

## The Use of LKPD Based on the Make A Match Model to Improve Digital Writing Skills in Low Grade Elementary Schools

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**Abstract.** This study aims to explain the improvement of digital writing skills by using LKPD based on the make a match model. This research was conducted at SD N Pajang 03, precisely in the lower grade. This research method is descriptive qualitative, with literature study. The data obtained came from primary data and secondary data. Primary data was obtained from direct observation by researchers. Meanwhile, secondary data comes from books, articles, and other written works. There are three ways in data collection techniques, namely, observation, interviews, and documentation. The data analysis technique in this study uses the Miles and Huberman model, namely 1) Data collection; 2) data reduction; 3) data display / data presentation; and 4) drawing conclusions. Testing the validity of the data, researchers used data triangulation techniques, namely by combining the data obtained and reinforced with theories from the results of literature studies or other related research. The results of this study indicate that digital writing skills through LKPD based on the make a match model in low-grade elementary school students are stated to increase, this is evidenced by an increase in digital writing skills between cycle 1 (number of 20 students, good category 14 students with 70% presentation, quite good 5 students with 25% presentation, and very good category 1 student with 5% presentation). There was an increase in Cycle II with an increase in presentation of 35% in the very good category and a decrease in presentation of 10%. The conclusion is that the use of LKPD based on the make a match model can improve the digital writing skills of low grade elementary schools.

**Keywords:** LKPD, make a match model, digital writing skills

### 1. Introduction

Education is a planned, organized, and sustainable effort throughout life to form a more mature and cultured individual. The rapid development of the global world in the 21st-century requires special skills that everyone must be possessed. These skills are known as 21st-century or 4C skills, namely Critical Thinking, Collaboration, Communication, and Creativity. Apart from schools, education can also take place in families and communities (1,2). Therefore, the responsibility of education should be shared between the family, the community and the government. Learning is a complex and long process because it involves many activities and actions to achieve optimal learning outcomes, not just absorbing information from the teacher (3). A good learning process will

create quality education that is able to produce quality human resources (4). In planned learning, learning models are usually used. Therefore, it is expected that teachers are able to determine learning models that are in accordance with learning materials to achieve optimal student learning outcomes (5).

It is important to understand that the success of a choice of learning model depends on the learning objectives, the suitability of the material taught, the stage of student development, the teacher's skills in managing learning, and the optimization of available learning resources (6,7). Teachers have the responsibility to organize effective learning, which basically includes the process from beginning to end presented characteristically by the teacher (8). In other words, the learning model reflects the implementation of learning approaches, methods, and techniques. This success is also reflected in the improvement of student learning outcomes in accordance with teacher expectations.

The Make a Match method is an approach in which students must match the cards they have within a certain time limit to identify pairs that match the learning concept, which is done in a fun atmosphere (9). In this situation, the use of the Make a Match method in learning is used to measure student understanding by matching cards that contain questions and answers related to the material that has been taught. The advantages of Make a Match type learning include increasing students' learning activities, both cognitively and physically; deepening students' understanding of the material taught; effective as an exercise to increase students' courage in presentation; and effective in training students' discipline in respecting learning time (10). The learning process with the Make a Match method can provide a more meaningful learning experience, more centered on student activeness, and help improve the quality of the learning process and outcomes (11). The application of the Make a Match model in learning will achieve optimal effectiveness if the E-LKPD used is also in accordance with the model. Supporting components in E-LKPD interactive learning include theory and various exercise questions presented through a computer and can be accessed by participants for independent learning (12). One example of an interactive E-LKPD is one that uses information and communication technology (ICT).

In the context of education related to Industry 4.0, there are opportunities to support learning and thinking patterns and develop creative innovation from students, with the aim of producing the next generation of superior and competitive nations. This shows that education at this time requires human resources who have certain skills, including high comprehension, critical thinking, collaboration, and communication skills, as well as innovation skills, problem solving, mastery of information and communication technology, life skills, and careers (13). In facing the Industry 4.0 and Society 5.0 era, teachers are faced with complex tasks due to the impact of scientific and technological advances and environmental changes (14). Therefore, human resources need to be trained early, even in the low grades of elementary school, with the introduction of the use of electronic media such as computers. For example, in grade 5 students have been introduced to exams using computers, while in grade 6 they are used to working on exam questions using computers. The use of technology in education facilitates students' access to a wide range of learning

resources, not just depending on the teacher (15). At the elementary school level, electronic media such as computers are often used to improve digital writing skills.

In the current era, computers have become one of the most popular electronic media, providing many possibilities for extensive use (16). The ability to use computers or digital literacy is very important for one's success in the field of education. The importance of creating ideal conditions so that the next generation of the nation has reliable skills, especially in technology is highly recognized. Children need to start from an early age to be able to access digital literacy media to expand their knowledge and apply it in various subjects (17). Along with the development of science and technology, learning resources and practical media are increasing. However, there are obstacles faced today, where not everyone, especially students, is able to use computers properly and correctly. The uneven development and distribution of Information and Communication Technology (ICT) in society has led to a digital divide, especially among rural communities (18). Many people have not realized the benefits of computers in completing their tasks.

## 2. Method

This research uses a descriptive qualitative approach method, which is a research approach that moves inductively using a simple qualitative approach. The main focus of this method is on the interpretation of the research results and the processes involved (19). In this qualitative approach method, the data is analyzed descriptively. explains that in the advanced stages of this qualitative method, the research results are presented in the form of quotations or data processing as research findings. After the data processing process is complete, the researcher will get complete information that can be used as a basis for making conclusions (20). The subjects of this study were teachers and low-grade students (1,2,3) totaling 20 students. This research was conducted at SDN Pajang 03 Surakarta. The researcher in this study acted as a teacher to implement the use of LKPD based on the make a match model to improve low-grade digital writing skills.

