



Digital Literacy: Classroom Action Research for Vocational High School Students'

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ABSTRACT

Purpose of the study: The purpose of this research is to find out students' digital literacy abilities and find out what actions are appropriate to take in order to increase students' digital literacy.

Methodology: This study used a class action research method with the Jhon Elliot research model design. This research model consists of a cycle in which there are several stages, namely design, implementation (action), observation, and reflection

Main Findings: The findings of this research is that students' digital literacy skills in the first cycle with conventional learning models are dominant in the bad category. Then in the second cycle by using a project-based learning model and utilizing technology directly it is known that students' digital literacy has increased where it is more dominant in the good category. So that the actions that can be taken by educators to improve students' digital literacy are by using a project-based learning model that is supported by sufficient learning media.

Novelty/Originality of this study: The novelty of this research is that it was conducted at the vocational high school level, then focused on appropriate classroom actions to increase students' digital literacy in Indonesian language subjects.

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1. INTRODUCTION

Education has a very core role in improving the quality of every human being [1]-[3]. Every human being who lives will need education to create human beings who have superior personalities and meet their daily needs [4]-[6]. In the current era, education prioritizes students having characteristics and behaviors that are able to compete in the world [7]-[9]. The educational process in the classroom is called teaching and learning activities.

Learning is a process of changing learning outcomes covering all aspects of life to achieve a certain goal involving two parties, namely students as learners and teachers as facilitators [10]-[12]. Learning is a complex process that is influenced by many factors, the learning process must pay attention to all aspects of learning including teaching materials to be delivered and students as learning subjects, meaning that educators control learning [13]-[15]. One of the lessons that is important to be mastered and learned by every student is Indonesian language lessons.

Indonesian language teaching has an important role, because Indonesian language lessons aim to develop oneself and improve reasoning abilities, as well as emotional and social abilities [16]. Indonesian

language lessons essentially provide knowledge to students about how to have Indonesian language skills so that they are able to properly and correctly according to their goals, uses, and uses [17]. Learning Indonesian is learning that cannot be separated from the four skills, namely: listening skills, reading skills, speaking skills, and writing skills [18]. Learning Indonesian itself has a goal that is no different from other learning goals, namely to acquire knowledge, skills, creativity, and attitudes [19].

Supporting factors in the success of learning activities are now supported by digital literacy of students and teachers [20], [21]. Digital literacy is the knowledge and ability to use digital media, which can influence the psychology of adolescents to use digital media intelligently [22], [23]. Digital literacy includes traditional literacy skills; reading, writing, listening, speaking and also other literacy such as information literacy, media literacy, and literacy in the use of technological devices [24]. Digital literacy refers to an individual's ability to find, assess and write clear information through writing and other media on various digital platforms.

In previous research conducted by Faridah et al., (2022) it was found that the project-based learning model can have an effect on students' digital literacy skills. In line with this research, this class action research was conducted [25]. Based on the explanation above, this research is important to do so that students can use technology properly and wisely. The purpose of this research is to find out students' digital literacy abilities and find out what actions are appropriate to take in order to increase students' digital literacy.

2. RESEARCH METHOD

This study used a class action research method with the Jhon Elliot research model design. This research model consists of a cycle in which there are several stages, namely design, implementation (action), observation, and reflection [26].

The population in the study were students of Vocational High School 3 Bengkulu City. With the sampling technique using purposive sampling. Purposive side, namely the method of sampling by selecting subjects based on certain considerations [27], [28]. The sample criteria to be taken are classes that require improvement of the learning cycle in Indonesian language subjects, the material is Preserving local wisdom values through folklore.

At the design stage, an analysis of the curriculum, problems, learning tools, and results of initial observations and interviews is carried out regarding the implementation of the learning process for the short story material to be studied. From the results of the analysis carried out, everything needed is designed for learning that can develop students' digal literacy in learning Indonesian. Starting from learning tools, learning media, and student learning resources. Then proceed at the implementation stage of giving action according to the plan that has been prepared. Then observation and data collection were carried out when the action was given. From the data obtained, a reflection bssn was conducted to find out whether the cycle was continued or not. If the results targeted in this study have not been achieved then the cycle is continued in the next cycle with necessary revisions to the design of the next cycle. If the desired result is achieved then the cycle is stopped. In this research, it is oriented towards efforts to increase students' digital literacy in learning Indonesian.

