



Digital literacy in EFL learning: University students' perspectives

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The 21st century has widely opened the opportunity for society, specifically in the educational party, to excel their performance in digital literacy. This relates to the competence required in accessing information using media and ICT tools in the process of learning. Technology integration in EFL learning has been a common issue, yet studies in digital literacy in language learning are still scarcely being conducted. This study explores university students' digital literacy skills and their perspectives on digital literacy in EFL learning. Two instruments were utilized through a qualitative method, including a questionnaire and interview. The findings showed some aspects of digital literacy influencing students' EFL learning. This involves students' information literacy, ICT and media literacy, and their perspectives on digital literacy. The result indicated that EFL university students are encouraged to apply digital literacy since almost all learning components are integrated with digital technologies. As a consequence, they showed high awareness to keep up with the latest issue on digital literacy in their EFL learning.

Keywords: digital literacy, EFL learning, technology-enhanced language learning

INTRODUCTION

Digital literacy is perceived as one of the demanding skills needed by 21st-century society based on the World Economic Forum in 2015 ([Kementerian Pendidikan dan Kebudayaan, 2017](#)). This has to do with the ability to understand technology, media, and information, as well as communication skills, to create and share meaning, to analyze and evaluate the knowledge available on networked digital resources ([Hague & Williamson, 2010](#)). The prominence of having digital literacy is also the result of the enormous growth of internet users. A survey revealed that in 2022, 77,2% of Indonesia's population are penetrated with internet, and they are active users which grow higher than the previous years ([APJII, 2022](#)).

This indicates that nearly most of our societies rely on the internet and technology for their various activities. Consequently, the need to educate society about digital literacy is urgently required. To begin with, the educational institution is the one that has an influential role in manifesting and teaching the future generation the value of being literate in digital. This is because the education domain is also directed through the process of globalization along with digital tools outreach mastery ([Martin, 2006](#)). The requirement to adapt to the development of digital technology is to prepare students, particularly at a higher education level, to be successful in the near future, such as in their work careers and living with society. This is also in line with the fact that digital literacy helps students engage with the world of competition and cope with the growing competitiveness in the digital era ([Komlayut & Srivatanakul, 2017](#)).

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Conversely, the importance of mastering digital literacy is not limited to a particular subject or lesson students learned, yet in language learning, it is also indisputable. In addition, there are demands for language learners to develop digital literacy skills and language-learning strategies in technology-enhanced language learning (TELL) environments ([Son et al., 2017](#)). In the early times, the application of technology in language learning was limited to grammatical drills, lexical games, transformation exercises, and restricted to autonomous student-computer interaction ([Brett & González-Lloret, 2009](#)). However, nowadays, the practice of language education aided with technology has expanded, such as facilitating human-to-human communication and offering them to practice their language acquisition with some programs such as websites, the internet, blogs, wikis, podcasts, and so forth ([Brett & González-Lloret, 2009](#); [Dudney & Hockly, 2007](#); [Johnson, 2017](#)). This has a significant value because the information students absorb comes from huge resources with multiple formats on the internet, and thus, they will explore their literacy and language skills wider instead of the discrete ones. In this case, it is then expected that today's English classroom goes beyond single literacy, yet diverse areas exist in literacies, such as technology, multimedia, relationship, and culture ([Shoffner et al., 2010](#)). As a result, students are encouraged to perceive digital literacy as a predominant skill and to be the basis for supporting their language learning in today's era.

Studies on digital literacy in EFL learning have been conducted by some researchers. One study by ([Kurniawati et al., 2018](#)) investigated the practice of digital literacy in EFL classroom of senior high school teachers from two generations, that is digital immigrant and digital native in Indonesia. Employing ACOT (Apple of Classroom of Tomorrow) framework, consisting of a series of technology utilization for teaching and learning that is categorized into five classifications: Entry, Adoption, Adaptation, Appropriation, and Invention, finding showed both teachers were at the Adaptation stage in terms of their digital literacy based on the utilization of digital media in assisting students' learning. This indicated that teachers who are native in digital technology do not guarantee that their developmental stages of digital literacy are superior, but experience and teacher training do ([Kurniawati et al., 2018](#)).

