The Level of Digital Literacy Competencies of EFL Teacher in Bogor Senior High School

Reynita Nadhifa[1], Imam Santosa[2]
[12] Universitas Media Citra Nusantara

Article Info	Abstract
	This research about digital literacy competence. The research was aim to determine the extent of the ability of EFL teachers in Bogor City Senior High Schools. To find out these abilities the researchers was categorized them into 3 levels, namely level 1 (Competence), level 2 (Usage), level 3 (Transformation) made by Allan Martin and collaborated with 8 elements of the basic digital literacy skills of Sarah Payton, namely Functional skills, Creativity, Critical thinking and evaluation, Cultural and social understanding, Collaboration, The ability to find and select information, Effective communication, and E-safety. This study used a qualitative method with a descriptive analysis approach. Data was collected by distributing questionnaires to schools in Bogor and there are 27 teachers from various school in Bogor who participated. From these 8 elements of digital literacy, researchers founded there are 3 elements of Creativity and Cultural and Social Understanding. As many as 59% of teachers was still less Creativity, 57% did not understand culture and social in the digital world or Cultural and Social Understanding and 56% did not using critical thinking . Which those abilities must be improved.
Info Artikel	**ABSTRAK**
	Penelitian tentang kompetensi literasi digital ini bertujuan untuk mengetahui sejauh manakah kemampuan para guru bahasa inggris di SMA kota Bogor. Untuk mengetahui kemampuan tersebut peneliti mengategorisasikan kedalam 3 tingkatan yaitu tingkat 1 (Competence), tingkat 2 (Usage), tingkat 3 (Transformation) yang dibuat oleh Allan Martin dan mengkolaborasikan dengan 8 element dari kemampuan dasar literasi digital dari Sarah Payton yaitu Functional skill, Creativity, Critical thinking and evaluation, Cultural and social understanding, Collaboration, The ability to find and select information, Effective communication, and E-safety. Penelitian ini menggunakan metode kualitatif dengan pendekatan deskriptif analisis.Pengumpulan data dilakukan dengan menyebar kuesioner ke sekolah sekolah di Bogor dan sebanyak 27 guru bahasa inggris ikut berpartisipasi dalam penelitian ini. Dari 8 elemen literasi digital ini, peneliti menemukan bahwa terdapat 3 elemen Creativity and Cultural and Social Understanding dan Critical thinking and evaluate. Sebanyak 59% guru masih memiliki kemampuan kreatifitas yang kurang, 57% tidak paham dengan budaya dan social dan 56% tidak berpikir kritis dalam dunia digital.

Corresponding Author:
Reynita Nadhifa
Universitas Media Nusantara Citra, FKIP Pendidikan Bahasa Inggris
Email: reynita.nadhifa@mncu.ac.id

1. INTRODUCTION

Technological developments during the digital age expose everyone to a situations that require the use of the ever-evolving technical, cognitive, and sociological skills are necessary in order to work effectively in a digital environment. Previously, the use of information technology

was limited to socializing through social media and looking for various information needs on the internet, but now the digital world has really become the main learning media (Bashori et al., 2020). Technological developments give an impact on the education sector. Various digital teaching resources termed as e-resources are available in abundance on the internet (Sujendra Diputra et al., 2020). The digital era provides a variety of information on the internet, both verified and unverified.

Currently, digital literacy competence is needed by teachers in the teaching and learning process so that teachers have a critical attitude in responding to information. Basically, teacher competence is divided into four parts, namely pedagogic competence, personality competence, social competence, and professional competence (Janawi, 2018). These four competencies become the main standards and indicators for assessing teacher competency mastery. However, in this digital era, these four competencies cannot be separated from the influence of technology (Kholid, 2020). He also state that the digital learning process can be done anytime and anywhere, media and learning resources can vary, students can also access various learning resources and various sources. (Ramadhan et al., 2019) also stated that Media literacy is one of the basic skills individuals must possess in the 21st century and has become a central and inseparable part of life.

Teachers play an important role in learning activities coupled with the current era of technology, thus requiring them to have digital literacy competencies. Especially the EFL (English Foreign Language) teacher because English is the language chosen as the main language in all existing technologies. Eighty percent of the information stored electronically in the world is in English and, of the estimated 200 million Internet users, about thirty-six percent communicates in English (Murtafi'ah & Setyo Putro, 2019), thus requiring adjustments in English subjects.