To measure students' digital literacy using a questionnaire. The digital literacy questionnaire used uses a Likert scale of 4. Score 1 strongly disagrees, score 2 disagrees, score 3 agrees, score 4 strongly agrees. The grid for the digital literacy questionnaire is as follows:

Table 1. Grid for digital literacy questionnaire

No.	Indicator	Statement
1	Technology use	1, 2, 3, 4, 5
2	Cellphone use	6, 7, 8, 9, 10, 11
3	Social networking	12, 13, 14, 15
4	Privacy settings	16, 17, 18, 19
5	Online safety	20, 21, 22, 23
6	Technology impact	24, 25, 26, 27, 28
Total statement		28

(Muyasaroh et al., 2021)

To calculate the category interval that is using the formula:

$$\frac{(total\ statement \times highest\ Likert\ scale) - (jutotal\ statement \times lowest\ Likert\ scale)}{likert\ scale}$$

The categories for students' digital literacy in the Indonesian language subject matter of preserving local wisdom values through folklore are presented in the following table:

Table 2. Categories for digital literacy

Category	Interval
Not very good	28 – 49
Not good	50 – 70
Good	71 – 91
Very good	92 – 112

Analysis of quantitative data obtained from the results of the digital literacy questionnaire was analyzed using descriptive statistics assisted by SPSS version 21. Descriptive statistics are used to determine the frequency, percentage, mean value, mode, median, min value, and maximum [30], [31]. Data analysis was continued with hypothesis testing in the form of a t test with the condition that the data were normally distributed and homogeneous.

3. RESULTS AND DISCUSSION

In this section, it is explained the results of research and at the same time is given the comprehensive discussion. Results can be presented in figures, graphs, tables and others that make the reader understand easily [2], [5]. The discussion can be made in several sub-chapters.

This research was conducted using the John Elliot version of the classroom action research model which is presented in the following figure:

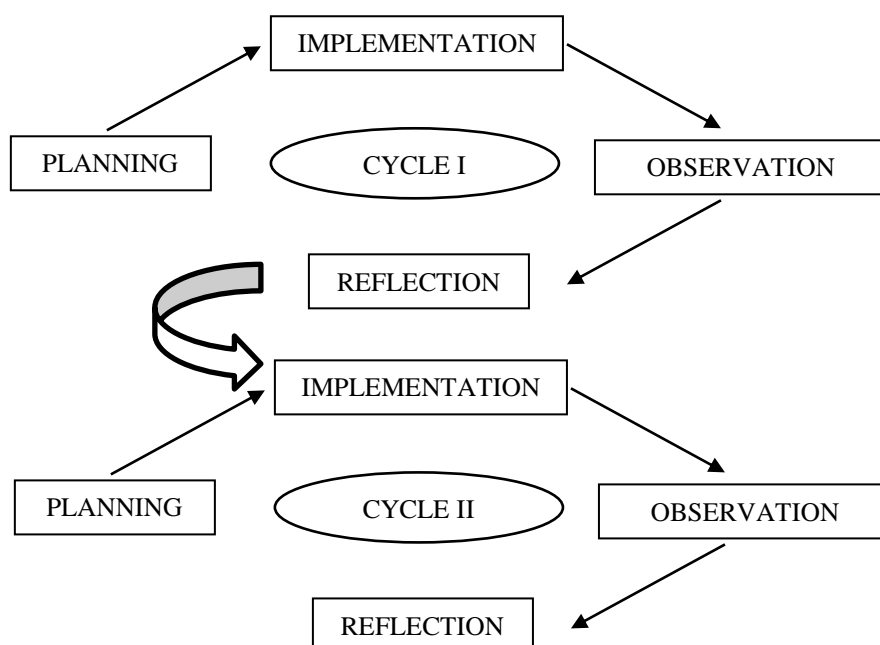


Figure 1. John Elliot's version of the classroom action research model

In the first cycle, the design stage was carried out using a conventional learning model. Followed by the implementation stage, namely the teacher becomes a facilitator where the learning process is centered on the teacher with media and learning resources in the form of books and power points. Furthermore, observations were made from the results of observations made for students' digital literacy when learning was still in the low category. The class used in cycle 1 and cycle 2 is the same class. The results obtained in the first cycle obtained digital literacy owned by students based on the descriptive statistics that have been analyzed are presented in table 3 below:

Table 3. Descriptive statistical results of students' digital literacy in the first cycle of Indonesian language subjects

School	Category	Interval	freq	%	Mean	Med	Min	Max
Vocational	Not very good	28 – 49	0	0				
High School 3	Not good	50 – 70	16	53,3%	68,22	70	59.00	89.00
Bengkulu	Good	71 – 91	14	46%				
City	Very good	92 – 112	0	0				

Based on table 3, it was found that students with digital literacy who were categorized as not good were 16 students and those who were categorized as good were 14 students with an average digital literacy value of 68.22 in this first cycle students were still dominant in the category not good for digital literacy in the eyes Indonesian lessons. So it must be continued in the second cycle.

