

TEACHERS' COMPETENCE IN DIGITAL LITERACY IN THE TEACHING OF ENGLISH AT ISLAMIC SENIOR HIGH SCHOOLS

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Abstracts

The objectives of this study are (1) to find out the digital literacy level of the English teachers at Islamic senior high schools, (2) the differences between public-private school English teachers' levels of digital literacy competence at the Islamic senior high school level, (3) the differences between male and female English teachers' levels of digital literacy competence of English teachers, and (4) the differences between rural and urban area English teachers' levels of digital literacy competence of English teachers. The design is descriptive comparative. 20 English teachers participated in the study. The instrument is five-scale Likert questionnaire. It is a combination of closed and open questions to elicit quantitative and qualitative data. The results indicate that the majority of English teachers' digital literacy levels in Islamic high schools are intermediate. This shows that English teachers have achieved digital literacy competence in the ability to communicate, think critically and evaluate various digital information and content on the internet, and are able to collaborate well through spaces or digital technology facilities. For the origin of schools, there are no specific gaps, but public schools have a more level of competency. Furthermore, there are quite significant differences in competence where male teachers have a higher level of digital literacy competence than female teachers in the four existing indicators. Viewed from the context of rural and urban schools, there is no specific digital literacy level gap. This indicates that teachers from rural and urban schools have commensurate levels of competence.

Keyword:

Technology, TELL, Digital Competence, Digital Literacy

Introduction

The world is currently transitioning into the digital era where all activities can be carried out in a more sophisticated way. The important role of this technology has brought human civilization into the digital era. All areas of life have been greatly affected by technological advances and the dissemination of information, including education (Fraillon, 2014). Basically, technology is involved in changing the nature of knowledge to develop more innovative and active ways, creating a more interactive and successful educational process.

Digital technology is now considered as one of the main educational media in the 21st century (Gopo, 2022). In recent years, technology has also been applied in teaching foreign language (English) classes. Technology has been used specifically for language learning to support and accelerate the educational process (Kranthi, 2017). Teachers can use a variety of

technological tools to support their teaching, motivate and engage students in the learning process. To enhance the language learning experience, teachers enable the use of technology tools to facilitate and mediate language learning for their students. In addition, several technology tools give teachers the ability to differentiate teaching and modify homework and class activities, which enhances the language learning experience.

The idea of a learning method known as "technology-enhanced language learning" is related to the topic of using technology to support teaching and learning activities in EFL (TELL) classes. TELL is defined as a learning scenario or setting in which computers, the internet, and other language learning support technologies are used to facilitate the learning process (Patel, 2014). In Indonesia, TELL is a good effective choice to use in situations where Indonesia cannot do full online learning, especially for learning English as a foreign language. By using TELL, English teachers aim to increase students' interest in and understanding of the teaching and learning process (Kranthi, 2017).

To improve the quality of learning, support student participation, adjust learning personalization, and encourage learning innovation, teachers need to understand the importance of digital literacy. Because the use, understanding, access to information, management, collection, and evaluation of information and communication technology (ICT) based sources is the core of digital literacy competencies (Siero, 2017). If all teachers are not digitally literate, it will be even more difficult to find useful information. To support the achievement of science and technology goals, teachers must facilitate digital literacy learning.

Technological developments are anticipated to increase with the use of the internet for learning (Haleem, et al., 2022). As an example of how to recognize and understand digital media, the teacher acts as a source of knowledge for all students. As a consequence, teachers must be really good at conveying language skills using this technology. But, in fact, teachers' ability to use digital is still lacking due to the low use of digital by professional teachers (Moorhouse, 2023). Teachers who struggle with technology admit that their slow understanding of information and communication technology is caused by their advanced age, and they are rarely even reluctant to use ICT to carry out learning activities. Nearly 20% of teachers, according to the OECD International Survey of Teaching and Learning (TALIS 2018), feel that more training is urgently needed, and 40% of teachers lack professional development in using technology in learning activities. According to the data, almost a quarter (23.3%) of teachers lack training in using technology to teach literacy. Based on the confessions of the teachers, they admit that lack of training and age are no longer sufficient to be the cause (Picton, 2019).