Another study by ([Durriyah & Zuhdi, 2018](#)) explored the digital literacy practice of the EFL student teachers. They investigated these student teachers' perceptions about the use of digital technologies and how they learned about theories and practices behind the use of digital technologies in teaching and learning. Results showed that these student teachers referred to their personal experience in selecting digital technologies as potential tools for their teaching and learning. In addition to the result, these student teachers selected Facebook, blogs, Skype, and WhatsApp as the popular digital technologies they can use to prepare to teach in the units contained in a junior high English textbook. This perception was perceived based on student teachers' sharing thought, where these technologies offer a safe feeling to

participate (Facebook closed group), a good chance to foster students' ownership in developing writing skills (blogs), to develop spontaneous and authentic oral communication (Skype), and offer intimacy and immediacy to nurture a dynamic community of learners to feel togetherness and accessibility (WhatsApp, a messaging platform).

Referring to previous studies on the practice of digital literacy in EFL context, most studies employed the framework of digital literacy which tends to be general in a sense. Thus, it might be less contextual to the research carried out in the scope of students' learning. The aforementioned studies have not offered concrete illustration of sort practices that might represent stages that can be achieved as the essential skills of digital literacy. As it is asserted, digital literacy is defined past the mastery of technical digital tools and technologies usage, yet skills, knowledge, and understanding technology media, information, and communication usage, requiring both cognitive and technical skills ([American Library Association, 2013](#); [Hague & Williamson, 2010](#); [Jones & Hafner, 2012](#)).

In addition to that, the previous studies limited their subject that is teachers or student teachers as the subject or participant of the study. Therefore, this study expects to fill the gap by employing a framework by ([Trilling & Fadel, 2009](#)) consisting of Information Literacy, Media Literacy, and Information and Communication Technology (ICT) Literacy, as well as involving EFL students of postgraduate study to be the participant. This is because the influence of digital technologies continues to be developed and expanded, not only in the process of teaching, learning and research, but also the colleges and universities are needed to be ensured that students can both use digital tools and critically consume and create a variety of content to reach the digital literacy skill ([Feerrar, 2019](#)).

A similar study once has been conducted by ([Son et al., 2017](#)) yet it limited on the quantitative discussion on the level of digital literacy skills students have. However, the framework used by ([Son et al., 2017](#)) was represented the framework employed in this study in order to further examined students' perspective about Information Literacy, Media Literacy and ICT Literacy as three of digital literacy skills they require to possess in relation with their experience of digital literacy in EFL learning. Thus, instead of focusing merely on measuring students' digital literacy skill level, this study was attempted to examine students' perspective through a qualitative method, as well as the benefits and constraints they experience during the learning through digital technologies.

Definition of Digital Literacy

Digital literacy is defined as the ability to use information and communication technologies in a critical thinking way ([American Library Association, 2013](#)). This involves knowing digital tools and using the information and communication technologies to find, evaluate, create, and communicate information, through both cognitive and technical skills ([American Library Association, 2013](#); [Hague & Williamson, 2010](#); [Jones & Hafner, 2012](#))

In similar vein, digital literacy has also been defined as the practice of doing communication, relation, and sharing thought and being associated with digital media (Jones & Hafner, 2012). It is concluded that, digital literacy is marked as individuals' awareness, attitude and ability, to appropriately use digital tools and facilities to identify, manage, evaluate, and synthesize digital resources to establish new knowledge through creating and communicating it with others (Martin, 2006). In short, the aforementioned digital literacy leads to the understanding and use of technology for learning, starting by searching and critically evaluating the information to be the learning sources, creating the sources into digital media, and the last, presenting and communicating it with their peers. Therefore, (Trilling & Fadel, 2009) categorize 3 components inside digital literacy skills students should own as it comes to the learning process. They are Information Literacy, Media Literacy, and Information and Communication Technology Literacy. These three divisions in digital literacy are explained further in the following:

A. Information Literacy

Students should be literate with the term information literacy, which demands them to access information efficiently (time) and effectively (sources), evaluate information critically and competently, as well as use and manage it accurately and creatively. Similarly, in language learning, the ability to cope with information literacy should be established. As students seek out information or references, they have to assure that the sources are credible, accurate, and reliable. They also have to decide which information is most useful and interesting and how to organize and display it to keep them engaged.