The current digital technology aims to improve the quality of education, thus requiring digitally competent teachers to facilitate the use of ICT in education. (Hassan & Mirza, 2021) Teachers must be able to create a student-centered learning environment and foster creativity, meta- cognition, meta-literacy, collaboration and communication in learners. The superficial use of ICT in teaching will not produce the necessary learning outcomes, but the integration of ICT in pedagogy is important to improve the teaching and learning process this is important because the teacher is a facilitator for students. (Sujendra Diputra et al., 2020) found conditions that are less than ideal occur in SD 1 Sulanyah and SDN 2 Sulanyah, where the digital literacy of teachers is still weak.

In fact, in the learning process using digital media, teachers must have the competence to choose teaching materials from various sources, using the latest learning tools to create interesting, creative, efficient and innovative learning processes and use various media to create fun learning. Previous research (Asari, Andi Kurniawan, Taufiq Ansor, Sokhibul Nur, Andika Bagus Putra, 2019) argues that it is important to implement digital literacy learning in the school environment. He also thinks that the inability of students and teachers to interpret digital literacy has an impact on attitudes and character. Today technology is a necessity for everyone. So people must have insight into technology. In the face of very fast technological developments, digital literacy is the key and the main foundation that must be possessed. Digital literacy is the most basic and most crucial thing in facing current technological developments (Ahsani, 2020). Therefore the development of existing technology requires the world of education to also attach importance to digital literacy. Mastery of digital literacy in the context of learning can streamline, facilitate, and strengthen educational processes and outcomes. In this context, mastery of digital literacy enables learners to improve cognitive, affective, and psychomotor competencies through better, faster, easier, and more enjoyable learning activities in a digital learning environment (Soedarto Harjono, 2018).

Moreover, teachers need wider sources of information so digital literacy is very important for English teachers. Based on those explanation from previous studies, this study is very important in the current era of technological development and the results of this study can be the

basis for teachers as information and reflection so that educators know or are 'literate' digital literacy.

Digital literacy is the ability to understand and use information from various sources, which can be accessed via computers (Bawden, 2001). The ability to use technology wisely to create positive interactions and communication. User skills in digital literacy include the ability to find, work on, evaluate, use, create and utilize them wisely, intelligently, carefully and precisely according to their use. According to UNESCO, digital literacy is closely related to life skills. This ability does not only involve technology, but the ability to learn, think critically, be creative, and be innovative for digital competence (Nancy Law, David Woo, Jimmy de la Torre and Gary Wong, 2018).Digital literacy is not only about knowledge and understanding that enables critical, creative, discerning and safe practices when engaging with digital technologies but also digital literacy is about much more than having access to or being able to use a computer which includes the components of digital literacy.

Figure 1.

This 8 component by Sarah and Payton on handbook of Future Lab explains that understanding digital literacy is not only about the use of digital technology but also about cultural and social issues, critical thinking and being creative all make up part of a broad set of practices that students need to wrap around their use of any tool and need to develop in order to participate effectively in any kind of culture (Payton & Hague, n.d.). Researchers use this theory as a framework because it is quite clear and complete
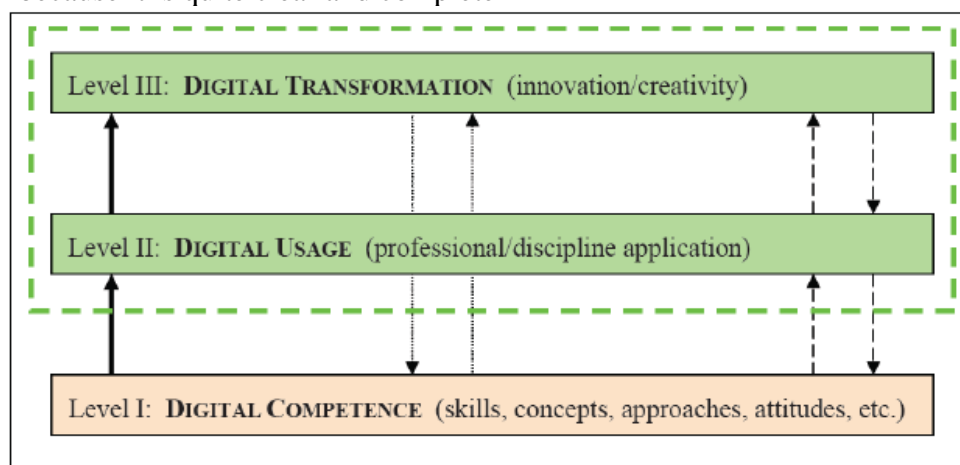

Figure 2

Thus theory will be combined with the level of digital literacy by Allan Martin to find out how far is the level of digital literacy competence of EFL teacher in Bogor senior high school. Then, based on the explanation and both theoritical framework, this study conduct to answer one question

a. What the level of digital literacy competence of EFL teachers in Bogor senior high school?

