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The Effectiveness of Educational Games in Digital Literacy to Improve Healthy Social Interactions in Elementary Schools

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Abstract

Purpose: This study aims to determine the effectiveness of educational games in fostering digital literacy to enhance healthy social interaction among elementary school students. By leveraging digital game-based learning, the research examines whether game-mediated activities can stimulate student engagement and promote constructive peer relationships.
Methodology: Employing a quantitative quasi-experimental design with pretest–posttest control groups, the study involved two fifth-grade classes at an elementary school: class VA (experimental) and class VB (control). Both groups completed a pretest measuring healthy social interaction, after which the experimental group engaged in a series of educational game sessions while the control group followed regular instruction. A posttest was administered to both groups, and data were analyzed using the General Linear Model and normalized gain (N-gain) to assess learning effectiveness.
Results: The experimental group (VA) achieved an N-gain of 79.16%, categorizing it as highly effective in improving healthy social interaction. In contrast, the control group (VB) recorded an N-gain of 30.79%, indicating a less effective outcome. These results demonstrate that students who learned via educational games exhibited significantly greater improvements in cooperative behaviors, communication skills, and mutual respect.
Applications/Originality/Value: By confirming that educational game-based interventions can effectively cultivate healthy social interaction, this study provides a novel contribution to the literature on digital literacy and social skills development. Educators and curriculum designers can adopt game-centered modules to simultaneously build technological fluency and interpersonal competencies. Furthermore, the research highlights a previously underexplored linkage between educational gaming and social well-being, offering new directions for both pedagogical practice and future studies.

Introduction

The development of digital technology today has changed all aspects of life. The technology used is able to make it easier for its users. According to the OECD, this shift is happening rapidly in the world of education towards digital technolo-gy to continue daily life, so that all-digital technology-related skills have im-portant participation in society (Scholes et al., 2024). Digital technology is able to change from the traditional to the modern era which is sophisticated and fast. Especially in the world of education in terms of learning materials, learning tools, and educational game media can be accessed through online media. Online media makes it easier for educators to find ideas and innovations to develop interactive learning materials for elementary school students. It can be concluded that the existence of digital technology in the world of education can have a great influ-ence on learning. Elementary school-age children really need to provide a touch of technology, both games and videos, in their learning. The existence of digital technology can add motivation and enthusiasm for learning in the classroom. Because if there is something new, students must have curiosity related to it. So that children are enthusiastic about participating in the learning carried out in the classroom. According to Fauziah, motivation arises from within a person in in-creasing material understanding to achieve planned goals (Gaol & Sitepu, 2020). Technology can be used in education as an effort so that students are not saturat-ed when learning is carried out.

The development of science and technology provides demands in the world of education to always update, follow, and be open to all existing changes (Chananggal & Wulandari, 2022). Digital technology that can be used to help educators in learning is educational games. Along with the development of in-creasingly sophisticated technology, teachers must present educational technolo-gy as a digital media (Khabibah et al., 2020). In addition, those that can be used in the learning process of elementary school children can be given learning mate-rials in the form of powerpoints, educational games, and learning videos. So that students can be involved to play and learn together. Many students are happier if their children are directly involved in learning. For example, students can try and do learning activities directly to engage in the process. Surely students will be able to understand better if they do it directly. Educators can use educational games in the learning process. Digital games can be an important tool in engaging students (Panjaburee et al., 2024). Educational games can have an influence on the learning strategies taught so that they will have an interactive learning im-pression.

Educational games can also make students to learn actively and always be directly involved with the material explained. In addition, educational games also make students more responsive because visual learning has challenges in the form of quis questions. These challenges are able to make students develop criti-cal thinking skills and be able to solve a problem faced by students.

