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Strategies to strengthen students' digital literacy through contextual learning in Pancasila Education

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ABSTRACT

This study aims to explore strategies for strengthening students' digital literacy through contextual learning in Pancasila Education at SMKN 4 Kendal, by describing strategies and identifying related obstacles and solutions. The method used is qualitative with a case study approach, relying on interviews with eight grade XI Culinary 1 students and one Pancasila Education teacher, as well as documentation and observation. Data validity is tested through triangulation, and data analysis involves collecting, condensing, presenting, and inferring data. The results showed that digital literacy can be strengthened through contextual learning with three main steps: strategy design, application of learning, as well as overcoming obstacles and finding solutions. Barriers for students are divided into in-class (such as lack of quota, inactive members, and drowsiness) and outside the classroom (lack of discipline, long distances, and bad weather). Barriers for teachers include long module preparation, lack of student focus, and difficulties in exploratory mentoring. In-class solutions include buying quota before school, approaching less-active friends, and going to bed early. Solutions outside the classroom include making time agreements, determining gathering points, and monitoring the weather. For teachers, the solution is to discuss with colleagues, provide ice breaking, and accompany via WhatsApp groups.

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INTRODUCTION

Technological advancements significantly impact education, particularly digital literacy (Liu et al., 2020; Pangrazio et al., 2020; Park et al., 2021). This skill is crucial for students to understand the ethical, security, and social implications of digital interactions. The digital era is often associated with the millennial generation, as they are born during this time (Fansury et al., 2020; Lissitsa & Laor, 2021; Munsch, 2021). The human group is divided into four generations: Baby Boomer, Generation X, Generation Y, and Generation Z (Gadomska–Lila, 2020; Rahardyan et al., 2023). This classification helps educators identify students in Generation Z, who are developing maturely in the era of technological advancement and internet networks.

The presence of the era of technological development actually aims for positive things and facilitates human life. However, the presence of digital media does not always have a positive impact on all levels of society. Some digital media challenges become serious challenges, such as the spread of hoax information, hate speech, and other harmful digital activities. One of the causes of this phenomenon is the lack of cybersecurity awareness due to low digital literacy skills (Shillair et al., 2022; Triplett, 2023).

Digital literacy skills are currently very important for students to have in learning (Erwin & Mohammed, 2022; Öncül, 2020; Abrosimova, 2020), including learning Pancasila Education. Pancasila education has a central role in shaping the character and personality of students (Fitriasari et al., 2020; Ma'arif et al., 2020), but the increasing importance of digital literacy in the current era of information technology demands strategic integration. In previous research, it was found that strengthening students' digital literacy is a must to answer the challenges of the times. Therefore, a contextual learning approach can be a relevant and effective strategy.

Through the integration of digital literacy in Pancasila Education subjects, students will not only understand the noble values of the nation, but also be able to manage information wisely in the digital world.

Some previous studies that discussed digital literacy in education are as follows: (1) Research conducted by Oktavia & Hardinata (2020) said that at SMAN 1 Kuala the level of digital literacy of students is still relatively low with a percentage achievement of 35.5%. Meanwhile, at SMAN 3 Kuala the level of digital literacy of students is classified as sufficient with a percentage of 51.7%. Therefore, both schools identified students as not having reached a high level of digital literacy; (2) Research Sari (2019) conducted on 100 adolescents in junior and senior high school in the North and South Blitar Regions shows that the level of digital literacy in students is still in the medium category, judging from the overall ability, namely information search on the internet, hypertextual navigation, content evaluation, and knowledge assembly; (3) Research by Erlianti & Ardoni (2019) which discusses the importance of digital literacy for the younger generation at SMPN 4 Palembayan, Agam Regency. The result of the study is that the level of digital literacy of students is included in the low category. This statement is evidenced by the fact that there are still many students who have not been able to use digital media wisely so they need direction on finding information to make it better.

