Exploring the Proficiency of English Teachers in Digital Literacy

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ABSTRACT

In the post-pandemic era, teachers need to have digital literacy skills in order to effectively teach and engage with their students in a virtual or hybrid learning environment. One problem with digital literacy and teachers in the post-pandemic era is that not all teachers may have the necessary skills and training to effectively use technology for teaching and learning. Building on these findings, this study aimed to investigate the digital literacy competence of English teachers and address the problems and challenges they face in the post-pandemic era. This study was conducted using a qualitative method with a descriptive analysis approach. The study was conducted in Bogor city, with data collected through a questionnaire administered to 25 English teachers in several senior high schools. The results suggest that most teachers have a high level of digital literacy in using technology to support learning, possibly due to the increasing emphasis on technology integration in education and the availability of professional development opportunities. However, there is still room for improvement in areas such as digital assessment, identifying credible sources, and recognizing risks associated with using digital tools safely. The findings also suggest that teachers with different levels of digital literacy have varying levels of understanding in areas such as copyright laws and collaboration.

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1.   INTRODUCTION

English teachers' digital literacy became more crucial during the COVID 19 pandemic outbreak when pre-service and in service teachers were forced to instruct online, many of whom were not sufficiently digitally literate and needed guided in using digital tool (Ferdig et al., 2020). In the post-pandemic era, digital literacy has become more important than ever before, as many aspects of our lives have moved online and teacher are required to be capable in innovating and creating innovate the infusion of digital technology as the conventional system of learning is no longer compatible for nowadays students. (Milawati & Sholeh, 2020). This includes education, where teachers need to have digital literacy skills in order to effectively teach and engage with their students in a virtual or hybrid learning environment. Developing digital literacy skills is crucial for teachers in the post-pandemic era,

as it can help them adapt to new teaching environments and enhance the quality of education they provide to their students.

One problem with digital literacy and teachers in the post-pandemic era is that not all teachers may have the necessary skills and training to effectively use technology for teaching and learning (Ferdig et al., 2020). This can lead to a digital divide between teachers who are comfortable with technology and those who are not, which can negatively impact student learning outcomes. The ability of teachers to effectively integrate digital technology in their teaching practices is essential for the transformation of education towards a more advanced and innovative direction. However, the inability of teachers to develop digital literacy skills may hinder this transformation, leading to a slow pace of change. Digital literacy skills enable teachers to effectively navigate and utilize digital resources and tools, which can enhance teaching and learning outcomes (Kimmons et al., 2020) . Teachers who lack digital literacy skills may struggle to incorporate technology in their teaching practices, which can result in limited access to educational resources and reduced engagement among students. This can further exacerbate educational inequalities and hinder progress towards a more equitable and inclusive education system. Therefore, it is crucial for teachers to develop digital literacy skills to stay relevant in the current digital age and facilitate the transformation of education towards a more advanced and innovative direction.

The importance of digital literacy for teachers has been emphasized in previous studies, as it is essential for the effective integration of technology in education. Kimmons, Graham, and West (2020) found that teacher digital literacy positively influenced technology integration in the classroom. Similarly, Nabhan (2021) emphasized the need for teacher education programs to develop digital literacy skills to enable effective technology integration in the classroom. The COVID-19 pandemic has further highlighted the need for teachers to have digital literacy skills to facilitate online learning (European Commission, 2020; University of South Carolina, 2020). In the context of English language teaching, Divjak et al (2022) found that teacher digital literacy positively impacted students' learning outcomes in online learning environments. Therefore, it is crucial for English teachers to possess digital literacy skills to broaden their sources of information and enable effective integration of technology in language learning. Building on these findings, this study aims to investigate the digital literacy competence of English teachers and address the problems and challenges they face in the post-pandemic era.

2. METHODS

This study was conducted using a qualitative method with a descriptive analysis approach. The aim of this research was to provide an overview of the digital literacy competence of English teachers in senior high schools in Bogor, as well as to identify ways to improve their digital literacy competence. According to Prof. Dr. Sugiyono (2010), this method serves to describe or provide an overview of an object under study through data or samples that have been collected as they are, without conducting an analysis to make conclusions that apply to the public.

