Application of Project Based Learning on Storytelling Ability in Early Childhood

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Abstract. Project base learning is a learning model that is used by giving projects to students with the aim of completing lecture targets with meaningful learning for students. The purpose of this study is to determine the application of project based learning to learning that involves mastering the concept and practice of storytelling. The results of the research show that the application of project based learning to students is divided into three levels of low, medi-um and high for mastery of learning concepts. Low percentage of 25%, moderate percent-age of 50% and high percentage of 25%. However, the results of practical observations show that students are able to make good products and practice storytelling skills well. Thus project based learning is assessed in the qualitative realm as successful for storytell-ing practice but not so significant a change for concept mastery in independent learning.

Keywords: project-based learning, children, storytelling, education

1 Introduction

Storytelling is one of the skills that must be possessed by educators in Early Childhood Education (PAUD) institutions. But unfortunately, not all PAUD teachers are able to mas-ter storytelling skills and choose appropriate fairy tale scripts for children. Based on ob-servations made in one of the districts in East Java, it shows the fact that when participat-ing in a storytelling competition, the teachers lacked confidence in their abil-ity in storytell-ing. This indication was seen when registering for a storytelling compe-tition for PAUD teachers, teachers had to be appointed first to represent their respective sub-districts as contestants and there was no personal initiative to register individually. Confidence is an indication of problems with the teacher's storytelling ability. If the teacher does not have confidence in storytelling, it is very possible that storytelling activities will not be optimal.

There are several problems in storytelling related to the practice of storytelling. These problems are divided into internal problems and external problems. Internal prob-lems relate to the mastery of storytelling techniques by individuals and external problems relate to things outside the individual that support storytelling practices such as media and situations that support storytelling. In response to this, the Early Childhood Educa-tion Teacher Education Department (PG PAUD) prepares students through storytelling

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courses as a student self-development course. The main objective of storytelling courses is for students to be able to understand and analyze important material in mastering storytelling skills in early childhood as well as being able to practice them as the final competence of lectures. The material referred to in storytelling is material for early childhood fairy tales, storytelling media, and storytelling strategies for early childhood. In order to support the achievement of learning objectives, an appropriate and ap-propriate learning strategy is needed. The portion of concepts and practices is an important point in learning with the hope that besides students mastering practice in storytelling, stu-dents are also able to understand storytelling conceptually. In lectures the presentation of the concept will be accompanied by implementing it through student practice. One of the strategies used in lectures is to use Project Base Learning (PjBL). Project base learning is a learning model that is used by giving projects to students with the aim of completing lec-ture targets with meaningful learning for students. Barron & Hammond [1] mentions that this learning is specifically rooted in inquiry-based learning in the construc-tivist theories of educational experts such as Dewey, Vygotsky, Piaget, and Freire. Inquiry learning is characterized by active, student-centered learning, focusing on critical thinking, questions, and problem solving. In practice PjBL learning requires careful planning, col-laborative strategies to increase small group interaction, and continuous assessment through formative feedback. Students involved in PjBL learning have more ability in terms of factual knowledge than traditional learning.

Several similar studies have stated that in practice project based learning can im-prove student learning achievement including including cognitive and motor aspects. Pro-ject based learning provides space for students to be creative and carry out projects and find new information from various sources [2]. The application of project-based learning to student learning activities shows high collaboration skills [1] reveals that project learning can facilitate deep understanding of content knowledge, and a supportive learning community can be developed through productive academic struggles.

In the learning process the most important thing is that students can construct their knowledge actively, so that this is where meaningful learning is found through various ac-tivities such as planning, discovery, collaborative, problem solving, exchanging ideas, and giving mutual assessments to give birth to new knowledge as learning outcomes [2]. This is what makes project-based learning deliver students to learn contextually. [3] stated the importance of the inquiry aspect in learning. Investigation in PjBL practice can be started by carrying out reflection and evalu-ation. Investigation aspects consist of (1) group work, (2) collaborative, and (3) adding re-flection (practice). While Roessingh and Chambers (2011) explain that in project design, several important elements exist in the design, namely (1) an overview of the project with its rationalization, (2) a clear set of learning objectives and key concepts, (3) a list of mate-rials and resources, (4) a set of tasks, (5) assessment criteria and rubrics.

