
Effectiveness Digital Mind Mapping Learning for Skills Writing Explanatory Texts in Elementary School

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Abstract : *The problem found in this study is the low level of explanatory text writing skills among students, which affects learning outcomes. Therefore, a solution that can be provided is the addition of digital media such as digital mind. concept mapping, or what is commonly called a concept map, is used by students to improve their explanatory text writing skills in Indonesian language learning. This study aims to determine the effectiveness of digital mind mapping media. Mapping of explanatory text writing skills . The subjects in this study were 25 sixth-grade students of Sepande State Elementary School. Data collection in the survey used pre- experimental quantitative data analysis techniques, and the data collection methods used were pre-test and post-test to determine how effective digital mind mapping is. Mapping . Initial data collection was in the form of a pre-test , namely students were directed to create an explanatory text with a predetermined topic, then for the post-test, they created an explanatory text using digital mind. mapping . The results of the study showed an increase in students' writing skills during the study, which was indicated by changes in the average score obtained from the pre-test and post-test . The average pre-test score was 57.00, while the average post-test score was 82.80. Thus, it can be concluded that the explanatory text writing skills of sixth-grade students at Sepande State Elementary School improved after using digital mind media. mapping .*

Keywords : *writing skills; explanatory text ; digital mind mapping.*

Abstract: *The problem identified in this study was students' low ability to write explanatory texts , which impacted learning outcomes. Therefore, a possible solution is to add digital media such as Digital Mind. concept mapping, or what is commonly called a concept map, is used by students to improve their explanatory text writing skills in Indonesian language learning. This study aims to determine the effectiveness of digital mind mapping media. Mapping of explanatory text writing skills . The subjects in this study were 25 sixth-grade students of Sepande State Elementary School. Data collection in the survey used pre- experimental quantitative data analysis techniques, and the data collection methods used were pre-test and post-test to determine how effective digital mind mapping is. Mapping . Initial data collection was in the form of a pre-test , namely students were directed to create an explanatory text with a predetermined topic, then for the post-test, they created an explanatory text using digital mind. mapping . The results of the study showed an increase in students' writing skills during the study, which was indicated by changes in the average score obtained from the pre-test and post- test . The average pre-test score was 57.00, while the average post-test score was 82.80. Thus, it can be concluded*

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INTRODUCTION

System Indonesian education uses curriculum independent curriculum that emphasizes comfortable , innovative , and independent learning . This only focus on the eyes core subjects , and Indonesian is one of them eye lessons learned change significant Because considered important (Suriani, 2024) . Learning Indonesian is one of the eye lessons learned at school base (*Video Learning Media* , 2024) . Skills speaking often causes problem in communication oral and written (Nugraheni , 2025) . In skills language in learning Indonesian language that must be understood and mastered by participants educate there is four component that is listening , reading , speaking and writing (Yanti & Suriani, 2024) . Writing at school base is skills that must be mastered participant educate in a way effective . Writing Alone moment This is difficult skills Because participant educate must control vocabulary , knowledge , and experience in pour out ideas or opinion that will it was written (Inggriyani & Anisa Pebrianti, 2021) .

Skills write participant educate obtained from great interest and regular practice so that skills can develop . In learning language , participants educate need own ability certain . Two skills that are necessary studied is skills writing and speaking (Agustin, 2024) . Skills write moment this is very important for progress academic every participant learners . Participants students who have personality skills good writing can convey his idea in a way clear , orderly , and mutually related (Ernawati et al., 2023) . Activities writing can also become activity skills speaking Because write nature expressive and productive . Therefore that , writing is very important for participant educate Because can build ability they For practice think critical , creativity , and initiative (Koraag & Astawan, 2022) . Learning write can done with various way , but writing can also considered as activity communication For convey message to other people. In the field Indonesian , activities write Alone classified as aspect important things to do implemented and practiced in a way continuously (Butarbutar , 2025) . Writing is something complex activities that require student For compile and deliver various ideas, concepts , and feeling in a way direct to something problem or events that will happen happen in the future . One of them for example is write text explanation , namely student explain the process of occurrence something incident with method pouring his feelings and communicate results his thoughts the in written form or text . With pour out ideas into in writing, students reflect source the power it has , so that the ideas written down students will also produce good writing (Widiastuti et al., 2022) .

Subjects Indonesian language at the moment This studied student Class VI includes text fiction , reports , poetry , and texts explanation . Explanation text is explanatory text something phenomena that occur . Phenomena the can in the form of disaster natural or problem social issues that occur in the environment around (Sandra, 2023) . For increase skills write specifically write text explanation , students can assisted with using digital learning media and today 's sophisticated digital applications as well as various models (Scientific & Madrasah, 2025) . Digital technology for classroom learning aims to ensure that learning become more fun and more easy accepted by participants educate . Another goal of digital technology for classroom learning is For make it easier learning with use various design For make it easier learning (Salsabila et al., 2023) . With progress information Technology can displayed and shared through audio, visual, audiovisual, and digital multimedia media. (Amanullah, 2020) . However , the use of technology in a way effective and relevant will also be face a number of challenge big . In addition , the digital era is based on technology moment This allows participant

educate For learn draft individually through various learning platforms interactive , which emphasizes development knowledge based on experience (Purwinarti et al., 2025) .