The study was conducted in Bogor city, with data collected from English teachers in several senior high schools. The Ministry of Education and Culture provided data on 146 schools in the area, both private and public, and researchers selected a few of these schools to participate in the study. Data collection took place from March to April 2022, with the use of a questionnaire consisting of eight sessions. The questionnaire questions were based on the components and levels of digital literacy and were closed-ended questions with a choice of strongly agree, agree, disagree, or strongly disagree. The researchers selected 25 English teachers to participate in the study using purposive sampling. Data collection began with the researcher seeking permission from the schools to allow English teachers to participate in filling out the questionnaire. After receiving approval from the schools, the researcher distributed the questionnaire questions in the form of links or hard copies of the question sheets. By using this instrument, the researchers were able to assess the level of teacher competence in digital literacy.

3.   FINDINGS AND DISCUSSION

The data in this study were collected through a questionnaire administered to English language teachers from 13 public and private senior high schools in Bogor city. Data collection took place between April and May. Out of 29 questionnaires distributed, only 13 schools agreed to participate in the study, resulting in 27 responses from English teachers in Bogor. The majority of the respondents were female, accounting for 74%, while male respondents accounted for only 26%. Thus, this study primarily includes female English teachers. Additionally, the average age of the teachers was between 40 and 49 years old, with 44% falling in this range. The last demographic variable captured was school status, with 52% from public schools and 48% from private schools. The following chart described the findings of the study.
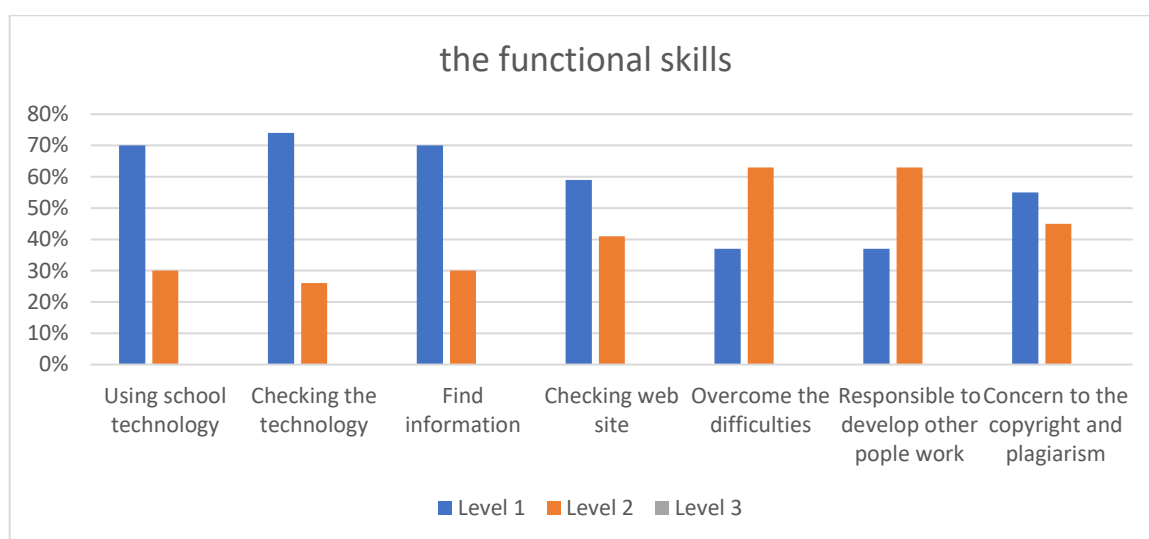

