

TEACHERS' COMPETENCY ON THE FOUR PILLARS OF DIGITAL LITERACY IN GUIDING STUDENTS TO USE SOCIAL MEDIA WISELY

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Abstract: Technological development is rapid and unavoidable. Every individual, not limited to age, educational background, profession and others, can access information digitally. But unfortunately the rapid development of digital technology is not accompanied by the anticipation for its users. This is a qualitative research with a phenomenological approach. Data collection is done by Unstructure interview. The researchers classified the informants based on their teaching experience, namely (a) teachers with less than 10 years of teaching experience, (b) teachers with 10-20 years of teaching experience, and (c) teachers with more than 20 years of teaching experience. The results of the study show that not all teachers understand and implement digital literacy. Teachers with the old paradigm or those who on average have more than 20 years of teaching experience, do not give their students enough freedom in the aspects of digital skills, namely, critical thinking, creativity, communication skills and collaboration. Teachers with the old paradigm seem less able to accept criticism from their students or if there are things where students don't share the same ideas as their teachers. Teachers with the old paradigm also still have big concerns if their students collaborate with students from other schools for security reasons, and tend to direct students to use their electronic devices only for learning and not for other things. From the differences in perceptions among these teachers, education or training related to digital literacy for teachers is very urgent to be implemented.

Keywords: Digital literacy; four pillars; media; student behavior

Abstrak: Perkembangan teknologi sangatlah pesat dan tidak dapat dihindari. Setiap individu, tidak terbatas pada usia, latar belakang pendidikan, profesi, dan lain-lain, dapat mengakses informasi secara digital. Namun sayangnya pesatnya perkembangan teknologi digital tidak dibarengi dengan antisipasi para penggunanya. Penelitian ini merupakan penelitian kualitatif dengan pendekatan fenomenologis. Pengumpulan data dilakukan dengan wawancara tidak terstruktur. Peneliti mengklasifikasikan informan berdasarkan pengalaman mengajarnya, yaitu (a) guru dengan pengalaman mengajar kurang dari 10 tahun, (b) guru dengan pengalaman mengajar 10-20 tahun, dan (c) guru dengan pengalaman mengajar lebih dari 20 tahun. Hasil penelitian menunjukkan bahwa tidak semua guru memahami dan menerapkan literasi digital. Guru dengan paradigma lama atau yang rata-rata mempunyai pengalaman mengajar lebih dari 20 tahun, kurang memberikan kebebasan yang cukup kepada siswanya dalam aspek keterampilan digital yaitu berpikir kritis, kreativitas, keterampilan komunikasi dan kolaborasi. Guru dengan paradigma lama terlihat kurang bisa

menerima kritikan dari siswanya atau jika ada hal siswa tidak sependapat dengan gurunya. Guru dengan paradigma lama juga masih mempunyai kekhawatiran besar jika siswanya berkolaborasi dengan siswa dari sekolah lain demi alasan keamanan, dan cenderung mengarahkan siswa menggunakan perangkat elektroniknya hanya untuk belajar dan tidak untuk hal lain. Dari perbedaan persepsi di kalangan guru tersebut, maka pendidikan atau pelatihan terkait literasi digital bagi guru sangat mendesak untuk dilaksanakan.

Kata Kunci: Literasi digital; empat pilar; media; perilaku siswa

INTRODUCTION

Advances in technology today are something that cannot be avoided in this life, because technological advances will run in accordance with advances in science.¹ Along with the development of technology, more and more people can use it from teenagers to adults. Technology was created to provide positive benefits for human life, and provide many conveniences, as well as a new way of doing human activities.

Everyone should be responsible for how to use technology to interact with the surrounding environment.² However, the generation that grew up with unlimited access to digital resources has a different mindset from the previous generation. Digital enables people to interact and communicate with family and friends in everyday life. Unfortunately, today's virtual world is increasingly filled with content that smells of fake news, hate speech, and radicalism, and even fraudulent practices. The existence of negative content that is destroying the digital ecosystem today can only be prevented by building awareness from each individual.