More specifically at SMKN 4 Kendal, researchers obtained two data related to literacy in general and digital literacy. Literacy data in general is taken from the 2023 SMKN 4 Kendal Education Report Card issued by the Ministry of Education, Culture, Research and Technology, while digital literacy data is obtained directly from the research class, namely class XI Culinary 1 through initial online observation.

The results of the 2023 SMKN 4 Kendal Education Report Card show that more than half of the students (54%) are in a condition of medium literacy ability, while the rest are almost the same as low and high literacy conditions of 2%, namely 22% each for low literacy ability and 24% for high literacy ability. Then the initial online observation data resulted in the majority of 76% of students still in a moderate digital literacy condition, 6% low digital literacy, and 18% high digital literacy. If we compare the two data, it turns out that there is a similarity that the majority of students are still in a condition of moderate digital literacy ability. Conditions like this cannot be said to be ideal, because it may come down to low digital literacy skills. Teachers have an important role in strengthening students' digital literacy skills in learning, including Pancasila Education subjects.

The strengthening of digital literacy in question is through contextual learning implemented in the subject of Pancasila Education. The contextual learning model (contextual teaching and learning) is a holistic learning process and aims to help students to understand the meaning of teaching material and relate it to the context of their daily lives (personal, social and cultural contexts), so that students have dynamic and flexible knowledge/skills to actively construct their own understanding.

The contextual meaning in this study is to pay attention to the peculiarities of the world of Vocational High Schools, in this case what is used as the object of research is the Culinary department. Researchers collaborated the Pancasila Education material, namely the Bhinneka Tunggal Ika element with the material of the Culinary department, so the Culinary Diversity material appeared in the people of Kendal Regency. This culinary diversity material is then connected with contextual digital literacy, so a learning project for Exploring Culinary Diversity in the Community was made through Food Vlogger. Food vlogger according to Ankeny et.al (2019) is a food vlogger making videos about food, including recipes, restaurant reviews, and food-related travel content. Food vloggers are currently very important in the culinary world because they are able to promote culinary businesses or businesses so that they are better known to the public and bring in more customers or buyers. So through this learning, students will directly plunge into the community to explore and get their own learning experience and get new references about work that they are very likely to apply in their present and future lives.

From the various explanations above, the author aims to explore strategies for strengthening students' digital literacy through contextual learning in Pancasila Education at SMKN 4 Kendal. This research is expected to be a foothold and reference for future studies related to digital literacy, contextual learning and Pancasila Education.

METHOD

This study uses qualitative methods to investigate Pancasila Education at SMK Negeri 4 Kendal, specifically targeting students. Data is collected through observations, interviews, and documentation, with primary sources being interviews with students and teachers. Secondary data sources include graphic documents, photographs, films, and video recordings. Data collection involves observation, documentation, and interviews. Observations were conducted four times based on the number of learning meetings, and documentation included learning tool documents, photos, and learning outcome documents. A semi-structured interview method was used. Data validity is measured using triangulation. The study aims to interpret data collected using qualitative methods from Miles et al. (2014), ensuring the validity of the research.

RESULTS AND DISCUSSION

Strategies for Strengthening Student Digital Literacy through Contextual Learning

Digital Literacy

As previously explained, the digital literacy discussed in this study focuses on digital literacy skills. These digital literacy skills have four main components, namely basic internet knowledge; basic knowledge of information retrieval engines; basic knowledge of conversational applications and social media; and basic knowledge of digital wallets and marketplaces.

Based on data from the results of the analysis on the basic knowledge component of the internet which includes questions 1 to 8, observations, and documentation, it can be concluded that students already have good basic knowledge about the internet. This is known from the results of interviews, observations and documentation during the learning process. Starting from the initial question, the students have understood the basic concept of what the internet is. Then they have been able to mention the various benefits of the internet, especially regarding learning. In addition to the benefits of the internet, students can also mention the reasons for the internet that has shortcomings or weaknesses, especially addiction to online games and forgetting the main task as a student, which is learning.