Figure 1. The result of functional skills

In the functional skills, the data show that for using school technology, 70% of respondents reported being at Level 3, indicating a high level of proficiency, while 30% were at Level 2. No respondents reported being at Level 1, indicating a low level of proficiency. Similar results were observed for checking technology and finding information, where 74% and 70% of respondents were at Level 3, respectively. In contrast, checking websites had a lower percentage of respondents at Level 3 (59%), with 41% at Level 2. For overcoming difficulties and being responsible for developing other people's work, a larger percentage of respondents were at Level 2 (63%) compared to Level 3 (37%). Finally, regarding being aware of copyright and plagiarism, 55% of respondents were at Level 3, while 45% were at Level 2. No respondents reported being at Level 1. Overall, the data suggest that respondents generally have a high level of digital literacy, particularly in using school technology, checking technology, and finding information. However, there is room for improvement in other areas, such as checking websites and being responsible for developing other people's work.
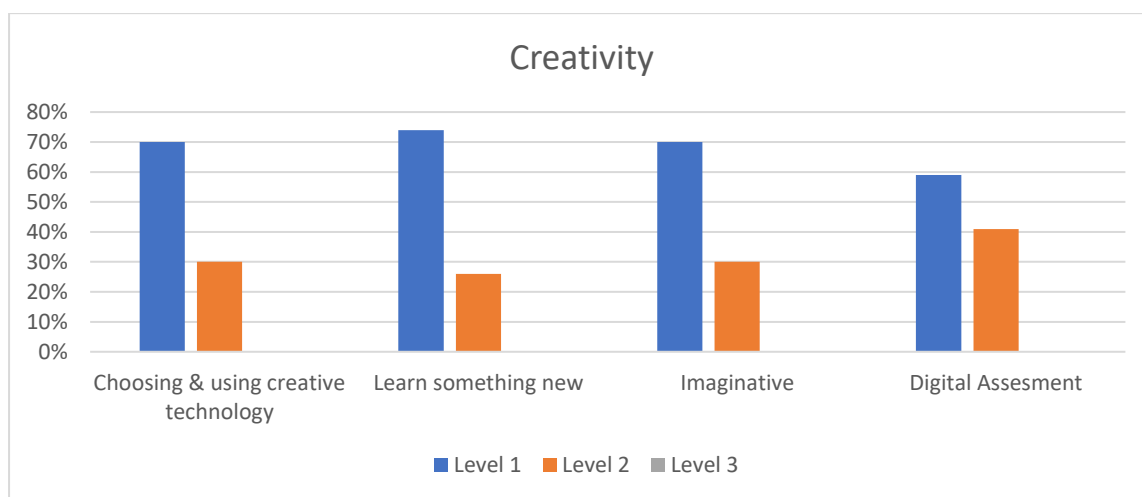
Figure 2. The result of creativity

Then, creativity, the data suggests that among the group of teachers, the category with the highest proportion of respondents at detail level 3 is Choosing & using creative technology, with 47% of respondents indicating that they have advanced knowledge or interest in this area. This indicates that nearly half of the teachers have expertise in using technology to enhance creativity. The category with the highest proportion of respondents at detail level 2 is Imaginative, with 59% of respondents indicating a slightly less detailed knowledge or interest in this area. This suggests that a majority of teachers have a moderate level of interest or knowledge in creative imagination. Interestingly, the data also shows that 51% of the respondents chose Learn something new at detail level 3, indicating a high level of interest or willingness to learn. However, no respondents chose this category at level 1, which may suggest that teachers already have a baseline level of knowledge in this area. Finally, the data shows that the category with the lowest proportion of respondents at detail level 3 is Digital Assessment, with only 24% of respondents indicating advanced knowledge or interest in this area. This may suggest that fewer teachers have expertise in using digital tools for assessment purposes.
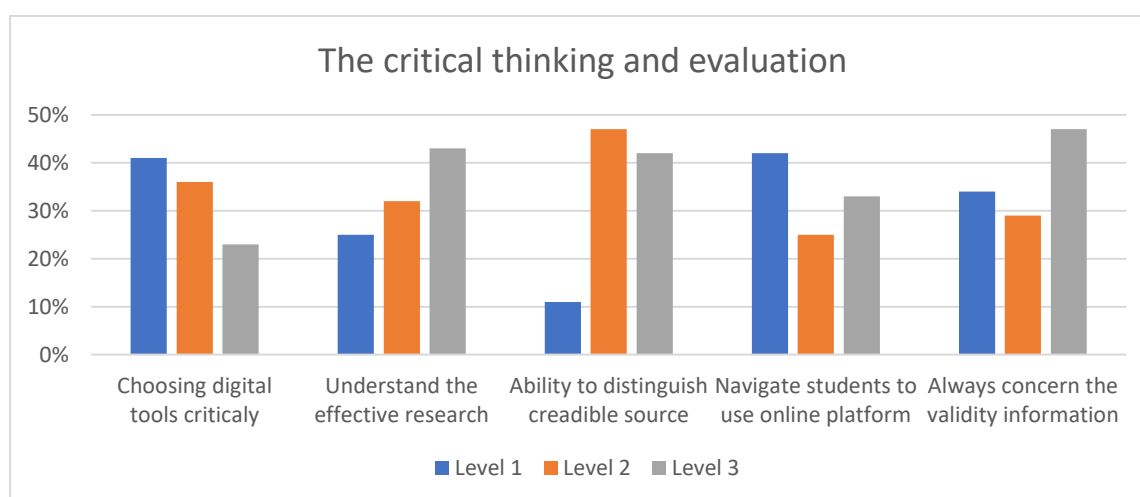

