DEVELOPING STORY JUMPER-BASED TEACHING MEDIA TO ENRICH KINDERGARTEN STUDENTS' VOCABULARY

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Abstract

The demand of integrating technology in instruction is essential since today's learning became Education 4.0. Thus, teachers are in need of help in creating suitable media to be implemented. This research aimed to know the development of story jumper to enrich kindergarten students' vocabulary and to know its quality. This research was Design and Development Research implementing ADDIE model. The subject of this research were three teachers and three kindergarten students. To know the quality, classroom observation, post-implementation questionnaire, and an interview were administered. The result showed, the media are good in helping the teachers deliver the material, and it is very easy to use. The students admitted that the media were able to attract their attention. The media produced are good enough to be used in further implementation. Teachers could refer to Story Jumper because of its practicality and benefits in helping them achieving the learning outcomes.

Keywords: ADDIE model, story jumper-based teaching media, young learners

INTRODUCTION

In this 21st century, it can be understood that our daily life revolves around the use of electronic devices. Everyday works become more simplified and almost all of them are done with the help of robots or Artificial Intelligence (AI). We cannot deny that without the use of electronic device in our daily lives, everything will become harder and less fun.

On experts' perspective, today's revolution age, according to Shahroom & Hussin (2018), is on Industrial Revolution 4.0 where every day works become more digitalized or more concerned with the help of technology in finishing tasks. Even students or children of today's generation, according to Fatimah (2017) are called as Generation Z, where they effortlessly update and get the information by the help of technology. Based on Fatimah (2017), it is clear that even the youngsters are capable of operating technology because most of their time are spent on finding information with the help of technology.

As to the phenomena mentioned above, every sectors, including on how the education works are now different because of the influence of the 4th Industrial Revolution. The education system that was born because of the influence of 4th Industrial Revolution, according to Shahroom & Hussin (2018), called as Education 4.0. As what the definition of Industry Revolution 4.0 is about, the Education 4.0 also revolves around the use of digital media, where Hussin (2018) mentions that there are 9 trends of education and a digitalize education is one of the trends. Therefore, during the transition, the teachers are in need of a more digitalize teaching media so that they could cope with the education 4.0.

The researcher had done pre observation at TK Lab. Undiksha regarding whether it is true that teacher are indeed in need of a help of a digital media. The pre observation indeed found that teachers are in need of a digital teaching media, because based on the pre observation data (which was gotten from an interview), the teachers admitted that the students enjoyed more while learning through the use of digital media. It was very unfortunate, because as what Fatimah (2017) argues, technology as the newest instructional media developed in this globalization era, presents situation which helps the students to have new authentic and meaningful learning experiences engaging their effort and behavior by providing more fun and effective learning atmosphere.

Other than that, several findings from the interview were also obtained, that were: 1) the school still implemented traditional learning strategy in which the less use of ICT implementation, which resulted boredom on the students during the lesson, 2) TK Lab. Undiksha did not have ICT-related media to be implemented in the second semester, 3) Teachers were less capable in implementing ICT-based media in their learning, and 4) The teachers were unable to create an attractive media that could accommodate vocabulary learning in a short time.

Those findings prove that Howard & Mozejko (2015) are correct on pointing out that it is true that some teachers will likely to incorporate or use digital-based teaching media in their teaching, they also said that many teachers will not. Not only that, it is also true on what Leteane, Pholele, Moakofhi, & Phiri (2015) found on the importance of digital-based teaching media is hindered by the incompetence of the teachers and resource unavailability from the stakeholders. On top of all, the less capability of teachers on using an ICT-based teaching media found by Habibu, Abdullah-Al-Mamun, & Clement (2020) is also proven from the findings.

From those data, the idea of developing a digital-based teaching media for the teachers at TK Lab. Undiksha was proposed. The media proposed was Story Jumper. The media were hoped to be able to help the teachers in order to cope with education 4.0 by also considering the common problems on what the experts above have found. Story Jumper according to Sandström & Kindenberg (2016) is a tool used to create children's book in an easy way, and the result will be a short story with movable pictures, characters and items. They furthermore emphasized that there are several skills of the students will be developed by implementing Story Jumper in their teaching, those are: 1) the ability to express thoughts in speech as well as in writing. 2) the ability to adapt the language for different purposes, recipients and contexts. 3) the skill to choose and use different language strategies.