However, the level of teacher competence in mastering and using digital technology facilities is not solely related to age. This level can be seen from various social aspects and geographic location of a teacher who is required to integrate digital technology in English learning activities at school. In terms of social aspects, it can be seen from how gender classifies differences in competence. Women have thoroughness and foresight in finding information and filtering existing information, while men are skilled in using technology (Tran, et al., 2020). In addition, another social factor is the difference in school status between public and private schools. The geographical location factor also greatly influences teachers' digital literacy competencies, namely between urban and rural areas (Wang & Eccles, 2013).

This study is chosen to focus on English teacher competence in the context of digital literacy. This is intended to determine the extent to which English teachers know and interact with the digital field known as digital literacy used by teachers in learning activities. Because at this point, to support students' understanding of quality information, teachers must understand the importance of digital literacy in education. The purpose of this study is to determine the level of teacher competence in learning English at the Islamic high school level

in the context of digital literacy reviewed and from various angles through the criteria used in digital literacy elements.

Methods

The study is intended to describe and compare in more detail and depth the actual conditions of the English teacher competency level in the context of digital literacy at the Islamic high school level. 20 English teachers participated in the study. They are from 13 different schools in Jombang and Blitar regencies, 7 public school teachers and 6 private school teachers.

In obtaining data, the questionnaire is the main and only instrument. It contains 65 questions, 36 closed questions and 29 open questions, which are packaged through a classification of questions based on 4 digital literacy indicators adapted from Son and Park's theory (2015), namely introduction and basic computer operation, functional skills and the ability to find and select information, communication, critical thinking evaluation and collaboration, as well as creation and development of creative and imaginative digital media and security in digital activities.

The quantitative data were processed statistically through a relative frequency distribution. To get the relative frequency, the data collection technique used a questionnaire using a Likert scale with the answer choices being Poor, Unable, Enough, Good, and Expert. Meanwhile, qualitative data become important description of the percentage obtained. From this calculation process, the percentage interval of the teacher's ability level in digital literacy is obtained with the competency level as in Table 1.

Table 1. Teacher Competency Levels

Level	Interval Percentage
High	$\geq 81\%$
Intermediate	61-80%
Basic	41-60%
Low	$\leq 40\%$

Findings

The research results in this study contain answers to the four proposed research problems. Each result is presented descriptively based on the results of the percentage analysis that has been carried out on the research data.

An Overview of English Teacher Competence in Digital Literacy

Based on the results of percentage analysis, good percentage results were obtained by all English teachers involved in this study. It implies that most English teachers get an intermediate digital literacy competency level in terms of all indicators.

Table 2. Score Distribution of English Teachers' Competence in Digital Literacy

No	Interval	Grade	Category	Frequency	Percentage
1	$\geq 81\%$	A	High	3	15%
2	61-80%	B	Intermediate	16	80%
3	41-60%	C	Basic	1	5%
4	$\leq 40\%$	D	Low	-	-
				20	100%

Table 2 indicates that most English teachers are at the *Intermediate* level, resulting from 80% of English teachers are at the *medium* category level, while 15% of English

teachers have *high* abilities in digital literacy, and also only 5% of teachers have abilities in the *Basic* category in the realm of digital literacy. There are no teachers with *Low* level of digital literacy competency in digital literacy. When viewed from the results obtained, most of the teachers who were declared to have fulfilled the intermediate level had met the digital literacy level criteria on indicators regarding the introduction and operation of basic computers, the ability to obtain and select information from digital media space, and were able to communicate, classify, think creatively and collaborate in the digital space.

Meanwhile, teachers who are declared to have met the *High* level have exceeded these three indicators. They are stated to have achieved the criteria for the highest digital literacy level on the highest indicator, namely creating and developing creative and imaginative digital media and understanding the basics of security in the digital realm. With these results, it is certain that teachers at this level really understand how to make the best and maximum use of digital technology for learning English. Meanwhile, for the lowest frequency, teachers who obtained the *Basic* level were declared to have met the competency criteria for functional skills and the ability to obtain and select information and media from digital spaces. With these results, it is stated that teachers are still unable to join digital forums to support their abilities in the field of technology while simultaneously developing their ideas and knowledge in the digital space.