An important skill on the internet that students need to master today is uploading or uploading and downloading or downloading. The ability to upload and download is needed by students because of current learning that applies a hybrid system or a combination of offline and online. The ability to upload students can be seen from their experience in learning to upload assignment documents to Google Classroom, to Instagram, and to Youtube. On the contrary, students have become accustomed as well when it comes to downloading documents. We can know this when students tell that they have downloaded various documents on Google Classrom, on the internet in general, and in the Canva application.

The next digital literacy skill that is no less important is the ability to edit photos and videos. There are various applications that support for photo and video editing both offline and online. In class, students show that they are able to edit photos and videos, especially in online applications such as Canva and Capcut. From the observations also show that photo and video editing activities can be done easily. Of course, the editing done at the standard level is not that professional but it already looks good. If you want to see the edited photos and videos, they will be attached to this study in the form of Instagram links and Youtube links.

After asking various things related to basic internet knowledge as part of digital skills, it ends with a conclusion question for this component. Students stated that the contextual learning that has been carried out can strengthen their knowledge about the internet. They become accustomed to using the internet in good ways and purposes, especially to support learning. In addition, by introducing the term food vlogger to students, they become more eager to be able to develop their creativity in the culinary field they are in.

The second component discussed is about the basic knowledge of information search engines and how to use them. Based on the data from the analysis of student answers from questions 9 to 14, the results of observation and documentation can be concluded that students already have basic knowledge of information search engines and how to use them. In general, students have understood the general understanding of information search engines, an example they know is Google Chrome.

The use of information search engines turned out to be inseparable from their activities as a student. Every day they must open and use the information search engine, some even open Google dozens of times in one day. This indicates that students are very close to the world of searching and browsing. To strengthen their digital literacy skills, of course, students must get used to accessing sites that are safe and do not fall into unwanted things, especially hoaxes. Students need to be accustomed to being more selective about the various news they find on the internet.

There are several ways that students use the internet for learning. They often use Youtube to search for various food making tutorials. In addition, they also take advantage of several educational applications such as Ruang Guru and Brainly. At the end of the discussion about information search engines, it was found that students felt better and more motivated to apply digital literacy skills that were beneficial for their learning.

The third component in the scope of digital literacy skills is basic knowledge of conversational applications and social media. Based on the data from the analysis of student answers from questions 15 to 20, the results of observation and documentation can be concluded that students already have basic knowledge of conversation applications and social media. Initial discussion about what a conversation application is, in general, students can provide information that is in accordance with the understanding of conversation applications, namely media for communicating over long distances. The mainstream conversation apps students have are Whatsapp and Telegram. In addition, there is also a mention of Facebook in the messenger section and Instagram in the direct message section.

Social media is now a media that is synonymous with the life of generation z or genzi. Students provide opinions that are in accordance with the understanding of social media as a medium to socialize and communicate online through text, photos, and videos. In addition to understanding, students are also familiar or accustomed to using social media. In social media they often follow certain news that is viral in the

community. This is actually good for students to follow the development of news in the community, but do not overdo it in following the news so that it is too long and protracted. The average student uses existing social media for learning purposes such as collecting assignments on Instagram and on Youtube. In addition, social media is also used to find material and inspiration in learning.

At the end of the discussion, students stated that the contextual learning carried out could strengthen their knowledge about conversational applications and social media. They become more motivated to use conversation applications and social media for their learning interests. Students feel more enthusiastic in adding knowledge and insight, especially in the culinary field.

The fourth component in the scope of digital literacy skills is basic knowledge of digital wallets and market places. Based on the data from the analysis of students' answers from questions 21 to 25, the results of observation and documentation can be concluded that students already have basic knowledge of digital wallets and market places. Starting from the question of knowledge about digital wallets, students in general have been able to describe the understanding of digital wallets that digital wallets are like virtual wallets that have money as well as digital money without a real wallet container. But some of them do not have a digital wallet account because there is not enough age requirement for 17 years.

