

AN ACTION RESEARCH: PROJECT-BASED DIGITAL STORYTELLING TO PROMOTE EFL STUDENTS' DIGITAL LITERACY

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Abstract— This article describes the implementation of Project-Based Learning (digital storytelling) to improve students' speaking skill and digital literacy. The aims of this research are (1) to find out whether Project-Based Learning (digital storytelling) can improve students' speaking skill and (2) to analyze the students' learning motivation when is implemented. The data were collected through observation, interview, questionnaire, and test. Findings of the research revealed that students' speaking competence was improved in some aspects such as grammar, vocabulary, pronunciation, fluency, and confidence. Those aspects were improved through a series of speaking activities including group discussion, interview, voice recording, and oral presentation. In addition, students' learning motivation increased in terms of: (a) the students invested more effort in the learning, (b) the students were more interested in the learning activity, and (c) the students' attitude became positive. A challenging multimedia-based project in which students created digital stories could foster students' digital literacy and enhance the students' participation throughout the learning process.

Keywords—*Project-Based Learning, digital storytelling, speaking skill, digital literacy, motivation.*

I. INTRODUCTION

Speaking is an essential skill to be mastered in English language learning. Speaking is productive skill which can determine the success of language learning. In the opinion of Nunan (1998), speaking competence is indicated by the ability to hold conversation in the target language. It is the most important aspect which determines the success of language learning. It can be said that students are successful in mastering English when they can communicate with others using oral language.

According to Cameron (2001) speaking refers productive activity of language use to express and share meanings with others. Speaking is labeled as productive skill because a speaker actively produces language to make meaning. The real challenge of speaking practice occurs when students face real communication. Essentially, there are three major difficulties in speaking. The first is knowledge factors: the students don't yet know aspects of language that enable production. The second is skills factors: the students' knowledge is not sufficiently automated to ensure fluency. Moreover, students' affective factors also discourage their speaking fluency, such as low confidence and high anxiety (Thornbury, 2005). Teaching speaking has purpose to minimize these discouraging factors. The teacher has to provide as much as possible practice opportunities. Then, active learning atmosphere is indeed needed to engage students' motivation in speaking.

In speaking class, students' motivation to actively speaking in English plays important role in achieving deep learning. Motivation refers to students' subjective experiences, especially their willingness to engage in lesson and learning activities and their reason for doing so (Brophy, 1998). It means that students will achieve the learning goal when they have high motivation to do so. He also stated that students are potential to handle tasks most successfully when their motivation is positive.

From pre-research observation, the researcher found that the students had some problems dealing with speaking skill. Those are: (1) some students couldn't express their ideas with correct grammar. Some of them made grammar error when they introduced themselves (2) most of the students had relatively low degree of vocabulary mastery. They tended to repeat the same word in speaking which is causing inefficient communication (3) students could not speak smoothly in delivering ideas (4) furthermore, some students still had problems in pronouncing some words and (5) some students stated the content of speech with low confidence. Indeed, there was no eye contact or any gestures.

The second problem was students' low learning motivation which was indicated by students' behavior in the classroom. Those were: (1) students did not put optimal effort in learning speaking. Some students looked so restless because they haven't done their homework (2) students did not have enough interest towards the learning activity. It can be seen from students' participation. Then, when the teacher got started the

discussion, some students paid less attention, and (3) students had negative attitude towards the language learning. They were not confident to speak up and seemed anxious during the learning. Most of them were afraid of making mistake in speaking. It showed that the low motivation had impacted on students' success in learning speaking.

Based on the pre-research result, the researcher used Project-Based Learning (digital storytelling) to overcome students' speaking problems. Project-Based Learning has been used to provide active learning environment. In line with it, there is a proposed definition of Project-Based Learning. Mergendoller et al. (2009) defined Project-Based Learning as a systematic teaching method which cultivates students' engagement in learning meaningful knowledge and skills through students-centered inquiry process.

