

PAI TEACHER DIGITAL COMPETENCY BASED ON TEACHING LEVEL

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Abstract: The balance of technological developments in education must be carried out through digital competence. Digital competence is the ability to take advantage of digital technology to contribute more efficiently to work. The increase in the intensity of technology use during the pandemic cannot be generalized that teachers master learning technology. Digital competence has a broad study, not just technical. This study aims to diagnose the digital competence of PAI teachers after the pandemic based on the level of teaching. The DigiComp framework was adopted in this study to measure digital competence. The research design uses a quantitative approach, while the survey is applied as a research method. The research sample was PAI teachers throughout the city of Cirebon at various levels of education. The data were analyzed quantitatively using descriptive statistics. The teacher's digital competence research results cannot be said to meet. From the measured digital competence aspect, it was found that the percentage score was lacking, namely the security aspect and digital content creation. Increasing digital competence through regular training and guidance needs to be implemented.

Keywords: Digital Competence, Islamic Religious Education Teacher, Education

Abstrak: Keseimbangan perkembangan teknologi bidang pendidikan harus dilakukan melalui kompetensi digital. Kompetensi digital merupakan suatu kemampuan memanfaatkan teknologi digital untuk berkontribusi secara lebih efisien dalam pekerjaan. Peningkatan intensitas penggunaan teknologi selama masa pandemic tidak bisa digeneralisasi bahwa guru menguasai teknologi pembelajaran. Kompetensi digital memiliki kajian luas bukan hanya teknis. Penelitian ini bertujuan mendiagnosis kompetensi digital guru PAI pasca pandemic berdasarkan level mengajar. Kerangka DigiComp diadopsi dalam penelitian ini untuk mengukur kompetensi digital. Desain penelitian menggunakan pendekatan kuantitatif, Survey diterapkan sebagai metode penelitian. Sampel penelitian adalah guru PAI se-kota Cirebon berbagai jenjang pendidikan. Data dianalisis secara kuantitatif menggunakan statistik deskriptif. Hasil penelitian kompetensi digital guru belum dapat dikatakan memenuhi. Dari aspek kompetensi digital yang diukur masih ditemukan skor persentase yang kurang yaitu aspek keamanan dan pembuatan konten digital. Peningkatan kompetensi digital melalui pelatihan dan bimbingan yang rutin perlu diterapkan.

Kata kunci: Kompetensi Digital, Guru Pendidikan Agama Islam, Pendidikan

INTRODUCTION

Post-pandemic conditions have led to a new habit for teachers: teaching using technology. The use of technology as a challenge must be prepared with the ability to understand the technology and then be able to operate it. This ability is called digital competence. Teachers must build skills and mentality to use learning technology in the digital era (Supriatna, 2018). Teachers who try to master digital competencies can narrow the digital era's competencies (Suryuranti & Wijayanti, 2018).

Digitalization in the current era requires teachers to have extra abilities, namely digital competence (Rohmadi, 2019). This ability is needed so every teacher and student cannot fall behind and answer every challenge (Restianty, 2018). Digital competence is an aspect that can explain the various uses of digital technology and contribute to the use of these technologies more critically (Hatlevik, 2017). This competency can consist of motivation, special knowledge, and cognitive abilities and skills. According to digital competence, digital competence is an ability related to technical skills and using digital technology to study and work in everyday life (Prayogi, 2020). In addition, this ability is also related to how to apply digital technology, critically assess, and motivate to be able to participate and be committed to digital culture.

Digital competence gives the opportunity to influence students during the lesson. Teachers who have good digital skills are able to have a positive impact on student learning outcomes. Activity study Students really need teachers who are confident and competent to be able to take advantage of digital technology. However, many teachers tend to have low digital competence (Fitrhana, 2020). Moreover, these teachers' quality in supporting technology use in education is also low. This is what should be an evaluation so that teachers are willing and able to think creatively. They also have to learn so they can adapt to change. Digital competence will be a factor that can support the quality of student learning, especially during the Covid-19 pandemic.

These phenomena and problems became the beginning of studies related to teacher digital competence. Currently, many educational media can be used. For example, through DigCompEdu, a community at the European Union Joint Research that develops digital measuring tools for educator competencies. The media aims to establish harmony regarding various educational policies in the European Union. DigCompEdu offers a categorization framework that is able to identify the digital competencies of teachers (Ghomi & Redecker, 2019). This media was also created to help teachers better understand what knowledge and skills look like more thoroughly (comprehensively). That way, they are able to integrate educational technology into meaningful learning activities.