2. METHODOLOGY

This research was prepared using a qualitative method with a descriptive analysis as the approach. This study will provide an overview of how the digital literacy competence of teachers is. As well as an overview of how to improve their digital literacy competence. Accordingly,qualitative is a method that 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 conclusion that apply to the public (Sugiyono, 2011). In other words, this approach is used to investigate and understand an event or problem that has occurred by collecting various kinds of information which is then processed to obtain a solution so that the problems revealed can be resolved. This method was chosen because it can provide an overview of the level of digital literacy competence, especially high school English teachers in Bogor.

The researcher collected data by distributing questionnaires which later the results of the data would be processed using a descriptive analysis approach to determine the level of digital literacy competence in high school English teachers in Bogor. The subject of this research is a high school EFL teacher. Researchers chose the high school level because at this level students definitely need more knowledge in order to balance themselves when they enter the world of work or lectures so that teachers at this level must pay more attention to the material obtained from digital platform.

The research instrument used for this research in the form of a questionnaire and every question was made based on the 8 elements of digital literacy. Research instrument is a tool data collectors used to measure the observed natural and social phenomena (Creswell, 2002). Thus, the use of research instruments is to find complete information about a problem, natural or social phenomenon. Researchers distributed research instruments to schools spread across the city of Bogor. There are 8 question sessions derived from elements of digital literacy. Each session contains 3 to 7 questions. The question will consist of Close-ended question with the option 'Strongly Agree' , 'Agree' 'Disagree', 'Strongly Disagree'. Close ended questions are questionnaires or survey questions that ask respondents to choose from a narrow predefined set of responses (Creswell, 2002).

The data that has been collected is the result of questions answer. The city of Bogor is a small city, from a total of 30 schools there are 13 schools that have given permits that have been submitted previously. These 13 schools involving 27 EFL teachers and teachers from public schools and private schools. The results of the answers are then processed using Microsoft Excel. The analysis is done by identifying each answer choice. 'Strongly Agree' indicates the level of transformation, 'Agree' the level of use and 'Strongly Disagree' 'Disagree' represents the level of competence. Judging from the average results and the percentage of each answer and its elements, the researcher can compare these percentages and identify the level obtained.

3. FINDING AND DISCUSSION

The result of this study will be explained on this session. The data collected is the result of the answers from the questionnaire questions. Based on the results from the data that have been collected by quetionnaire for this research, researcher presents the finding

3.1.Finding

The first result that researcher found is the level of digital literacy from EFL teacher of Bogor senior high school as the question of this research. There are 8 elements of digital literacy, this element is a person's ability to use digital technology. Researchers analyzed these 8 elements or categories. There are 27 teachers who participated with this study. Researcher

consider, 'Strongly Agree' choice present transformation level, 'Agree' as usage level and 'Disagree' with 'Surely Disagree' as competence level. To determine the level of teacher ability in digital literacy, the researcher provides an assessment to decide the level. The assessment describe on the table below :

Level 1 (Competence)	< 43%
Level 2 (Usage)	44% - 54%
Level 3 (Transformation)	> 55%

Table 3.1

This assessment made based on the results of the average value of the answer to the question and the choice of questions. All of these averages have been converted into percentages for easier understanding.