B. Media Literacy

Students need to perceive how to apply the media resources available for learning, and to create compelling and effective communication products such as videos, audio podcasts, and Web sites. "Media literacy" is defined as a medium to present the message. The messages can be in the form of print, graphics, animation, audio, video, Web sites, and so on. The crafting of the message should consider the "look and feel" of a Web site, for example, and the impacts the media message has on audiences based on the purpose. How to design and create Web pages, graphics, animations, videos, and games (including selecting the right digital tools for the tasks), and choosing appropriate communication methods to promote their work to other students. This is related to interpreting and valuing the message differently through the utilization of media.

C. Information and Communication Technology Literacy

Using appropriate tools well for learning is expected. A number of international organizations have been at work for decades to help close the world's digital learning divides and provide guidance on how to use ICT tools for learning. As an example, the International Society for Technology in Education (ISTE) dedicated to helping integrate ICTs into the daily work of schools and education systems involving students, teachers, and administrators. This reflects the

utilization of digital technologies like computers, media players, and sort to be appropriately accessed, integrated and evaluated.

In conclusion, digital literacy is defined as the ability to understand and use credible information, produce and receive media in multiple formats and be able to utilize the information and communication technology for learning. From the aforementioned definitions of terms by the experts, it can be concluded that digital literacy is not merely a single skill that students need in order to adapt with the use of technology in learning. Digital literacy then appears as a skill to contribute to human development in this disruption era by integrating some aspects related to it, for example information literacy, media literacy, and also ICT or information and communication technology literacy.

In EFL learning, this skill is essential in order to prepare students with an abundance of learning resources they need to pick as their supporting materials. In addition, since students are now frequently exposed to digital media, learning English is supposed to be promoted through the integration of digital media and technology, as a lead to enhanced outcomes for students, and support the interactive process of learning. Finally, digital literacy in English learning is expected to contribute to the effectiveness of students' learning activities in today's society.

METHODS

Research Design

Throughout this study, a qualitative method was deployed in order to acquire the related information from the participants regarding their perspectives about digital literacy in EFL learning. This aims to explore and understand the meaning of an individual or group, where the process of research includes questions, procedures, purposeful sampling, collection of open-ended data, analysis of text or picture, representation of information in figures and tables (Creswell, 2009). Hamied, 2017 further claimed qualitative research involves bottom-up approach or inductive reasoning which is begun from observations and measures, patterns and regularities detection, and ended up with general conclusions or theories. In this research, the aim of this study is to explore EFL university students' perspective on digital literacy skill in their EFL learning. Utilizing two instruments, questionnaire and interview, this research started by administering the questionnaire to 22 EFL university students in a public university in Bandung, Indonesia, followed by conducting an interview to them based on the purposeful sampling. This aimed to proceed students' perspective regarding digital literacy that were delivered through questionnaire, and then acquired their response deeper through an interview session.

Data Collection

Collecting data throughout the questionnaire allowed the researcher to collect a number of data in a relatively short amount of time. Upon this study, though qualitative data was

deployed, questionnaire was still used in order to quickly gather the general data of a huge number of the subject participants. The data from questionnaires was involved at the beginning to portray students' understanding of digital literacy categories, that is derived from the framework by (Trilling & Fadel, 2009) regarding Information Literacy, Media Literacy, and Information and Computer Technology).

The questionnaire is a written collection of self-report questions to be answered by a selected group of research participants (Hamied, 2017). In addition, the in-depth interview was conducted to gain more understanding from the participants. It also aimed to clarify and confirm more regarding their answer, after they had finished fulfilling the questionnaire. It is supported by (Cohen et al., 2007) in which the questionnaire will be given to all the participants who are willing to participate, and continued to the semi-structured interviews, to those who are considered as knowledgeable through open-ended questions. Silverman, 1993 claims the importance of open-ended interviews, that is to enable respondents to demonstrate their unique way of looking at the world based on the respondent's definition. By conducting interview, the participants could expand and elaborate their responses toward the deeper questions regarding their perspectives on digital literacy in their EFL learning.