Digital wallets are closely related to market places. In general, students have understood the meaning of market places as places to buy and sell online. Some applications that are familiar to students such as Shoope, Lazada, and Tokopedia. Although some do not have a digital wallet, students can still transact through the COD system or pay on the spot. At the end of the discussion on basic knowledge of digital wallets and market workshops, students stated that the contextual learning that has been carried out can strengthen digital literacy skills, especially in the components being discussed. Students become more open and more insightful regarding digital wallets and marketplaces.

Contextual Learning

There are five components discussed in contextual learning, namely connecting, experiencing, applying, working together, and moving. The linking component strives for students to be able to understand the material being studied, connected to the real world that students experience. In this case, students feel that the contextual learning that has been carried out is in accordance with the current development of life. Students argue that there are many professions that make video as a medium, including food vlogger videos. In addition, they become more understanding of culinary material because they can plunge directly into the community to explore various foods or culinary around them.

The experience component will make students have direct experience that allows students to construct their learning experience. For vocational schools, having direct experience related to their major is very important. In addition to internship activities, it needs to be strengthened by learning activities based on developing the competence of the department. The teacher ensures that all students have been involved in the exploration activity. We can see from the distribution of tasks given in each group, there are no students who do not have a job desk, all work according to their respective duties. When asked about the activities carried out, they can give a good explanation. They learn about new things they have encountered during exploration, especially related to the cuisine they review.

Once students have experienced firsthand, the next component is applying. In this applying component, students are expected to be able to apply new concepts and knowledge gained in their daily lives. Based on the results of interviews with students, they stated that they were able to apply the new knowledge gained in their daily lives. Especially the recipes they get in cooking they can apply. Although some utensils do not have them, they can still cook them according to makeshift conditions. This indicates that students need to be given plenty of opportunities for exploration outside the classroom to increase their knowledge and skills.

The component of working together in contextual learning is very important to note. Communication and collaboration of students with fellow group members, between groups with one another, and between groups and parties outside the school. In practice, it is not as easy as imagined, even the communication area in group discussions sometimes has not found a satisfactory agreement. In addition to communication with their group colleagues, students are required to be able to build communication and cooperation with other parties, especially the owners or staff of the restaurants they visit. Some groups make some kind of agreement before the exploration, some are immediately carried out on the same day, all depending on the situation and conditions of each group and the destination restaurant. Based on the results of interviews with students, information was found that students in general have been able to work well between group members, between groups, and with other parties.

The last component is the moving component. This component provides direction to students so that the knowledge and experience gained can one day solve problems in students' real lives. Teachers hope that their skills in making vlog videos will be useful as an alternative source of income in the future, or even starting when they are still in school. Based on the results of interviews with students, it was found that not all students

were interested in becoming food vloggers, only some were interested. Students who are not interested because they already have their own goals that have been determined long ago. While students who are interested because they see good potential when they can develop their abilities to become food vloggers. There are also those who are middle, meaning that they have set goals or goals after graduating from school, but are still interested in becoming a food vlogger as an additional useful activity.

In addition, researchers include subject matter components as supplementary information. Based on information from students, information is obtained that the subject matter becomes easier for students to understand and accept because they can get their knowledge directly from business actors. Learning experiences outside the classroom make a positive impression on students. In addition, students find this contextual learning very fun because they can study as well as walk and eat with their friends.

Strategies for Strengthening Student Digital Literacy through Contextual Learning

In general, based on the results of interviews, observations, and documentation that have been carried out, information was found that there are three major steps in the strategy of strengthening students' digital literacy through contextual learning. The three steps are: 1) Design a strategy to strengthen digital literacy; 2) Application of contextual learning; 3) Obstacles and solutions.