Interactive learning is learning that involves student participation in the learn-ing process. Digital game-based learning is a learning strategy that combines digi-tal games and educational design (Zheng et al., 2024). This digital game-based learning has become a trend nowadays. Students can be more active and less sat-urated when learning. According to KF Hew and T. Brush, the existence of this digital technology is able to facilitate the creation of learning and teaching op-portunities for everyone in supporting student learning, teaching, and assessment (Boateng et al., 2024). Students can do it directly and provide opportunities for students to use digital technology. According to J. Tay, the role of this technology is able to change learning into innovative and provide new experiences for stu-dents. Previous research has shown that the use of digital games in education is more effective than conventional lecture strategies (Zheng et al., 2024). Because children in elementary school have a very big difference between children in the past and children in this era. The existence of educational games can provide a fun experience. This has been proven to increase learning motivation and student involvement in the learning process.

Digital game-based learning provides a change in the learning process. Educa-tional games can be used as a tool or means of providing learning materials to students. The existence of digital games can be used to achieve the learning goals that have been designed. Educators can design learning according to the needs of students. Providing digital games to increase students' understanding of the mate-rial that has been delivered. Various efforts that educators can make to make learning fun and interesting for students. In order for learning to run happily, educators can use learning support tools. Educational games can be designed using points, levels, and in the form of challenge questions to be able to motivate students to think critically, communicate, and be creative in themselves. Play-based learning in elementary schools can encourage active student involvement in problem-solving, collaboration between students, and practice communication skills. In addition, the existence of digital games can have a great influence on healthy social interaction in elementary schools. These educational games have an influence on collaborative learning and increase cooperation (Qiannan et al., 2022). Educational games are widely used or designed to be played in groups that involve healthy competencies. Working together, deciding on the right answer, and communication are included in healthy social interactions between students and students that are built to solve a problem.

According to Pulgar, the ability to interact with people around can have a posi-tive impact on students. Students can capture the impact of social interaction in a social environment largely depending on their teaching strategy (Candia et al., 2022). Strategies in building social interaction in students have a very important effect on the teaching strategies applied by teachers. If teachers implement a learning process that encourages students to be actively involved in the learning process, such as learning discussions, it can improve students' ability to com-municate and collaborate with their peers. Students can convey ideas, ideas, and opinions to promote positive social interactions. Social skills are able to provide students with an understanding of social values, empathy, providing support, openness, cooperation, and other skills related to interaction. According to Blair, social literacy skills, namely students' ability to read and write, include mastering literacy skills through social interaction with other children and adults both in-side and outside the formal or informal curriculum (Alsubaie, 2022). Social in-teraction will form itself if students are able to interact or communicate frequent-ly with others. It can be seen when students have the courage to speak up ex-pressing their opinions, respond to conversations with others, and are able to be good listeners. Teachers have a very important role to encourage healthy social interaction in students. Because teachers often interact when learning in class. Teachers can instill positive things when learning such as appreciating and re-specting the opinions of others.

Social interaction will be better if teachers are able to guide and direct stu-dents in the learning process. Teachers' involvement in shaping students' person-alities that are communicative, critical thinking, collaboration, empathy, open-ness, and mutual support. Each child has a different mentality and body in adjust-ing to the environment in their area, not all children are involved in social activi-ties well (Budiwati et al., 2022). In learning, it is very important to do two-way learning, so that learning is not only about lectures, students can respond. The relationship that occurs is reciprocal between emotional support and children's empathy (Pakarinen et al., 2020). Educators can provide an educational game to provoke student interaction according to the material taught. The desire to use technology and the increasing number of available technology will encourage educators to use classroom technology more and more in involving students in learning. The findings of previous research state that the trend of influence on the use of games can increase student motivation (Leitão et al., 2022). In addition to students' reactions to educational games carried out in learning, of course, it can increase students' motivation to learn in class. The use of educational games is able to provide stimulation to students for children who easily get bored with lecture or conventional learning methods. The existence of this game is able to attract students to learn to do with the help of educational games that are inte-grated with learning materials.