Based on this, in this study an evaluation was carried out before implementing the PjBL model. PjBL began to be implemented by giving questions and answers covering students' initial knowledge about the elements in storytelling and individual storytelling practices to determine students' initial storytelling skills. In the implementation of the use of the PBL model, specific learning objectives will also be determined in advance

to pre-pare the project design to be carried out, develop the teaching materials used, as well as the assessment criteria and assessment rubrics.
The advantages of Project Based Learning are stated by [4] that PjBL provides learning experiences that are detailed, detailed, challenging, and require a longer time to produce satisfactory products from projects that have been implemented. So it is considered that this model is suitable if applied to storytelling in ear-ly childhood which requires detailed practice related to mastery of storytelling elements and in-depth strategies related to its implementation. Another important thing in preparing learning with the PjBL model is knowing the steps for project based learning (PjBL). The PjBL learning steps listed in [5] are as fol-lows: (1) question, (2) plan, (3) schedule, (4) monitor, (5) facilitate the process, and (6) evaluate.
In this research, the base learning project will be carried out through various stages of the project in accordance with the expected lecture objectives. The benefit of implementing PjBL in learning is that students are expected to have direct experience by analyz-ing and implementing their knowledge of concepts in storytelling courses, so that the com-petencies gained by students will be intact both cognitively and psychomotorically. This project based learning is carried out in stages according to the material load and planning in the revised RPS so that it is hoped that the competencies achieved will match the ex-pected targets. The purpose of this study was to determine the application of project based learning to student learning which involves mastering the concept and practice of storytell-ing for early childhood.

2 Methods

The method and research design is a quantitative survey design with the aim of knowing the impact of project based learning on students' storytelling skills, both cognitive and psychomotor abilities through storytelling practice. The research subjects were 4th semes-ter students totaling 86 people. The research was conducted for 8 weeks. The results of the multiple choice tests and videos on storytelling practice by 86 students. Data collection techniques using observation and questionnaires.
Data analysis techniques using descriptive statistics. Descriptive statistics are used to analyze data by describing the data that has been collected as it is without intending to make conclusions [6]. This analysis technique is used in populations with-out taking samples in it, so that it is suitable when applied in this study. The descriptions presented include the range of values, mean (M), median (Me), and standard deviation (SD). The mean is the calculated average, the median is the middle value of the data that has been sorted, and the standard deviation (SD) is the group or standard measure of devi-ation from the mean. In compiling the frequency distribution, the following steps are tak-en: (1) determine the number of class intervals using the sturges formula. number of class intervals = 1+3.3 log n with the record that n is the number of respondents. (2) determine the range of data (range), class range = maximum score -minimum score + 1, (3) determine the length of class intervals, length of class intervals = range of data divided by the num-ber of class intervals, then research variable data needs to be categorized by steps standard deviation and categories of student scores are less, moderate, high.

The PjBL learning steps carried out in this study conform to the PjBL steps listed in The [5] as follows: (1) question, (2) plan, (3) schedule, (4) monitor , (5) facilitate the process, and (6) evaluate. The first stage is a ques-tion, at this stage it is carried out by looking for important questions related to learning ob-jectives and the benefits of learning storytelling for students and how is the application of PjBL in learning so that it can help achieve learning goals? The second stage is to plan learning outcomes or results obtained by students referring to the answers to questions in stage one as well as designing PjBL learning stages. The third stage is to determine the schedule for implementing the project based on the results to be achieved. At this stage, simplified achievement benchmarks will also be determined so that they are easily under-stood, especially by students. The fourth stage is making an authentic assessment to be used in monitoring or monitoring the process of the project activities being carried out. This stage requires a detailed assessment so that several techniques are needed in order to explain the process that occurs. The fifth stage is facilitating the process by accompanying and directing students in carrying out projects, one of which is by providing student activi-ty sheets that can be used as guidelines in implementing projects. The final stage is to evaluate by conducting assessments or reflections both as individuals and as a group. At this stage discussions were also carried out regarding the target points that were successful-ly carried out and what needed to be changed as well as what new things were interesting so that later in the future it could be made into a new project.
The evaluation stage in the implementation of the project based learning (PjBL) model is very important to be carried out in order to be able to explain the results of the implemented PjBL model. In this regard, several suggestions from Miller (2012) need to be taken into consideration, including: (1) Do not wait or be carried out immediately, mean-ing that the assessment is not only carried out at the end but in the process it is necessary to monitor; (2) the strength of learning standards, meaning that when designing learning with the PjBL model, make sure the test standards are in accordance with learning tar-gets/objectives; (3) perfect PjBL implementation, meaning that in conducting evaluations it is necessary to control the implementation of PjBL that is good or fulfills the requirements.