DigCompEdu also offers six critical areas of digital competence that apply to all levels of education, from *preschool* to college. Teacher competence can also be developed by transferring

theoretical knowledge and realistic experience (Hinojo-Lucena et al., 2019). From here, teachers can incorporate digital technology into the teaching and learning process. In addition, digital competence is also related to the ability to utilize information technology for the public interest. These competencies can be in the form of various skills, such as finding and processing information, using multiple internet-based tools and services, and identifying accurate information through virtual content.

There are six competencies or domains that teachers need to develop in order to be able to carry out learning effectively. Especially now that development seems to require teachers to be able to develop several devices so that they can improve students' skills (Zhao et al . , 2021). Digital competence in it also includes the ability to recognize and understand educational needs. This ability is also about conceptually solving problems through technology (Elihami, 2017). Therefore, digital competence is related to skills that can improve the quality of life and encourage empowerment.

Similar studies have been researched by Fitriani (2021), who examined approximately 392 responses from teachers regarding digital competence and the use of digital content. Another one, Hinojo, also conducted the same field research on 140 teachers in Andalusia, Spain. The purpose of this study is to find out what factors can affect the digital competence of teachers (Hinojo-Lucena et al . , 2019). Prajana & Astuti (2020) surveyed 30 related teachers' use of ICT in the implementation SMK curriculum has been used technology for planning learning. Habibah (2022) researched PAI teachers at the base-level school regarding their digital competence. It shows that the teachers can increase their level by using the independent method and joining the training.

This study intends to understand two formulations, namely how the opinions of teachers regarding their digital competence based on years of service, gender, and school level. It is also to know the opinions of these teachers regarding various digital competencies if they are reviewed based on their school level.

This study will discuss the understanding of teachers' digital competence towards their work based on the level of teaching in school, gender, and years of service. Questionnaires related to evidence of digital competence will be analyzed using descriptive statistics with percentage tables and diagrams.

METHOD

This study uses a cross-sectional survey model. This model aims to explore individual opinions about the subject under study at a certain time (Fraenkel, 2012). The cross-sectional survey was started by distributing questionnaires to the sample, and then the response data was calculated using

descriptive statistics, and tables and diagrams were made. Calculation results are combined with relevant research to corroborate the results. A survey involves as many as 68 PAI teachers who teach from SD, MTs, SMP, SMA, MA, and SMK located in Cirebon City, West Java – Indonesia. Level schools in Indonesia are grouped into Elementary schools (20 teachers), MTs (7 teachers), SMP (8 teachers), SMA (13 teachers), MA (11 teachers), and SMK (8 teachers). The questionnaire was adopted and developed based on the draft DigComp. The questionnaire is based on five dimensions: literacy information and data, communication and collaboration, making digital content, security, and problem solution. Form development questionnaire digital competence guided by Cebi & Reisoğlu (2020). The questionnaire applied four scales for knowing the digital response competence of teachers, namely 4 points for strongly “agree,” 3 points for “agree,” point 2 for “disagree,” and point 1 for strongly disagree agree. The questionnaire distribution to the sample was then calculated using descriptive statistics and made tables, and diagrams. Calculation results are combined with relevant research to corroborate the results.

RESULTS AND DISCUSSION

The pandemic forced teachers to conduct online learning within two years. In fact, many teachers have digital competencies that need to be better standardized. Surveys were conducted in the study to describe the condition of digital competence based on specified dimensions. The researcher collected data from the distribution of online surveys. It is carried out the calculation and presented in an article displaying the “agree and strongly agree” responses. This is based on the destination researcher’s focus description of each dimension’s digital competence.

Teacher digital competence is declared as a very essential ability beyond just digital literacy. Digital competencies include more understanding _ related to digital policy, technical digital use, and solving problem-related education. On the other hand, theory lessons must also be taught orientation technology in life every day. That thing teachers are required to have good and capable digital competence adapt. Framework measurement adopted digital competencies in the study based on reference DigiComp where there are five aspects/fields.