Educational games can also improve healthy social interaction for children. According to the results of an article from Stolz, finding an idea related to socio-logical theory with the concept of social games that has advantages in providing guidance for interpretation, explanation, and translation of intermediate level theories (Stolz, 2023). According to philosophy, Searle states games are used for fun in showing how real and constructed social reality is (Stolz, 2023). In doing so, children also learn complex interactions and role identities through play. Ed-ucational games are able to build

healthy social interactions in the form of coop-eration, empathy, communication, respect and respect for opinions, discussion, and being able to solve problems. The social interaction that occurs in the use of games is able to provide a sense of empathy to students in responding to a prob-lem. Grusec and Hastings stated that many students spend time in the school en-vironment, so there is a lot of social interaction between peers and teachers (Schwerter et al., 2024). The use of learning media in subject matter is expected to be able to form healthy social interactions in students. Learning media can be a means to attract and encourage students in communication skills.

Based on the explanation from researchers related to the problem, research re-lated to educational games with digital literacy has been proven to increase un-derstanding of technology so that it can encourage digital literacy skills. Howev-er, research related to healthy social interaction from the use of educational games has not been studied in depth. Based on this background, researchers are interested in further studying the effectiveness of educational games in digital literacy to improve healthy social interaction in elementary schools. Through educational games, students can be encouraged to increase social interaction in learning. Researchers will focus on how educational games are an effective means of learning to increase healthy social interaction through digital literacy. So that educational games are not only a learning medium but are able to develop students' social interaction skills. The existence of this study can provide a refer-ence or guide for teachers to use educational games as a form of increasing digi-tal literacy and building healthy interactions in elementary schools. This research can also contribute to understanding related to technology to develop healthy social interaction at the elementary school level.

Method

This study uses quasi-experimental research using a quantitative approach that aims to determine the effectiveness of educational games in digital literacy to improve social interaction in elementary schools. The design used uses a pre post test control group. The research was conducted at Madrasah Ibtidaiyah Muham-madiyah Sonorejo. The subject of the research is focusing on grade V elementary school students. The number of students studied was 50 students consisting of 26 students in class VA and 24 students in class VB. The VA class is an experiment and the VB class is a control class. The data collection technique uses a pretest questionnaire and a posttest questionnaire. The instrument used is social interac-tion. The social interaction instrument used adapted from Pratama with the re-sults of the reliability test of the table > calculation, which was 0.860 > 0.36, so the results were very significant (Pratama, 2021). The instrument consists of two aspects, namely the aspect of social contact and communication. The results of the pretest data were carried out normality tests and homogeneity tests to deter-mine whether the data was normally and homogeneously distributed. The data analysis technique uses the ANOVA General Linear Model for the experimental class and the control class. The General Linear Model is used to analyze data with dependent variables and independent variables. To find out the effective-ness of educational games, it can be tested using the N-gain test. The existence of the N-gain test is able to find out that the games carried out in the learning pro-cess can run effectively.

Results and Discussion

Results

This research was carried out at Madrasah Ibtidaiyah Muhammadiyah Sonorejo. The subjects in this study are class V which consists of two classes, namely VA class as many as 26 students and VB as many as 24 students. The total number of samples was 50 students. The VA class is an experimental class and the VB class is a control class. The process of giving the VA class treatment is using digital literacy educational games while the VB class uses conventional learning or lecture methods. The first step is to provide a pre-test questionnaire to students in the experimental VA class and the control VB class. The pretest was carried out to test the students' initial understanding before the treatment. After the pre-test data is collected, a descriptive statistical test can be carried out.

Table 1. Descriptive statistical results

Description	Experiment		Control	
	Pretest	Posttest	Pretest	Posttest
Average	87,19	121,35	84,50	99,46
Std. Deviation	7,419	1,294	7,616	6,587
Min	68	199	75	89
Max	104	125	100	109

Table 1, It shows the average pretest of the experimental class is 87.19 and the pretest of the control class is 84.50. The average posttest of the experimental class was 121.35 and the posttest of the control class was 99.46. It can be compared that the average class of the experimental class is higher than that of the control class. This shows that the learning action in the experimental class has a more significant influence. The averages obtained can be used to test *the General Linear*

Model and the N-gain test. The next step is to test normality and homogeneity to find out if the data is normal and homogeneous.

