Global, *Prosiding Konvensi Nasional Asosiasi Pendidikan Teknologi dan Kejuruan (APTEKINDO) ke 7 FPTK Universitas Pendidikan Indonesia, Bandung*.
- Swaffield, S., (2014). Professional Development In Education Models Of Professional Learning And The Global Imperative Of Professional Development In Education. *Professional Development in Education*, 40(3), 37–41.
- Sern, L. C., Hamisu, M., Salleh, K. M. (2017). Determining the Elements of TVET Teachers Competency for Nigerian Higher Learning Institutions, *IOP Conf. Series: Journal of Physics: Conf. Series* 1049.
- UNESCO. (2015). *UNESCO TVET Strategy 2016-2021*. Germany: UNESCO 2016.

- Waluyanti, S. (2018). Standards Of Tiered Teacher Competence As A Guide For Continuous Professional Development Of Vocational High School Teachers, *Jurnal Pendidikan Vokasi*, Vol. 8, No. 1.
- Wagiran., Pardjono., Suyanto, W., Sofyan, H., Soenarto, S., Yudiantoko, A. (2019). Competencies Of Future Vocational Teachers: Perspective Of In-Service Teachers And Educational Experts, *Cakrawala Pendidikan* Vol. 38, No. 2.
- Yunos, J. Md., Sern, L. C., Kiong, T. T., Hamdan, N. H. (2016). The Issues and Challenges Of Vocational Teacher Education Program. *Proceedings of the 1st Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL).of Gifted Young Scientists*, 7(2), 377-387. <https://doi.org/10.17478/jegys.579560>.
- Wong Ping-ho Law Sin-ye, Angelina Yip Sin-ching. (Tt). *Affective Education: The Value Development of Hong Kong Student-Teachers* dalam <http://conference.nie.edu.sg/paper/new%20converted/ab00566.pdf> (diakses 02 Maret 2017).
- Yin, Robert K. (2008). *Case Study Research: Design and Methods*, Penerjemah M. Djauzi Mudzakir, *Studi Kasus: Desain dan Metode*. Jakarta: RajaGrafindo, 2008.