The progress of a nation today and in the future is very dependent on the current generation to participate in advancing the nation. With the existence of a quality next generation and a high-quality education system, we can nurture the younger generation to have intellectual potential. In its implementation, educational institutions hope to produce graduates or superior outputs from the provision of good, quality and competent learning in their fields. The quality of student academic achievement is not only assessed from academic achievement, but also must be assessed in terms of the quality of personality, knowledge that has been mastered, and behavior in the process of daily learning activities.³

Insufficient understanding of the digital world for young people and the disclosure of information on social media which has a negative impact on the use of social media is often experienced by young people. Based on Association Survey data Internet Service Providers (APJII), the number of Indonesian internet users rose 8.9% from 171.2 million in 2018 to 196.7 million in the second quarter of 2020. The portion of internet users in Indonesia also increased from 64.8% to 73.7% of the total population of 266.9 million. The largest contribution was still from Java, which was 56.4%, up from the previous 55.7%.⁴ However, this increase is not followed by the ability of the millennial generation that should be able to filter information. The advantages in utilizing this

¹ Anupam Sharma and Jasleen Kaur, "Artificial Intelligence Based System," *Information Resources Management Journal* 34, no. 2 (2021): 80-90, <https://doi.org/10.4018/irmj.2021040105>.

² "Education Management Information System and Tracking of Students' Records in Selected Public Secondary Schools in Turbo Sub-County, Kenya," *Journal of Education and Practice*, 2022, <https://doi.org/10.7176/jep/13-17-06>.

³ Thomas Stanley and J., *Pemikiran Millionaire* (Jakarta: Rajawali Press, n.d.).

⁴ A.P.J.I.I., "Survei Internet APJII 2016," n.d., <https://apjii.or.id/content/read/39/264/Survei-Internet-APJII-2016>.

new technology are not accompanied by good digital knowledge. They generally can only afford buying expensive and sophisticated mobile phones but have no understanding of digital ethics.

Data from the Ministry of Communication and Information of the Republic of Indonesia states that 80% of internet users in Indonesia are teenagers aged 15-19 years. Teenagers use the internet not only for educational needs, but also for entertainment, shopping, interacting through social media.⁵ There are three motivations for children and adolescents to access the internet, namely the motivation to seek information, connect with friends (old and new) and for entertainment. The search for information is often driven by schoolwork, while the use of social media and entertainment content is driven by personal needs.⁶

The government through the Ministry of Communication and Information of the Republic of Indonesia in 2021 will take preventive steps, namely launching a digital literacy movement for 12.4 million people in 34 provinces. This is a great work to provide digital literacy to the community. At least, there are 20,000 trainings based on modules and curricula that target 4 (four) pillars of digital literacy, namely digital ethics, digital society, digital skills, and digital culture. The government's efforts are carried out as part of the urgency of digital literacy, which is outlined in the digital literacy roadmap for 2021-2024.

Basically, media literacy is the public's concern for the negative effects of mass media. As we know, the mass media has two sides of the sword, giving positive and negative impacts. The negatives sometimes outweigh the positives. These include reducing individual privacy, increasing the potential for crime, and also causing overload in communication. By understanding media literacy, mass media audiences can react and assess a media message with full awareness and a sense of responsibility. However, the most urgent thing at this time is how to provide education related to digital literacy to teachers in schools, considering that more and more criminal cases occur among school children and moreover all of this is caused by information obtained from the internet, such as sexual harassment, because of the frequent viewing of pornographic videos from the internet, smoking, online games, stealing motorbikes, and spreading false news (hoaxes) and others. This is of course very concerning. Being digitally literate for teachers is very important because it can fundamentally change the nature of knowledge that allows them to apply in ways that

⁵ Brogan C, *Social Media 101 Tactic and Tips to Develop Your Business Online* (Manhattan: Wiley, n.d.).

⁶ A.P.J.I.I., "Survei Internet APJII 2016."

are more ethical, cultured, creative, skillful, active, effective and able to filter information to build and communicate knowledge through digital media technology.⁷

BPS (2020) shows that the internet penetration rate for the young group aged 16-18 years is 62.32% and the age group 19-24 years is 56.88% as the largest users of digital media. Of course there is a student group in it.⁸ They use various applications, namely Facebook, Twitter, Instagram, just to make friends and sensational news as a follow-up.