Project work is led by authentic questions that finally result in final products or tasks. In this view, the students utilize language in real context for asking and refining questions, debating ideas, making predictions, designing plans, collecting and analyzing data, drawing conclusion, communicating their ideas and findings to other, and creating products (Blumenfeld et.al, 1991). In addition, project is designed distinctly from traditional learning activities. Digital storytelling is another type of technology-integrated project work. The integration of technology in learning has aim to cultivating students' motivation.

Digital storytelling project emerges as innovative way to improve students' speaking skill. It can encourage the students to use language relatively natural communication. In order to complete the project, the students are compelled to discuss and negotiate in group work using English. In this case, students' confidence in speaking is increased because they speak without anxious in small group. Poonpon (2011) found that project can help the students to aware of their own English ability and improve English skill in real life context.

There are generally six stages of Project-Based Learning. (1) It starts with the essential question. Besides, the teacher also needs to organize resources and decide grouping strategies. (2) The second stage is project launch. In this stage, the teacher stimulates students' interest by introducing the project description. It is followed by project structuring that consists of determining rules, making timeline, and designing procedure for the project. (3) The next stage is project creation. In this research, the project is making digital storytelling to describe people and places. (4) The last stage is project conclusion. The students present the final product and the teacher conducts assessment. Finally, students make reflection on the project learning and process. They can express their opinion about the strengths and weaknesses of the project. In line with the curriculum in Indonesia, Ministry of Education and Culture (2013) clearly stated several steps of classroom procedures in implementation of Project-Based Learning. Project-Based Learning starts with essential question as

the guidance of the project. The more rigid steps are explained as follows: (a) start with the essential question; (b) design a plan for the project, (c) create a schedule; (d) monitor the students and the progress of the project; (e) assess the outcome; and (f) evaluate the experience. In this research, the researcher adopted the procedure proposed by Mergendoller and his colleagues (2009). There are several steps of project implementation in the classroom as stated in the following table.

TABLE I. PROCEDURES OF ACTION RESEARCH

Project Stage	Activities
Start: Project Planning	<ul style="list-style-type: none"> ✓ Develop a Driving Question ✓ Plan assessments ✓ Organize resources ✓ Decide on grouping strategies
Stage 1: Project Launch	<ul style="list-style-type: none"> ✓ Stimulate students interest, enthusiasm, and concern ✓ Establish high expectation ✓ Clarify rules, procedures, products, timeline, and grading practices
Stage 2: Guided Inquiry and Product Creation	<ul style="list-style-type: none"> ✓ Facilitate resource use ✓ Help students define tasks and assess progress ✓ Scaffold learning and working ✓ Cultivate presentation skill
Stage 3: Project Conclusion	<ul style="list-style-type: none"> ✓ Stage exhibition ✓ Conduct assessment ✓ Reflect on project learning and process

Digital storytelling is appropriate type of project to promote students' speaking skill. There are some steps of digital storytelling: (a) students compose story for the later script. It helps them to develop critical thinking and linguistic knowledge, (b) audio recording, students are practice how to produce correct pronunciation, including stress and intonation pattern, (c) students capture images and or videos. Then, they will be practicing with image scanning and editing, working therefore towards improving their visual and technological literacy, (d) students combined different types of media such as audio and images onto a timeline and add music tracks (video editing), and (e) students present the digital story. Students' speaking skill can be seen in this stage by the way they attract the audience.

Based on the previous studies, this research aims to (1) find out whether Project-Based Learning (digital storytelling) can improve students' speaking skill and (2) analyze the students' learning motivation when is implemented.

II. METHODOLOGY

A. Research Method

The study was used action research design. Action research is considered as an inquiry process about specific issues through planning, acting, evaluating, refining and learning from the experience (Koshy, 2005: 9). Action research usually is in small-scale circumstance like classroom. It is done by teacher or researcher in the own classroom to investigate particular issue. Action research consists of a number of phases which often recur in cycles: planning, action, observation, and reflection

(Richards & Lockhart, 1994: 12). In addition, Greenwood and Levin (2007: 3) argued that action research is social research which carried out by a team that includes a professional action researcher and the members of an organization, community or stakeholders who are seeking to improve the certain situation.