Public-School and Private-School English Teachers' Level of Digital Literacy

The findings in this study regarding the differences in the competency levels of public and private school teachers provide quite balanced results in terms of their respective assessments on four different indicators. The percentage results obtained are as in Table 3.

Table 4. Digital Literacy Competence of Public and Private School

Indicator	Public School		Private School	
	Percentage	Category	Percentage	Category
Introduction and basic computer operation	80.14%	Intermediate	90.42%	High
Functional skill and the ability to find and select information	73.75%	Intermediate	78.75%	Intermediate
Communication, critical thinking and evaluation, and collaboration	69.29%	Intermediate	69.64%	Intermediate
Creation and development of creative and imaginative media and security in digital activities	65%	Intermediate	58.25%	Basic

Table 4 reveals that public and private schools have competing competencies. In indicator 1, basic competence in operating a computer, private schools get a fairly high score compared to public schools with 90.42% which are included in the *high* competency category, while public schools get a score percentage of 80.14%. This shows that most private and public teachers have mastered these indicators well and have not encountered any obstacles.

For the second indicator, private teachers also get a relatively higher percentage score compared to public teachers, with 78.75%, private school teachers get *intermediate* competency level in functional skills and how to search, find and select information on the internet to support learning, which means they have been able to maximize the use of the internet as a means of enriching information and developing learning materials such as by

being able to visit various websites such as AcademiaEdu, Ruangguru, Journals, and other websites by 5% on this indicator which means there is no big difference between the two.

Then in indicator 3, private teachers get almost the same percentage of scores as public school teachers gain 69.64% while public teachers get 69.29%. These results certainly indicate that there is no teacher competency gap in how teachers communicate, think critically and evaluate and collaborate in digital spaces. This provides clarity that public school teachers can teach not only statically, but also dynamically.

And for the percentage results of the last indicator point, public school teachers were able to outperform private school teachers with a total percentage score of 65% in the medium category, while private schools with 58.25 got the *basic* category levels. Public schools are identified above private schools in terms of creating and developing creative and imaginative digital media and ensuring digital security.

Male and Female English Teachers' Level of Digital Literacy Competence

The research results were obtained through an analysis of 20 respondents consisting of English teachers and then obtained the percentage of each digital literacy indicator so that the results regarding the level of digital literacy between male and female teachers were obtained. Based on the research, the following are teacher specifications based on gender that researchers collected for analysis in determining their digital literacy competencies. The following is the result of the percentage analysis collected.

Table 5. Digital Literacy Competence of Male and Female Teachers

Indicator	Male		Female	
	Percentage	Category	Percentage	Category
Introduction and basic computer operation	86.94%	High	83.1%	High
Functional skill and the ability to find and select information	78.33%	Intermediate	74.64%	Intermediate
Communication, critical thinking and evaluation, and collaboration	70.95%	Intermediate	68.78%	Intermediate
Creation and development of creative and imaginative media and security in digital activities	70.33%	Intermediate	58.86%	Basic

Table 5 shows that male teachers scored relatively higher than female teachers on each indicator, however, no large discrepancies were found. Male teachers mastered Indicator 1 with high competence with a percentage of 86.94%, while female teachers got a relatively close percentage of 83.1%. At this point, many teachers claim to have a good command of the basic computer skills which became their initial benchmark in digital literacy.

In indicator 2, an equal percentage score was obtained, where male teachers scored 78.33% and female teachers scored 74.64%. With these results, both of them are at an intermediate level and are able to use the internet to enrich information and obtain various content and learning media.

The results of indicator 3 are consistent with a score of 70.95% for male teachers and 68.78 for female teachers. This suggests that both male and female teachers have *intermediate* competency levels in terms of communication, critical thinking, and evaluation as well as collaborating in developing digital technology-based learning.

For the last indicator, there is a slightly visible gap between the competencies of the two genders. Male teachers obtained a percentage score of 70.33% at the *intermediate* level,

while female teachers obtained a score of 58.86 at the *basic* level. It is at this last point that the competence of male teachers is much more visible because creative and imaginative factors in the use of more diverse digital technologies have proven to support the creation and development of more interactive and interesting digital-based learning media.