In this research, there are three ways to collect data, namely observation, interviews, and documentation. The researcher made observations by selecting aspects to be observed and noting things that were relevant to the research topic. Furthermore, interviews were conducted with teachers who teach low grade or homeroom teachers to obtain direct information. The last method is documentation, which is used to collect data that is already available in the form of records or documents. Documents are often used to support and complement primary data obtained through observations and interviews.

The data analysis method used in this research is the Miles and Huberman model data analysis technique (21), which involves several stages. The first stage is data collection, where researchers generally conduct a literature study first to verify and prove early that the problem to be studied does exist. Furthermore, researchers conduct interviews and observations to collect field data. The second stage is data reduction, where the data obtained is reduced, selected, and sorted to be formed into writing to be analyzed. The results of the recorded interviews with the subjects will be summarized into verbatim, while the observation results will be compiled in the observation table.

The third stage is data presentation, where all the data that has been compiled in the form of a script will be presented to process the semi-finished data into writing that has a clear theme flow. The last stage is drawing conclusions or verification, where the conclusions drawn are related to the research questions posed earlier.

### 3. Result and Discussion

The first step of the research in this study was the interview. Interviews were conducted by each low-grade teacher, teachers were asked the same questions and teachers had almost the same arguments in the low-grade class. In grade 1 teachers have an argument that there are still many students who have not been able to write in books and there are some students who cannot read. In grade 2 the teacher argues that almost all students can write and read, in grade 2 there are also many students who can access laptops and understand the digital questions given. In grade 3 all students can write and read fluently, in using digital media can be smooth and can also understand the existing digital questions. Teachers in each class argue that students who have a slightly delayed learning process are almost all due to family factors, for example there is one student whose parents are divorced and finally the child is at home with his grandmother who may lack knowledge. Parents' involvement in early childhood education must be coordinated with various program initiatives and activities tailored to the study of parents' limitations, such as social position, family form, family development stage, and role modeling (22). So it can be said that the family has a big role in the child's education process. The results of the research on the use of LKPD based on the make a match model to improve low-grade digital writing skills at SDN Pajang 03 Surakarta in the table as follows:

**Table 1. Digital Writing Skills Ability Indicator**

No	Indicators of digital writing skills	Description	Implementation
1.	Access	<ul style="list-style-type: none"> <li>• Able to access and operate keyboards on computers, laptops and cellphones</li> <li>• Able to access the internet</li> <li>• Able to access digital lkpd on computers, laptops and cellphones</li> <li>• Able to access Microsoft Word on computers and laptops</li> </ul>	Students are able to access LKPD on the computer, able to operate the keyboard, able to access the internet, able to access digital lkpd, able to access microsoftword.
2.	Understand	<ul style="list-style-type: none"> <li>• Able to understand the LKPD given</li> <li>• Able to understand letters, numbers, punctuation marks on the keyboard of computers, laptops, and cellphones</li> <li>• Able to understand the arrangement of words or spaces in each word</li> </ul>	Students are able to understand the problems in the LKPD and understand the layout of letters, numbers, and punctuation marks on the keyboard.
3.	Preview	<ul style="list-style-type: none"> <li>• Able to practice digital writing by working on the LKPD that has been given</li> </ul>	Students are able to practice digital writing by working on LKPD which contains letters,

No	Indicators of digital writing skills	Description	Implementation
		<ul style="list-style-type: none"> <li>• Able to practice arranging words appropriately</li> <li>• Able to practice the arrangement of fingers on the keyboard in order to type quickly and precisely</li> </ul>	numbers, and punctuation marks.
4.	Fluency	<ul style="list-style-type: none"> <li>• Fluency in digital writing and memorizing the keyboard layout on the computer</li> <li>• Fluency in writing 3-6 words</li> <li>• Fluency in accessing digital LKPD</li> <li>• Fluency in operating the computer.</li> </ul>	Students are fluent in digital writing by memorizing the keyboard layout on the computer and fluent in spelling a sentence.

Table 2. Results of Digital Writing Skills of SDN Pajang 03

Indicator	Pretest	Cycle1	Cycle2
Very good	0	1	8
Good	7	14	12
Good enough	13	5	0

(Source: Primary Data, 2023)