Figure 3. The result of critical thinking and evaluation

Next in the critical thinking category, the data shows that the subcategory with the lowest proportion of respondents at detail level 3 is ability to distinguish credible sources, with only 11% of respondents indicating advanced knowledge. This suggests that very few teachers have expertise in evaluating and identifying credible sources of information. This is a concerning finding, as it indicates

that teachers may struggle to help students navigate the vast amount of information available on the internet and identify trustworthy sources. Additionally, the data shows that at detail level 1, the highest proportion of respondents is in the subcategory of Ability to distinguish credible sources, with 42% of respondents indicating a basic level of knowledge or interest in this area. This suggests that while advanced knowledge is lacking, most teachers have a basic understanding of how to distinguish credible sources from unreliable ones.
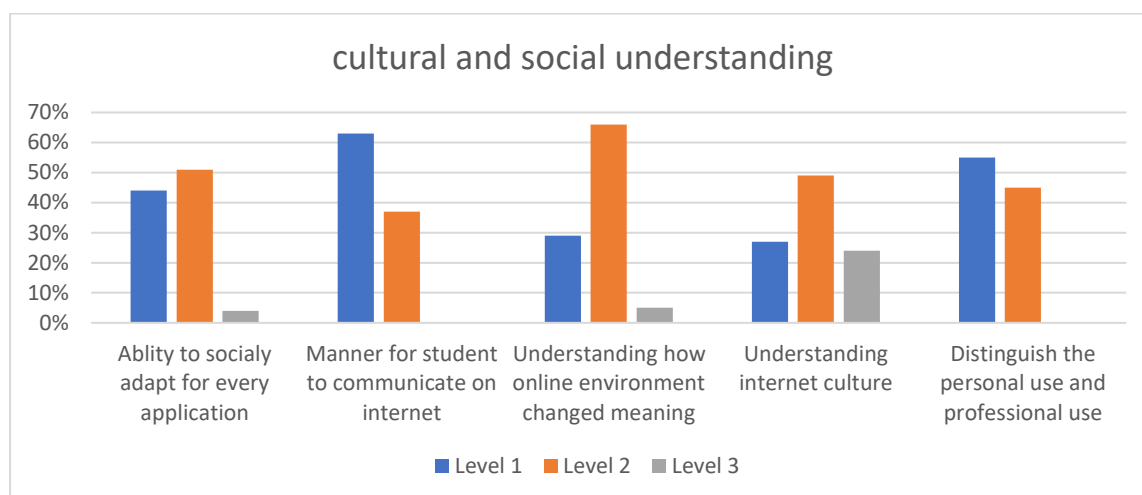