Table 2. Pretest normality test results

Shapiro-Wilk		
Data	Sig.	Ket.
Pretest	0,712	Usual

Table 2, The results of the pretest normality test showed that the significance value in the experimental and control groups was greater than 0.05. Based on the results of the normality test, it can be concluded that the pretest data is normally distributed. So that this data can be used for parametric statistical tests.

Table 3. Results of pretest *homogeneity test*

Levene Statistic		
Data	Sig.	Ket.
Pretest	0,389	Homogeneous

Table 3, The results of the pretest homogeneity test showed that the significance value in the experimental and control groups of SIG. 0.389 is greater than 0.05. It can be concluded that the pretest data has homogeneous data.

Activities carried out after obtaining pretest questionnaire data, each class is treated. The treatment was given three times for each class. The experimental class had three meetings and the control class had three meetings. The experimental class in the VA group used the educational game Wordwall. Meanwhile, the control class in the VB group uses conventional learning. The subject used for the research is Pancasila Education with norm material in my life. After the implementation of three meetings for each class, a posttest was carried out to measure students after being given action.

Table 4. General linear model *test results*

Dependent Variable: Healthy Social Interaction			
Source	F	Sig.	Ket
Educational Games	275,990	0,000	Influential

Table 4, Showing test results *General Linear Model* with the significance value obtained from the results of the posttest questionnaire data of the experimental class and the control class. Based on the test results, it is stated that sig. 0.000 is less than 0.05. It can be concluded that there is a significant influence between educational games and healthy social interaction in elementary school students. To test the level of effectiveness of the experimental class and control class, it can be done with the N-gain test.

Table 5. N-gain test results

Class	N-Gain Result (%)
Experiment	79,16
Control	30,79

Based on the results of the calculation of the N-gain test on Table 5. The average result of the experimental class was 79.16% and the average control class was 30.79%. Furthermore, it can be seen through the table of categories of interpretation of N-gain effectiveness from Hake, R.R (1999).

Table 6. Categories of n-gain effectiveness

Percentage (%)	Interpretation
< 40	Ineffective
40 – 55	Less Effective
56 – 75	Quite Effective
> 76	Effective

Based on the interpretation category on Table 6. The results of the calculation of the N-gain test showed that the average N-Gain score for the experimental class with educational games was 79.16% included in the effective category. Meanwhile, the average N-gain for the control class with conventional learning of 30.79% is included in the category of ineffective. So it can be concluded that the use of educational games is effective in increasing healthy social interaction in the subject of Pancasila Education, the norm material in my life. Meanwhile, conventional learning is less effective in increasing healthy social interaction in Pancasila Education subjects.

Discussion

This study aims to determine the level of effectiveness of educational games in digital literacy to increase healthy social interaction in MIM Sonorejo. This re-searcher used a quasi experiment . Quasi experiment is a systematic approach to research in which a researcher controls and measures any change in another vari-able (Zajić & Maksimović, 2022). The purpose of the experiment is to predict whether there are changes and improvements when given an action. According to Gunawan, the experimental and control groups that were given a pretest were then given a treatment and then ended with a posttest (Hidayati & Afifah, 2022). The subjects of this study are 26 VA students and VB as many as 24 students with a total of 50 students. This research is divided into two, namely VA as an experimental class and VB class as a control class. The implementation of learn-ing was carried out 3 times for each class, 3 meetings for the VA class and 3 meetings for VB. The total number of implementations was 6 meetings. The im-plementation of actions for the experimental class uses educational games while the control class uses conventional learning or lecture methods. However, the two classes use the same learning materials but different media.