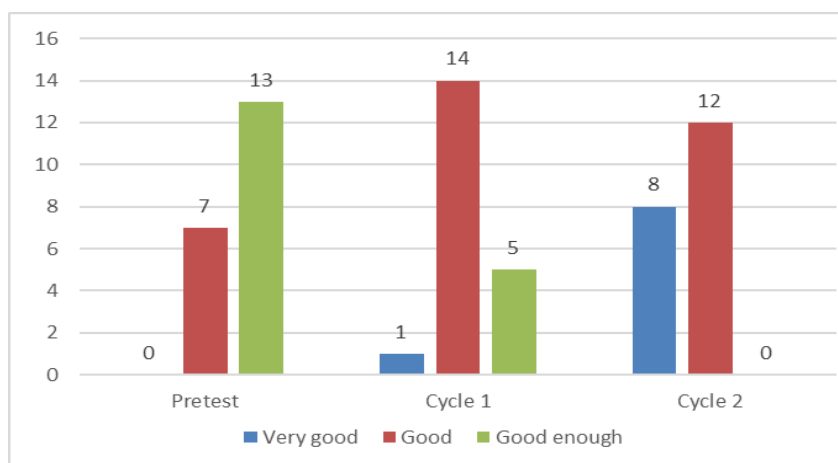


Figure 1. Histogram of Digital Writing Skills of SDN Pajang 03

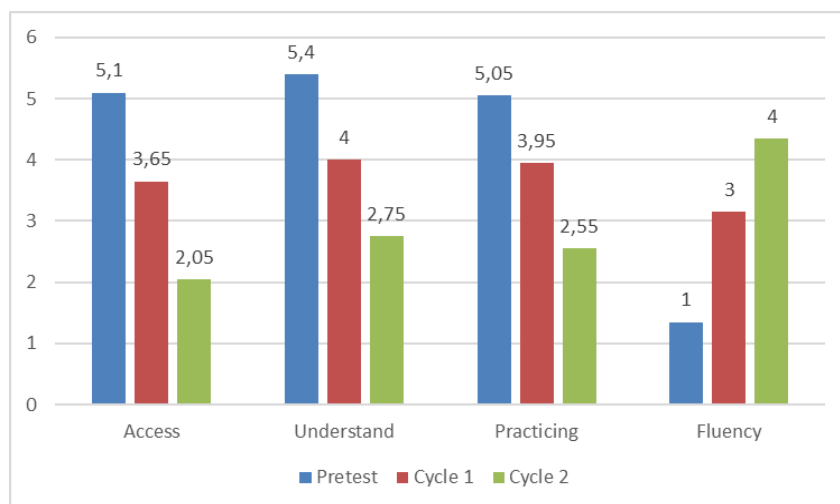
Based on the results of the data analysis above, it is known that the ability of digital writing skills at SDN Pajang 03 at the time of the pretest was highest in the good enough category, totaling 13 students with a percentage (65%), while 35% were in the good category with 7 students. During Cycle I, students' digital writing skills were highest in the good category with a total of 14 students with a presentation (70%), while 25% were in the good enough category with a total of 5 students, and the remaining 5% were in the very good category with a total of 1 student. Cycle II students' digital writing skills were highest in the good category with a total of 12 students (60%), and the remaining 40% were in the very good category with a total of 8 students. From the results of Cycle 1 and 2 provide results that there is an increase in the ability of digital writing skills. The success of student writing is influenced by the availability of facilities, infrastructure, and educational resources in both academic and non-academic fields. This is a major study to help develop cognitive

and psychomotor educational outputs (23). In the lower grades there are already some students who have adequate facilities such as laptops and cellphones, these facilities are in their respective family environments.

**Table 3. Indicators of Digital Writing Skills of SDN Pajang 03**

Indicator	Pretest	Cycle 1	Cycle 2
Access	5.1 minutes	3.65 minutes	2.05 minutes
Understand	5.4 minutes	4 minutes	2.75 minutes
Practicing	5.05 minutes	3.95 minutes	2.55 minutes
Fluency	1 word	3 word	4 word

(Source: Primary Data, 2023)



**Figure 2. Histogram of the Digital Writing Skills Ability Indicator of SDN Pajang 03**

During the pretest, the average time it takes students to access and operate the keyboard on the computer is 5.1 minutes. The time it takes students to understand the LKPD given and understand the letters, numbers, punctuation marks on the computer keyboard takes an average of 5.4 minutes. The time it takes students to practice digital writing by working on the LKPD that has been given takes an average of 5.05 minutes, and students are able to write digitally and memorize the keyboard layout on the computer with an average of completing 1 word smoothly. In the pretest, elementary school students are still unfamiliar with computer devices. Children's computing skills are still in the early stages. Elementary school age children are still not used to using laptops/computers. Meanwhile, junior and senior high school students can already utilize laptop computers because there are computer/ICT classes at school (24). Innovations that occur in the field of ICT have a positive effect on the way students carry out their learning functions and teaching strategies, especially in the creation, dissemination and application of knowledge and skills (25).

During Cycle I, the average time required for students to access and operate the keyboard on the computer was 3.65 minutes. The time it takes students to understand the LKPD given and understand the letters, numbers, punctuation marks on the computer keyboard takes an average of 4

minutes. The time it takes students to practice digital writing by working on the LKPD that has been given takes an average of 3.95 minutes, and students are able to write digitally and memorize the keyboard layout on the computer with an average of completing 3 words smoothly. In this case students have begun to understand how to operate a computer. The introduction of computers is highly recommended because with today's technology that is so advanced, we can get various world information in the palm of our hands. Likewise, children who will become the next generation of the nation need to be introduced to the most suitable technology to be taught to them (Saputri, 2023).

During Cycle II, the average time it takes students to access and operate the keyboard on the computer is 2.05 minutes. The time it takes students to understand the LKPD given and understand the letters, numbers, punctuation marks on the computer keyboard takes an average of 2.75 minutes. The time it takes students to practice digital writing by working on the LKPD that has been given takes an average of 2.55 minutes, and students are able to write digitally and memorize the keyboard layout on the computer with an average of completing 4 words smoothly. Computer devices and other equipment and the history of their development are important to introduce to students because this is a fundamental thing (Jayanti et al., 2021).