Aspect Literacy Information and Data

Aspect information literacy includes knowledge of one's problems and information need and the ability to identify, locate, evaluate, organize, and effectively create, use, and communicate information to address the issue or problem at hand. Information literacy is becoming more important today as people absorb the flow of electronic data and information daily than it was decades ago when news came at a slower pace.

Aspects of Information and Data Literacy

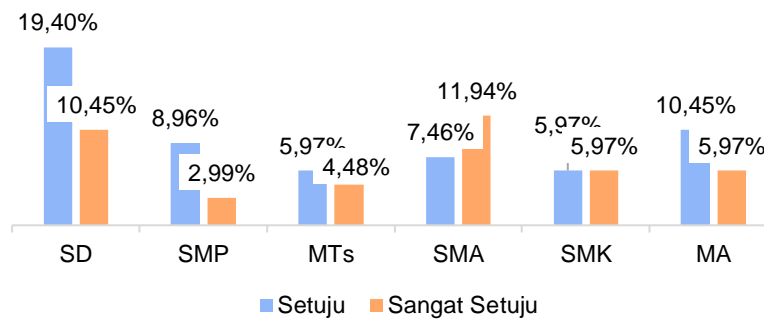


Chart 1. Percentage Literacy Information and Data

Graph 1 shows that if seen by the whole, all level schools agree on literacy information and data. In detail, the majority at the elementary level agree by 19.40%. As for those who strongly agree with the most found at the high school level by 11.94%.

Competence literacy information and data for elementary school teachers have more percentages. At the same time, MTs teachers have a percentage of literacy necessary data information effort increase. Biancarosa & Griffiths (2012) stated the need for disseminating e-reading technology to support teachers in diverse learning. During this existence, teachers' limitations in learning literacy information and data only through the internet where the data is very much.

Setiawan & Ismurjanti (2018) explain that the internet is dominating for making information data references, especially Indonesian sites. Literacy information and data will have a helpful impact _ on the teacher's job in creating learning latest and administration. Product technology and the internet is essential for more upgrade _ good again. Beneficial training program for teachers to reach optimal digital skills so they can interpret strategy to their profession (Sánchez-Cruzado, 2021).

Aspect Communication and Collaboration

Communication and collaboration are essential aspects _ of *lifelong learning*. This is because, with communication, someone can express their thoughts and cooperate with others, express ideas clearly, communicate with diverse audiences effectively, and create quality products.

Aspects of Communication and Collaboration

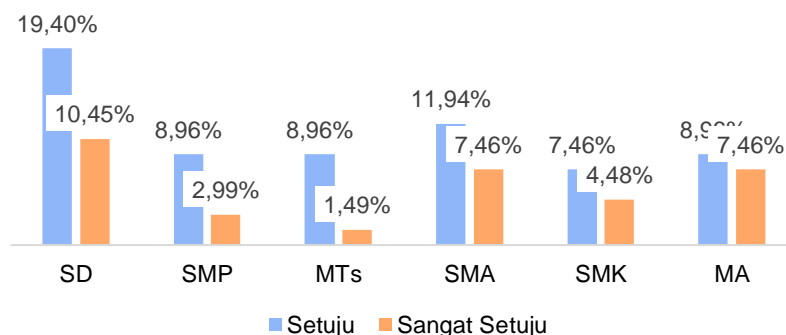


Chart 2. Percentage Communication and Collaboration

The graphics above show that if seen by the whole, all levels of the school agree on the aspect of communication and collaboration. In detail, the majority opinion was found at the elementary level, where think agrees by 19.40% and strongly agree 10.45%. The following percentage is the most prominent found in SMA level teachers, the third MA and SMK level teachers. Based on the level of education, the teaching aspect of communication and collaboration experience differences in the average percentage.

Aspect communication and collaboration realized with teacher management skills source the power you have for disseminating good to fellow teachers and students through web/chat apps to interact online. In inactivity learning, the teacher familiarizes and participates actively with interaction through various tools and technology for weave communication with students, including the use of zoom, google meet, WhatsApp groups, and google classroom. Teachers who can manage relevant teaching materials more easily develop professional strategies (Sánchez-Cruzado, 2021).

Master at least knowing characteristics of teaching materials that will be used and shared with later students customized to the tool technology used. The teachers no can share a live long duration video to WhatsApp. Long-duration videos become more efficient when uploading on YouTube channels and then sharing the video URL to WhatsApp. This also applies to other file types so that you can collaborate by right.