The process of conducting research is carried out using stages, namely pre-test, control class action and experiment, and posttest. The control class was used as a comparison group with the experimental group given the action (Zajić & Maksimović, 2022). The pretest is carried out to find out the initial condition of the student before the implementation of the action. After the pretest is carried out, the results will be tested for normality and homogeneity. Pre-test testing is carried out with a combination of control class and experimental class. The num-ber of pretest questions is 26 questions. The results of the normality test showed sig. 0.712 is greater than 0.05. Based on the results of the normality test, it can be concluded that the pretest data is normally distributed. So that this data can be used for parametric statistical tests. After the normality test, it can be continued by testing homogeneity. The results of the homogeneity test showed that the significance value in the experimental and control groups was sig. 0.389 is greater than 0.05. It can be concluded that the pretest data has homogeneous data.

The importance of building healthy social interaction in elementary school as an effort to build character in students. According to Hamre, it is stated that con-tinuous interactions carried out by students are such as interactions between teachers and students (Soininen et al., 2023). The interaction occurs in the school environment during classroom learning. Teachers can provoke students to con-tinue interacting such as asking questions to teachers, teaching them how to appreciate and respect others. So that students have a sense of empathy and open-ness in communicating. Efforts to build interaction can also be done when in the home or community environment. To increase social interaction in learning, it can be supported by using learning media. The selection of interesting learning media can be an effective medium to increase social interaction in the classroom. The existence of technology assistance can make it easier for students to be in-volved in the learning process, both discussions and questions and answers. Digi-tal literacy-based media can help improve the understanding of the material ex-plained by teachers.

Digital literacy-based learning media can be applied by using educational games in learning. Digital literacy is an important thing in all fields, especially in the field of education (Z.-J. Liu et al., 2020). According to Simbolon research, digital literacy also has an influence on reading interest for elementary school students (Simbolon et al., 2022). In his research, digital literacy is used to meas-ure reading interest by using various WhatsApp applications, zoom, google classroom as a learning communication tool. The more advanced modern technology is, it is hoped that educators will be able to keep up with the development of the all-digital era. All educational techniques can be used as a new experience in this digital age. Digital literacy also has an influence on the learning environment on student learning outcomes. As the results of research by Yuliana, the habit of helping each other when the learning process is able to create a comfortable at-mosphere (Yuliana et al., 2023). So the results of his research show that the learning environment and social interaction have an influence on learning out-comes.

In this study, digital literacy for educational games also has an effective level of effectiveness. Through Wordwall games, it can be a new thing to understand, access or use technology well. The game can be used as an introduction to digital literacy for students because it involves the use of technology in helping to un-derstand the learning material. Encouraging students' skills in using technology in education. So that learning can run happily and have an interactive impression. This media makes it easier for students to understand learning so that students do not get bored with the lecture learning method (Kariyati & Kusumaningrum, 2021). His research discusses Wordwall media in improving Chinese vocabulary skills. The results of the research show that it is feasible to be used in the learning process. It can be concluded that Wordwall games can not only be used to pro-mote healthy social interaction, but can also be used to improve Chinese vocabu-lary as previously researched.

Learning media is an important means to support the learning process in the classroom. The learning medium used in this study is the Wordwall game. Word-wall is a platform that provides various types of educational games that can be used as a medium in learning. Wordwall media has proven to be easy to use and has many alternatives in conveying questions and materials (Hasibullah, 2023). Wordwall has various forms of games that can be used to ask questions related to the material studied. According to Koro's research, students who use Wordwall educational media or games have higher enthusiasm and activeness in teaching and learning activities so that it has a positive impact on improving student learning outcomes (Lestari & Rohmani, 2024). Student involvement in digital games is very effective in promoting healthy social interaction. Teamwork in the form of playing online students can be used in applying teamwork skills (Adipat et al., 2021). In addition, the existence of educational games can improve students' critical thinking skills. According to

Widiastika, media can be used in the class-room as one of the learning strategies to develop student characteristics (Hidayat et al., 2023).

