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THE IMPORTANCE OF DIGITAL LITERACY IN THE PROFESSIONAL COMPETENCE OF SMK ACCOUNTING TEACHERS

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ABSTRACT

At present, technological developments occur very rapidly in line with the needs of more and more human life, so technology becomes what is needed. Technology makes possible the development of science which produces higher quality and more advanced human resources in the future. One thing that is developing is the process of using digital technology in various aspects, one of which is in the field of education. Education personnel in schools, one of which is the teacher, are required to have digital skills to support the implementation of learning in schools. Teachers in who carry out learning need to have mastered competencies, one of which is professional competence. Digital literacy possessed by teachers is expected to be able to support professional competencies that must be mastered by teachers as capital in learning. This article aims to find out the importance of digital literacy in the professional competence of SMK Accounting teachers. The research in this article uses a quantitative method with a sample of SMK Accounting teachers in Central Java. The results of the study indicate that there is a positive influence of digital literacy on the professional competence of SMK Accounting teachers. The magnitude of the influence of digital literacy on the professional competence of SMK Accounting teachers is 28.9%. This means that if the teacher has good digital literacy, then the teacher's professional competence is also well-established. The importance of digital literacy for teachers is that it can provide the ability to access and understand the right digital media to explore the required learning materials. In addition, digital literacy can support teachers in developing competencies, especially professional competence as capital in implementing learning. Teachers as the main actors in learning are expected to have qualified digital literacy that can be implemented in developing professional competencies to improve the quality of learning.

Keywords: *digital literacy, professional competence, vocational high school, accounting teacher*

1. INTRODUCTION

In today's era, technological developments occur very rapidly in line with the needs of more and more human life, so technology is something that is needed. The Fourth Industrial Revolution has led to the wide spread of digital technology, where the use of artificial intelligence, robotics, virtual reality, and other innovations has a strong impact on the nature of training and work (Kateryna, et.al, 2020) so that technology has benefits in supporting the daily activities of the people. In the world of education, technological developments are also felt to be useful in learning activities in schools. Technology makes possible the development of science which produces higher quality and more advanced human resources in the future. One of the things that are developing in relation to technology is the process of digitalization in various aspects, one of which is in the field of education. Digitalization demands activities that were previously carried out conventionally and then change to a digital basis. In schools, things that are digital can be exemplified by network-based learning (online) using relevant platforms.

In implementing digitalization, the capabilities possessed by the human resources who run it are needed, so that these activities can be carried out optimally. In schools, teachers as learning implementers are human resources (HR) who need to have adequate digital skills. Based on a survey, the condition of digital literacy in Indonesia is currently at a medium/low level (Kominfo, 2021). For the condition of the teacher's digital ability itself until 2019, the quantity level of teacher digital mastery is 40% of all existing teachers (Pustekom, 2018). This has become an aspect of concern for the world of education, especially policymakers, that there is a need for higher digital mastery. Digital literacy is a competency needed to use available digital technology to meet information needs (Jang, et.al, 2021). A teacher needs to have knowledge, skills, and attitudes in digital matter so that he can meet the needs of teachers in carrying out their obligations in learning at school. As digital media is expected to be part of the learning process in schools, information technology is needed to support the implementation of an interactive communication process between teachers and students as required in learning activities (Fuada, Soepriyanto & Susilaningsih, 2020).

To carry out tasks in learning, teachers need to have mastered competencies, one of which is professional competence. According to Law no. 14 of 2005, professional competence is the ability to master subject matter broadly and in-depth which includes mastery of the subject matter curriculum in schools and the scientific substance that covers the material, as well as mastery of the scientific structure and methodology. Professional competence by teachers acts as capital in providing and developing learning materials for students. When associated with the TPACK concept, professional competence has similarities with Content Knowledge (CK), which refers to knowledge or special characteristics of a discipline or subject matter. A teacher in carrying out his obligations to provide learning in schools must have knowledge of the content of the material being taught. Content knowledge differs between fields, and teachers must understand the deeper foundations of knowledge of the disciplines they teach (Mudrikah, 2021).