Based on these results, it can be concluded that the average time given is 5 minutes to perform each indicator of digital writing skills. In the pretest, students did each indicator in an average of 5 minutes. Then students listened to the material provided and cycle I was carried out. In cycle I students did each indicator on average 3-4 minutes, it can be said to have increased in the speed of doing each indicator of digital writing skills. In cycle II students performed each indicator in an average of 2 minutes after observing each process given. From the pretest, cycle I, and cycle II, it can be seen that the LKPD-based digital writing skills with the make a match model are increasing, this is said to increase because students work on each indicator in a shorter or faster time. This will help students better understand the subject matter. Therefore, the use of learning media in the learning process is very important to increase students' absorption of learning materials (26).

The following is a histogram of the results of the cycle II analysis of each indicator of the ability of digital writing skills at SDN Pajang 03:

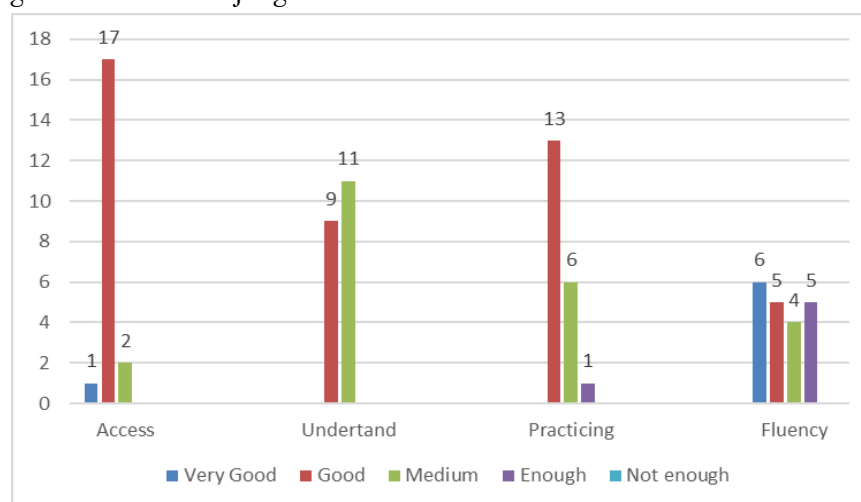


Figure 3. Histogram of Digital Writing Skills of SDN Pajang 03



Based on the picture above, it can be concluded that digital writing skills at SD N Pajang 03 are in a good category. This is evidenced by the results of observations and practical activities in the classroom. Most students already have good digital writing skills in the access indicator, which is 85% of the total number of students. The excellent category is obtained by only 1 student, based on this, only 1 student is accustomed to accessing a computer or laptop, so that 1 student has good accessing skills. This indicator includes the ability to access LKPD on computers and laptops, be able to operate the keyboard, be able to access the internet, and be able to access Microsoft Word. Microsoft Word is a popular computer application for doing school assignments (Sari, 2020). Microsoft Word (sometimes known as Microsoft Office Word) is the company's main word processing software. The benefit of Microsoft Word is to help write documents better (27).

Based on the picture above, it can be concluded that digital writing skills at SD N Pajang 03 are in a good category. This is evidenced by the results of observations and practical activities in the classroom. Most students are in the moderate category in the understanding indicator, namely 55% of the total number of students. The good category is obtained by 9 students only, this is only 9 students who have high understanding abilities, so that 9 students are in the good category. This indicator includes the ability to understand the LKPD given, understand the letters, numbers, and punctuation marks on the keyboard of computers and laptops, and understand the arrangement of words or spaces in each word. The level of student knowledge varies greatly between students, especially when it comes to the subject matter delivered by the teacher. Whether we realize it or not, many parents and teachers today are tempted to compare their children's learning achievements with those of other children, without ever understanding how children's learning achievements should be viewed as a whole in the context of social, emotional, and physical development, psychology, and others (28,29).

Based on the picture above, it can be concluded that digital writing skills at SD N Pajang 03 are in a good category. This is evidenced by the results of observations and practical activities in the classroom. Most students are in the moderate category in the practicing indicator, which is 30% of the total number of students. The good category is obtained by 13 students only, this is only 13 students who have high practicing skills, so that 13 people are in the good category. This indicator includes practicing digital writing by working on the given LKPD, arranging words appropriately, and the correct arrangement of fingers on the keyboard to speed up typing. Students' psychomotor development varies depending on the level of practice; therefore, each student must improve their psychomotor development, for example through project work. Meanwhile, psychomotor development refers to the development of management of body movements through coordinated actions between the central nervous system and muscles (30).

Based on the picture above, it can be concluded that digital writing skills at SD N Pajang 03 are in a good category. This is evidenced by the results of observations and practical activities in the classroom. Some students are in the excellent category in the fluency indicator in digital writing, which is 30% of the total number of students. In the good category, 5 students were obtained, 4 students were moderate, and 5 students were in the sufficient category. This indicator includes



fluency in digital writing 3-6 words, memorizing the layout of letters, numbers, and punctuation in the computer keyboard, and fluently accessing digital LKPD on the computer. The fluency of each child is different, because it all depends on the level of understanding capture or student absorption of what has been explained before doing the task. Educators use absorptive capacity to assess student understanding of the material being taught (31,32). Students' ability to absorb information has a significant influence on how well they complete project tasks. Therefore, good absorption is very important for students in the learning process (33).

Based on the exposure to data analysis, it can be concluded that the model of using LKPD based on the make a match model is able to improve low-grade digital writing skills at Pajang 03 State Elementary School. In line with research (34) which states that applying make a match can improve writing. In this study, the ability of digital writing skills of SDN Pajang 03 students increased in 4 indicators, namely the first, namely accessing, where students are able to access the LKPD on the computer, are able to operate the keyboard, turn off and turn on the computer. The second is understanding, where students are able to understand the problems in the LKPD and understand the layout of letters, numbers, and punctuation marks on the keyboard, the third is practicing, students are able to practice digital writing by working on LKPD containing letters, numbers, and punctuation marks. The last is fluency, in this case students are fluent in digital writing by memorizing the keyboard layout on the computer and fluent in spelling a sentence.