In this study, Wordwall media was used to find out the level of social interac-tion contained in this web game. The implementation of this game is carried out every meeting, one educational game is given. The types of games used are quiz, Match Up, and Open the Box. The game contains statements related to students' reactions to pictures and story questions about social interaction. Games in digi-tal form are able to be used and involve students in learning practices (Z.-Y. Liu et al., 2021). Students can do directly in playing educational games, so students can learn while doing to make it easier to remember the learning material. The selection of this game can be with multiple choice, quizzes, or short questions. According to Cruea, wordwalls are an easy way to use games in education by testing knowledge through game platforms (Magasvaran et al., 2022). This can make innovative learning for educators to integrate a game into learning materi-als. This game can be adjusted to the material being studied so that it can be syn-chronized with the learning topic.

The first game used in the learning process in the experimental class was quis. Wordwall includes a web application for creating fun quis-based games (Kariyati & Kusumaningrum, 2021). Quis is an educational game used to create quizzes with an interactive design. This first game was used at the first meeting of Pan-casila Education material on the forms of norms. The first step is to provide learning materials related to various norms such as religious norms, moral norms, polite norms, and legal norms. After the material was completed, VA class stu-dents were directed to group to play educational games. The quis can be in the form of statement questions accompanied by pictures to clarify the questions in the short quiz. So that students can choose the answer according to the quiz ques-tions presented. When performing actions, students are divided into groups in the implementation of the game. Due to the limitations of technology in the form of laptops, they use a board to write the answers. The board that has written the an-swer is raised up to check the answer. Teachers can help operate the laptop in seeing the answers.

The second educational game is Match Up Wordwall. This educational game is done by pairing statements according to the image. This game was carried out at the second meeting of Pancasila Education with rights and obligations material. This implementation is carried out in groups, each group will get a turn to play together to find the answer. Wordwall can improve students in maintaining a spir-it of collaboration and empathy in class (Widhiatama & Brameswari, 2024). Due to limitations, laptops are used in rotation according to the order of the group. This game can arouse students' enthusiasm in playing. The content of the game presented is related to ways to increase interaction in the form of a sense of con-cern for what is experienced by others. Because in this game there is a game score for each group. In addition to the winning score, it can be seen from the speed of time when playing it.

The third game is Open The Box. The Wordwall game used for the implemen-tation of learning related to educational games is to open questions in the form of pictures on the Wordwall. This game was used in the third meeting with the mate-rial on the application of norms in my life. The implementation of this game is displayed on the LCD screen, then students can advance one by one in turn to select the boxes on the screen. Then students can describe the reaction of the image that has been seen with the paper that has been provided. In this game, it is done individually so that students can give their reactions according to their re-spective views. The existence of this game is able to provide interactive learning. According to Ahmad Susanto, an important factor to achieve learning effective-ness will affect students' interest in learning (Hidayati & Afifah, 2022). If teach-ers provide varied learning, such as presenting educational games in learning activities, it will give students a spirit of learning.

If teachers only use lecture or conventional methods, students tend to be pas-sive. Conventional learning is learning that is centered on the teacher as a source of learning and at the same time as a delivery of learning materials (Govindarajan & Choo, 2022). In his research, he also discussed the relationship between math-ematics learning and conventional learning and blended learning. The findings of the study also show an increase in students' attitudes in blended learning so that it makes it easy for students to understand mathematics material. Conventional learning students only follow learning by listening, taking notes, and doing as-signments given by the teacher. Unlike classes that use Wordwall educational games, students are directly involved in the learning process. Students can direct-ly experience the games presented by the teacher related to social interaction. Students also respond to learning with enthusiasm and enthusiasm. Not only playing, students also learn related to the material taught in the learning process.