The problem of digital literacy has been studied by Thai researchers Kulthida Tuamsuk and Mega Subramaniam in 2017. The research was conducted based on the concept of digital literacy, namely technical skills, cognitive skills, and emotional-social skills, but using quantitative methods. Meanwhile, other researchers who are also researching digital literacy are Yustika, G. P. & Iswati, S (2020).⁹ However, this study focuses more on formal online education and does not specifically relate to the behavior of digital media users.

This research was conducted to answer the question of how teachers and parents understand the 4 pillars of digital literacy and what efforts must be made so that knowledge related to the 4 pillars of digital literacy can be understood by teachers and parents of students at school in the hope that teachers and parents can guide students-students and their children to be wiser in using digital media and not easily provoked by irresponsible parties. The results of this study will contribute to educational institutions, observers of educational issues and also to the government, especially policy makers related to education in Indonesia.

This is a qualitative research with a phenomenological approach. Phenomenological studies were used in conducting this research. This is based on the interest of researchers to study more deeply about the phenomena experienced by key informants. Qualitative research methods do not rely on evidence based on mathematical logic, numerical principles or statistical methods. Qualitative research has the aim of maintaining the form and content of human behavior and analyzing its qualities, even some experts turn it into qualitative entities.¹⁰

Phenomenology is an interpretative study that is as it is about human experience, which aims to understand and describe human situations, events and experiences, "as

⁷ S Payton and C Hague, "Digital Literacy in Practice: Case Studies of Primary and Secondary Classrooms," n.d., http://www.futurelab.org.uk/sites/default/files/Digital_Literacy_case_studies.pdf.

⁸ BPS, "Berita Resmi Statistik," Badan Pusat Statistik, 2020, <https://www.bps.go.id/pressrelease.html>.

⁹ G P Yustika, "& Iswati, S..(2020).Digital Literacy in Formal Online Education: A Short Review," *Dinamika Pendidikan* 15, no. 1 (n.d.): 66-76.

¹⁰ Deddy Mulyana, *Metodologi Penelitian Kualitatif* (Bandung: PT Remaja. Rosdakarya, n.d.).

something that arises and is present everyday". The focus of attention on phenomenology is not only just a phenomenon experienced, but focused on conscious experience from the point of view of the first person or who experienced it directly.¹¹

In phenomenological research, the data collection method used focuses on in-depth interviews and narratives as the main steps in making explanations and depictions of experiences that have been experienced in life. In addition to describing a person's life experience, it is necessary to obtain data through documentary methods or visual methods. Data documentation is carried out to provide evidence in the research conducted that the research is valid because it is equipped with the latest documentation while visual methods need to be carried out for the purpose that the research carried out can be visualized and given a real picture of the actual situation.¹²

In this research, the interview method used is unstructured interview. Unstructured interviews are free interviews in which the researchers do not use a structured and complete interview guide for data collection. The interview guide is only an outline of the problems that will be asked.¹³ In this study, the researcher interviewed 30 middle school teachers (15 Senior High School teachers and 15 Junior High School teachers). The researchers classified the informants based on their teaching experience, namely (a) teachers with less than 10 years of teaching experience, (b) teachers with 10-20 years of teaching experience, and (c) teachers with more than 20 years of teaching experience. The description of the interviewed informants is as follows:

Table 1. Informan Criteria

Number	Occupation	Teaching Experience
5	Junior High School Teachers	≤ 10 years
5	Junior High School Teachers	10 - 20 years
5	Junior High School Teachers	≥ 20 years
5	Senior High School Teachers	≤ 10 years
5	Senior High School Teachers	10 - 20 years
5	Senior High School Teachers	≥ 20 years

Created to obtain data related to the understanding of teachers and parents in terms of digital literacy. This data triangulation was carried out to maintain the validity of the data in this study. The validity of the data in this study uses data triangulation. According to Moleong (2007),¹⁴ confirms that, data triangulation is a data validity checking technique that utilizes something else from outside the data for the purposes of checking or as a comparison of the data. In this study, there are four criteria for

¹¹ Engkus Kuswarno, *Fenomenologi* (Bandung: Widya Padjadjaran, n.d.).