Figure 4. The result of cultural and social understanding

The data reveals that there are significant differences in cultural and social understanding among teachers across different levels of digital literacy. For instance, teachers in Level 3 exhibit a higher proficiency in distinguishing between their personal and professional online use, with 55% of respondents in this level. In demonstrate a better understanding of internet culture, teachers with 49% of respondents are in the level 2 in this category.
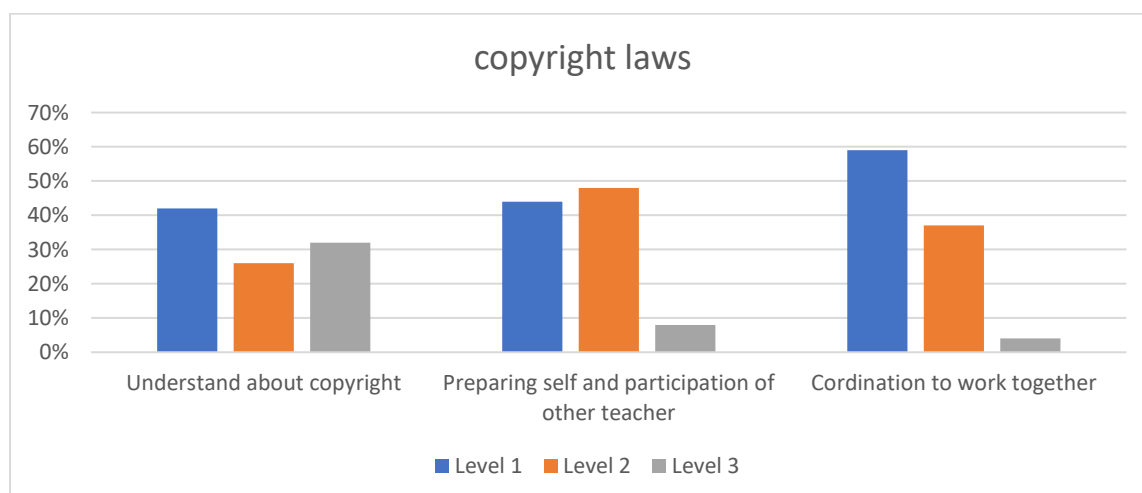

Figure 5. The result of copyright laws

For instance, in understanding copyright laws, with only 26% of level 2 and 32% level 1 respectively in this category. In contrast, 42% of teachers demonstrate a high level of understanding of copyright laws. Regarding self-preparation and participation of other teachers, Level 3 and Level 2 teachers exhibit higher proficiency, with 48% and 44% of respondents scoring in this category, respectively. On the other hand, Level 1 teachers have the lowest score, indicating the need for more

training and support in this area. In terms of coordination and collaboration, Level 3 teachers demonstrate the highest proficiency, with 59% of respondents scoring in this category.
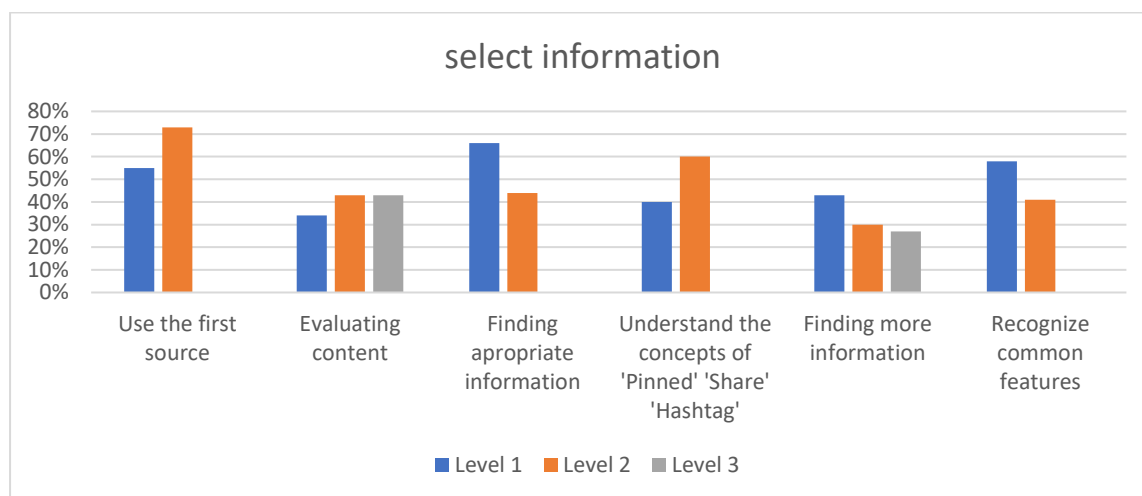