Based on the classroom action research model used, the second cycle begins with the redesign stage. Here, the researcher designs a learning device learning model by considering efforts to increase students' digital literacy. Learning in cycle 2 uses a project-based learning model, learning media in the form of computers, namely learning is carried out in the Lab. Computer. By forming small groups, students are directed and guided to find and obtain information related to Indonesian language subjects on preserving local wisdom values through folklore. Then, based on the information obtained, students were assigned to do group project assignments to make a short story and then publish it on the internet and present it in front of the class. In the next stage, namely observations (observations) were obtained for students' digital literacy to increase. The results of the analysis used are descriptive statistics which are presented in table 4 below:

Table 4. Descriptive statistical results of students' digital literacy in the first cycle of Indonesian language subjects

School	Category	Interval	freq	%	Mean	Med	Min	Max
Vocational	Not very good	28 – 49	0	0	75.00	80.00	60.00	98.00
High School	Not good	50 – 70	5	16,3%				
3 Bengkulu	Good	71 – 91	23	76,7%				
City	Very good	92 – 112	2	6,7%				

Based on table 3, it was found that students with digital literacy who were categorized as not good were 5 students, who were categorized as good were 23 students, and who were categorized as very good were 2 students with an average digital literacy score of 75. In this second cycle, students were dominant in the category good for digital literacy in Indonesian language subjects. So that the research can be stopped in the second cycle. Then an analysis of the prerequisite test was carried out before the t test was carried out.

Table 5. Prerequisite test results for normality and homogeneity

Prerequisite Test	Variables	School	Sig.	Information	
Normality	Digital Literacy Students	Vocational	High	.200	Normal
Homogeneity		School 3 Bengkulu	City	.210	Homogeneous

Based on the prerequisite test that has been carried out, it is found that the data is normally distributed and is homogeneous as indicated by the sig. $0.200 > 0.05$ and $0.210 > 0.05$. After the t test conditions are met, it can be continued with the independent sample t-test and the test results are presented in the following table:

Table 6. The results of the independent sample t-test of students' digital literacy

Variable	Cycle	Sig. (2-tailed)
Digital Literacy Students	Cycle 1	0.037
	Cycle 2	

Based on the analysis using the independent sample t-test, the value of Sig. (2-tailed) namely 0.037 < 0.05 in the student digital literacy variable based on the class action cycle given to students, meaning that there is a significant difference in cycle 1 and cycle 2.

The results of this study show that students' digital literacy abilities in Indonesian language subjects preserve local wisdom values through folklore in the first cycle with conventional learning strategies. Students' digital literacy is more dominant in the bad category. From the results of research in the second cycle that has been carried out, students' digital literacy can be improved through learning facilities and also the learning model that is applied. By providing and implementing learning strategies that are oriented towards digital literacy students will increase students' digital literacy skills. Students' digital literacy skills are important for students to have because of the progress of the times which are increasingly rich in advanced technology. To be able to take advantage of existing technology, students' digital literacy abilities or skills are needed in order to be able to use technology properly and wisely [27]-[30].

The results of this study are also supported by previous studies, namely those conducted by Kustini et al. (2021) that implementing project-based learning can improve digital literacy skills [24]. The difference is that the previous research was conducted at the tertiary level, the sample was students. So this research was carried out as an update from previous research which was carried out at the vocational high school level, then focused on appropriate classroom actions to increase students' digital literacy in Indonesian language subjects.

The impact of this research on teaching staff is that they can apply a project-based learning model to increase students' digital literacy and educators can teach students and guide students to use digital media to obtain information and use digital media properly and wisely. This research is limited by the research sample and also the lessons learned. Recommendations for further research researchers can generalize from this study. Suggestions for further research can be carried out further research, for example the effect of learning strategies on digital literacy, or the effect of digital literacy on student achievement.

4. CONCLUSION

The conclusion of this research is that students' digital literacy skills in the first cycle with conventional learning models are dominant in the bad category. Then in the second cycle by using a project-based learning model and utilizing technology directly it is known that students' digital literacy has increased where it is more dominant in the good category. So that the actions that can be taken by educators to improve students' digital literacy are by using a project-based learning model that is supported by sufficient learning media.

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