Instructional Media used For convey material to in a learning process and triggers curiosity know participant educate so that help the learning process . With existence progress technology moment this , can concluded that learning media functioning as means learning and helping the learning process reach the goal (Damasanti & Nuroh , 2023) . Currently , digital media such as mind mapping can fulfil need learning . In activities , participants educate millennials more often using laptops and smartphones especially For accessing the internet. The world of education must changed so that participants educate can utilise technology as means learning . This is will make participant educate No only focused on books but also can utilise technology for learning become fun . Digital mind mapping itself is map digital mind creation with use notes material For more learning practical (Oktavia et al., 2021) . Digital mind mapping is method learning For organize knowledge with use draft as simple as Possible in understand the idea. Which can displayed through digital mind mapping is contains ideas, words, and information in form graphics . This media can used in various level education , starting from school base until college high , and proven capable used as source Study . In the past, it was just mind mapping shaped paper and writing, but along development technology moment This has develop become mind mapping in digital form . This digital mind mapping media own a number of advantages , one of which is can increase interest Study in digital form , easy accessible , and not limited to scale document (Bhattacharya & Mohalik, 2020) . In the learning process writing , more attention big given to the process or How participant educate only use theory For learn . Therefore that 's the problem the overcome with use mind map or mind mapping based teaching materials for evaluate skills write participant educate (M. Zubad Nurul Yaqin, 2023) . Media always used in the learning process . Media can in the form of What only one can used For allows the learning process occurs with involving thought participant educate or increase ability participant educate . Images are one of the most frequently used media used in the learning process This (Zalukhu et al., 2023) . Research This different with study previously on the media used . The media used in the research previously is image , whereas study This using digital media in the form of digital mind mapping. Research previously focused on improving ability write text explanation , whereas study This focused on skills write text explanation .

Study This will know how much effective digital mind mapping media in increase skills write text explanation at school basic and develop pattern think student through digital media to explain the process or phenomenon .

METHOD

Type and Design

Approach study This is quantitative . The research design used in study This is pre- experimental research This use approach One-Group Pretest-Posttest research . Same treatment given when apply approach This .

Data and Data Sources

Study This carried out at SDN SEPANDE during not enough more One week of the year academic year 2024/2025. The numerical data used in study This are pretest and posttest data. Subject study is student class VI SDN SEPANDE class VI A totaling 25 people . Sample in study This use saturated sampling technique that is all member population made into sample (Adim et al ., 2020) .

Data collection technique

Data collection techniques in study This is through test test done For measure how much effective digital mind mapping media in increase skills write text explanation . Test done before and

after action done . Test First or pretest is conducted with make text explanation with topics that have been determined , then test second or posttest, namely apply or using digital mind mapping media for make text explanation .

Data analysis

The Shapiro-Wilk test has mark significance >0.05 for normality test used as a test in the data analysis process . Sample t-test in pairs is methods used For compare the collected data before and after treatment . With $t - \text{count} > t - \text{table}$ or $\text{sig} > 0.05$. Data analysis techniques were carried out For measure how much effective digital mind mapping media in increase skills write text explanation at school base .

RESULTS AND DISCUSSION

Study This done For know how much effective digital mind mapping media in develop skills write text explanation at school basic research This involving One class , namely Class VI A, which consists of 25 students at SDN SEPANDE .

Normality Test

Normality Test Results						
Normality Test						
	Kolmogorov-Smirnov ^{And}			Shapiro-Wilk		
	Statistics	Df	Signature.	Statistics	Df	Signature.
PRE-TEST	.178	25	.039	.937	25	.127
POST TRIAL	.224	25	.002	.930	25	.089

Normality test and hypothesis test done For see difference results between pretest and posttest after given treatment . In research This , the normality test used is Shapiro-Wilk, which is used For know whether the data is normally distributed or not No as one of the required tests For do paired sample t-test analysis . Based on normality test results , values significance skills write text explanation for the pretest of 0.127 which means that The pretest results were normally distributed , and the posttest results were 0.89. With Thus , the significance results pretest and posttest more significant of 0.05 ($0.127 > 0.05$, $0.89 > 0.05$). With Thus , the data results skills write text explanation normally distributed .

H0: There is no significant difference between writing skills with predetermined topics before and after using digital mind. mapping as a medium for writing explanatory text .