There are several things that need to be considered to carry out each of the above steps. Like the first, the design of strategies for strengthening digital literacy is carried out before the learning process. The design of the learning implementation is identical to the teaching module document. The teaching module is a document that contains various things needed for the implementation of learning. In this study, teaching modules are made by adjusting predetermined research objectives. One of the contents that must be included is digitization of student learning processes and outcomes. Students are accustomed to apply information and communication technology well in learning. Contextual learning that is emphasized is that students can understand the subject matter about diversity with the nuances of the culinary department, so that culinary diversity material appears. To make a good teaching module, teachers need to communicate and discuss with peers in order to get constructive suggestions and input.

The second is the application of contextual learning. This step is a core step in the study. Teachers must be able to apply each step that has been planned in advance in the teaching module. These contextual learning measures have been modified to support the strengthening of students' digital literacy skills and make it easier for students to understand the subject matter. In implementing learning steps, teachers are required to be able to condition and manage classes both in the classroom and outside the classroom. Digital-based learning allows online mentoring through online WA and LKPD groups. In order for the digital-based learning experience to run well, students need to monitor digital activities from teachers. This is important so that students are always in the right direction.

The third step is obstacles and solutions that are carried out after the learning process is complete. Barriers and solutions are needed as part of the learning evaluation. Both students and teachers reflect and evaluate so that further learning can be better. Writing down obstacles in learning can be a distraction so that things that hinder can be reduced or even eliminated. Likewise, by providing alternative solutions, this is important so that it can be applied to overcome obstacles to future learning.

Barriers and Solutions to Strengthen Student Digital Literacy through Contextual Learning

Obstacles and solutions are inevitable in a study. The existence of obstacles and solutions will be a reference for similar research in the future so that it will produce even better research. Barriers are divided into two, namely student barriers and teacher barriers. Student barriers are also divided into two, namely obstacles in the classroom and obstacles outside the classroom.

Based on interviews with students, information was found that some obstacles to students in the classroom include: not having a quota, there are members who are not actively discussing, sleepy when in class, crowded in class, and the glare of sunlight entering the classroom. Meanwhile, the obstacles for students outside the classroom are: lack of discipline when leaving, have not prepared enough questions for interviews, are constrained by distances between students who are far away, and unfavorable weather (rain). Then the researcher conducted an interview with the observer teacher asking about the teacher's obstacles in learning, the results of which include: the preparation of old teaching modules, some students lack focus, and do not accompany directly during exploration.

After mentioning some obstacles, students can also provide some alternative solutions that can be done to overcome the obstacles above. This can be seen from the results of interviews with students who stated the solutions as follows: buying quota before going to school, asking for internet hotspots or tethering to friends, approaching less active friends, giving group assignments evenly, creating group whatsapp groups to streamline communication, sleeping not late, increasing teacher assertiveness, and installing curtains on classroom windows. As for solutions when exploring outside the classroom as follows: making agreements and departure time commitments, preparing more interview questions, determining the middle gathering point

before departure, monitoring weather forecasts through the app, and bringing raincoats. Solutions to overcome obstacles from teachers are as follows: discussing with colleagues, providing ice breaking in the middle of learning, accompanying via whatsapp groups, and monitoring online assignments during exploration.

Discussion

Strategies for Strengthening Student Digital Literacy through Contextual Learning

The rapid development of technology requires us to be able to dynamically adjust these developments. If we are not able to adjust to the times, it will be difficult for us to live in the current era. Therefore, as educators, it is necessary to prepare our students to become students who understand technological developments. One way is to strengthen digital literacy by including digitization content in learning processes and outcomes.