Figure 6. The result of select information

Next, in ability in select information, the data highlights that respondents at Level 2 have the highest proficiency in using the first source, with 73% reporting proficiency in this skill. Meanwhile, for the skill of evaluating content, proficiency levels were highest among Level 2 and Level 3 respondents, with both at 43%, while 43% of Level 1 respondents reported having proficiency in this skill. Additionally, the data reveals that Level 3 respondents have the highest proficiency level in finding appropriate information, with 66% reporting proficiency in this skill. For the understanding of the concepts of 'Pinned,' 'Share,' and 'Hashtag,' the proficiency level was highest among Level 2 respondents (60%), followed by Level 3 respondents (40%). Moreover, finding more information had the highest proficiency level among Level 3 respondents (43%), while recognizing common features was highest among Level 3 respondents as well (58%). Overall, the data indicates that the respondents have a relatively high level of proficiency in digital literacy related to finding and selecting information.
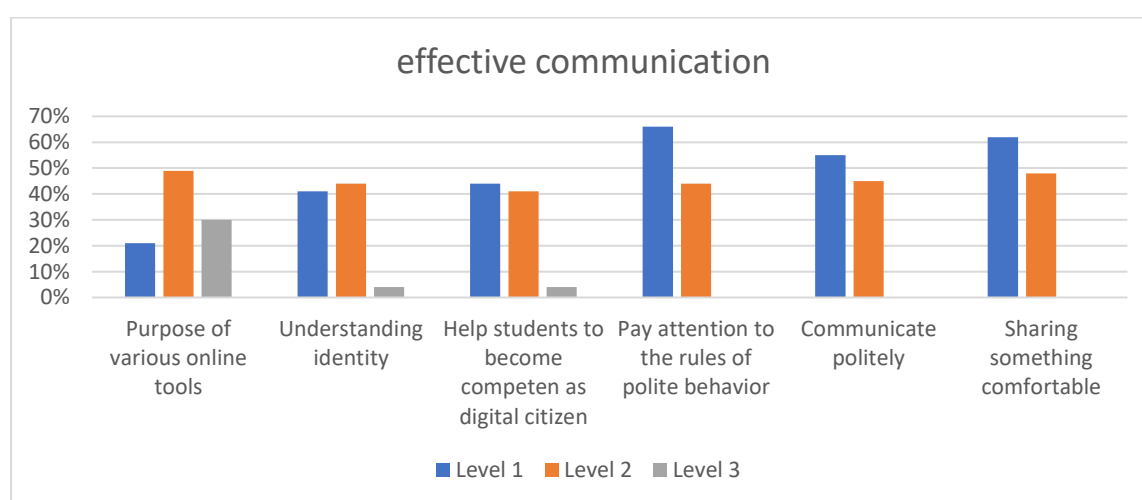

Figure 7. Effective communication

Moreover, the data provided shows the proficiency levels of respondents in various aspects of digital literacy related to effective communication. In terms of the purpose of various online tools,