Rural and Urban Area English Teachers' Level of Digital Literacy Competence

The results of the study were conducted on 7 teachers classified as coming from rural areas and also 13 teachers coming from urban areas in Jombang and Blitar. And obtained results that are equivalent between the two classifications of the geographical location of the English teacher's origin. Table 6 summarizes the findings.

Table 6. Teacher Digital Literacy Competencies in Rural and Urban Area

Indicator	Rural Areas		Urban Areas	
	Percentage	Category	Percentage	Category
Introduction and basic computer operation	81,9%	High	85,15%	High
Functional skill and the ability to find and select information	73,93%	Intermediate	76,15%	Intermediate
Communication, critical thinking and evaluation, and collaboration	71,43%	Intermediate	69,89%	Intermediate
Creation and development of creative and imaginative media and security in digital activities	64%	Basic	62,92%	Basic

Table 6 indicates that teachers from rural and urban areas were able to get *high* digital literacy percentage points in the first indicator. In detail, the competence of teachers in urban areas is superior with points above rural areas with 85.15% while teachers in rural areas with 81.9%, with this means that both of them still get very good or high titles in computer mastery.

Furthermore, when viewed from indicator 2, the percentage value of the digital literacy level obtained is competitive with one another, with rural teachers getting a percentage of 73.93% while urban teachers getting a larger percentage, namely 76.15%. However, these two groups of teachers both received the title of *intermediate* level, that is, they both had intermediate competence in terms of mastering functional skills and competence in selecting all information obtained from the internet or digital spaces.

For the third indicator, teachers in rural areas get a percentage of 71.43%, while teachers in urban areas differ slightly with 69.89%. With these results, each group received the title of *intermediate* digital literacy level with an almost equal difference in percentage points. Then, in the last indicator, rural teachers get 64% while urban school teachers get 62.92%. With these results, the two groups of teachers received the title of *intermediate* digital competence.

Discussion

English Teacher Digital Literacy Competency Levels

The progress of teacher competency levels in ICT is based on the importance of understanding TELL (Technology-Enhanced Language Learning) which can be the most important point that revolutionizes traditional methods and creates a better style of teaching modern languages (Ghanizadeh et al., 2015). TELL has been proven to have been

successfully developed and applied by most English teachers who have demonstrated their ability at the intermediate level in digital literacy. This shows that English teachers have good skills in terms of digital and technological awareness, use and utilization of technology and information, technological literacy (communication, evaluation, critical thinking, and collaboration), and also technological creativity. Widana (2020) also said that digital literacy is how to create digital content and exchange information. When viewed from each indicator, teachers get high results in competency in basic computer operations. Of course, this is a good thing and is really needed by teachers because computer literacy has an important position as a form of digital literacy (Hoffman & Blake, 2003). The high abilities possessed by the teacher include using the keyboard to type, file manager, changing screen brightness, scanning disks, minimizing and maximizing screens, taking photos, activating Bluetooth and Wifi, operating audio jacks, and projectors.

For the second indicator, teachers were able to record intermediate levels in functional abilities (Microsoft Word, Excel, PowerPoint and Internet skills) and information acquisition with 75.75%. This is of course the result of the most important ability in the concept of literacy in the digital realm. Johnson & Webber (2003) stated that information literacy refers to competence in finding effective information. Of course, in obtaining information, good accessibility skills are needed in terms of technology or internet skills and processed and delivered with the functional abilities of the teacher. At the level of ability in communication, critical thinking, evaluation, and collaboration, English teachers are at the intermediate level with percentage 69.43%, which means they have good and qualified skills. This competency is important to have because of the importance of teachers in processing the information they get and how they are able to express it in the digital space.

Furthermore, Hamidah (2021) highlighted that communication can foster opportunities to develop language skills and activities in the digital space. The forms of communication networks used by teachers are also easy, practical and effective networks such as Google Meet, Zoom, E-mail, and WhatsApp. Finally, in the fourth indicator, English teachers are also listed as middle level teachers with a percentage of 62.3%. This shows that teacher competence is at a standard level in professionalism to transform and create innovative content or digital media. This is the highest level in digital literacy. As a result, some of them have been able to properly develop and create various existing media. Trilling & Fadel (2009) confirmed the same thing that media literacy is the medium for delivering messages (web sites, audio, video animation, podcasts, graphics).