3 Findings and Discussion

3.1. Findings

The activities carried out are in accordance with the stages of project base learning. The first stage is Question. At the beginning of the lecture, students are given the task of carry-ing out storytelling practices and debriefing with lecturers for an initial evaluation of stu-dents' ability in storytelling. storytelling practice to identify students' problems in storytell-ing and question and answer to find out the extent of student knowledge regarding fairy tale scripts for early childhood. The evaluation showed that students had internal problems related to storytelling skills and had little initial knowledge and some were even wrong about fairy tale scripts for early childhood.
The second stage is the Plan. The results of the evaluation are followed up by set-ting learning targets or objectives and then creating projects that assist students in fulfilling

learning objectives. At the beginning of lectures to the middle (1-8) learning objectives practically focus on mastering storytelling skills, especially overcoming students' internal problems in storytelling. learning objectives conceptually focus on understanding in story-telling scripts, the elements of storytelling.
The third stage is the schedule. based on the results of the evaluation and learning objectives, a project is made to achieve the learning objectives along with the schedule. Stage four is the monitor. This stage is carried out by making an authentic assessment, namely making observation notes and a list of questions for interviews, and making multi-ple choice test questions to measure student understanding. The next stage is facilitation. This stage is carried out by facilitating the learning process (making the LKM as a project guide containing brief materials, projects that must be carried out along with explanatory rubrics, making learning materials in the form of PPT and text descriptions). Activities car-ried out (1) practice storytelling individually 3 times using storytelling practice instruments (2) work together in groups to understand storytelling material (3) analyze fairy tale scripts of at least 5 scripts from different sources from various sources with fairy tale elements as instruments . The final stage is to evaluate through multiple choice questions and observe student storytelling practices.
Evaluation of students' ability to understand storytelling concepts or material was measured using a multiple choice test totaling 25 questions with a distribution of 3 main materials namely mastery of fairy tale text material for early childhood, storytelling media, and storytelling strategies for children with easy, medium, and difficult difficulty levels . The test results show a range of values between 44-92 with an explanation of the lowest score obtained is 44 for 3 people and the highest score is 92 for 1 person. The average value obtained is 65.76 or if it is rounded up to a value of 66 and the median is 64.
After knowing the data above, the next step is to arrange the frequency distribu-tion, the following steps are carried out: (1) determine the number of class intervals using the Sturges formula (number of class intervals = 1+3.3 log n) provided that n is the num-ber of respondents; (2) determine the data range (range class = maximum score - minimum score + 1); (3) determine the length of the class interval (class interval length = data range divided by the number of interval classes). The following is the explanation, the first step is to determine the number of class intervals with the Sturges formula, namely the number of class intervals = 1 + 3.3 log n with a note that n is the number of respondents. The re-sulting value is 7,384 when rounded up to 7 class intervals. The second step is to deter-mine the range of data (range) = maximum score - minimum score + 1 to obtain a value of 49 and finally determine the length of the class interval = the range of data divided by the number of class intervals resulting in a value of 7. Then the resulting frequency distribu-tion table is as follows:

Tabel 3.1 . Storytelling Ability Variable Frequency Distribution.

No	Interval	F	%
1	44-50	7	8.14 %

2	51-57	15	17.44%
3	58-64	26	30.23%
4	65-71	5	5.81%
5	72-78	19	22.09%
6	79-85	13	15.12%
7	86-92	1	1.16%
Total		**86**	**100%**

The table shows that the most frequent frequency of storytelling ability is in the 58-64 interval of 26 students (30.23%) and the least is in the 86-92 interval of 1 student (1.16%). Once the variable frequencies are known, another thing to do is to look for tendencies in storytelling abilities. The steps taken are to find out the minimum value (X min) and maximum value (X max), find the ideal average value (Mi) and ideal standard deviation (SDi). The formula Mi = 1/2 (X max + X min) yields a value of 68. The ideal standard deviation formula (SDi) = 1/6 (X max-X min) yields 8. Based on the average, continue to make the categories low, medium and height which can be seen through the following table.