Participant

The participants of this study involved 22 university students in English Education or English Literature major from one public university in Bandung, Indonesia. The students involved in the study sat on the first semester, where most of the courses were in relation to research. Therefore, the digital literacy skill which involves the ability to search for information, create media and activity on information and communicate it in digital technology is applied. Therefore, the selection of the sample was based on purposive sampling (Creswell, 2009) where the researcher investigated the case based on her need to study, that was exploring EFL university students' digital literacy in EFL learning. This is in line with the assertion that the researcher handpicks the sample on the basis of judgment and the satisfaction to the researcher's specific needs (Cohen et al., 2007).

Instrumentations

As the main source for collecting the data, the instruments used by the researcher were questionnaire and interview.

a. Questionnaire on Digital Literacy (Son et al., 2017)

The questionnaire was adapted from the previous research done by (Son et al., 2017). The questionnaire encompasses 5 sections in which the researcher expected it to be feasibly answered by the participants. At first, the researcher gathered the profile of the participants, which became the prominent consideration to represent the sample of the study. In the first section, the researcher attempted to acknowledge the participants regarding their habit of using technology, the types of digital application they use to

practice their digital literacy skill, and their experience of learning activity through digital platforms. In the second section, the questions focused on the participants' information literacy. While in the third section, the researcher asked about participants' ICT and media literacy skills. In the fourth section, the researcher highlighted the benefits and constraints in digital literacy experienced by the participants. At last, the fifth section contributed as the main point to figure out the perspectives of the participants on digital literacy in English language learning. The questionnaire distributed to the respondents or participants showed their digital literacy skill and thus it was needed as the guidance to conduct the following data collection, which was an interview to gain more understanding on their answer.

b. Interview List

The urgency of conducting the interview was due to the fact that there were more phenomena which could be conveyed from the participants in order to gain deep understanding about their perspectives on digital literacy practice. The questions encompassed 5 main questions on digital literacy. The first question asked about the participants' general perception in using digital media and technology in language learning. The second question gained deeply to which extends their digital literacy could influence their language learning. The third question inquired about the participants' information literacy, media literacy and ICT literacy skills. The fourth and fifth questions were sequentially asked about the benefits and constraints of being digital literate by means of using digital technology in the participants' language learning activity.

Procedures

The data collections were carried out by distributing the link of the questionnaire made up from Google form through an instant message application (Whatsapp) to the respondents to suit the sample. The distribution of the questionnaire was done on November 9, 2021, while the interview was conducted on November 11, 2021. Upon the distribution of a web questionnaire, it would help the researcher gather the data in a more effective and efficient way. In addition to that, an in-depth interview was also conducted after the researcher collected the questionnaire given previously.

Data Analysis

The data were analyzed through coding procedures. It is part of data analysis which aims to conceptualize and categorize the data (Hamied, 2017). The stage involves examining or observing the data from the questionnaire and interview, giving labels to the individual phenomenon, and then analyzing and describing the data through answering the problem from the research question.

RESULTS AND DISCUSSION

Upon the research question "what are the university's students' digital literacy skill?", it was found that university students tend to develop their digital literacy skills in

language learning through some aspects. Throughout the questionnaire distributed and interview administered to the respondents, the findings and discussion are provided more detail in the following:

Students' Information in the Frequency of Using Digital Technology

Figure 1, looking up the result of the frequency of using ICT experienced by students, the majority of students were acknowledged to frequently experienced the use of a personal computer (PC) or laptop, mobile devices, with internet accessibility at home. It was known that they tended to use mobile phones as the most frequent technology they used for their learning with 21 responses dominating it. The basis mastery of digital literacy is related to the use of the digital technologies to aid them in searching for information, creating media in multiple formats, and also to be able to use ICT media and technologies. Thus, by recognizing students' frequency in using technology for their language learning, it can contribute to the understanding of digital literacy better. This is in line with the previous study done by (Hafifah & Sulisty, 2020), they revealed that there was a significant correlation among internet frequency usage with participants' ICT literacy level, in which it disclosed the evidence that the more frequent participants implement the ICTs, the more literate they will become.