B. Setting and Participant

The action research that implemented project-based digital storytelling was conducted in class X MIA 4 of SMA N 1 Karanganyar. There were thirty six students and an English teacher involved as the subject of this research.

C. Research Procedures

This is a classroom action research. The data in this research were collected through observation, interview, questionnaire, and tests.

TABLE II. PROCEDURES OF ACTION RESEARCH

Steps of the Study	Techniques	Data
Pre-Research	Observation Questionnaire Interview Test (Pre-test)	The result of the questionnaire, observation, interview, and pre-test score
Planning the Action	Preparing anything needed	Lesson plan and students worksheet, materials, teaching media
Implementing the Action Research	Implementing Project-based Digital Storytelling in teaching Speaking	Field note, Photograph and recording of teaching-learning process, Lesson plan
Result	Post-test	Post-test scores, observation notes

First, the observation is done by the researcher and the collaborator. They observed the students' speaking, attitude and involvement during the project work. They also recorded what happened during the lesson. After all, the observation gives some information about the events and interaction in the classroom.

Second, the researcher did interview to some students and the English teacher in order to know their problems in speaking class. After the research, the researcher held interview to get information from the students about their personal perception, experiences, opinions, and suggestions related to the implementation of Project-Based (digital storytelling) and its effects on the students' speaking skill.

Third, the questionnaires were given before and after the research. The first questionnaire was given in the beginning of the research to know the students' speaking problems and learning motivation in speaking English. In the end of treatment, the questionnaire was given to examine the changes of students' speaking skill and motivation.

Fourth, tests were conducted by giving pre-test before the action begins and post-test in the end of the action. The purpose of the test is to know whether the students' speaking skill in this class improves or not. In this

research, the tests were in the form of asking students to perform presentation in front of the class.

In analyzing qualitative data, the researcher used constant comparative technique as described by Burns (1999: 156). They are assembling the data, coding the data, comparing the data, building interpretation, and reporting the outcomes.

The quantitative data were presented in the form of mean score. It was done to compare the students' speaking ability before and after each cycle or the result of pre-test and post-test showing whether or not there was improvement in speaking ability.

III. RESULT AND DISCUSSION

The finding of the research showed the implementation of Project-Based Learning (digital storytelling) in two cycles. The implementation made some changes in each cycle. There was improvement on students speaking aspects which was summarized in table 3.

TABLE III. THE IMPROVEMENT OF STUDENTS' SPEAKING SKILL

Before Action Research	After Action Research
a. Students produced wrong sentences	a. Students' understanding about grammar was improved
b. Students lacked of vocabularies	b. Students' vocabulary was increased
c. Students pronounced many words incorrectly	c. Students could pronounce words better
d. Students could not speak fluently	d. The students became more fluent
e. Students could not speak confidently	e. The students became confident in presenting oral description

In the cycle 1, they described senior in form of digital storytelling. There were some procedures conducted in order to make improvement. Firstly, the researcher introduced the project work. Then, the students watched an example of digital story and then wrote important points from it. In groups, they read and discussed a descriptive text about famous people. This activity potentially could enrich students' vocabulary and their understanding about descriptive text.

Secondly, the students prepared the project investigation. In this stage, students composed a list of questions for interview. After composing the questions, they practiced how to conduct it. The objectives of this stage were to train them in making correct sentences and correct pronunciation. During the process, the students shared ideas in group to arrange the interview questions so that they got the intended information. They started to ask for help from the researcher in forming the questions. The researcher was monitoring the process so she could give feedback and correction on students' work. The next step was information gathering in form of interview. They also recorded the interview process in order to check their English speaking. Students conducted interview using English with their senior to gain

information about him. The interview was done outside the classroom so they could communicate freely. It could increase the students' confidence in speaking English. Moreover, they got experience in using English in real communication.

Thirdly, researcher checked the result of the interview of each group and students reported the progress of the project. In the report stage, each student got opportunity to tell the findings in English and the others could give suggestions. In addition, the researcher also gave them pronunciation practice by using video. From the video, the students got new vocabulary for describing the senior and then they could pronounce the words correctly.