By considering that Story Jumper could improve several of students' skills during teaching and learning activities, therefore Story Jumper is a suitable media to enhance learning outcomes. Juma (2016) argues every tool that helps in improving learning outcomes are a teaching media. This does not close the chance of teaching

media being beneficial for younger learners. According to Talabi (as cited in Amos, Adu, & Antwi 2017) there are various types of instructional materials and most teachers make use of them in order to achieve their objectives and also for concepts to be concretized in the mind of the child. He furthermore emphasized that teaching media are viewed as objects generally designed to provide realistic images and substitute experience to acquire knowledge. By providing realistic images could make the learners understand more on the material that are taught, and this is very beneficial to younger learners, as their characteristics according to Pinter (as cited in Salazar & Larenas 2018)) are generally, they understand meaningful messages but cannot analyze language yet, lower levels of awareness about themselves as well as about the process of learning, limited reading and writing skills, even in their first language, generally, more concerned about themselves than others, and limited knowledge about the world, they enjoy fantasy, imagination and movement. Therefore, by using teaching media, especially ICT-based teaching media to younger learners will be very beneficial for them.

Thus, this study only focused on the development of Story Jumper-based teaching media especially for the second semester materials of TK Lab. Undiksha to enrich the kindergarteners' vocabulary with the regard that there was no Story Jumper-based teaching media in the school. The problems of this research were stated as follows: 1) how was the development of Story Jumper-based teaching media toward kindergarteners' vocabulary enrichment in TK Lab. Undiksha? and 2) How is the quality of the Story Jumper-based teaching media? Therefore, the objectives of this study were: 1) to develop Story Jumper-based teaching media toward kindergarteners' vocabulary in TK Lab. Undiksha, and 2) to know the quality of the Storyjumper-based teaching media.

Before this study, there was also similar study conducted by Damavandi, Hassaskhah, & Zafarghandi (2018) did a closely related topic with the current research topic, that is the implementation of ICT, especially Story Jumper, to improve students' learning. Their research was of qualitative and quantitative. They used ANOVA to measure the significance of improvement on the students, before and after given a treatment. They also used a pre and post-test to collect the data. The learners' view was also used to determine the success of Story Jumper in improving their ability. In the research, they found that the students' writing skill was significantly improved, as well as their vocabulary and their choice of words. This research is different from the current research, where the current research methodology was using Design and Development Research with ADDIE as its model. The current research refer on the importance of the learners' view on also considering the quality of the media.

METHOD

The method used in this research was Design and Development Research (DDR) in which according to Richey & Klein (2016) the method involve the production of knowledge with the ultimate aim of improving the process of instructional design, development, and evaluation. It can be said that this method was suitable to be used as the basis standard of creating products that were related to instructional design and or development. While there are 2 categories of DDR, those are; 1) research on product and tools, and 2) research on design and development models. This research was more focused on using the second model which was the research on design and development model in order to create the desired products (Story Jumper-based teaching media). The

created products were in a form of digital story telling that were available online and offline. Moreover, the created products material were developed based on the second semester theme in order to achieve the aim of DDR that was improving the process of instructional design to produce new knowledge. Furthermore this research aimed to be able to accommodate students in learning English vocabularies, make the learning easier and more enjoyable for the students in TK Lab. Undiksha.

The development model of this research used ADDIE model by Romiszowski (1984) to help the researcher in developing the Story Jumper-based teaching media which is appropriate to young learners. It was also supported by Aldoobie (2015) that ADDIE model as a guide to producing an effective design in which to create an efficient, effective teaching design that can be used in any environment as online or face-to-face. Moreover, Romiszowski (1984) states that ADDIE model has five procedures in developing a product, those are: Analysis, Design, Development, Implementation, and Evaluation.

Analysis phase was the phase where the researcher analyzes the learning situation before designing a product. Therefore in this phase there were three activities that can be analyzed, which were: 1) the competence that should be achieved by the learners during the learning process, 2) the learners' characteristics as well as their knowledge, learning styles, attitude and their intelligences, and 3) the learning materials that appropriate to develop the competencies.