One of the most important things in learning is writing, writing is an activity or process of expressing thoughts, ideas, or information through the use of certain symbols or letters that form words and sentences (35). Writing is a form of written communication that can be used to convey ideas, store information, or communicate with others. Digital writing is a form of writing that involves the use of digital technology or electronic devices. It includes a wide range of formats, from text written on a computer to multimedia content that includes text, images, audio and video. Media and learning models are very important for teachers to improve the writing skills of elementary school students. Based on (36) states that the various models and media applied in learning writing skills have positive responses and significant changes that make students interested and motivated to take part in learning, this shows that the use of these learning models and media is effective in efforts to improve students' writing skills.

In this digital writing, there are 4 indicators used, namely the first is accessing, where the indicator of accessing SDN Pajang 03 students is categorized as good. Students have basic skills such as using a mouse, keyboard, and Microsoft office. To find out what are the mandatory components and basics of a computer to run smoothly, it is necessary to educate the introduction of computer basics (software, hardware and brainware) so that students can understand the basics of computers and use information technology properly for learning purposes and can keep up with current technological developments properly and appropriately (Saputri, et al., 2023).

However, the level of understanding and technological skills can differ between students. The difference is caused by several factors, one of which is parents (Nahriyah, 2018). At the low-grade elementary school level, the discussion of computer access involves an introduction to basic

hardware and software. Teachers can focus on basic knowledge of mouse and keyboard usage. In addition, lessons on digital ethics, online safety, and the importance of shutting down computers properly can also be taught. Presenting the material in an interactive and engaging way can help students understand the concepts better. According to (37) learners must be technologically literate especially those in the digital world for education to continue.

Writing on digital computers in low-grade elementary school students involves an introduction to basic writing skills using word processing software. In order for students to understand the basics of computers and use information technology properly for learning purposes and be able to keep up with current technological developments properly and appropriately, it is necessary to educate the introduction of computer basics (software, hardware and brainware (Saputri, et al., 2023). Teachers can focus on the introduction of the keyboard students are taught to recognize and use the keys on the keyboard to type letters, numbers, and special characters. After that, the use of word processing software Students are introduced to software such as Microsoft Word to create and edit text that has been provided and is in the form of LKPD. This learning is done in stages and involves hands-on activities so that students can apply their writing skills in the digital world. According to Trisna, et al., (2022) Hardware, software, and brainware are the basic components of a computer. Hardware, software, and brainware are the components or foundation needed to create a computer with features that benefit students.

The second indicator is understanding, where the indicator of understanding of SDN Pajang 03 students is categorized as Moderate. The ability to access the computer well. The ability to understand computers in low-grade elementary school students varies. The stage of student understanding of the Learner Worksheet (LKPD) on the computer can vary due to the factor of the level of readability of teaching materials with the grade level of students (Fitri, et al., 2023). students need to adapt to the digital format of LKPD, which may be different from traditional printed forms. They need to understand how to open, save, and close digital files. If the LKPD uses interactive elements such as videos, moving images, or other multimedia elements, students need to learn to interact with the content. Students need to be able to read, understand and follow the instructions contained in the digital LKPD. This includes understanding how to fill in, answer questions, and complete tasks. Students' understanding of computerized LKPD can be improved through teacher support, technology training, and gradual practical experience. Regular opportunities to interact with technology can help students build their confidence and ability to use digital LKPD.

However, low-grade elementary school students face a number of obstacles when trying to understand LKPDs on computers. Some common obstacles that can arise involve aspects of technology, computer skills, and students' level of understanding and preparedness. Students may not have access to computer devices or the internet at home as well as limited facilities at school, which can limit their ability to understand and work on digital NLPDs. Some students may not have basic skills in using computers, especially grade 1, where they tend not to be able to write and read and also constraints such as operating a mouse, typing, or using word processing software. Mulyati

(2018) states that grades 1-2 are included in beginning reading, which is an activity of recognizing language sound symbols and pronouncing them into meaningful sounds. The next obstacle is that students are more accustomed to print formats than digital formats, so it takes time to adapt to new ways of reading and completing tasks. Students face difficulties in writing or answering questions digitally, especially if they are not familiar with the keyboard or do not have good typing skills even though the lower grades are adept at accessing and understanding hardware in the form of cellphones, this is very different from computers with more complex keyboard keys. It is important to be mindful of these constraints and provide appropriate support to students so that they can overcome these challenges. Teacher support, technology training, and collaboration with parents can help improve students' understanding of the LKPD on the computer.

The third indicator is practicing, where the indicator of practicing students of SDN Pajang 03 is categorized as good. Low-grade students who are able to work on digital Learner Worksheets (LKPD) well can experience various supporting factors, namely at this stage students have basic abilities in using computer devices, including the use of a mouse and keyboard. Teachers also provide sufficient support in terms of using technology both in the context of formal learning and at home. Teacher support is very important so that students become interested in the material and enjoy every learning process (Oktafiani, 2018). After the teacher practiced, students were able to understand the instructions contained in the digital LKPD and could follow it well.