¹² *Fenomenologi: Dalam Penelitian Ilmu Sosial* (Jakarta: Deepublish, n.d.).

¹³ Sugiyono, *Metode Penelitian Kuantitatif, Kualitatif Dan R&D* (Bandung: Alfabet, 2016).

¹⁴ Lexi Moeloeng, *Metodologi Penelitian Kualitatif* (Bandung: Rosda Karya, 2011).

trustworthiness, namely credibility, dependability, transferability, and confirmability.¹⁵ Data checking techniques in this study used source triangulation methods and method triangulation. This was done by comparing the results of interviews and document analysis. It is hoped that the final results of the analysis will reach a high level of quality and validity.

In analytical research carried out according to structured and specific analytical methods developed by Creswell (2015),¹⁶ namely: 1) Describe personal experience with the phenomenon being studied; 2) make a list of important statements; 3) taking these important statements and then grouping them into meaning units or themes; 4) write textural descriptions (what was experienced) from the participants' experiences; 5) describe the structural description (how the experience happened). In carrying out the data analysis process, there are several steps that must be carried out Creswell (2015),¹⁷ namely:

1) Horizontalization. At this stage it is done by describing individual experiences. The individual experiences described do not only include the experiences of the participants but also the experiences of the researchers themselves. The description of the researcher's experience will be explained in the researcher's reflection. The next process carried out by the researcher was conducting interview transcripts. Interview transcripts were carried out to obtain more textural data. Transcripts function to be able to find out about the understanding/experience experienced by participants;¹⁸ 2) Textual Description. At this stage the researcher focuses on what experiences the participants get. The textural description process is the way the researcher tells what experiences the participants have had. These experiences include participants' experiences of receiving sociology lessons, participants' experiences of interacting with friends in class or at the cottage and also participants' experiences of a multicultural society outside of school or in the community'; 3) Structural Description. At this stage, the researcher describes the multicultural experiences students have or have acquired. The process of describing experiences at this stage can be seen based on the setting, which includes the time (when) and the place (where) the experience took place. At this stage, the researcher conducted an analysis of how multicultural means according to the participants.

¹⁵ Denzin and Lincoln, *Handbook of Qualitative Research* (London: Sage, n.d.).

¹⁶ John W Creswell, *Penelitian Kualitatif & Desain Riset* (Yogyakarta: Pustaka Pelajar, n.d.).

¹⁷ J.W Creswell, *Research Design* (Yogyakarta: Pustaka Pelajar, 2010).

¹⁸ Giorgi, A P Giorgi Giorgi, and B M Giorgi, "The Descriptive Phenomenological Psychological Method," in *Qualitative Research in Psychology: Expanding Perspectives in Methodology and Design*, ed. P M Camic, J E Rhodes, and L Yardley (American Psychological Association, n.d.), 243-273, <https://doi.org/10.1037/10595-013>.

RESULT AND DISCUSSION

1.1 Digital Skills

Digital skills relate to the individual's ability to know, understand, and use digital hardware, software and operating systems in everyday life. The results of the interviews show that on average teachers and parents of students already have digital skills which means they already understand how to operate digital devices according to their daily needs.

The ability to use digital technology appropriately is a digital skill. Digital skills are digital skills that cover all skills related to technology starting from basic skills or literacy, general skills for all workers and specific skills for professionals in the ICT field. Meanwhile, according to Van Deursen et al, digital skills are divided into 4 dimensions which include: digital technician skills, digital communication skills, digital analysis, and digital thinking. Instilling 4 important values in using the internet, namely: (a) Critical thinking, (b) Creativity, (c) Communication skills and (d) Collaboration as stated by Dewi and Purwanti, namely 21st century competencies or skills that have been identified by US-based Partnership for 21st Century Skills (P21), namely "The 4 Cs".