a. Functional Skill

This element is about a basic skill required in the use of digital technology and the use of the internet. In other words, this is the first step that must be mastered by the EFL teacher. For this element researcher made 7 questions in the questionnaire.
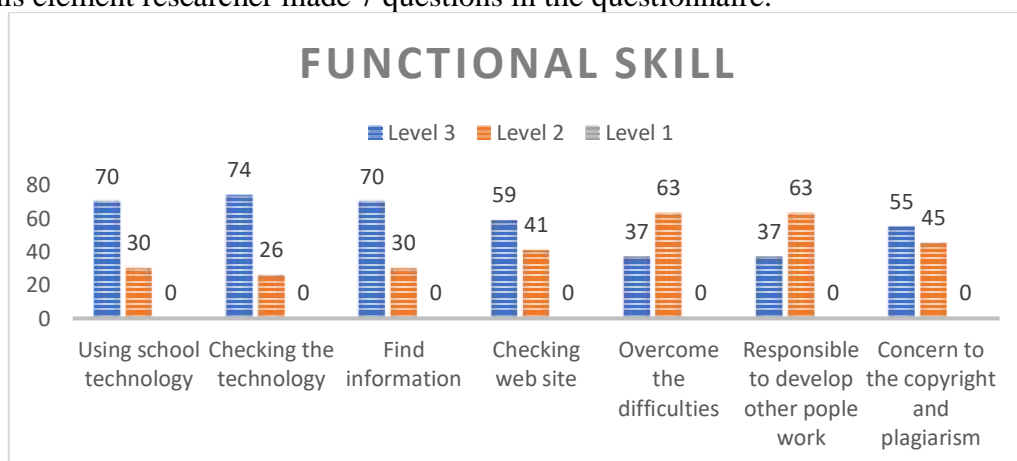

Chart 3

The bar graph above shows the results of the answers to questions for the Functional skill element. The data shows that each question regarding basic abilities is dominated by teachers who understand, and this shows that teachers have reached level 3 transformation.
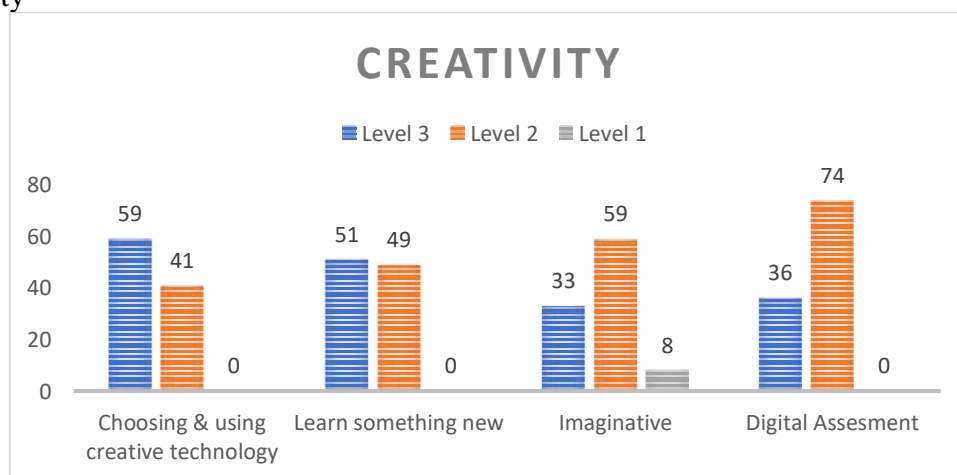
b. Creativity

Chart 4

This about how technology is used to create knowledge and innovate processes and products. In this category, the EFL teacher's response to each question regarding their creative abilities is still a lot who do not understand this category. Some of them don't even know how to use their creative abilities imaginatively in finding resources.
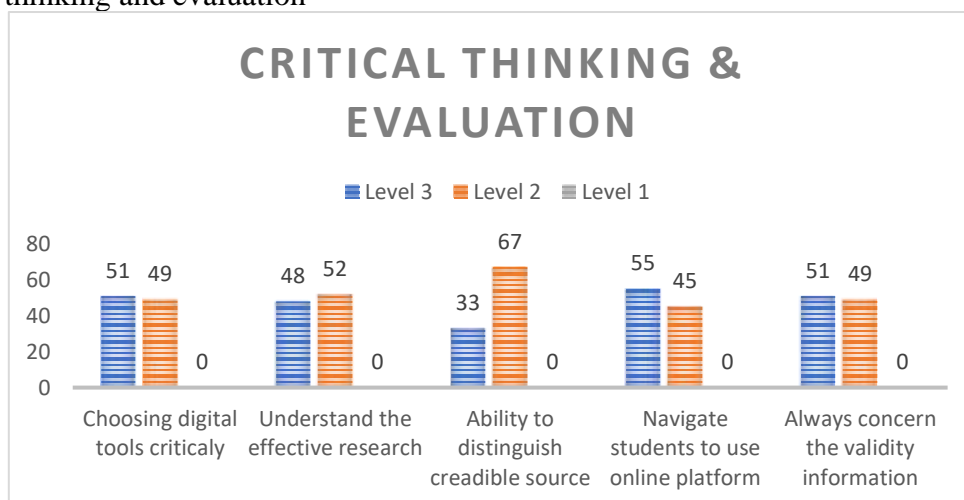
c. Critical thinking and evaluation

Chart 5

Next element is about to think critically and evaluate the things that she/he got from the internet platform. In this category the results show that the ability of teachers in this aspect still needs to be developed. Figures show that each question response is dominated by the second choice. Meanwhile, the most points are on the question of the ability to distinguish credible sources.