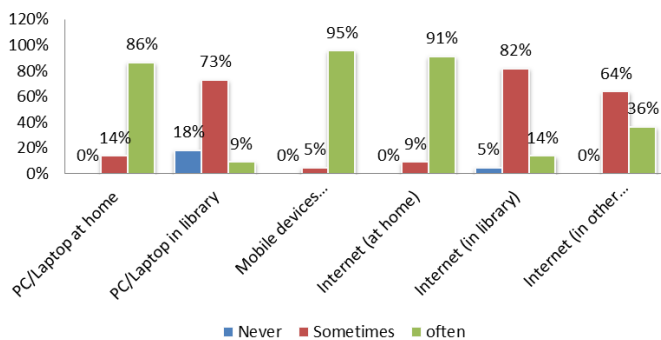


FIGURE 1 | Students' Frequency in Using ICT for Learning

Students' Types of Language Learning Applications

Types of Language Learning Applications Used

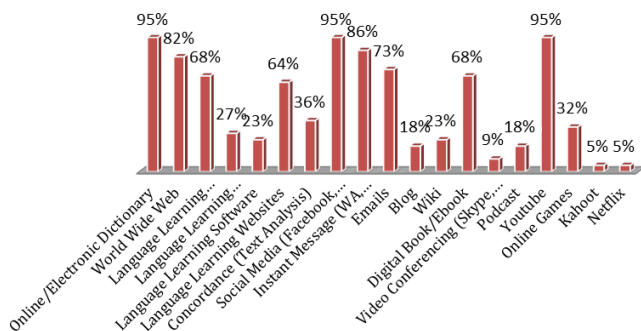


FIGURE 2 | Learning Applications Used by Students in Language Learning

Figure 2 represents the participants selected online dictionaries, social media, and YouTube respectively to be the frequent application used for their learning (95% voters). The participants stated that online or electronic dictionaries helped them in comprehending the material in language learning, the same as social media and YouTube. It is then followed by the instant message (86%), world wide web browser (82%), email (73%), digital book or E-book (68%), language learning management (68%), and language learning websites (64%). This indicated that digital technology adequately contributes to the enhancement of participants' language learning. The participants admitted from the interview session, that, using language learning applications especially those related to EFL learning like Oxford online dictionaries, Merriam Webster, BBC learning English, social media like Instagram could expose them with English learning material either spoken or written better. This is supported by (Gonzalez-Acevedo, 2016) who claimed that by using technology-enhanced gadgets would be aiding in the development of trans disciplinary skills, media literacy, while proving to be effective and engaging tools in the EFL learning setting. The participants felt engaged when they were learning through these kinds of applications with pleasure and originality of the material to enhance their language skills.

Students' Learning Activity Through Digital Technology

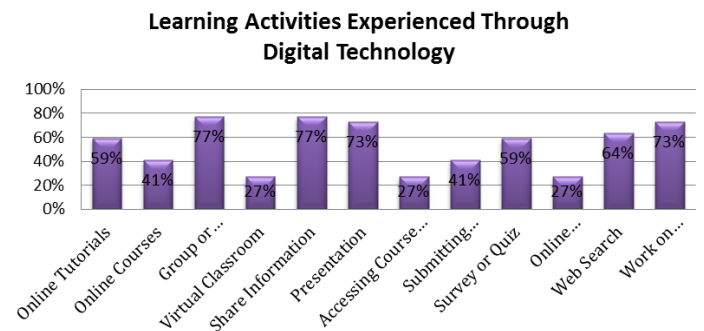


FIGURE 3 | Learning Activities Experienced by Students through Digital Technology

From the result of participants' types of learning activity in Figure 3, they mostly use digital media and technology to experience an online group discussion forum (77%), share information (77%), presentation (73%), and work on assignment (73%). Based on the previous result, it implied that digital literacy in EFL learning promotes students with a new culture in digital technologies to perform a number of experiences through digital technology and applications. The result showed that the type of learning activities helped them do discussion, share information, presentation, and work assignment virtually beyond the conventional classroom, accordingly to the digital learning applications they selected earlier. It is further agreed that learning through technologies

offers time to focus on the 21st century skills that requires more interaction among learners while providing tools to further build their skills on online collaboration, communication, leadership, social and cross-cultural activity (Trilling & Fadel, 2009). This phenomenon is also a proof that the application of new technology enables learners to increase opportunities to receive feedback from software tutors, teachers, and peers to reflect on their own learning process and be guided toward their progressive revisions in order to improve their learning (Bransford et al., 2004).

Students' Information Literacy Skill

On the next result and discussion, the researcher inquired about the participants' information literacy skills. They were asked to rate their information literacy skills into some categories. The first question was about finding and accessing information from the internet effectively and efficiently. The second question was regarding how they evaluate the information. While the third question regarding the ability to decide which information suit their need.