Table 3.1 represents that the most used mood type in this short story was Imperative (50%). Then, the second type was Declarative (41, 7%). After that, the third type was the Interrogative (5, 6%). Furthermore, the lowest mood type that was used was Subjunctive (2, 7%). Based on the table, the leading mood type initiated in this short story was Imperative.

Tabel 3.2 . Participants' Storytelling Ability Category

Kategori	Rumus	Hasil	Orang	Prosentase
Rendah	X < M - 1SD	< 60	22	25%
Sedang	M - 1SD ≤ X < M+ 1SD	60 ≤ X < 76	42	50%
Tinggi	M + 1SD ≤ X	76 ≤ X	22	25%

3.2. Disscussion

Analysis of student multiple choice test answers showed different results. Some of the questions that caused a lot of wrong answers as many as 7 questions out of 25 questions. The question is question number 1 with a total of 32 responses correct answers,

number 6 with a total of 35 responses correct answers, number 9 with a total of 32 responses correct answers, number 10 with a total of 31 responses correct answers, number 14 with a cor-rect answer a total of 31 responses, number 19 with a number of correct answers totaling 40 responses, and number 21 with a number of correct answers totaling 24 responses. A total of 7 numbers are spread over 3 materials, including 4 questions about fairy tale text material, 1 question about fairy tale media, and 2 questions about storytelling strategies. Conceptual material about fairy tale scripts has the most errors and practical materials such as fairy tale media and fairy tale strategies have fewer errors.

When carried out further analysis, questions number 1 and 6 fall into the category of easy and basic material but there are many errors due to students not being careful in reading the answers provided, namely question number 1 concerning the difference between fairy tales and stories in general and number 6 concerning the theme of fairy tales child. Question number 9 has many mistakes because many are fooled by answers to questions that are similar. Question number 10 was an error caused by being fooled by an answer that seemed correct but in fact it was not included in the intended recommenda-tion, there were even 3 responses that were not careful with the questions and answered not according to the age recommended for children. Numbers 14, 19, and 21 that cause er-rors are less thorough in answering questions with tricky answers.

In general, when viewed from the causes of errors, it is actually not because students do not understand the material in storytelling, as evidenced by the answers chosen which are answers that are similar to the correct answers. However, when interviews were conducted in the form of discussions with students via the Google Meet platform, it was stated that the errors occurred due to not being careful in reading, being rushed with time, and not being used to multiple choice tests in online form. If you look at the answers that were answered the most easily and correctly based on the material, the number of correct answers above 70% of the responses was 11 questions. Number 2 is 89.5% correct an-swers, number 3 is 83.6% question number 25 is 84.9% correct answers with 73 respons-es.

The results of the initial observations made on students found that from the results of the practice of storytelling, many students experienced internal problems including lack of confidence, lack of expressiveness, flat intonation/no voice variation between charac-ters and narrator, rush, and inappropriate time duration. The existing problems were then followed up by carrying out intensive individual practice to train students' storytelling abil-ities. The result is that students' storytelling skills increase in practice and students are able to write story scripts for early childhood. The manuscript has been assessed according to the components that should be in a children's story script. Another product is that students are able to make storytelling videos by showing facial expressions that support the charac-ters being played, mastering several different voices and being able to show body gestures that support the storyline.

A different thing happened to mastery of the basic concept of the story through multiple choices which was considered less than optimal with the presence of 22 people in the low category. Thus project based learning is assessed in the qualitative realm as

successful for storytelling practice but not so significant a change for concept mastery in independent learning.

4 Conclusion

The results of the research were shown through an evaluation consisting of multiple choice test evaluations and storytelling practice. The results of the research show that the application of project based learning to students is divided into three levels of low, medi-um and high for mastery of learning concepts. Low percentage of 25%, moderate percent-age of 50% and high percentage of 25%. However, the results of practical observations show that students are able to make good products and practice storytelling skills well. Thus project based learning is assessed in the qualitative realm as successful for storytell-ing practice but not so significant a change for concept mastery in independent learning.

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