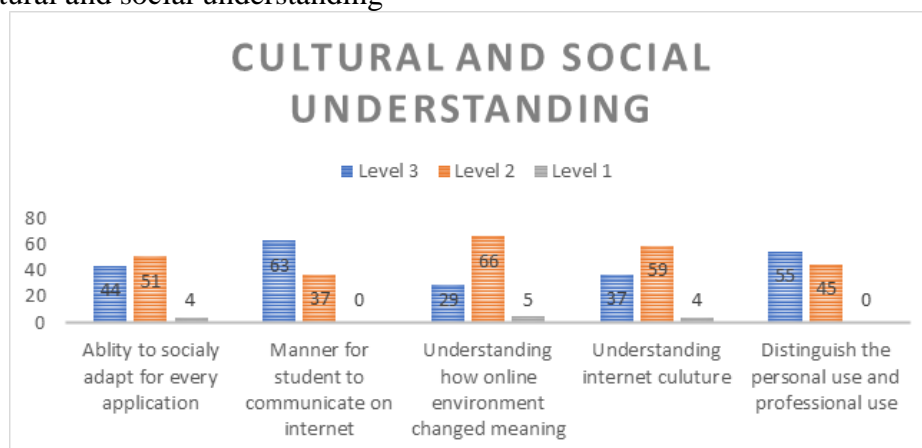d. Cultural and social understanding

Chart 6

There are five questions for this category and most teachers are still not very familiar with this category. Some of them don't even know it like on the first question, the third and fourth question. Of course this must be considered considering that currently all activities are carried out online, even socializing.
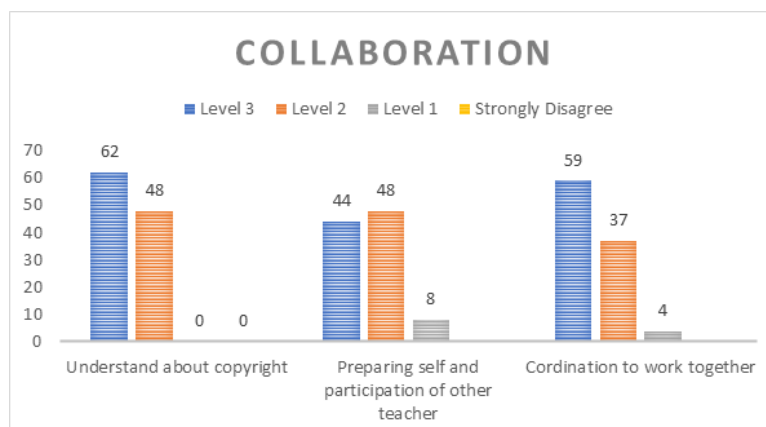
e. Collaboration

Chart 7

The results of the bar graph above show that there are 3 questions for this element and the responses from the teachers who participated in this study explained that their ability in this element was quite good. The response shows that most teachers already understand and master even though there are teachers who still don't understand but the response is dominated by teachers who understand.

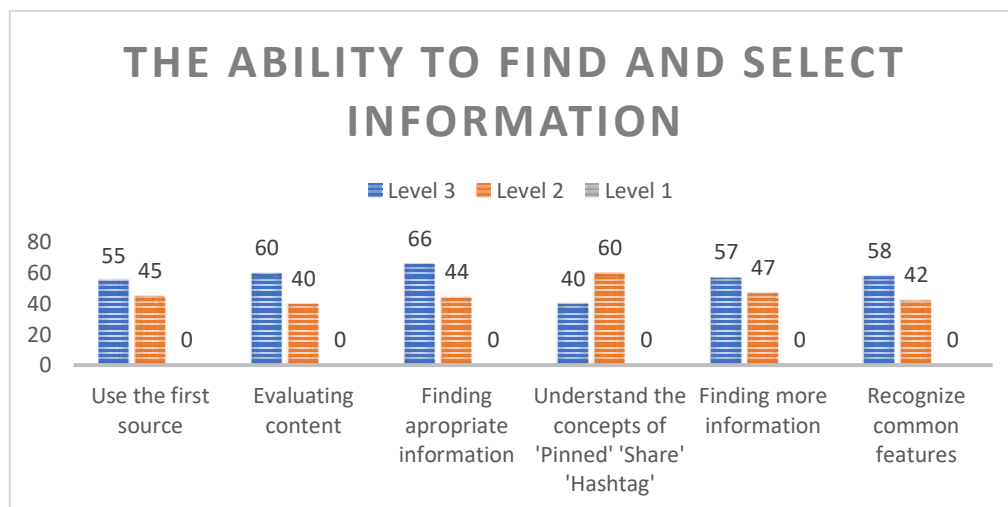f. The ability to find and select information