The fourth indicator is fluency, where the fluency indicator of SDN Pajang 03 students is categorized as very good. Typing skills in primary school students can vary depending on factors such as facilities, discipline, and learning motivation (Febriana & Suryani, 2015). Students who have access to a computer device at home and are disciplined in practicing typing are more likely to become fluent in using the keyboard. In addition to Reading and Writing skills, students who already have good reading and writing skills may more quickly develop typing skills because of the link between the three. typing skills are not only about speed, but also accuracy and editing skills. In primary education, the focus can be on developing good typing skills as part of broader digital literacy skills.

Based on (6) the learning process with interactive media can help students in learning and writing the material being studied. One of the interactive learning models is the make a match model. This model is a fun and relaxed learning model by changing the boring learning atmosphere into a happy and lively atmosphere (38). Make a match refers to an activity in which learners are asked to match or arrange appropriate pairs (39). This activity can be applied in various subjects (40). The purpose of the "make a match" activity is to test learners' understanding of certain concepts, build relationships between information, and improve material retention. In addition, this activity is able to increase student activeness in the learning process both cognitively and affectively (41,42). Based on the results of research from (43,44) using the make a match model as a learning media will improve the writing skills of elementary school students.

Improving digital writing skills is necessary for primary school students, although children in primary school may not have reached the level of complex digital writing skills, developing digital

writing skills at this level is still important. Students can start with a basic understanding of how to use digital devices such as computers or tablets. Students should know how to use the keyboard, mouse, and various basic elements for digital writing as they are the basic techniques for learning purposes and can keep up with current technological developments properly and appropriately (Saputri, et al., 2023). Students can utilize digital presentation tools such as PowerPoint or Google Slides to convey their ideas or information using text, images and multimedia elements.

In addition to teaching children how to access technology, it is also important for teachers to teach students about digital ethics, including copyright, image usage, and online responsibility. In accordance with digital ethics, facing changes in the field of information and communication technology today is very important so that we can build digital citizens with strong character (45). Students must understand the importance of respecting the work of others and online safety. In addition to writing skills, digital media literacy is also important. Students need to understand how to assess the sustainability and credibility of online information. By providing positive and educational digital writing experiences, schools can help primary school students develop the basics of digital writing skills that they will need in this digital era.

This research is in line with (46) where make a match is able to improve the quality of the process and learning outcomes of Javanese writing skills. In addition (47) also argues that the make a match model is able to improve Arabic writing skills with a percentage of 95% complete. The make a match model is also able to improve the learning outcomes of elementary school students (48,49). The improvement in writing anedot text also increased when the make a match learning model was applied to class X students of SMK Dharma Bakti 1 Medan (34).

#### **4. Conclusion**

Based on the results of the research, it can be concluded that improving digital writing skills is necessary for elementary school students, although children in elementary school may not have reached the level of complex digital writing skills, developing digital writing skills at this level is still important. The model of using LKPD based on the make a match model is able to improve low-grade digital writing skills at Pajang 03 State Elementary School.

In this study, the ability of digital writing skills of SDN Pajang 03 students increased in 4 indicators, namely the first, namely accessing, where students are able to access the LKPD on the computer, able to operate the keyboard, turn off and turn on the computer. The second is understanding, where students are able to understand the problems in the LKPD and understand the layout of letters, numbers, and punctuation marks on the keyboard, the third is practicing, students are able to practice digital writing by working on LKPDs containing letters, numbers, and punctuation marks. The last is fluency, in this case students are fluent in digital writing by memorizing the keyboard layout on the computer and fluent in spelling a sentence.

Students experience an increase in each cycle in digital writing skills by working on LKPD based on the make a match model, not only that, each indicator also increases as seen from the time in digital writing on the LKPD. Thus, improving digital writing skills in elementary school is very

important and has a big effect later when students continue their education to a higher level, students have basic knowledge in operating electronic media such as laptops or computers. In addition to operating a laptop, students can also access the digital LKPD provided by the teacher. Students can also more quickly memorize the layout of letters, numbers, and punctuation marks on the keyboard.