The initial observational findings of this study show that the condition of students' digital literacy is less satisfactory, only getting a moderate predicate which tends to be weak. This indicates that students need to strengthen their digital literacy skills. In practice, students today, especially vocational students, have known and used various technological devices in the palm of their hands. But it turns out that they still do not fully understand the benefits of the digital technology they use. This is in line with the views of Nuryadi & Widiatmaka (2023) explaining that students currently cannot take full advantage of digital technology, especially those related to digital literacy, this has an impact on their lack of civic literacy skills. Previous studies have also shown similar results that students' digital literacy at a moderate level tends to be weak, such as research conducted by Oktavia & Hardinata (2020), Sari (2019), and Erlianti & Ardoni (2019).

The importance of strengthening digital literacy skills for students also strengthens students' ability to solve the problems faced. As stated by Ting (2015) who explained that the learning process that uses digital literacy can solve problems faced by students through exploration through the use of the web or internet. How many problems today arise on the internet such as viruses that mess up the system, online fraud, hoaxes, or even online crime. Through strengthening digital literacy, students will be able to recognize and anticipate various problems arising from the internet.

In order to strengthen students' digital literacy, people first need to understand that digital literacy is something broad and there are many opinions or references from various experts. Therefore, researchers chose and focused on the concept of digital literacy from the opinions of Kominfo et al. (2020). According to Kominfo et al. (2020), digital literacy competencies are divided into four, namely Digital Skills, Digital Culture, Digital Ethics and Digital Safety. Of the four competencies, researchers focus on digital skills or digital skills to be explored. Digital skills are the ability of individuals to know, understand, and use ICT hardware and software and digital operating systems. Based on the results and findings in this study, it shows that digital literacy, especially students' digital skills, has strengthened and is better than before the study. This can be seen from the results of structured interviews with students. They say that the learning that has been carried out makes them better understand and more motivated in the exploration of a good digital world.

The strategy used to strengthen students' digital literacy is through contextual learning. Sanjaya (2009) suggests Contextual Teaching and Learning (CTL) is a learning strategy that emphasizes the process of full student involvement to be able to find the material learned and connect with real-life situations so as to encourage students to be able to apply it in their lives. According to the subject matter of Pancasila Education at the beginning of the even semester of class XI is Bhinneka Tunggal Ika. Then the teacher determines the theme of learning is the diversity that exists in society. On that basis, researchers then connected the culinary department with diversity material, so culinary diversity material emerged in the community. In order for students to be able to build their own learning experiences, they need to be given exploration activities directly to the community. Thus the substance of contextual learning is fulfilled.

Based on the data that the researchers collected, the researchers made special steps of contextual learning oriented towards strengthening digital literacy. The steps are as follows.

Initial/Introductory Activities

1. After all students enter the main class, the teacher greets.
2. The teacher directs one of the learners to lead the prayer before the lesson begins.
3. The teacher conducts the attendance of students.
4. The teacher asks the students about the general health condition.
5. The teacher delivered a brief reflection from the previous meeting.
6. The teacher delivered today's learning objectives.
7. The teacher conveys the sequence of activities or learning scenarios to be carried out.

Core Activities

1st Meeting

1. The teacher presents an introduction to the material through Power Point related to the material and exploration projects to be carried out.
2. Students are directed to understand the problems in material exposure.
3. Students are directed to formulate fundamental questions related to problems in exposure to the material.
4. Students are divided into groups, one group contains four children.
5. Each group discussed to determine the division of tasks of each member.
6. Each group discusses to determine the type of culinary and the location of the restaurant or food stall to be visited.
7. The results of the group discussion are written and sent to the designated online LKPD link.
8. Students are given an online LKPD link which will be filled in during the exploration process in the community.
9. Teachers direct students to access Google Classroom to view other materials and resources that support exploratory projects.
10. Teachers provide technical briefings before students dive into society.

2nd Meeting

1. Each group plunges directly into the community to explore the culinary diversity around it.
2. Each group fills in a description of the exploration results to the online LKPD link that has been given.
3. Teachers monitor and accompany students both offline in class and online (WA and LKPD groups) during the exploration week.
4. The teacher provides suggestions and input on the results of the exploration that has been carried out.
5. Students are given the opportunity to question and answer with teachers and other groups.