Table 2. Digital Skills

No	Aspects	≤ 20 years teaching experience	10-20 years teaching experience	≥ 20 years teaching experience
1.	Critical Thinking	Train students to think before doing something	Train students by observing something and analyzing it.	Students must respect the teacher, do not just give criticism
2.	Creativity	Teachers must give appreciation to the creativity of students	Teacher must give students freedom to creativity	Teacher must direct students
3.	Communication Skills	Students should not be afraid of expressing opinions	Students must have the courage to express opinions in a good way	Students must follow the rules set by teacher
4.	Collaboration Skills	Collaboration is carried out not only with classmates but also with friends from other classes	Collaboration with classmates, outside the classroom and other schools	Prefer students to collaborate with classmates for safety

and even other
schools

2.1 Critical Thinking

The results of interviews related to critical thinking with teachers show different results between teachers who already have work experience of more than 20 years and less than 20 years. Teachers who have taught for more than 20 years are less abreast of current developments in the digital world. This shows that teachers of the 20th century (those born before 2000) do not follow the demands of the world of education today. While the students faced are XXI century humans who are of course different in their thoughts and opinions. The results of the interviews also showed that teachers who had more than 20 years of teaching experience did not even understand what was meant by 'critical thinking', so there was an impression that they were afraid of being criticized by their students.

“Students can be taught to think critically by observing their social environment. After that students can report the results of their observations via Whatsapp or Zoom Meeting media. Then the teacher must check how the results of student observations and analysis. Thus students will get used to thinking before doing something because they already know the pros and cons of doing it.” (OQ- Junior High School teacher with 8 years teaching experience)”

“So far, I have always trained students' critical thinking by asking them to read cases that are currently trending topics, then analyze them. Thus they have good critical thinking skills.” (IV- High school teacher with 12 years teaching experience)”

“Students will be able to think critically if they have the courage to speak and ask questions, but teachers also need to teach students about manners and manners so that students still respect their teachers, don't just give criticism, because after all we live in eastern culture, that must be prioritizing the values of decency.” (RT- SMA teacher with 24 years teaching experience)”

The results of the interviews show that teachers who have teaching experience of less than 20 years understand better what critical thinking is and how to train students to have critical thinking. This is in line with Ennis' statement which states that critical thinking is reasonable and reflective thinking that focuses on deciding what to believe or do. Reasonable and reflective thinking implies that one must focus on the problem and collect logical data or facts based on the problem before concluding it, so that one will not rush into making a decision. Students who have critical thinking skills do not only believe in what is explained by the teacher. Students will try to consider reasoning

and look for other information to get the truth as a final conclusion. Meanwhile teachers who have teaching experience between 10-20 years can still keep abreast of current developments in the digital era.

3.1 Creativity

Reveals that the ability to think creatively is an ability that causes an individual to give birth to an idea or new ideas or creative ideas about something. Meanwhile according to Campbell creative thinking as a product defines creativity as an activity that produces something new or unique, useful and understandable. Therefore, someone who is creative when faced with a problem will be able to come up with ideas for solving it. Creativity is a product at the highest level of thinking. That is why, Bloom's new theory places to create or create an important part of its refinement so that the cognitive domain does not end with evaluation, but creation.

“Because the characteristics of gifted children and the characteristics of students that teachers want are different, it often happens that students' creative initiatives do not get teacher support. To develop this skill the teacher can use a variety of questions aimed at provoking and exploring students' creative ideas. The most important thing is that the teacher must be able to provide support and not discourage his creative spirit just because the students' thoughts are deemed not in line with the teacher's thoughts.” (DF- Junior High School Teacher with 7 years teaching experience)

“Teachers must be able to give freedom to their students to be creative. Teachers should not discourage students to be creative. Let them grow according to their time. One model of developing creativity is using questions to challenge the highest level thinking processes according to the concept of developing creative ideas and creative and innovative works.” (AM- High School teacher with 14 years teaching experience)

“To increase student creativity, teachers must always provide space for them to develop their ideas. Today's students have far-reaching thoughts. But unfortunately, they are often reckless in making decisions. This is where the teacher's role is to direct students.” (GU- High school teacher with 25 years teaching experience)