The TPACK concept, it is known as Technology Content Knowledge (TCK), which is knowledge about how technology and content influence each other. This is in line with Teacher Digital Competence (TDC), namely the relationship between digital

abilities and teacher professional competence, namely the commitment to develop teacher professionalism in a sustainable manner, have strategic involvement in professional networks, and access and use digital information productively (Falloon, 2020). The teacher's ability to go digital has a relationship with the content or material knowledge possessed by the teacher, in the sense that these two things have mutual benefits in supporting the learning process at school. This is reinforced by Artacho, et.al, (2021), who that there is a relationship between digital literacy and professional competence, namely where a teacher's digital literacy is important because it can become capital for teacher professional competence in integrating technological resources into quality learning.

Based on this background, the author intends to find out the importance of digital literacy in the professional competence of vocational teachers in the Accounting expertise program. This article aims to determine the importance of digital literacy in the professional competence of SMK teachers in the Accounting expertise program.

2. LITERATURE REVIEW

2.1 Digital literacy

Digital literacy is an ability that includes personal, technical, and intellectual skills needed to live in today's digital world (Kateryna, et.al, 2020). In today's digital world, digital literacy is a set of basic skills that enable users to operate effectively with software in performing basic information retrieval tasks, which are also related to the internet and must be able to evaluate and use information critically (Buckingham, 2015). This is in line with the fact that the digital literacy model includes the basic skills that people need to use computer technology, including the Internet skills needed to consume digital information, such as familiarity with browsers (Callaghan, et.al, 2021). Digital literacy in its implementation is not only related to skills in using technology but also knowledge and attitudes toward technology (Ramboousek, Stipek & Vankova, 2016).

In relation to teachers, digital literacy has a role in supporting the professional as a teacher when implementing learning. This is related to producing students who have digital abilities, which means prioritizing technical skills in using digital tools and systems that are considered appropriate by identifying things that can be used in certain learning (Admiraal, et al, 2016). Digital competencies owned by teachers can support planning and learning programs to encourage relevant competencies given to students (Falloon, 2020). In addition, teacher digital literacy refers to the teacher's ability to utilize digital technology for self-development, participation, and contribution in professional forums, as well as utilizing ICT as a means of research and professional development (Listiaji & Subhan, 2021). ICT and internet-based learning provide benefits, namely making it easier for teachers to find learning resources and broadening teacher insights (Suyanto & Djihad, 2012).

2.2 Professional competence

Teacher’s roles as professionals in carrying out learning in schools require relevant competencies. The competencies that must be possessed by teachers in accordance with the Teacher and Lecturer Law No. 14 of 2005 are pedagogic competence, professional competence, personal competence, and social competence. In school - related to mastery of the material, a teacher is required to have professional competence. Professional competence is a basic competency possessed by teachers to master theoretical and practical expertise and skills in the learning process.

Teacher professional competence is an interpretation or information regarding the competence or expertise possessed by an educator or teacher related to mastery of learning material in accordance with a broad and in-depth field of study (Utama, Subkhan & Nurkhin, 2015). According to Nurzaman (2021), professional competence is the teacher's ability to master the fields of science, technology, and or cultural arts that they teach. Teacher professional competence is an important competence in terms of the learning materials provided to students so that they can benefit them according to their needs.

Professional competence has several indicators that are used as a reference according to Permendiknas No. 16 of 2007 namely mastery of material, structure, concepts, and scientific mindsets that support the subjects being taught; mastery of competency standards and basic competencies of the subjects being taught; development of learning materials that are taught creatively; continuous professional development with reflective action; and utilization of information and communication technology for self-development. These indicators provide an understanding that teacher professional competence has areas from material mastery to the development of teacher competence itself.