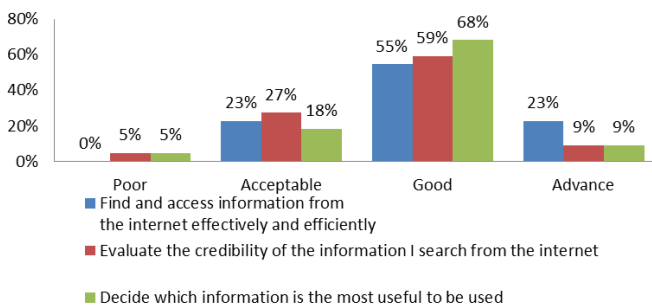


FIGURE 4 | Students' Information Literacy Skill

Figure 4. In the first question, it generally presented that the majority of students already had good information literacy skills, since they could find and access information from the internet effectively and efficiently (55%), evaluate the credibility of information (59%), and decide the most useful information (68%). This is supported by (Martin, 2006) that being literate in digital means knowing the knowledge of how particular communication technology affect the meanings they convey, and it needs the ability to analyze and evaluate the knowledge available on the web.

The significance of students' information literacy is to point out how the information spread through digital media can be well used by the participants to avoid uncredible sources. Furthermore, as it comes to learn English, the participants may find sources which are not relevant to improve their language learning, thus, any information related to learning field should be filtered in order to support them with credible sources as their knowledge.

Students' ICT and Media Literacy Skill

From the ICT and media literacy perspectives, students indicated themselves as those who range from having

acceptable to good literacy skill. It is known from the result that is described from the following figure. It is quoted that digital literacy is associated with computer skills, whilst others see it involving the kind of critically ascribed to media literacy (Belshaw, 2011).

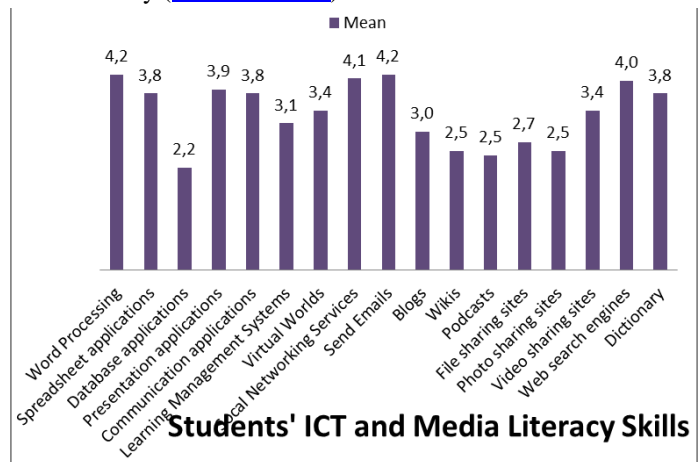


FIGURE 5 | Students' ICT and Media Literacy Skill

From the figure 5 above, the students mostly were good at ICT and Media literacy skill. Out of 22 respondents 50% and more performed good literacy in ICT and Media from word processing, learning management systems, emails, dictionaries, and so fort. This is reflected from the mean of their literacy in ICT and media that ranges from 1 as never use, 2 as poor, 3 as acceptable, 4 as good, and 5 as advance.

The implication of recognizing students ICT and media literacy is to indicate that students possess the ability in dealing with a sort kind of digital literacy aspect. It is significant since students are always displayed by the use of ICT and media in their daily activities. Thus, to balance, students need also to promote them in their language learning, how to transform the information into multiple format which can be accessed by them for learning. This is confirmed by (Trilling & Fadel, 2009) referring to media literacy as a need to be perceived by students for learning, create compelling and effective communication products such as video, audio, podcast, and other multi literacy types.

Students' Perspectives on the Benefits and Constraints in Using Technology to Perform their Digital Literacy in EFL Learning

For the next research questions, "what are the university's students' perspectives on digital literacy skill in their EFL learning?", it was found that university students tend to encourage and take some benefits to their EFL learning throughout digital literacy, though constraints cannot be avoided. Digital literacy certainly opens both challenges and opportunities for schools and educators as they seek to apply the skill to engage students assist their learning (Hague & Williamson, 2010).