Level 2 respondents have the highest number with 49%, followed by Level 3 respondents with 30%. Meanwhile, for understanding identity, Level 2 and Level 3 respondents are equal at 44%, with only 4% of Level 1 respondents having in this skill. For helping students become competent as digital citizens, Level 2 respondents are slightly more proficient than Level 3 respondents, with 44% and 41% respectively. In terms of paying attention to the rules of polite behavior, Level 3 respondents have the highest number, with 66% reporting in this skill. Additionally, communicating politely had the highest number with 55% level 3, followed by Level 2 with 45%. Finally, sharing something comfortable had the highest proficiency level among Level 3 (62%), followed by Level 2 (48%).
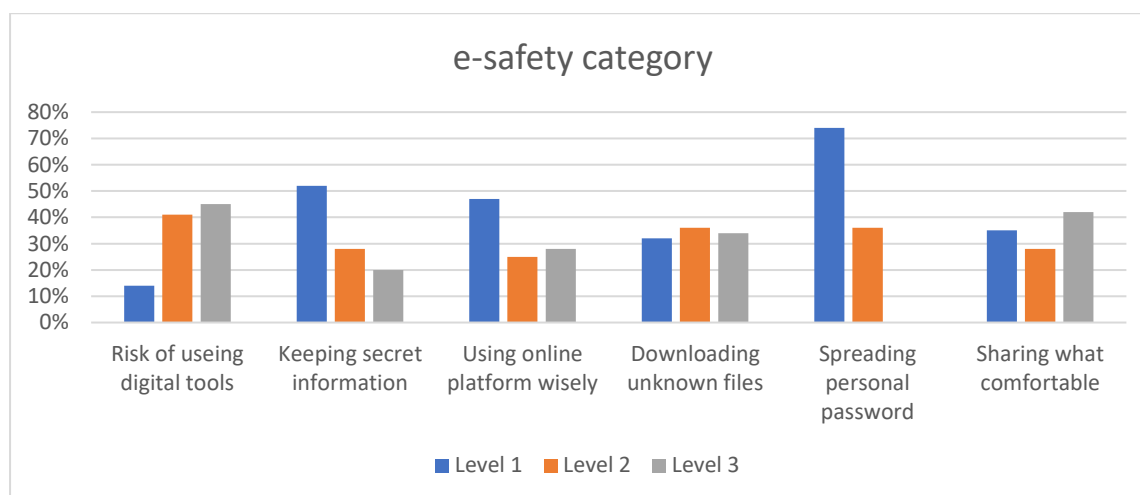

Figure 8. E-safety category

And the last one, in the e-safety category, the data show that a relatively low percentage of respondents were at Level 3 for recognizing the risks of using digital tools, with only 14% of respondents at this level, compared to 41% and 45% at Levels 2 and 1, respectively. For keeping secret information, a majority of respondents were at Level 3 (52%), with 28% at Level 2 and 20% at Level 1. Using online platforms wisely had a similar distribution, with 47% of respondents at Level 3, 25% at Level 2, and 28% at Level 1. Downloading unknown files had a more even distribution, with 32% at Level 3, 36% at Level 2, and 34% at Level 1. Spreading personal passwords was an area of concern, with only 36% of respondents at Level 2, and a majority (74%) of respondents at Level 3, indicating a high level of proficiency in this area. Finally, for sharing information, a relatively low percentage of respondents were at Level 3 (35%), with 28% at Level 2 and 42% at Level 1. Overall, the data suggest that respondents may need to improve their understanding of the risks associated with using digital tools, as well as their ability to share information safely and responsibly.

Discussion

The findings of the study suggest that a majority of the respondents have a high level of digital literacy in using technology, these results are consistent with previous studies that have found that teachers generally have a high level of digital literacy (Jang & Chen, 2010; Sang et al., 2010). The study also found that there is room for improvement in other areas, such as checking websites and being responsible for developing other people's work. This is in line with previous research that has highlighted the need for teachers to develop a more critical approach to using digital technologies (Kvavik et al., 2004; Law et al., 2006). One possible reason for the high level of digital literacy among teachers in this category is the increasing emphasis on technology integration in education. With the proliferation of digital technologies in the classroom, teachers are expected to be proficient in using technology to support learning (Roblyer, 2003). Another factor that may have contributed to the high level of digital literacy is the availability of professional development opportunities for teachers. Many schools and districts offer training and support for teachers to develop their digital skills

(Prensky, 2010).

In the creativity, the finding indicated that nearly half of the teachers have advanced knowledge or interest in choosing and using creative technology is consistent with previous research on technology integration and creativity in education. For example, a study by Huang, et al (2019) found that teachers who incorporated technology in their teaching practices were more likely to engage in creative teaching practices, which ultimately led to greater student creativity. Additionally, a study by Knobloch (2015) found that technology integration can enhance student creativity by providing students with opportunities to explore and experiment with different types of media and tools. The high level of interest or willingness to learn something new, as indicated by 51% of the respondents, is also consistent with research on teacher professional development and technology integration. As noted by Ertmer and Ottenbreit-Leftwich (2007), teachers who have a growth mindset and are open to learning new skills and approaches are more likely to successfully integrate technology into their teaching practices. The finding that only 24% of the respondents indicated advanced knowledge or interest in digital assessment suggested that there may be a need for more professional development in this area. This is consistent with previous research indicating that teachers may lack knowledge or confidence in using digital tools for assessment (Laurillard et al., 2018). To address this gap, professional development programs that focus on digital assessment and feedback may be beneficial for teachers