3rd Meeting

1. Teachers accompany the process of making infographics and vlog videos made using the Canva and Capcut applications on students' cellphones.
2. Teachers provide suggestions and input on the process of making infographics and vlog videos made using applications on students' cellphones.
3. The teacher gave directions for infographics and ready-made vlog videos to be uploaded immediately on students' social media, infographics uploaded on Instagram and vlog videos uploaded on Youtube.
4. Students submit uploaded links (on Instagran and Youtube) to Google Classroom as part of the assignment.
5. Students are given the opportunity to question and answer with teachers and other groups.

4th Meeting

1. The teacher gives directions before the presentation process is carried out in front of the class.
2. Each group presents the results of group work in front of the class.
3. The results of the group work presented were by opening the upload link on Instagram and Youtube.
4. The other group responded and was given the opportunity for Q&A.

Final Activities

1. The teacher and students conclude the material that has been learned.
2. Teachers and students reflect on learning activities by asking questions such as the following:
   - What is the learning impression today?
   - What are the benefits of learning today?
3. Teachers give appreciation to students who are active and motivate others.
4. Teachers provide reinforcement to students to stay enthusiastic and follow learning.
5. The teacher invites students to pray to end the learning activity.
6. The teacher closes the learning activity by saying hello.

After making specific steps for contextual learning, researchers then made a flow of strategies to strengthen students' digital literacy through contextual learning as follows.

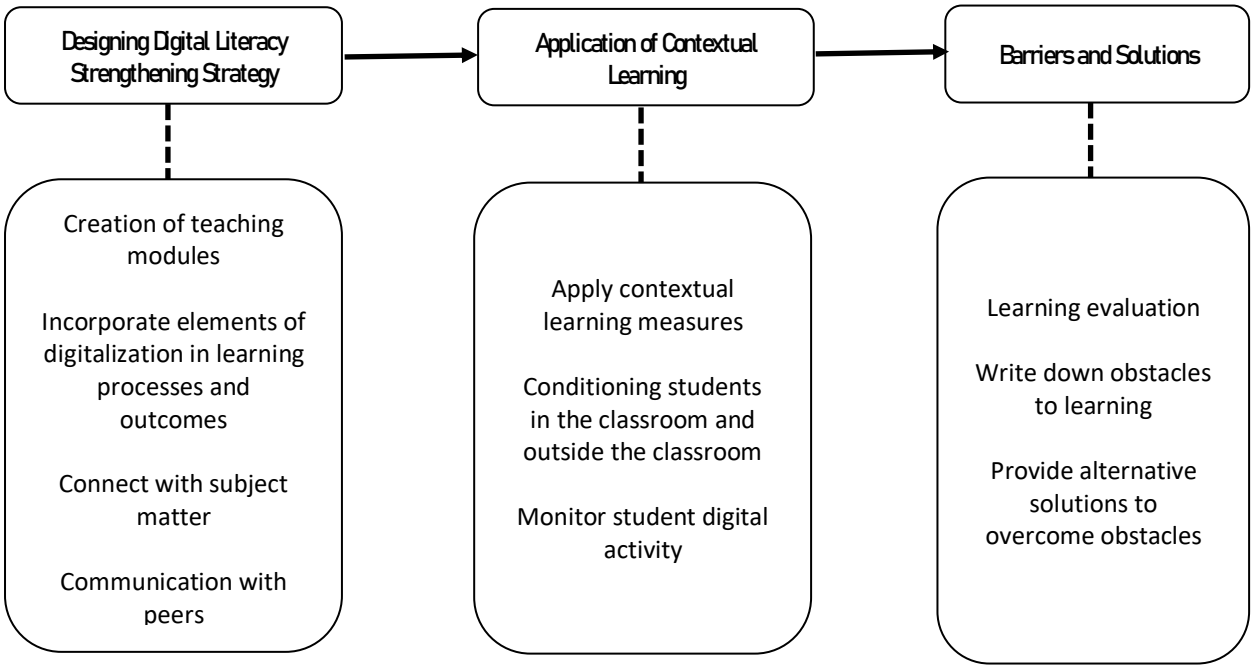

Figure 1. Flow of Digital Literacy Strengthening Strategy through Contextual Learning