THE ABILITY TO FIND AND SELECT INFORMATION

■ Level 3   ■ Level 2   ■ Level 1

	Use the first source	Evaluating content	Finding apropriate information	Understand the concepts of 'Pinned' 'Share' 'Hashtag'	Finding more information	Recognize common features
Level 3	55	60	66	40	57	58
Level 2	45	40	44	60	47	42
Level 1	0	0	0	0	0	0

Chart 8

This category is about how someone find and select information which suits with their needs. How they evaluate the sources and utilise feature to find information. The responses to the six questions in this category are dominated by the answers of teachers who understand and master this ability. Ability to find information relevant to their needs.
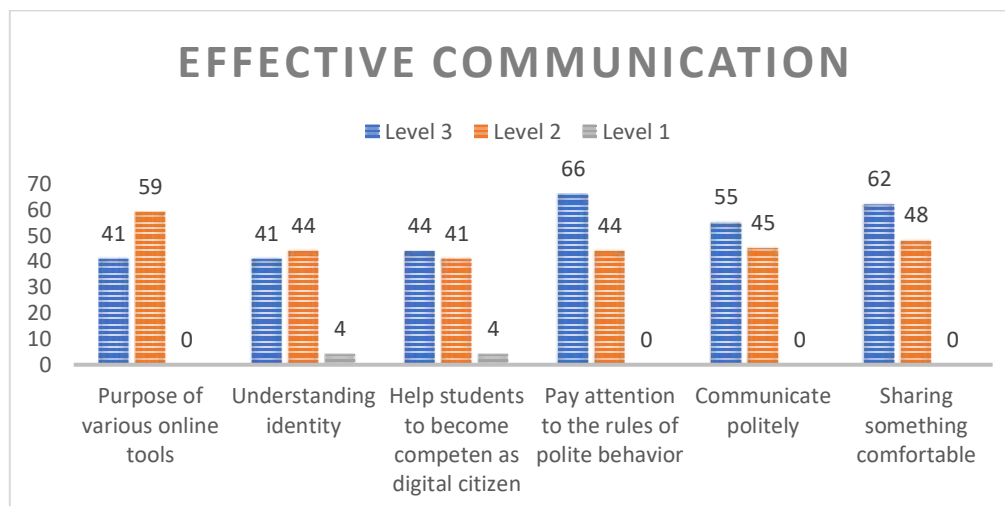
g. Effective communication

EFFECTIVE COMMUNICATION

■ Level 3   ■ Level 2   ■ Level 1

	Purpose of various online tools	Understanding identity	Help students to become competen as digital citizen	Pay attention to the rules of polite behavior	Communicate politely	Sharing something comfortable
Level 3	41	41	44	66	55	62
Level 2	59	44	41	44	45	48
Level 1	0	4	4	0	0	0