Public and Private School English Teachers' Level of Digital Literacy Competence

The study found that teachers from private schools get higher percentage scores on 3 indicators (computer/PC operation, functional skills, and critical thinking evaluation communication, and collaboration skills) than teachers from public schools who have higher percentage scores on the fourth indicator and the highest level, namely the creation and development of digital media or content and technology security. This is in line with Shabbir's et al. opinion (2020) which states that private school teachers are better than public school teachers in accessing digital media, basic information, and content management. However, the results obtained by public schools show that they can make wider and more creative use of digital technology and can create and develop media. Ali et al. (2020) uttered that public school teachers are better digitally than private school teachers in content delivery, online processing, and record keeping. Another opinion reveals that private schools have more supportive facilities than public schools, but in reality not all private schools are like that, even public schools often outperform private school facilities and are more advanced. Therefore, this competence is not based on the facilities and also the quality of the schools that support it, but based on the quality of each teacher. Hatlevik (2017) stated that the use of ICT by teachers is positively related to their professional development.

Male and Female English Teachers' Level of Digital Literacy Competence

The finding of the study reveals that male English teachers have better competence than female teachers in all existing indicators, although there is no high percentage score difference between the two classifications. The issue of gender differences in mastering digital literacy further strengthens opinions that say the same thing, namely male teachers are better at digital literacy and are said to be more technologically literate than female teachers. This is in accordance with the opinion of Rizal et al (2021) that male teachers and female teachers are distinguished regarding digital literacy, in which male teachers are better at digital literacy than female teachers. However, apart from that, in reality female teachers are more up to date regarding the latest information and news than male teachers, and are also more active and have diverse skills in obtaining a lot of information. This shows that information literacy is basically dominated by female teachers. Tran, et al. (2020) stated that female teachers have good skills in finding information using ICT, but male teachers are better at using ICT. Rizal et al. (2021) highlighted that not only finding information, female teachers can also improve their quality of life.

Rural and Urban Area English Teachers' Level of Digital Literacy Competence

In the competency classification of English teachers from urban and rural areas, the results of the study found that each percentage score was equivalent. Teachers from urban areas are better at digital literacy competencies which include computer operating competencies and functional skills in selecting information from digital spaces. Urban teachers are said to be better and quicker to get information due to geographical location and environment which affect the rapid dissemination of information. This is supported by Fraillon et al. (2014) that modern lifestyle factors in line with the rapid spread of information are the cause of a person's high digital literacy. Apart from that, Rundel and Salemink (2021) said that the ease of infrastructure and networking facilities is one of the factors of person's high digital literacy in urban areas. However, according to the results, teachers from schools in rural areas are better in percentage scores for indicators of communication, critical thinking, evaluation, collaboration, creating and developing content or media technology, as well as safety in digital activities. Even though in reality teachers who are in schools in rural areas have incomplete and supportive facilities like those in urban area schools, this does not limit the enthusiasm, progress and creativity of rural school teachers. This is in line with what was said by Pangrazio (2016) that digital literacy is able to open opportunities for students in thinking, communicating, and working that affect their learning success without the limits of places and times.

Conclusion

The current research investigated digital literacy level of the English teachers at Islamic Senior High Schools, and the differences between public and private school English teachers' level, male and female English teachers, and rural and urban area English teachers' levels of digital literacy competence of English teachers. The findings reveal that their mastery of digital literacy is good and there are not much differences among the investigated variables. This does not necessarily imply that no more efforts to improve teachers' digital literacy. In this regard, educational researchers and policymakers and practicing teachers hold that extensive professional development training would have a strong and positive impact on learners' success rate. However, it entails an in-depth investigation of the departure point of teachers' technology use, availability of tools and support, related beliefs, and perceptions of challenges. Developments motivated by a clear definition of policies and practices may, henceforth, become more perceptible. In this regard, findings of the current research could have very effective and concrete pedagogical implications for EFL teachers, learners and curriculum developers.

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