In this stage, the researcher tried to design the media as neat as possible by considering several aspects such as the content, characters, and backgrounds of the products. The researcher tried to design the content to be appropriate to be told as a story so that the learners were able to see the flaws of the products. Regarding to Robin (2006) the type of digital storytelling to inform or instruct, the researcher also considered that the content should able to reflect instructional material, in which in this research was focused on the development of the learners' vocabulary where the chosen vocabularies were based on the products blueprint. The researcher also tried to design the product in which the characters, backgrounds, and the colors were attractive, in harmony and were related to the material. Those design were validated by also referring to instrument and material evaluation. Besides designing on the products, the researcher also designing on the instrument for the media and material judges, and also instruments for the teachers and students.

When the design step was done, the products then tried to be developed based on the products blueprint and suggestions from the material and media experts. Therefore the media could be seen as an eligible media to proceed to the implementation step. To be specific, the steps before the implementation in this stage were: 1) Product validation were from the validity of informatics management lecturer to validate the media such as the physical aspects of the media (choice of colors, backgrounds suitability of characters, and the display of the products), and the validity from 2 lecturers of English Language Education to validate the material that were delivered within the products such as the grammar, the suitability of vocabularies and relation of the content with the learning objective, 2) Product revision was done after the product was given suggestion from the experts. The product validity and revision were done up until the products were perceived as eligible or valid.

The last stage which was the implementation stage had a purpose to find whether the products are valid to be implemented in further classroom implementation or not. Therefore the roles of material and media experts were really crucial in

determining the validity of the products. When the implementation should include facilitator's training, because the products were implemented by the researcher, therefore other facilitators are not needed. The implementation of the products was done by the researcher in 4 classes in TK Lab. Undiksha to try out whether the media were good enough to be used for a real classroom situation. Whilst implementing the products, the researcher observed the students reaction while learning vocabularies through the media given. Then, the students were interviewed as a whole on their opinion toward learning vocabularies through the use of the products.

For the evaluation stage, the evaluation usually consists of formative and summative evaluation, but because this research was focused on DDR method, the evaluation used was only on the formative evaluation in which formative evaluation was done in each of every steps from analyze, design, develop, and implement. The instruments used were valid. The stages of ADDIE model in this research could be perceived as the following:
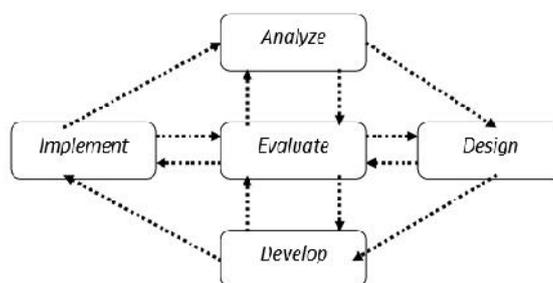

Figure 1. Stages of ADDIE model

In collecting the data, several methods were used, those were: 1) Interview, 2) Syllabus Analysis, 3) Products Validation, 4) Questionnaire Distribution, and 5) Observation. While the instruments were: 1) interview guide, 2) syllabus analysis rubric, 3) expert judgment rubrics, 4) questionnaire, and 5) observation sheet.

The data that were gathered were then analyzed both quantitatively and qualitatively. The quantitative data gathered through analyzing the eligibility and the quality of the media in which the data gathered through the experts' judgment sheets and from the experts' validation. While the qualitative data were from the observation, interview, and syllabus analysis.

FINDINGS AND DISCUSSION

Analysis was the first step of ADDIE model. In this step, the researcher collected the data by analyzing the result of the data that has been done by doing pre-observation. The data were conducting from the result of observation in SDN 3 Banjar Jawa, the result of students' questionnaire, the result of teacher's interview, and the result of syllabus analysis. Those results were explained as follows.

The researcher did an interview to 3 teachers at TK Lab. Undiksha. The amount of questions asked were 8.

The first question asked were about whether the teachers often used ICT learning media in their teaching. They answered that they rarely used ICT media to teach the students, because they prefer a traditional teaching style, using blackboard, and textbooks. Moreover, the reason why the teachers used traditional teaching's style because of the lack of ICT teaching media that was suitable for the students.

The second one was about what kinds of media that were used during teaching and learning session and how the implementation was. The teachers answered that the media that were often used were worksheets, course book, pictures, and any clip of cartoon videos that can be downloaded from YouTube. Besides that, the teachers occasionally used TV as their teaching supporting media, and even though the school has 2 LCDs, the teachers rarely used them because again, the media that were appropriate to the school theme were hard to find.