Aspect Making Digital Content

Digital content is available information *_online* for downloaded or distributed on electronic media. Digital Learning Content contains learning materials made in various forms of text, image, video, audio, or combination formats that are converted by machine readers into the coded form so that they can be read, displayed, or played by digital machines or computers and can be easily shared or accessed by students/learners. As an effort in to produce exciting content, it must be accompanied

by creativity. Especially during the current pandemic, digital learning content is very influential on student interest in learning because before the pandemic hit, teachers only presented material armed with learning textbooks. So, at this time, teachers are required to be able to present material in digital form.

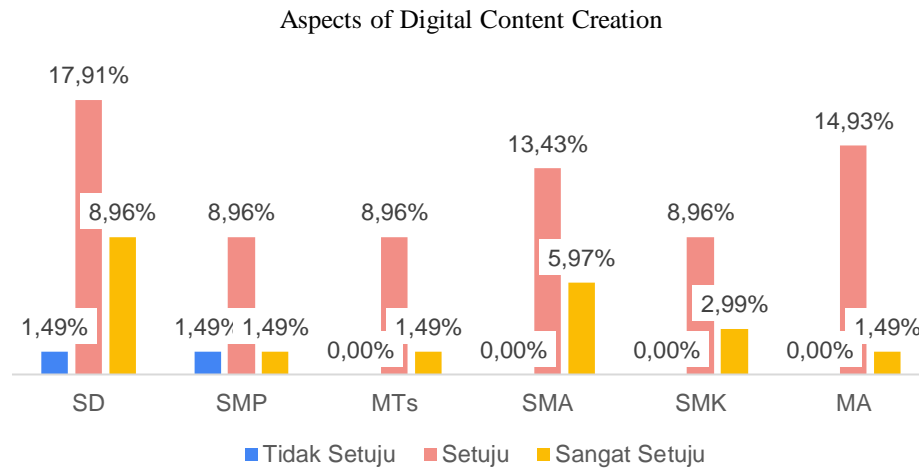


Chart 3. Percentage Making Digital Content

Graph 3 shows that if seen by the whole, all level schools agree to the aspect of making digital content. However, if seen in detail, respondents at the elementary and junior high school levels, respectively 1.49 %, disagreed with making digital content. Teachers need to gain special skills in creating this type of digital content. Teachers more often use a material that is already on the internet or videos on YouTube. Cognitively, teaching materials cannot be used for all students' cognitive levels. Teachers' understanding and skills regarding digital content are still low after the pandemic. Teachers are less skilled at creating digital content independently and need support specifically (Shahid, 2022; Ningsih, 2021; Saluky et al., (2022)). Regular practice activities as an effort to train teachers' skills in creating original content.

Created content by self as reflection practice teacher digital teaching, can create guidance academics and develop Skills as well as give advice to students. On the other hand, teachers still have low digital content dimensions. This is in line with Rizal's (2020) statement that teachers have relatively low skills in designing digital content. In contrast, the content is presented in accordance level of the cognitive student so that the content becomes different and unique. However, teachers tend to use teaching materials that already exist on the internet. Due to the limited operation or technical constraints, content creation still cannot be made. The teacher must be active in joining related to digital content creation. Besides, digital content makes it possible to have the right created.

Aspect of Security

The Covid -19 pandemic is pushing every agency to adopt technology and move to the. However, the security aspect is often overlooked in this digital transformation condition. Security covers the right to use all content used _ digitally based. This is undoubtedly dangerous if the teacher does not know the applicable policy. Diagnostic results dimensions security has served through the diagram below this.