Moreover, research has shown that the ability to evaluate and identify credible sources is a crucial component of digital literacy and critical thinking skills (van Laar et al., 2020; Yasdin et al., 2021). However, studies have also found that many individuals, including teachers, struggle with this skill (Keiler, 2018; Kim et al., 2019). The current finding that only 11% of teachers had advanced knowledge in this area aligns with previous research and highlights the need for additional training and support in this area. Furthermore, the finding that most teachers had a basic understanding of this skill is consistent with previous research that has shown that many individuals have some level of understanding, but may still struggle to apply it effectively (McLoughlin & Lee, 2007). Overall, the data highlights the importance of continuing to emphasize and provide training in the development of critical thinking and digital literacy skills, particularly in the area of evaluating and identifying credible sources.

Furthermore, the finding that teachers at different levels of digital literacy have varying levels of understanding in areas such as copyright laws and collaboration is consistent with previous research. For example, a study by Falloon (2020) found that teachers who were more digitally competent were more likely to be aware of copyright laws and how to apply them in their teaching. Additionally, a study by Ertmer and Ottenbreit-Leftwich (2007) found that teachers who were more proficient in technology integration were more likely to collaborate with other teachers. These findings suggest that digital literacy is an important factor in teachers' ability to effectively collaborate and navigate legal issues related to technology use in the classroom.

The results suggest that respondents have a relatively high level of proficiency in digital literacy related to effective communication, particularly in terms of understanding the purpose of various online tools and communicating politely. This finding is consistent with previous research that highlights the importance of effective communication skills in the digital age (Warschauer & Matuchniak, 2010). In a study conducted by Warschauer and Matuchniak (2010), they found that communication skills, such as the ability to collaborate and communicate effectively, were essential for students to succeed in the digital age. Additionally, research suggests that teaching digital citizenship is important to help students become responsible digital citizens (Ribble et al., 2004).

And the last, the results indicate that there are still areas of concern when it comes to e-safety, particularly in recognizing the risks associated with using digital tools and sharing information safely and responsibly. These findings are consistent with previous research on digital literacy, which has identified e-safety as a crucial component of digital literacy (Law et al., 2018; Livingstone et al., 2010). A study by Ofcom (2019) found that young people in the UK often lack knowledge of e-safety and are not aware of the potential risks associated with online activity, which can put them at risk of harm.

Similarly, a study by Coman (2020) found that university students in the UK had limited knowledge of e-safety and were not adequately prepared to navigate the risks associated with using digital tools. These findings highlight the need for continued education and training in e-safety for individuals of all ages, particularly as online activity continues to play an increasingly important role in daily life.

4. CONCLUSION

The study aimed to explore the digital literacy of teachers in various aspects, including creativity, communication, e-safety, digital assessment, collaboration, copyright laws, and identifying credible sources. The results suggest that most teachers have a high level of digital literacy in using technology to support learning, possibly due to the increasing emphasis on technology integration in education and the availability of professional development opportunities. However, there is still room for improvement in areas such as digital assessment, identifying credible sources, and recognizing risks associated with using digital tools safely. The findings also suggest that teachers with different levels of digital literacy have varying levels of understanding in areas such as copyright laws and collaboration. This indicates that digital literacy is a critical factor in teachers' ability to navigate legal issues related to technology use in the classroom and effectively collaborate with other teachers. The study highlights the importance of providing training and support in developing critical thinking and digital literacy skills, particularly in the areas of evaluating and identifying credible sources and recognizing the risks associated with using digital tools safely. Effective communication skills in the digital age are also essential, and teaching digital citizenship is crucial to helping students become responsible digital citizens. Overall, the study emphasizes the need to continue emphasizing and providing training in the development of critical thinking and digital literacy skills, particularly in areas where teachers may be lacking. This will ensure that teachers are better equipped to support student learning and help them become responsible digital citizens in the ever-evolving digital world.

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