If there have been three meetings, the next stage is to give a post-test question-naire to the VA (experiment) and VB (control) classes. After that, it is possible to analyze the results or data obtained using the General Linear Model analysis. The General Linear Model test is a method to analyze data with dependent vari-ables and independent variables. The hypothesis testing of this study uses the univarat general linear model analysis used to determine the significant effec-tiveness of learning media on healthy social interaction or not. GLM is a test technique that provides better estimation of research results (Kinat et al., 2019). The test criteria, if the P-value (sig.) is $\geq \alpha$ (0.05), then Ho is accepted. If the P-value (sig.) is $< \alpha$ (0.05), then Ho is rejected. Analysis using SPSS 25. The results of the General Linear Model test show that sig. 0.000 is smaller than 0.05. It can be concluded that there is a significant influence between educational games and healthy social interaction in elementary school students. The results of the analy-sis show that classes that have been given actions in the form of Wordwall educa-tional games can have an influence related to healthy social interaction on stu-dents. Students can give a reaction in the form of empathy, openness, so that they have positive thoughts when they see a problem presented in an educational game. Social interactions that occur directly can encourage students to under-stand each other's

needs and sense of care. The positive impact that occurs through Wordwall's educational games to promote healthy social interaction has proven significant.

The next step is to determine the effectiveness of learning with the N-gain test. The N-gain test is used to measure the effectiveness of learning to determine the level of social interaction carried out with educational and conventional games or lectures. The N-gain test was carried out by calculating the difference between the pretest and postest results. Based on the results of the calculation of the N-Gain score test, it shows that the average N-Gain score for the experimental class with educational games of 79.16% is included in the effective category. The av-erage N-gain score for the control class with conventional learning of 30.79% is included in the less effective category. It can be concluded that learning with educational games is effective in increasing students' healthy social interaction, while conventional learning or lectures are not effective in increasing social in-teraction in students. Technology is able to change the way teachers teach by planning lessons to be easy and efficient (Kilag et al., 2022). The existence of educational games presents educational technology in making the learning pro-cess easier. Educational games can be used as an alternative to increase students' understanding of material related to the material taught by the teacher.

Learning carried out with educational games helps in increasing student social interaction. Educational games also help students in collaboration, openness, and empathy for the content of questions in the game by feeling that the student is in the position as depicted in the educational game. According to Behnamnia, digi-tal-based games can help children learn like in the real world and improve crea-tive thinking skills in students such as being able to maintain mental health and behave positively (Behnamnia et al., 2020). This is different from conventional learning control groups. This learning is only teacher-centered. Focusing on the teacher's activities explaining the material in front of the class. So that there is a lack of student interaction in learning. This results in students not getting a dif-ferent experience and tends to be bored compared to students who carry out learning with educational games. Learning that uses educational games tends to be more active and interactive.

Conclusion

Based on the results of the study, it can be concluded that educational games in digital literacy are proven to be effective in increasing healthy social interaction in MIM Sonorejo. This can be proven in the results of the N-gain test on the ex-perimental class and the control class. The results of the N-gain test are the VA class as an experiment of 79.16% while the VB class as a control is 30.79%. From the results of the test, it can be concluded that educational game learning is effec-tive in increasing healthy social interaction in elementary schools. Meanwhile, conventional learning is not effective in increasing healthy social interaction. These findings can be used as interactive media for teachers in elementary schools such as Wordwall in learning Pancasila Education to increase healthy social interaction with interesting, interactive, and fun games.

In the implementation of the research, there are limitations in carrying out learning. Because elementary school students do not use mobile phones during learning. There is a solution to overcome these problems, the first is to display educational games on LCD screens to support the smooth research process. Sec-ond, use the board to write down the answers from the games displayed. Third, the researcher used laptops in turn for students to try the Wordwall educational game themselves. The existence of educational games can help students to prac-tice cooperation, openness, empathy for others, and practice communication skills. The game contains related to ways to promote healthy social interaction in elementary school. So that educational games are effective in supporting the learning process in the classroom. This research can be used as a reference for teachers to develop interactive and innovative learning.

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