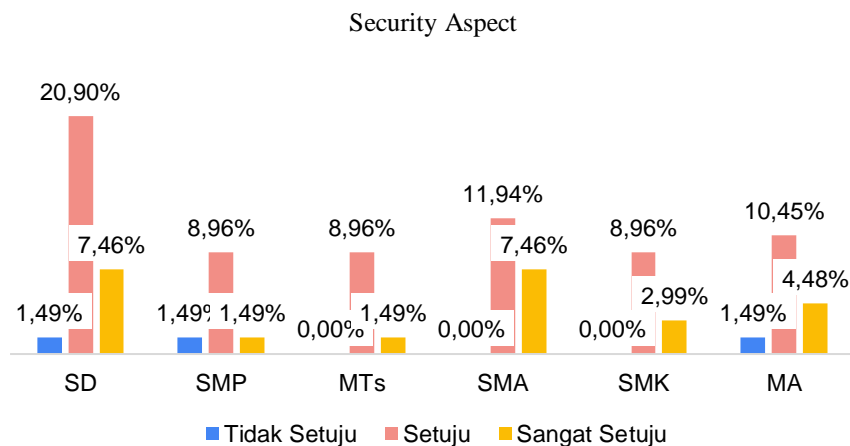


Chart 4. Percentage Security

Information obtained based on the graph above shows that respondent for the elementary school level has the most dominant response, which agrees to aspect security by 20.90%. Likewise, some respondents do not agree at the elementary, junior high, and MA levels, each at 1.49%. The percentage yield allows the teacher to know a possible policy just applied to use product internet technology. Teachers' understanding of digital data security still needs to improve. Teachers have yet to realize that their digital data is not a secret. The teacher has no suspicion of the data provided to access the required files. Understanding digital security such as email account data, mobile phone numbers, addresses, photos of faces, IP browsers, and software, all downloaded files have the potential for viruses. Sholihatin et al. (2021) provide data that many prospective teachers still need to understand how to secure digital identities.

Scope aspect security allows existence expansion meaning. From the questionnaire, it can be diagnosed that the teacher still needs to understand digital security. Teachers need to consider the dimensions of security when accessing the internet for any purpose. Sidyawati (2021) says that digital understanding security aims for personal data protection. Touron (2018) explains the intended security cover content used to reset, protect privacy, and control technology. Information about policy right, rights access, and security must still be given to the teacher to anticipate unforeseen incidents unexpected.

Aspect Solution Problem

Aspect solving problem is related with something effort to respond or resolve hindrance or constraint when something answer or method answer from something not yet found. The ability to solve problems is needed to face the ever-changing digital world developed by the development of the times.

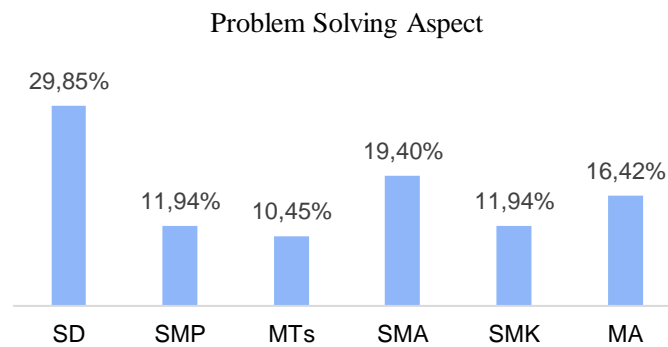


Chart 5. Percentage Solution Problem

Graph 5 shows that if seen by the whole, all levels of schools agree on aspect solving problem, where the highest percentage is found at the elementary level at 29.85 % while the lowest grade is MTS level at 10.45%. Solving problems in this context that teachers often experience are problems opening/changing downloaded files, fixing internet connection errors, the wrong target opening unwanted websites, forgetting passwords, and errors downloading files from the internet. The teacher is still struggling and anxious when he finds the problem. But on the other hand, there are differences in the context of digital use based on the level of teacher teaching. MTs, SMP, and SMK teachers need help to solve problems using technology for their work. The solution they often use is to call a technician who is more tech-savvy.

Level teacher school base have competence in solving an assessed problem well. That thing because the level of difficulties and policies of online learning at every level of school is different at the SMP and MTs levels, and the ability to solve digital teacher problems is relatively the same. Precisely high school teachers can find solutions to conditions that burden more work and policies tall than other levels of education. Conditions that cause technical problems can be solved through video tutorials or reading articles on the internet. The speed of solving problems will significantly help the success of online learning. (Udin, Maufur & Riyanto , 2022).

CONCLUSION

The digital competence of teachers based on the level of teaching is different. Teaching teachers at the primary school level have better understanding and skills of digital competence than other levels for each dimension. Dimensions of digital content creation where teachers still need to be more independent in creating digital content for their learning. This study recommends the intensity of training to develop digital content that the agency supports. Future research can focus on the types of content teachers are familiar with and asynchronous development for the dimensions of communication and collaboration.

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