2.3 Hypothesis

The hypothesis in this study is that there is an effect of digital literacy on the professional competence of SMK Accounting teachers. Digital literacy is an individual's ability to master and use technology in everyday life. According to Vidosavljevic & Vidosavljevic (2019), digital literacy is one of the competencies required of modern people, therefore, to achieve quality education, and these two concepts have become part of the education system. The competency profile of professionals involved in vocational education and training defines VET professional competencies related to professional knowledge and ability in the use of technology (Bocz, 2008). A teacher is required to have knowledge about how to integrate technology in learning (Parkay & Standford, 2010). According to Cattaneo, Antonietti & Rauseo (2022), the existence of support in the development of teachers' digital competencies will affect the development of their professional competencies.

3. METHODS

The method used in writing this article is survey research with a quantitative approach. The research was conducted using a questionnaire to collect data with digital literacy as the independent variable and teacher professional competence as the dependent variable namely teacher professional competence. The data analysis used is regression analysis. The population in this study was 1,700 vocational teachers in the accounting expertise program in Central Java Province. The sample used is a portion of the entire group of SMK teachers in the Accounting expertise program, namely 95 teachers.

4. RESULTS & DISCUSSION

4.1 Results

The results of data collection were carried out within one month, there were 95 respondents and all were declared valid. The description of the respondents is as follows:

Table 1. Description of respondents

No	Description	Amount	Percentage
1	Gender a. Male b. Female	 18 77	 18,95 % 81,05 %
2	Age a. < 30 years old b. 30-40 years old c. >40 years old	 5 37 53	 5,26 % 38,95 % 55,79 %
3	Education a. D4/S1 b. S2	 69 26	 72,63 % 27,37 %

Based on table 1.Description of Respondents, there were 18.95% of male respondents and 81.05% of female respondents. Based on age, 5.26% of respondents were aged less than 30 years, 38.95% of respondents were aged between 30 to 40 years, and 55.79% of respondents were aged more than 40 years. Based on education level, 72.63% of respondents were D4/S1 graduates and 27.37% of respondents had the highest masters' degree.

Table 2. Data description

No	Value	Category	Amount (Percentage)
1	61-66	Rendah	18 (18,9%)
2	67-73	Sedang	45 (47,4%)
3	74-80	Tinggi	32 (33,7%)
Total			95 (100%)

Based on table 2. data description, most of the respondents are in the medium category at 47.4%. This means that the digital literacy level of SMK teachers in the Accounting Expertise Program is in a moderate trend.

Table 3. Regression coefficient

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	33.457	7.429		4.504	.00
	Literasi Digital (X)	.645	.105	.538	6.154	.00

a. Dependent Variable: Kompetensi Profesional (Y)

Table 3. Regression Coefficient, providing information on the results of data analysis using SPSS version 25 regarding the regression between digital literacy and the professional competence of SMK Accounting teachers. Based on table 3, the significance value obtained is 0.000, where the significance value is less than 0.05, so it can be interpreted that there is an influence of digital literacy on the professional competence of SMK Accounting teachers. This is reinforced by the t value obtained of 6.154, where the calculated t value is greater than the t table value of 1.986. Based on the significant value and t value obtained, it can be stated that the hypothesis is accepted, namely the influence of digital literacy on the professional competence of SMK Accounting teachers. In addition, the unstandardized B value is known to be 0.645 and is positive, meaning that for every 1% increase in digital literacy level, the level of professional competence of SMK Accounting teachers will increase by 0.645.

Table 4. Determination analysis

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.538[a]	.289	.282	6.00277

Table 4. Big Influence, explains how much influence digital literacy has on the professional competence of SMK Accounting teachers. The R square value obtained based on Table 4 is 0.289, which means that digital literacy has an influence on the professional competence of SMK Accounting teachers by 28.9%. Meanwhile, for the remaining 100% - 28.9% = 71.1%, professional competence is influenced by other variables not included in this study.