Based on the students' perspective on the benefit of digital literacy skill in using technology for language learning, more than a half of the respondents agreed that the use of technology for language learning can increase their motivation and provides them with wide variety of sources, provide either collaborative or independent learning, easy, effective and efficient to use, promote communicative and interactive activity, and build creativity as well as critical thinking. Understanding various digital tasks and the degree to which it can be manipulated through technology is one benefit to reach the learning objectives in language learning (Cote & Milliner, 2018).

Based on the interview, it shows that majority of students realized that constraints cannot be avoided when technology integrated in their learning. Lack of skill and knowledge still become common issue to observe and overcome, followed by too much information spread out, restriction in some sources, distraction, cost, addiction, and technical error contribute as problem they encountered. However, since technology developed rapidly from time to time, the respondents who are mostly students' teacher mostly felt left behind when there is another technology to learn, and they need time and help from other people who are expert on the particular technology, and further to learn about it.

Students' Perspective on Digital Technology in Language Learning

All of students tend to be well conscious on what digital literacy is based on the interview conducted by the researcher. By knowing their perspectives in digital literacy, they seemed to be enjoyed and comfortable with this new term, also they claimed that they could be aware and not feel threatened when the new technology appeared. Similarly, they would like to learn and they assure how important being digital literate is in terms of improving their language learning. Thus, based on their perspective they insist to instill their learning with the use of digital technology. As future language teachers, the researcher assures the support by (Cote & Milliner, 2018) that EFL university students have high digital proficiency level of digital literacy, recognizing the beneficial contribution to their profession, and most are willing to develop their understanding and control of digital practices further.

Thus, upon the result and the discussion above regarding the study of EFL university students' digital literacy skill, it was acknowledged that EFL students already had good digital literacy. This is proven by the result of their information literacy, media literacy, and ICT literacy that previously answered the research question that was categorized as good in several aspects. In the first section, regarding EFL university students' habit, it was recognized

that the majority of students obtained a high frequency of using digital technologies with various learning application to conduct their learning experiences in EFL classroom. In addition to the main digital literacy skill, the information literacy EFL university students obtained were also high based on the self-assessment they filled. These includes the ability to search, evaluate, and decide which information is the most useful. In addition, the media and ICT literacy of EFL university students were also various in which it determines the ability of students to cognitively and creatively utilized several ICT and digital learning media during their learning. In the last, it was acknowledged that the benefit of having digital literacy skill and the ubiquitous of digital technology provided either collaborative or independent learning, easy, effective and efficient usage, communicative and interactive activity, and creativity as well as critical thinking. Yet, lack of skill in mastering particular digital technologies become the barrier these EFL university students experienced.

CONCLUSION

Based on the study conducted, university students reflected their perspectives in digital literacy in EFL learning into some major aspects. They include information literacy, media literacy, and ICT literacy. Following the result, the participants have positive perspectives on digital literacy in EFL learning. This can be obtained from the data showed that the participants performed good literacy skill in digital information, media and ICT based on the questionnaire they filled out and with the interview carried out.

Furthermore, participants perceived that digital literacy is important since it deals with the ability to access information, evaluate and use it critically and effectively to suit their need. The participants seemed to be good at tackling with this issue. Moreover, as it comes to the ICT and media literacy, they share their good ability in utilizing them as it is known from the result of the study.

From their perspectives on digital literacy in EFL learning, most of them would say that they enjoy and feel comfortable, are aware of digital types, will to learn, and even suggest that digital technology could be integrated into every aspect of education, specifically in language learning. On the other hand, ever since digital literacy provides the students with both challenges and advantages, the need for further researchers to conduct a similar study is urgent to gain deeper knowledge on the issue of digital literacy, as well as how to solve the problem in the digital literacy-related language learning.

In conclusion, this study reported that digital literacy has provided the students or participants with the ability and awareness of having one of the essential skills for 21st century society in their language learning activity. The exploration of digital literacy in EFL learning however should be promoted not only in a higher level of education but also to any level of education. This is regarded the fact

that the younger generations are already digital native, and thus, the praxis of digital literacy in EFL learning should be permeated in order to prepare them to meet the criteria of global citizens in the future.