Chart 3.7

The requirement of this element is need to be able to choose the right communication technology to suit its purpose so as to create effective communication. The results of this element can be seen on the diagram above. it can be seen that the char the highest number on the fourth question. This indicate that teacher on this study have a good communication toward digital.
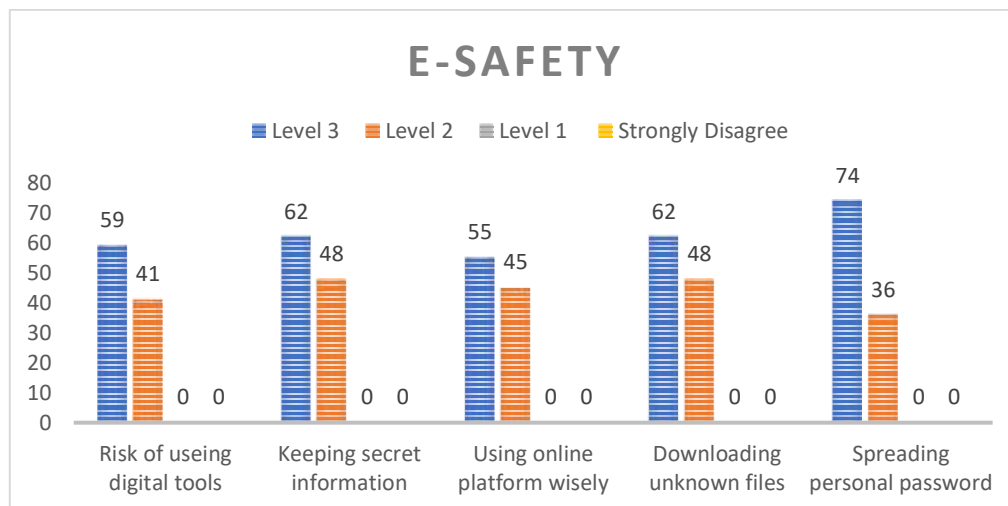
h.E – Safety

Chart 3.8

Last category explain about knowledge to identify potential risks and be aware of your personal safety while browsing, sharing or surfing the internet. Not only personal safety but teachers must also pay attention to the security of student data and school data. Result shows that mostly teacher have this knowledge about internet security. They understand about the risk, using online platgorm wisely and what will happen if the spreading their personal password.

3.2.Discussion

Based on the analysis, researcher found that the level of teacher digital literacy competencies was good enough. There are eight elements of digital literacy functional skill, creativity, critical thinking and evaluate, collaboration, cultural and social understanding, the ability to find and select information, effective communication and e-safety. These elements can be said as the foundation skill in digital literacy. The result from total 41 questions and 27 teachers presented at the chart bar below.

Table 3.

Level of Digital Literacy Elements of Digital Literacy	Level 1 Competence	Level 2 Usage	Level 3 Transformation	EFL teachers level of digital literacy
Functional Skill	0	43	57	Level 3
Creativity	2	57	44	Level 2
Critical Thinking & Evaluation	0	52	47	Level 2
Cultural and social understanding	2	54	45	Level 2
Collaboration	4	47	55	Level 3
The ability to find and select information	0	46	56	Level 3
Effective Communication	1	44	55	Level 3
E-Safety	0	43	62	Level 3

The assessment of this level is based on the average of percentage for each category. Researcher consider that scor below 43% include to the Level 1 (Competence) scor between 45% until 54% include to Level 2 (Usage) and scor up to 55% include to Level 3 (Transformation)

The table shows, for the first elements *Functional Skill* as 57% teachers have reached the transformation level. With all the questions about this element and 42% teachers at usage level. It means that teacher is basic skill have fulfill the required abilities for level 3 or transformation level. Next, *Creativity*. This element dominated by teacher with usage level. This element got 57% for level 2 and 44% level 3 even worse, there are 2% teacher have no

understanding of this element. Thus, knowledge for this aspect is still very lacking. Further development is needed on how to apply creativity in digital literacy

   Critical thinking and evaluation, for this category the different number for each level not that far. 47% teachers choose have reached level 3 and 50% for level 2 This category belongs to level 2, Usage level. EFL Teachers' understanding of this ability needs to be developed so that EFL teachers can think critically. *Cultural and Social Understanding*, this element included in usage level. The knowledge and teacher understanding about this category still lack. 3% teachers at the level 1 and 55% teachers at the level 2. Thus, only 42% teacher who have reached the level 3 or can be said teacher who understand about culture that exists in digital platforms. *Collaboration*, this element talking about teacher's ability to help each other and collaborate to solve a problem. The result for this category shows that 55% at the transformation level , 48% at usage level and 2% for competence level. Even though this element got 'level 1' point, this element still reach the transformation level because the scores of the first and second answer choices are quite high, to cover the number of teachers who disagree.

   Next element is *The ability to find and select information*, as we can see from the chart, this element got 56% for level 3 and 44% for level 2. The sum of these results shows that the teacher's ability to find relevant and appropriate information is at level three. The result for *Effective Communication* element has reached level 3. The number shows there are 55% teacher who have reached transformation level with the questions. These teachers know the purpose of various online tools, understand what identity means and they can communicate politely online to help manage a secure social media presence. The last element, *E-Safety*. The teacher's ability to maintain security when accessing the internet is at the transmission level. as many as 62% of teachers know with all the risks that exist and know what can be done and what can't be done.