The fourth is product creation. The students compiled all the information in form of video profile. After writing the description of the senior, the students created narration and then it was recorded. The process of voice recording demands accurate pronunciation and intonation. Indeed, they practiced a lot before the recording.

The last stage is project exhibition. The students presented their final product in front of the class. This final stage was done to encourage students' pronunciation, fluency and confidence in speaking. Before the presentation, the students had practices in order to train their pronunciation, fluency, and intonation. The researcher also encouraged them to make gestures to attract the audience. In the presentation, they tried to present their project in the best way. At the same time, the other students were allowed to deliver suggestions and comments.

Besides, the students' behavior was getting better than the previous. It indicated that students' learning motivation was improved from cycle to cycle. The changes of students' learning motivation during the research can be seen in table 4.

TABLE IV. THE CHANGES OF STUDENTS' LEARNING MOTIVATION

Before Action Research	After Action Research
a. Students lacked of effort	a. Students took effort optimally
b. Students lacked of interest	b. Students was mostly engaged
c. Students showed negative attitudes	c. Student enjoyed the learning

The result of pre-research showed that students had low learning motivation. It was indicated by students' behaviors during the learning. Those were: (a) students lacked of effort in learning; (b) students seemed not interested in joining the English class; and (c) students showed negative attitudes like seemed anxious, nervous and not confident in speaking.

The students' learning motivation was improved in each stage of project procedures. Project launch was the first stage which primarily aimed to engage students' attention. In this stage, the teacher introduced project to the students by showing video of project work. The

students seemed curious and interested in this challenging activity. Then, they could design the timeline, rules, and procedures of the project. This stage was aimed for building collaborative and cooperative atmosphere between students and teacher.

During the product creation, the students searched additional sources from internet such as songs and some pictures. They collaborated seriously to create the digital story. At last, they combined pictures, recorded voices, and songs into a video profile by using movie maker software.

It could be seen during the presentation that the students took optimal effort for the project. They showed good team work by performing attractive presentation. To open the presentation, they used good songs or videos. It proved that their creativity was increased. Finally, the researcher invited students' perception about the learning. Students could state their critics or suggestions to the researcher for the future learning. Some students stated that the project was fun and interesting. They stated that they became brave to speak in English. However, there were some students who stated that the time was limited so they could not create the perfect digital stories. From the students' self-reflection, the researcher thought that the second cycle should be conducted better.

Based on the observation in cycle 1, some students did not participate fully in group work. There were only particular students who really actively joined the group discussion. To make all students speak up, the researcher tried a different way of grouping. As a result, in cycle 2, the students worked in pair to complete the second project. Overall, the stages were the same as in cycle 1 but the object to be described was place.

In the second cycle, students were asked to promote ecotourism object in Indonesia using digital storytelling. They acted like television hosts who gave information about the fascinating ecotourism object. The second project was more challenging in terms of performing the better speaking competence. The students in pairs created their self-written script to describe particular ecotourism object. At first, they were encouraged to collect information from varied sources. They needed to read and select the needed information. Through this activity, their vocabulary was increased. After gathering information, they composed the script which made them understand more about well-arranged sentences. Then, they practiced the script before they recorded the voice. This activity was mainly aimed for improving students' fluency and pronunciation in which the student was lacked the most in the first cycle. Finally, the students presented the digital stories orally in front of the class. The students improvised their speaking as professional broadcasters. There were also students who acted comical characters of hosts which made laughter.

The learning procedures of Project-Based Learning (digital storytelling) are heading to real purpose. Normally, students intended to get the best achievement so they even practiced more to perform the best product.

The students stressed on the process of product making. However, the process of project making was also taken to main consideration. Stoller (2002) argued that the process and final product were both contributing aspects in enhancing students' speaking competence. The teacher's sufficient guidance and support were really needed to make sure that the students could balance both of them.