From the answers above, data is obtained that teachers who have teaching experience of more than 20 years still think that creative freedom must still be directed and controlled by the teacher, while teachers who have teaching experience of less than 10 years give more freedom to students to be creative. without any fear. This is in accordance with the statement of Utami Munandar (1997), that the characteristics of creative students are having freedom in self-expression, being open to new experiences, having a level of confidence in their own ideas, being independent in

giving consideration, and showing initiative. In addition to the need for teacher competence, the development of student creativity through learning requires a supportive climate or culture. There are good habits that teachers cultivate. The results of the study show that the behavior of creative students is not always the same as the behavior that the teacher expects so that it often happens that the teacher does not support the growth of student creativity.

4.1 Communication Skills

Communication that exists between educators and students must be supported by the communicative skills of these educators. Communication skills according to Greenstein (2012), include aspects of conveying messages from selected targets (other students), willing to accept communication (reading, listening, arguing, and using many sources to express ideas). The needs of high school students in the current global era, in addition to the knowledge and skills that have been obtained at school, are also skills in communicating.¹⁹ Communication skills are one of the needs of high school students towards better self-maturity and preparation for entering a higher level.²⁰ The communication process aims to build and maintain a quality relationship and improve the quality of performance in their field.

"An effective communicative process must have a sense of openness when interacting. Willingness to open up and share information when it is worth discussing. Effective communication cannot be done when the atmosphere is not supportive. Therefore the teacher must be able to provide opportunities for students to talk and discuss with their friends. The important thing is students don't be afraid to give opinions. " (AE- Middle school teacher with 5 years teaching experience)

"We as teachers also don't say your opinion is right or your opinion is wrong. Let them talk. The important thing is to remain polite and respect others. This can be done through group work or interactive discussions in class. We as teachers must be able to facilitate these activities so that our students' communication skills become good." (RO- High school teacher with 11 years teaching experience)

¹⁹ Hartanto Hartanto et al., "Learning System Management To Improve The Quality Of Learning Chemistry On Students Of State 8 Sma Negeri 8 Bekasi And Taman Students High School Of Bekasi," *International Journal of Educational Research & Social Sciences* 3, no. 5 (2022): 1927-34, <https://doi.org/10.51601/ijersc.v3i5.428>.

²⁰ Natalya Lukyanova, Yury Daneykin, and Natalia Daneikina, "Communicative Competence Management Approaches in Higher Education," *Procedia - Social and Behavioral Sciences* 214 (2015): 565-70, <https://doi.org/https://doi.org/10.1016/j.sbspro.2015.11.761>.

“Communication skills are very important for students. To get good student communication skills, at this time it is indeed a challenge for teachers. To train students to communicate, I usually ask them to make presentations in class on topics that are trending at the time, then I ask them to debrief with their friends. But as a teacher, I also have to monitor that the discussion doesn't go anywhere. So we still direct students. Students also cannot talk or ask questions, must use rules, must follow the rules set by the teacher, and must use good and correct Indonesian. So students also have to respect the teacher.” (GU- high school teacher with 26 years teaching experience)

From the answers given by the informants, we can see a very significant difference. Teachers with more than 20 years of teaching experience, even though it provides opportunities for students to discuss but always try to provide directions so that students follow the applicable rules. There are limitations that seem stiff, namely students must use good and correct Indonesian, and students may not speak in random ways or ask questions. Teachers with the old paradigm are still guided by standard principles and rules. Meanwhile, teachers with a new paradigm give more freedom to their students to dare to speak and express their opinions. Students do not need to have the same mind as the teacher, so they have independence in deciding things, but still respect others. This is in line with the opinion of Trilling & Fadel (2009) who said that in the 21st century education must always move in line with the progress of the times- this movement is based on a change in the educational paradigm from conventional to modern education.²¹

Collaboration in Dictionary (KBBI) is defined as working together to make something.²² In relation to the world of education, students are trained to improve collaboration skills. In achieving success and success, of course, you cannot do it alone, but you need the help of others. Collaboration and cooperation can be developed through the experiences of students in school, between schools and outside of school. Students can collaborate on authentic, project-based assignments. In conventional learning activities, collaboration is usually carried out between students or teachers in the same school or in the same class. However, with the availability of an internet communication network, collaboration is very possible between schools, between

²¹ B Trilling and C Fadel, *21st Century Skills: Learning for Life in Our Times*, Wiley Desktop Editions Series (Wiley, 2012), <https://books.google.co.id/books?id=pfKyBwAAQBAJ>.