The third question was about whether the ICT-based media were also shared to the students' parents or not. The teachers answered that they also shared to the parents, the media that were given to the students. The purpose was to inform the parents on what material that were taught to the students. This way, the parents could also let their children practice the words that were taught at school. The teachers admitted that they shared their ICT media through WhatsApp and Facebook. Besides sending the media to the students' parents, the teachers also shared their media by doing a regular meeting between the teachers and the students' parents in the early school year. In that meeting the teachers said that the parents had also provided their children with another ICT-based teaching media such as video from YouTube.

The fourth question was about the duration of using ICT-based teaching media to teach the students. Every teachers have their own time in using ICT-based teaching media. The first teacher admitted that she took up to 15-20 minutes in using the media in which the 20 minutes was equal to 1 learning session. The second teacher said that she may take up to 10-15 minutes in using ICT-based media, and she spent the rest of the learning session with games and puzzles. The last teacher took up to 10-20 minutes of learning session, and if there were still time to spare, she would also do games and puzzles. When using ICT-based media, they preferred more on using videos rather than pictures, because the students were more eager to learn through watching videos.

The fifth question was about whether the students were paying attention if they were given ICT-based media in their learning. The teachers admitted that the students are very eager and excited to learn when they are exposed with ICT-based teaching media. The teachers added that the students also paid more attention during the learning session. The teachers said that the proof could be seen when the students were engaged by watching TV in the school TV room.

The sixth question was on whether the ICT-based media used Bahasa Indonesia or English. The teachers answered that the ICT-based media used both language in the material presentation. Moreover the teachers said that even though the media used both language, the students were able to understand the meaning of words that were taught to them. The teachers said that the reason why they probably understand was because their parents also gave them opportunities to learn both language in their home.

The seventh question was whether the students were able to understand an English ICT-based media. As what the teachers have answered in the previous question, the students had no problem whatsoever on understanding the meaning of each taught vocabularies. The teachers' admitted that beside the parents also helped their children learning, the teachers also provided a clue to what the meaning of each vocabularies.

The last question was on what kinds of ICT-media were needed for the kindergarteners and which material could be developed. The teachers answered that because the students are more eager to learn through videos, the needed media was also oriented in videos implementation. The needed videos also should provide a slow narration which are clear for EFL learners.

In order to know on which material that were needed to be developed further into story jumper-based media, the researcher conducted a syllabus analysis, and it was in a form of syllabus analysis rubric. In the process, the researcher asked help from teacher of TK Lab. Undiksha in order to validate on which theme that are appropriate to be developed further into story jumper-based teaching media. Besides asking the assistance of the teacher on validating on which theme that were needed to be developed, the researcher also ask for assistance on the vocabularies that were to be used in the media. In order to develop appropriate material for the students in the current level, the researcher referred to the standard development of the material.

To indicate that the theme that were going to be developed into story jumper-based teaching media, the teacher was instructed to give checklist on the syllabus analysis rubric on which theme that were to be developed whether the theme were needed or not.

Based on the result, it was decided that there are six themes to be developed further into story jumper-based teaching media. The developed theme were namely: recreation (transportation), job, water, air and fire, communication tools, my country, and universe.

In Design stage, the researcher had done several steps to be able to design the media in such a way. The design step included drafting the media and the supporting materials referred to the syllabus analysis, designing the media based on the draft, preparing the instruments to evaluate the validity of the media based on three experts, and afterward revising the media so that the media were appropriate to be implemented.

During developing the product, the researcher used Story Jumper. The media had gone through 2 times of revisions. The development involved 2 material experts with an expertise on Teaching English as a Foreign Language and Teaching English for Young Learners, and 1 media experts with an expertise on teaching media. The experts had a role to give score to the media on the experts' rubric, and the total score of each scored rubric had a category as follows:

Table 1. Criteria for the media based on the total score given by material experts

Score	Criteria
X ≥ 99	Excellent Media
77 ≤ X < 99	Good Media
55 ≤ X < 77	Average Media
33 ≤ X < 55	Below Average Media
X < 33	Poor Media

Table 2. Criteria for the media based on the total score given by material experts

Score	Criteria
X ≥ 18.74	Excellent Media
14.58 ≤ X < 18.74	Good Media
10.42 ≤ X < 14.58	Average Media
6.26 ≤ X < 10.42	Below Average Media
X < 6.26	Poor Media

The average of the total score given by the media experts on the first revision was as follows:

Table 3. Media Expert Average Score on the First Revision

Topic	Score
1	12
2	12
3	12
4	12
5	13
6	13
Total	74
Average Score	12.3

While the material experts average score was:

Table 4. Material Experts Average Score on the First Revision

Judge	Score
1	472
2	476
Total	948
Average Score	79

The average score was 79 which was gotten by dividing the total score from both judges and dividing it by 12 (considering that each judge had scored on 6 topics).