However, this study is limited in several ways. First, since this study was conducted in one of public universities in Bandung and with particular case, this study cannot be generalized to study in other universities. Thus, the present study seemed to be limited in numbers of the participants, and as a consequence, further research is suggested to employ a bigger number of participants. Second, since the present study employed a self-assessment questionnaire, it was barely viable to gain unpretentious responses from the respondents. Thus, additional instrument such as an observation might be fruitful to be conducted by further research in order to witness the real situation and condition of the participants to get their digital literacy based on evidence provided.

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REFERENCES

- American Library Association. (2013). *Digital literacy*. APIII. (2022). *Profil internet Indonesia 2022*.
- Belshaw, D. A. J. (2011). *What is digital literacy? A Pragmatic investigation*. Durham University.
- Bransford, J. D., Brown, A. L., & Cocking, R. R. (2004). *How people learn: Brain, mind, experience, and school*. The National Academy Press.
- Brett, D., & González-Lloret, M. (2009). *The handbook of language teaching* (M. H. Long & C. J. Doughty, Eds.). Blackwell Publishing.
- Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education (Sixth Edition)*. Routledge.
- Cote, T., & Milliner, B. (2018). A survey of EFL teachers' digital literacy: A report from a Japanese University. *Teaching English with Technology*, 18(4).
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches (3rd ed.)*. Sage Publications.
- Dudeny, G., & Hockly, N. (2007). *How to teach English with technology*. Pearson Education Limited.
- Durriyah, T. L., & Zuhdi, M. (2018). Digital literacy with EFL student teachers: Exploring Indonesian student teachers' initial perception about integrating digital technologies into a teaching unit. *International Journal of Education and Literacy Studies*, 6(3), 53. <https://doi.org/10.7575/aiac.ijels.v.6n.3p.53>
- Feerrar, J. (2019). Development of a framework for digital literacy. *Reference Services Review*, 47(2), 91–105. <https://doi.org/10.1108/RSR-01-2019-0002>
- Gonzalez-Acevedo, N. (2016). Technology-enhanced-gadgets in the teaching of English as a foreign language to very young learners. Ideas on implementation. *Procedia-Social and Behavioral Sciences*, 232, 507-513.
- Hafifah, G. N., & Sulisty, G. H. (2020). Teachers' ICT literacy and ICT integration in ELT in the Indonesian higher education setting. *Turkish Online Journal of Distance Education-TOJDE*, 21(3), 186–198.
- Hague, C., & Williamson, B. (2010). Digital participation, digital literacy and schools. *Curriculum and Leadership Journal*, 8(10).
- Hamied, F. A. (2017). *Research methods: A guide for first-time researchers*. UPI Press.
- Johnson, K. (2017). *An introduction to foreign language learning and teaching*. Routledge.
- Jones, O. H., & Hafner, C. A. (2012). *Understanding Digital Literacies: A practical introduction*. Routledge.
- Kementerian Pendidikan dan Kebudayaan. (2017). *Materi pendukung literasi digital*.
- Komlayut, S., & Srivatanakul, T. (2017). Assessing digital literacy skills using a self-administered questionnaire. *Review of Integrative Business and Economics Research*, 6(3), 74–85.
- Kurniawati, N., Maolida, E. H., & Anjaniputra, A. G. (2018). The praxis of digital literacy in the EFL classroom: digital-immigrant vs digital-native teacher. *Indonesian Journal of Applied Linguistics*, 8(1), 28–37.
- Martin, A. (2006). A European framework for digital literacy. *Nordic Journal of Digital Literacy*, 1(02), 151–161. <https://doi.org/10.18261/ISSN1891-943X-2006-02-06>
- Shoffner, M., de Oliveira, L., & Angus, R. (2010). Multiliteracies in the secondary English classroom: Becoming literate in the 21st century. *English Teaching: Practice and Critique*, 9(3), 75–89.
- Silverman, D. (1993). "Beginning research". *Interpreting qualitative data. Methods for Analyzing talk, text and interaction*. Sage Publications.
- Son, J.-B., Park, S.-S., & Park, M. (2017). Digital literacy of language learners in two different contexts. *The JALT CALL Journal*, 13(2), 77–96.
- Trilling, B., & Fadel, C. (2009). *21st Century Skills: Learning for Life In Our Times*. John Wiley & Sons, Inc.

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