## 5. References

1. Listiaji P, Widianingrum RA, Saputri AAI, Rahman NFA. PjBL Model assisted by Smartphone Sensors to Improve Critical Thinking Skills of Prospective Science Teachers. *Indones J Learn Adv Educ*. 2022;4(3):246–56.
2. Maghfiroh A, Widiyani Styati E, Fachriza A, Simpol W, Anwar Syaputra R. Future-Ready Educators: Assessing Digital Competence and Teaching Preparedness Among Prospective Teachers in the 21<sup>st</sup> Century Loey Primary Educational Service Area Office, Thailand. *Indones J Learn Adv Educ* [Internet]. 2024;6(1):47–61. Available from: <http://journals.ums.ac.id/index.php/ijolae>
3. Setyowati L, Inah EN. Penerapan Model Number Head Together (NHT) dalam Meningkatkan Hasil Belajar Matematika pada Siswa Sekolah Dasar. *Diniyah J Pendidik Dasar*. 2020;1(1):23.
4. Rusman R. *Belajar & Pembelajaran: Berorientasi Standar Proses Pendidikan*. Prenada Media; 2017.
6. Ayuwanti I. Meningkatkan Aktivitas dan Hasil Belajar Matematika Menggunakan Model Pembelajaran Kooperatif Tipe Group Investigation di SMK Tuma'ninah Yasin Metro. *SAP (Susunan Artik Pendidikan)*. 2017;1(2).
7. Utami NPMA, Ganing NN, Kristiantari MGR. Model Make A Match Berbantuan Media Puzzle Suku Kata Berpegaruh Terhadap Keterampilan Menulis. *J Ilm Pendidik Profesi Guru*. 2020;3(1):48–60.
8. Fuadatus SA, Agung AAG, Sudarma IK. Pengembangan Media Puzzle Berbasis Make A Match Pada Pembelajaran Tematik Kelas 2 Di Madrasah Ibtidaiyah. *J Edutech Undiksha*. 2019;7(2):36–47.
9. Dasor YW, Hermaditoyo S, Hudin R. Communication Strategy In Learning To Resolve Communication Anxiety College Students UNIKA Santu Paulus Ruteng. *J Educ Teach Learn*. 2022;4(1):61–73.
10. Suprpta DN. Penggunaan Model Pembelajaran Make a Match Sebagai Upaya Meningkatkan Hasil Belajar Bahasa Inggris Siswa. *J Educ Action Res*. 2020;4(3):240–6.
11. Huda M. *Cooperative Learning: Metode, Teknik, Struktur Dan Model Penerapan* (Cet. 9). 2015.
12. Pratiwi RH. Metode Pembelajaran 'Make A Match'Dan Pengaruhnya Terhadap Hasil Belajar IPA. *Florea J Biol dan Pembelajarannya*. 2018;5(1):37.
13. Alberida H, Handayani D. Pengembangan Asesmen Kemampuan Berpikir Kritis Materi Sistem Sirkulasi untuk Siswa SMA Kelas XI. *SIMBIOSA*. 2020;9(1):39–51.
14. Widyanto IP, Merliana NPE, Pranata P. Implementasi Manajemen Pembelajaran Era Revolusi Industri 4.0 Di Institut Agama Hindu Negeri Tampung Penyang Palangka Raya. *J SMART (Studi Masyarakat, Reli dan Tradisi)*. 2020;6(1):1–15.
15. Ahmadi F, Ibda H. *Konsep dan aplikasi literasi baru di era revolusi industri 4.0 dan society 5.0*. CV. Pilar Nusantara; 2019.

16. Isrokaton I, Yulianti U, Nurfitriyana Y. Analisis profesionalisme guru dalam pelaksanaan pembelajaran daring di masa pandemi Covid-19. *J Basicedu*. 2022;6(1):454–62.
17. Permana RSM, Mahameruaji JN. Strategi pemanfaatan media baru NET. TV. *J Stud Komun Dan Media*. 2019;23(1):21–36.
18. Bestari MP, Hakiki MH. Peningkatan Literasi Sekolah Guru dan Siswa melalui Pengabdian Kepada Masyarakat Perpustakaan STIE Perbanas Surabaya. *Pustabiblia J Libr Inf Sci*. 2018;2(1):137–48.
19. Oktavianoor R, Dalam JD, Airlangga S. Kesenjangan Digital Akibat Kondisi Demografis di Kalangan Masyarakat Rural Digital Gap caused by Demographic Condition among Rural Society. *N J Inf Libr Sci*. 2020;11(1):9–57.
20. Yuliani W. Metode penelitian deskriptif kualitatif dalam perspektif bimbingan dan konseling. *QUANTA J Kaji Bimbing dan Konseling dalam Pendidik*. 2018;2(2):83–91.
21. Darmalaksana W. Metode penelitian kualitatif studi pustaka dan studi lapangan. *Pre-Print Digit Libr UIN Sunan Gunung Djati Bandung*. 2020;
22. Sugiyono. *Metode Penelitian Kualitatif*. Bandung: Alfabeta; 2018. 134 p.
23. Irma CN, Nisa K, Sururiyah SK. Keterlibatan orang tua dalam pendidikan anak usia dini di TK Masyithoh 1 Purworejo. *J Obs J Pendidik Anak Usia Dini*. 2019;3(1):214–24.
24. Putri ADS. Keefektifan Modul Pembelajaran Menulis Karangan Berbasis Pendidikan Karakter pada Peserta Didik Kelas IV Sekolah Dasar. *J Pendidik Dasar*. 2018;6(2).
25. Pradana YA, Setyawati Y, Dewi LP, Shobri MQ, Adhantoro MS, Kurniaji GT, Romadloni NT. Penentuan Rute Optimal Wisata di Kota dan Kabupaten Madiun Menggunakan Algoritma Genetika. *Jurnal Keilmuan dan Keislaman*. 2024 Jan 22:49-56.
26. Onojah AA, Onojah AO, Olumorin CO, O. Omosewo E. Secondary School Teachers' Accessibility to Internet Facilities for Advanced Instruction in Nigeria. *Indones J Learn Adv Educ*. 2021;3(2):86–95.
27. Anditiasari N. Analisis kesulitan belajar abk (Tuna Rungu) dalam menyelesaikan soal cerita matematika. *Mathline J Mat Dan Pendidik Mat*. 2020;5(2):183–94.
28. Wijaya M. Kelebihan dan Kekurangan Microsoft Word. *nitrotekno. com*. 2020;
29. Tiara B, Stefanny V, Sukriyah S, Novitasari D, Asbari M. Inovasi di era informasi: Analisis kepemimpinan transformasional dan iklim etis di industri manufaktur. *EDUKATIF J Ilmu Pendidik*. 2021;3(6):4659–70.
30. Tsoraya ND, Khasanah IA, Asbari M, Purwanto A. Pentingnya Pendidikan Karakter Terhadap Moralitas Pelajar di Lingkungan Masyarakat Era Digital. *Literaksi J Manaj Pendidik*. 2023;1(01):7–12.
31. Wiryaningsih N, Jampel IN, Antara PA. Penerapan Kegiatan Melipat Kertas Origami Untuk Meningkatkan Kemampuan Motorik Halus Pada Anak TK Aisyiyah Bustanul Athfal. *E-Journal Pendidik Anak Usia Dini Univ Pendidik Ganesha Jur Pendidik Guru Pendidik Anak Usia Dini*. 2016;4(2).
32. Aryantini NK, Sujana IW, Darmawati IGAPS. Model Discovery Learning Berbantuan Media Power Point Meningkatkan Hasil Belajar IPA Siswa SD. *J Pedagog Dan Pembelajaran*. 2021;4(2):243–50.
33. Meganingtyas BR, Winarni R, Murwaningsih T. The effect of using course review horay and talking stick learning methods towards social science learning result reviewed from learning interest. *Int J Educ Res Rev*. 2019;4(2):190–7.