Based on the results and research findings that have been described earlier, information was obtained that there are three major steps in the strategy of strengthening students' digital literacy through contextual learning. The three steps the researchers refer to as the flow of strategies to strengthen digital literacy through contextual learning, namely: 1) Design of strategies to strengthen digital literacy; 2) Application of contextual learning; 3) Obstacles and solutions. Each step in the flow needs to pay attention to several important things so that the flow can run according to the expected plan. The detailed description of the flow has been conveyed by researchers in the research findings.

Barriers and Solutions to Strengthen Student Digital Literacy through Contextual Learning

In a study there will definitely be obstacles that come with it. According to Oemar (1992: 72) Obstacles are everything that hinders, hinders, hinders what humans or individuals encounter in their daily lives that come one after another, thus causing obstacles for individuals who live them to achieve goals. It is important that we know the obstacles in the implementation of learning so that we also know how to overcome them.

The existence of obstacles and solutions will be a reference for similar research in the future so that it will produce even better research. In this study, obstacles were divided into two, namely student barriers and teacher barriers. In particular, student barriers are further divided into two, namely obstacles in the classroom and obstacles outside the classroom. For more details on obstacles and solutions in the following table.

Table 1. Barriers and Solutions to Strengthen Student Digital Literacy through Contextual Learning

Situation	Obstacles	Solution
Students in Class	1. Has no quota 2. There are members who are not actively discussing 3. Drowsiness when in class 4. Crowded in class 5. The glare of the sunlight that entered the classroom.	1. Buy quota before going to school 2. Request a hotspot or tether internet to a friend 3. Approach less-active friends 4. Equitable assignment of group assignments 5. Create a group Whatsapp group to streamline communication 6. Sleep not late at night 7. Increase teacher assertiveness 8. Installing curtains in classroom windows
Out-of-Class Students	1. Lack of discipline at departure 2. Haven't prepared enough questions for the interview	1. Make agreements and departure time commitments 2. Set up more interview questions

	3. Constrained by distance between students who are far away 4. Unfavorable weather (rain)	3. Determine the middle gathering point before departure 4. Monitor weather forecasts through the app 5. Bring a raincoat.
Teacher	1. Preparation of old teaching modules 2. Some students lack focus 3. Not accompanying directly during exploration	1. Discuss with peers 2. Providing ice breaking in the middle of learning 3. Accompany via Whatsapp group 4. Online assignment monitoring during exploration.

Source: Data Researcher

Based on the results and research findings that have been described earlier, researchers make a table of obstacles and solutions so that research findings are easier to understand. The table of obstacles and solutions above can be an important point for future researchers who will develop contextual learning again or for educators who will apply it in learning.

CONCLUSION

The study suggests that contextual learning can strengthen digital literacy skills by combining theory with hands-on practice. This strategy involves designing a strategy, applying contextual learning, and identifying barriers and solutions. It involves creating teaching modules, implementing contextual learning both inside and outside the classroom, and evaluating and addressing obstacles. Student and teacher barriers include technical and student behavior issues, as well as difficulties in structuring teaching modules and monitoring students. Solutions include buying quotas, using hotspots, improving discipline, and monitoring through WhatsApp groups. Teacher barriers include peer discussion, ice breaking, and online mentoring. The study concludes that contextual learning can make students more active and interactive, providing meaningful learning experiences. Teachers should focus on these points and provide references for obstacles and solutions. Further research is encouraged on digital culture, ethics, and security.

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