²² KBBI, “Kamus Besar Bahasa Indonesia (KBBI) Online” (Jakarta: Badan Pengembangan dan Pembinaan Bahasa, 2016), <https://kbbi.kemdikbud.go.id/entri/>.

regions, and even beyond national boundaries. However, from the interviews conducted by the researchers, differences of opinion were obtained from the teachers.

"Collaboration skills are very important for students to master. In addition to increasing learning achievement, these skills will foster positive character such as stimulating to generate ideas, respecting others, building relationships with others, and working with others to achieve the same goals, and responsibility. The ability to collaborate is obtained when they work on projects together. I always give them the opportunity to be able to collaborate with friends from other schools, other cities and even from other countries because it will be useful not only when students are in school but until they go to college and work." (UK- Junior High School teacher with 4 years teaching experience)

"I apply the collaboration activities during group work, group discussions or joint projects, and they are not only carried out with classmates but also there are certain projects that they have to collaborate with friends from other classes, from other schools, even from other cities and other countries. Of course before starting to carry out the activity, the teacher needs to emphasize what is the purpose of the activity." (EN-High School Teacher with 14 years teaching experience)

"Cooperation between students is needed because it can improve communication skills and also creativity. Students have broad insights. I usually apply these collaboration values by asking my students to discuss in groups, or work on a project together. But in practice I prefer them to work with classmates or schoolmates only. This is to maintain security." (IN-High school teacher with 28 years teaching experience)

From the answers given, we can obtain data that teachers with more than 20 years of teaching experience give less freedom to students to collaborate with the widest possible range of friends, while teachers with a new paradigm give more freedom to students so they can expand their networking overseas. country. This can also train students to have a leadership spirit and be able to take decisions responsibly according to Greenstein's opinion,²³ that collaboration skills are skills to work together effectively and show respect for diverse teams, practice fluency, and willingness to make decisions necessary to achieve common goals.

²³ Siti Zubaidah, "Keterampilan Abad Ke-21: Keterampilan Yang Diajarkan Melalui Pembelajaran," in *Isu-Isu Strategis Pembelajaran MIPA Abad 21* (Sintang: STKIP Persada, 2016), 1-17.

5.1 Digital Culture

Digital culture is a form of community activity in the digital space while retaining nationalism, Pancasila values, and diversity. Digital culture is part of an assessment of the skills needed for a person/individual in reading, describing, familiarizing, examining, and building national insights in accordance with the values of Pancasila and Bhinneka Tunggal Ika in utilizing advances in technology and information.

Table 3. Digital Culture

≤ 20 years teaching experience	10-20 years teaching experience	≥ 20 years teaching experience
Train students to have a sense of tolerance	Train students to respect differences	No need to comment comments on every news
Explore news that is currently a trending topic	Must be observant to distinguish which news is true and which is hoax	Use a cell phone to access lessons, not read news that is less useful
Not easy to believe information		

From the answers given, the researcher can conclude that teachers with the old paradigm do not give freedom to students to use their cellphones to explore news, but tend to prefer students to use their electronic devices to access lessons while teachers with the new paradigm give more freedom to students in order to be able to follow the news that is trending topics, but be careful to filter it because the purpose of deliberate hoaxes is to make people feel insecure, uncomfortable and confused. In confusion, people will make decisions that are weak, unconvincing, and even wrong.²⁴

6.1 Digital Ethics

Digital ethics is the ability to be aware of considering and developing digital ethical governance in everyday life. Meanwhile, communication ethics are norms, values or measurements, behavior that forms the basis of good or bad in communicating. This digital ethic is urgent because we are social beings so follow the rules that apply in communicating on the internet.