34. Widyastuti PA, Widiana IW. Analisis Peran Tutor Sebaya Terhadap Sikap Sosial Siswa Tuna Rungu. *J Educ Technol*. 2020;4(1):46–51.
35. Ratri DP, Muhroji M, Prayitno HJ, Adhantoro MS, Putra CA. TikTok Dance Challenge: Content Creativity and Character Value for Elementary School Students. *Buletin KKN Pendidikan*. 2024 Jun;6(1):20-32.
36. Pertiwi IN, Sumarno S, Dwi A. Pengaruh Model Make A Match Berbantu Media Kartu Bergambar terhadap Kemampuan Membaca dan Menulis. *Mimb PGSD Undiksha*. 2019;7(3).
37. Fauzia FI, Salamah IS, Hakim RT, Zulfikar MF. Efektivitas Penggunaan Model Dan Media Pembelajaran Dalam Meningkatkan Keterampilan Menulis Siswa SD. *Nat J Kaji Dan Penelit Pendidik Dan Pembelajaran*. 2022;7(1):1370–84.
38. Upa R, Pulu R. Pelatihan dan pengenalan dasar-dasar komputer bagi siswa sekolah dasar di lingkungan Kelurahan Temmalebba. *Madaniya*. 2021;2(4):373–7.
39. Pratiwi SU, Yensy NA, Maizora S, Siagian TA. PENERAPAN MODEL PEMBELAJARAN KOOPERATIF TIPE MAKE A MATCH BERBANTUAN LKPD BERBASIS SCIENTIFIC UNTUK MENINGKATKAN HASIL BELAJAR MATEMATIKA SISWA KELAS VIII A DI SMPN 17 KOTA BENGKULU. *J Penelit Pembelajaran Mat Sekol*. 2021;5(3):392–405.
40. Johannes J. Meningkatkan Hasil Belajar Siswa Menggunakan Model Pembelajaran Make A Match Pada Pelajaran IPA Materi Sifat-Sifat Cahaya Di Kelas V SD Negeri 060952 Medan Labuhan TP 2019/2020. *J Educ Teach Learn*. 2021;3(1):50–61.
41. Putri END, Taufina T. Pengaruh Model Kooperatif Tipe Make A Match Terhadap Hasil Belajar Siswa di Sekolah Dasar. *J Basicedu*. 2020;4(3):617–23.
42. Ermita E. Make a-match: Sebuah Metode untuk Meningkatkan Keaktifan Siswa. *J Stud Guru Dan Pembelajaran*. 2021;4(2):429–36.
43. WANTI NIRI. Penerapan Model Make A Match Untuk Meningkatkan Keaktifan Siswa. *Soc J Inov Pendidik IPS*. 2022;2(1):44–50.
44. Herlina H, Marhadi H, Kurniawan O. Penerapan Model Pembelajaran Kooperatif Tipe Make a Match Untuk Meningkatkan Kemampuan Menulis Pantun Siswa Kelas IV SD Negeri 015 Penyaguan. *Riau University*; 2017.
45. Adhantoro MS, Gunawan D, Prayitno HJ, Riyanti RF, Jufriansah A. Strategies to Enhance Literacy and Access to Muhammadiyah Information through ChatMu Innovation. *International Journal of Religion*. 2024 Jun 29;5(11):2503-20.
46. Pramanda AY. Penguatan Etika Digital pada Siswa untuk Menanggulangi Penyebaran Berita Bohong (Hoax) di Media Sosial Melalui Pendidikan Kewarganegaraan (Studi SMA/SMK di Surakarta). 2018;
47. Sugiarti S. Peningkatan Keterampilan Menulis Aksara Jawa Melalui Metode Struktural Tipe Make a Match pada Siswa Sekolah Menengah Pertama. *Edudikara J Pendidik dan Pembelajaran*. 2019;4(3):192–207.
48. Shalihah HH. Penerapan Metode Make A Match Berbasis Pancingan Kata Untuk Meningkatkan Kemampuan Menulis Bahasa Arab. *ALSUNIYAT J Penelit Bahasa, Sastra, dan Budaya Arab*. 2018;1(2):137–45.
49. Hakin I, Zuryanty Z. Peningkatan Hasil Belajar Peserta Didik Pada Tematik Terpadu Menggunakan Model Cooperative Learning Tipe Make A Match Di Kelas IV SDN 08 Tarung-Tarung Selatan Pasaman. *Innov J Soc Sci Res*. 2023;3(2):6542–51.



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50. Zahrah N, Syam N. Penerapan Pembelajaran Kooperatif Model Make A Match Untuk Meningkatkan Hasil Belajar Siswa Sekolah Dasar Kelas Lima di Kabupaten Pinrang. *Pinisi J Educ.* 2021;1(2):122–135.