In this study, Project-Based Learning (digital storytelling) was employed to increase students' learning motivation. It can be seen from changes of students' intensity, desire, interest, and attitude during the learning process. The students were actively involved in the group work to make digital story. In line with it, Blumenfeld (1991) stated Project-Based Learning involves students to make use of new technology to gain and share information with others.

Since the project required deep investigation to the target, the students were engaged to collect information inside and outside classroom. It made them pay more attention on the researcher's explanation. They seemed to be more curious about the project procedures. Moreover, technology use in learning increased students' intrinsic motivation. Most of the students enjoyed the process of the digital storytelling making. The positive effect of Project-Based digital storytelling is also supported by the finding of Min Hung (2012). He stated that after the implementation, the students had better accomplishment and attitude in learning. Moreover, they got higher learning motivation and problem-solving capability. Then, from the interviews, it was found that the students enjoyed the project activity and felt helpful of it.

From the explanation above, it can be seen that the use of Project-Based Learning (digital storytelling) could improve students' speaking skill and increase students' learning motivation. Project-Based Learning allowed the students to be active and creative learners. The students could design their own learning starting from planning, scheduling, conducting, and presenting their work. All of the stages were done by the students and they could express their idea without hesitation.

By analyzing the research findings, it was concluded that the implementation of Project-Based Learning (digital storytelling) effectively improved students' speaking skill. As the additional finding, the means of students' score improve from cycle to cycle. The improvement could be seen in table 5.

TABLE V. MEAN SCORES OF EACH SPEAKING ELEMENT

Aspect	Pre-Test	Post Test 1	Post Test 2
Grammar	53.33	70	80
Vocabulary	59.44	71.11	79.44
Pronunciation	52.77	68.33	75
Fluency	58.88	68.88	76.66
Confidence	58.33	76.66	83.33
Mean	56.55	71	78.88
Improvement		14.45%	7.88%

IV. CONCLUSION AND SUGGESTIONS

After conducting the research by using Project-Based Learning (digital storytelling), the researcher draws some conclusions.

Project-Based Learning (digital storytelling) could improve students' speaking skill. In this research, this method was used to enhancing students' speaking competence of descriptive text, where the students described people and places. The improvement of the students' speaking skill is indicated by some aspects: (a) the students' understanding about grammar was improved; (b) the students' vocabulary mastery was increased. They got some new vocabularies during the learning activity; (c) some students could pronounce words better; (d) the students became more fluent in speaking; and (e) the students became more confident to speak English in small group discussion or in front of the class. The means of students' score improve from cycle to cycle. The mean score in pre-test is 56.55. It improves into 71 in post-test 1. Finally, the mean score in post-test 2 is 78.88.

Project-Based Learning (digital storytelling) also increased the students' learning motivation. In the initial stage, the project can cultivate the students' interest. The students are allowed to design their own learning in terms of planning the project. Then, the activity is multimedia-based project which provides meaningful and challenging learning activities. It leads the students to invest optimal effort and creativity. Furthermore, the project is done inside and outside the classroom. It leads the students' intrinsic motivation to do the activity. The students enjoy the process of the learning and their skill is improved. Therefore, the researcher implies that implementing Project-Based Learning (digital storytelling) is effective to improve students' speaking skill and increase students' learning motivation.

Having concluded the result of the research, the writer proposes some suggestions. For the students, they should be aware of peer-relationship or group-relationship in doing the project. Every student must be responsible of his/her own role, so the project can be completed

collaboratively. Then, the students should be wise to use technology in the classroom. They have to use the technology and access the media for the sake of learning. For English teachers, they must have good design for the learning. Project usually consumes longer time, so the teacher should make good planning and scheduling to make it effective. Moreover, the students-teacher's relationship should be enhanced. The teacher should consider the students' voice in designing the project, such as allowing them to select the topic of the project. For schools, the researcher suggests that the school should facilitate the learning by providing sufficient media, comfortable learning environment, and necessary facilities. Finally, for the other researchers, the writer hopes this research finding can be additional references for the future study. The writer also hopes that this method can be applied by other researcher in the other skills and the other subject matters.

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