Ha: There is a significant difference between writing skills with predetermined topics before and after using digital mind. mapping as a medium for writing explanatory text .

For test hypothesis above , table below This show results sample t-test analysis in pairs in form statistics sample paired , correlation sample paired , and sample test paired (sig-2-tailed) .

Statistical test results sample in pairs

	Means	N	Standard Deviation	Standard Error of the Mean
Couple 1 PRE-TEST	57,0000	25	11.18034	2.23607
POST TRIAL	82,8000	25	6.62697	1.32539

The results of the t-test above show that average pretest score is 57, and the average post-test score is 82.8. With Thus , the average value after using digital mind mapping more significant . With thus , it means There is improvement skills write text explanation using digital mind mapping .

Paired Sample Test Results

		Difference in pairs			95% Confidence Interval of Difference		T	df	Sig. (2-tails)
		Means	Deviation Standard	Error Average Standard	More low	On			
Couple 1	PRE-TEST – POST TEST	-25,80000	7.86342	1.57268	-29.04586	-22.555414	-16,405	24	.000

The results of the t-test with using paired sample test shows mark significant of 0.000 which means more small from 0.05. Therefore that is , H₀ is rejected . This means results obtained before and after write text explanation using different digital mind mapping media . With that , can it is said that there is significant difference between skills write text explanation before and after using digital mind mapping media .

Research result This show existence improvement skills write text explanation student after using digital mind mapping. Compared with before using digital mind mapping. After pretest and posttest were carried out and obtained better posttest results high and happening change . Assessment on both test the use aspect same assessment that is content text , structure text , rules linguistics text explanation , spelling , signs read , and the suitability of mind mapping with text explanation . Based on results findings previous pretest results or pretest obtained score write text explanation of 57.00 and the posttest score of 82.80. After normality test was carried out using Shapiro-Wilk and t-test, the t-test results show mark significance of 0.000. So it can concluded that mark significance of $0.000 < 0.05$. This means there is difference skills write text explanation before and after using digital mind mapping. Learning write text explanation with using digital mind mapping to create student more active and enthusiastic . Based on results the can known how much effective digital mind mapping for write text explanation . Research This support results study (Sairo et al., 2021) which states that the use of digital mind mapping can increase ability write students . Research

This show that digital mind mapping is said effective For increase ability write students . Improvement The average value is also supported by interest student in Study utilise technology . With using digital mind mapping can help student in develop ideas and think critical so that can increase ability write student .

Agintayani (2022) stated that digital mind mapping is right used For observe skills write students . The use of this media proven skills write increase up to 50%, even though previously skills write student only 30%. The use of mind mapping has also been proven can motivating student . Sairo et al. (2021) researched how much effective digital mind mapping in increase skills write students . Research results show that digital mind mapping is effective increase skills write students . The average score of students on the pretest was 24%, then increase to 90%, and it happened improvement in students . Although previously Not yet reach standard minimal learning . Improvement the results obtained are also based on media support or digital technology , which can help student in organize ideas, create student think critical and creative , as well as increase skills writing . Tajiri et al. (2025) explains in his research that digital mind mapping is effective For fulfil need student in increase skills write . Therefore that , digital mind mapping can implemented in learning Indonesian . With give results significant increase , surpassing average grade point value (GPA) generated .

Inovasi et al. (2025) stated that use of mind mapping in digital form can increase competence student in write text explanation . With using digital mind mapping media, students will feel learning write text explanation more easy understandable and enjoyable . Research results This show existence improvement ability write text significant explanation with fulfil criteria like content , structure , vocabulary , and signs read . More further , according to Nurhabibah et al. (2021) can also use digital mind mapping learning models influence results Study cognitive . Therefore that , the average score pretest results Study cognitive more tall than the average score posts after treatment . According to results research , Ismaela & Ramadhani (2021) explains How results Study increase when using digital mind mapping media with do a number of cycle or treatment . In the first cycle that was carried out , the percentage completeness Study of 71%, with an average of 80.4. Furthermore, in cycle II , the results obtained presentation of 100% with an average of 88. It can be concluded that happen improvement results presentation by 29% and an increase mark of 7.6. Research results This show that the use of digital mind mapping media can increase results Study student .

Conclusion

Based on results research and discussion that has been done , can concluded that there is improvement skills write text explanation with using digital mind mapping on students class VI SDN Sepande . There is average difference in results before and after treatment . Average results before treatment of 52.00. After treatment happen improvement to 82.80. With existence change in average yield student said , of course it is very effective If use tool help with this digital mind mapping For write text explanation for students . Digital mind mapping is also a tool digital assistance that makes things easier student in organize ideas before write text explanation . This digital mind mapping can also help student in organize information visually . Digital media can increase interest and motivation student in write text Because learning become more easy , fun , and exciting .

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