Table 4. Digital Ethics

≤ 20 years teaching experience	10-20 years teaching experience	≥ 20 years teaching experience

²⁴ Boy I Pasaribu et al., "Knowledge Transfer: A Conceptual Model and Facilitating Feature in Start-up Business," *Procedia Computer Science* 116 (2017): 259-66, <https://doi.org/https://doi.org/10.1016/j.procs.2017.10.052>.

Avoid plagiarism Pay attention to the right time when communicating through social media Use good Indonesian Give comments in polite language	Avoid cheating cheating Communicating must pay attention to time Use good Indonesian Give comments in polite language	Cheating is unacceptable Must be able to choose the right language in communication Always maintain good manners
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Regarding digital ethics, both teachers with the old and new paradigms agree that ethics or politeness must be maintained in communicating digitally. So far, many people think that digital communication is not face to face with other people, therefore they think this is different from face to face. However, this opinion is wrong. Precisely when we are not face to face, the focus is on our writing and non-verbal language. Communication ethics is not only related to good speech but also departs from sincere intentions which are expressed from our calmness, patience and empathy in communicating.²⁵

7.1 Digital Safety

Digital safety is the ability of the public to recognize, implement, increase awareness of personal data protection and digital security. This is the concept of using the internet wisely and in accordance with applicable ethics or norms without endangering your own safety or that of others, don't easily believe things, especially things that don't make sense, don't be provoked by negativity let alone participate in spreading hoaxes and don't be afraid and lazy. ask someone who knows better.

Table 5. Digital Safety

≤ 20 years teaching experience	10-20 years teaching experience	≥ 20 years teaching experience
- Be careful in protecting personal data	- Be careful when writing personal data on social media	- Be careful when writing personal data on social media
- Be careful when sending personal identification such as family cards, ID cards, insurance, etc.	- Be careful when sending personal identification.	

²⁵ Adrian Kosasih et al., "Search Engine Optimization (SEO) in Promoting E-Commerce Start Aja. Com," *International Journal of Recent Technology and Engineering (IJRTE)* 8, no. 6 (2020): 577-80, <https://doi.org/10.35940/ijrte.f7396.038620>.

The internet can have a very large positive impact including security for its users if they are able to hold the concept of digital safety. From the answers of the teachers it can be concluded that teachers with the old and new paradigms have the same view that students must be careful when writing down let alone sending personal data via social media because it is not impossible that this data can be hacked by irresponsible people. Digital Safety refers to the safety competency area which consists of 4 competencies as indicators, namely: (1) protecting devices (protection of devices; (2) protecting personal data and privacy (protection of personal data and privacy); (3) protecting health and well-being (health and welfare protection), and (4) protecting the environment.²⁶²⁷

CONCLUSION

The results of the study show that not all teachers understand and implement digital literacy. Two things that show similarities between teachers' opinions with the old and new paradigms are in terms of digital ethics and digital safety. Teachers agree that students must be given education regarding digital communication ethics and digital safety. However, differences of opinion can be seen in the other two pillars of digital literacy, namely the skills and digital culture aspects. Teachers with the old paradigm or those who on average have more than 20 years of teaching experience, do not give their students enough freedom in the aspects of digital skills, namely, critical thinking, creativity, communication skills and collaboration. Teachers with the old paradigm seem less able to accept criticism from their students or if there are things where students don't share the same ideas as their teachers. Teachers with the old paradigm also still have big concerns if their students collaborate with students from other schools for security reasons, and tend to direct students to use their electronic devices only for learning and not for other things. From the differences in perceptions among these teachers, education or training related to digital literacy for teachers is very urgent to do. For future research, the researcher suggests conducting research related to digital literacy training for teachers with a different approach.

²⁶ Stephanie Carretero, Riina Vuorikari, and Yves Punie, "DigComp 2.1: The Digital Competence Framework for Citizens" (Joint Research Centre (European Commission), 2017), <https://doi.org/https://doi.org/APO-221736>.

²⁷ D E Silalahi et al., *Literasi Digital Berbasis Pendidikan* (Get Press, 2022), <https://books.google.co.id/books?id=2d55EAAAQBAJ>.

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