4.2 Discussion

From the results of testing the hypothesis, digital literacy has an influence on the professional competence of SMK Accounting teachers. The influence of digital literacy is a positive influence which means that the higher the level of digital literacy, the higher the level of professional competence possessed by SMK accounting teachers. Digital literacy has a direct influence on the professional competence of vocational accounting teachers because most of the teachers who are respondents have the ability to go digital both in their daily lives and in their learning. In the digital literacy variable, there are five indicators, namely expertise in using technology, communication and collaboration in the use of technology, professional development in digital literacy, selection and creative use of digital resources in learning, and integration of technology into learning. From each of these indicators, the majority of respondents have values that are related to their digital literacy, so this shows that accounting teachers have digital literacy in the medium category. Digital literacy is an asset in learning and developing teacher competence itself, so that it can support the success of learning in schools. Digital literacy has an important role in maintaining and developing professional competence possessed by teachers. Digital literacy is an ability that includes personal, technical and intellectual skills

needed to live in today's digital world (Kateryna, et.al, 2020). Digital literacy provides an understanding that an individual needs competence in digital to support everyday life. In today's digital world,digital literacy is a set of basic skills that enable users to operate effectively with software in performing basic information retrieval tasks, which are also related to the internet and must be able to evaluate and use information critically (Buckingham, 2015). A teacher needs to have knowledge, skills, and attitudes in digital matters so that he can meet the needs of teachers in carrying out their obligations in learning at school. As digital media is expected to be part of the learning process in schools, information technology is needed to support the implementation of an interactive communication process between teachers and students as required in learning activities (Fuada, Soepriyanto & Susilaningsih, 2020).

The targets of this study are accounting teachers in Central Java, where there are almost no barriers to digital access. The intended digital access is convenient due to the availability of adequate infrastructure. This supports teachers in Central Java, especially vocational teachers in the Accounting expertise program, to use digital devices, both computers and telecommunications equipment, to support their work as teachers.

Based on this research, teachers' ability to use digital devices is not only used to access information, but also to implement in learning. This shows that the level of teachers are using and creating digital resources for their teaching practice is quite high. The use of multimedia-based presentations, videos, and quizzes with digital media is something that is currently mandatory for teachers to do. The tools in the form of digital media can provide more interactive and fun learning so that the achievement of learning objectives can be fulfilled.

Teachers also use digital technology to communicate with students regarding the learning activities they carry out. The communication tools they use are relevant to their communication goals such as email, school websites, social media applications, or online learning platforms. Communicating with digital media can simplify and speed up the relationship between teachers and students, so messages are delivered quickly to be received. Besides being used for communication with students, the media is also used to communicate with colleagues both internally and externally to the school. Exchanging ideas and information is needed in relation to implementing learning in schools and developing teacher competencies. This means that the teacher's digital capabilities are implemented for communication aimed at supporting the implementation of teaching and learning activities.

The results of this study are in line with the results of Antonietti, Cattaneo & Amenduni's research (2022), where there is a positive and significant relationship between teachers' beliefs about their digital competence and the ability of the material content in classroom learning. This is reinforced by Cattaneo, Antonietti & Rauseo (2022), namely, that the existence of support in the development of teachers' digital competencies will affect the development of their professional competencies.

5. CONCLUSION

Digital literacy has a direct influence of 0.538 on the professional competence of SMK Accounting teachers (t count of 6.154 > 1.986), which means that as much as 53.8% of professional competence is influenced by digital literacy and the rest is influenced by other factors. The condition of digital literacy owned by SMK Accounting teachers has a level in the medium group which affects the professional competence of teachers.

Professional competence in teachers is a mandatory competency that must be possessed by teachers in carrying out their duties in educating students learning at school. This is stated as such because professional competence is an asset in providing and developing learning materials so that students can obtain relevant and appropriate information. With digital literacy owned by teachers can support their professional competence in terms of organizing learning and developing teacher professionalism.

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