4. CONCLUSION

   The importance of the ability to process information from the internet is not something that can be underestimated. Digital literacy is an obligation for teachers in searching for information on teaching materials. Therefore, this study seeks to determine the extent of the competence of EFL teachers for digital literacy. Based on the results obtained, the researchers found that the ability of English teachers in Bogor has reached the highest level where at this level of transformation the teachers are already professional in the application of digital literacy.

   They have achieved this level for all categories except 'Creativity', 'Critical Thinking and Evaluation' and 'Cultural and Social Understanding'. These categories have not much difference. As many as 57% of teachers are still confused to apply their creativity when using the internet to search for information. Moreover, 50% EFL teachers still having difficulty in distinguishing between credible and unreliable sources. As well as the category 'cultural and social understanding' the data shows that as many as 55% of teachers do not understand about culture and social on the internet such as the use of hashtags, or even existing terms. So in this case these three categories are at the usage level which is level II.

5. ACKNOWLEDGEMENT

6. BIBLIOGRAPHY

Ahsani, E. L. F. (2020). Strategi Orang Tua dalam Mengajar dan Mendidik Anak dalam

Pembelajaran At The Home Masa Pandemi Covid-19. *Jurnal Al_Athfal*, *3*(1), 37–46.

Asari, Andi Kurniawan, Taufiq Ansor, Sokhibul Nur, Andika Bagus Putra, R. (2019). *Jurnal Kajian Perpustakaan dan Informasi KOMPETENSI LITERASI DIGITAL BAGI GURU DAN PELAJAR DI LINGKUNGAN SEKOLAH KABUPATEN MALANG*. http://journal2.um.ac.id/index.php/bibliotika

Bashori, M., van Hout, R., Strik, H., & Cucchiarini, C. (2020). Web-based language learning and speaking anxiety. *Computer Assisted Language Learning*, *0*(0), 1–32. https://doi.org/10.1080/09588221.2020.1770293

Bawden, D. (2001). Information and digital literacies: A review of concepts. *Journal of Documentation*, *57*(2), 218–259. https://doi.org/10.1108/EUM0000000007083

Creswell, J. W. (2002). *Educational Research*.

Hassan, M. M., & Mirza, T. (2021). The Digital Literacy in Teachers of the Schools of Rajouri (J&K)-India: Teachers Perspective. *International Journal of Education and Management Engineering*, *11*(1), 28–40. https://doi.org/10.5815/ijeme.2021.01.04

Kholid. (2020). *PENTINGNYA LITERASI DIGITAL BAGI GURU PADA LEMBAGA PENDIDIKAN TINGKAT DASAR DAN IMPLIKASINYA TERHADAP PENYELENGGARAAN*.

Murtafi'ah, B., & Setyo Putro, N. H. P. (2019). DIGITAL LITERACY IN THE ENGLISH CURRICULUM: MODELS OF LEARNING ACTIVITIES. *Acta Informatica Malaysia*, *3*(2), 10–13. https://doi.org/10.26480/aim.02.2019.10.13

Nancy Law, David Woo, Jimmy de la Torre and Gary Wong. (2018). *A Global Framework of Reference on Digital Literacy Skills for Indicator 4.4.2*. http://www.uis.unesco.org

Payton, S., & Hague, C. (n.d.). *Digital literacy across the curriculum a Futurelab handbook*. www.futurelab.org.uk/

prof. dr. sugiyono. (2011). prof. dr. sugiyono, metode penelitian kuantitatif kualitatif dan r&d. intro (PDFDrive).pdf. In *Bandung Alf* (p. 143).

Ramadhan, S., Sukma, E., & Indriyani, V. (2019). Teacher competence in utilizing digital media literacy in education. *Journal of Physics: Conference Series*, *1339*(1). https://doi.org/10.1088/1742-6596/1339/1/012111

Soedarto Harjono, H. (2018). Literasi Digital: Prospek dan Implikasinya dalam Pembelajaran Bahasa. *Jurnal Pendidikan Bahasa Dan Sastra*, *Vol.8 No.*

Sujendra Diputra, K., Ketut Desia Tristiantari, N., Nyoman Laba Jayanta, I., Pendidikan Guru Sekolah Dasar, P., & Pendidikan Ganesha, U. (2020). *GERAKAN LITERASI DIGITAL BAGI GURU-GURU SEKOLAH DASAR*. *3*(1), 118–128. https://doi.org/10.31764/jces.v3i1.1483