From those experts score, the overall media were good, but the judges also left notes on what needed to be revised. After the products were revised based from the suggestions given, the media were once again scored by the experts to re-check the quality of the media, the results of the second revision were as follows:

Table 5. Media Expert Average Score on the Second Revision

Topic	Score
1	18
2	18
3	17
4	18
5	18
6	17
Total	106
Average Score	17.6

While the material experts average score was

Table 6. Material Experts Average Score on the Second Revision

Judge	Score
1	659
2	654
Total	1313
Average Score	109.4

The average score was 109 which was gotten by dividing the total score from both judges and dividing it by 12 (considering that each judge had scored on 6 topics).

After the second revision, the media quality was very good and was ready to be implemented.

The implementation had an objective in finding out whether the development of the media were successful or not during classroom teaching and learning activities. Right after the implementation of the media, in order to know the precise response from the teachers and students, questionnaire for the teachers and interview from the students were conducted. By conducting questionnaire and interviews, the validity of the usage of the media are expected to be more relevant.

The tryout conducted on 27th – 28th May 2019. The participants were kindergarteners of TK Lab. Undiksha who were within 4 classes that are TK A1, TK A2, TK B1, and TK B2. The tryout needed the usage of LCD and a Laptop. The LCD was already provided by the school, and the laptop was from the researcher's.

For the implementation procedure, it was conducted on 4 classes with being 2 classes as the implementation of 2 media. To be precise, the implementation was as follow: TK A1 to TK A2 to TK B1 to TK B2 to TK B1 again, then to TK B2 for the final implementation, and the topics taught were Transportation, Job, Communication, Elements, My Country, and the Universe. While teaching the students, the researcher referred to the procedure of teaching storytelling proposed by (Bonin, n.d.) who mentioned that there are 9 steps in teaching storytelling: 1) tell the group an example story, 2) provide ice breaking games involving verbal skills, 3) introduce the concept of "Appreciations and Suggestions", 4) initiate theater games to help students understand character, conflict, struggles and motivation, 5) have students review a variety of folktales and talk to other students about a story they found interesting, 6) invite students to create and share a new story or adapt a folktale using some of the skills learned so far, 7) after each telling, ask the storytellers if they would like to receive appreciations and suggestions from classmates, 8) encourage students to re-tell the stories, 9) after sharing the story two or three times, encourage the class to share their stories with an audience. Instead of the school's teachers who are as the implementer, the researcher became the implementer. The reason was because only a few of the teachers who are able to speak English, so to minimize problems in the implementation, the researcher became the implementer instead. During the implementation, instead of only playing the video and let the students watch it, the researcher did a 'play and pause', to be able to emphasize the vocabulary that were being taught. While also emphasizing the vocabulary, the researcher also related the material to their real life so that they could also use the vocabulary for their real life activities. Even though the teachers were not the one who mainly giving the lesson, the teachers also helped the

researcher on focusing students' attention, and emphasizing vocabulary. In other words, the teachers were also involved in the implementation of the media.

In order to evaluate the usage of storyjumper-based teaching media that were already implemented. The researcher did questionnaire that was filled in by the teachers regarding the use of the media, and interviewing several students on their learning experience after being taught by using a video. From the questionnaire that was given to the teachers, all of them agreed that the media were really helpful in teaching the students, especially teaching English Vocabulary. They perceive that the media were able to attract students' attention. They added that when teaching the students without the media, the students were rather not focusing on their study and play around. The teachers also said that the students were very responsive when given questions regarding the material that were delivered using the media, but not when the students were being asked about a material without using the media. Overall, the teachers strongly agreed that the media is a very powerful tool that could help teachers in achieving the learning objectives, and it was proved by the teachers by scoring 4 in all aspects of the questionnaire.

The next was on the students' response toward the interview. The researcher used purposive random sampling and used 3 students as interviewee. The students chosen were based on the teachers' suggestion. The students enjoyed their time learning English by using media. Moreover when it was a story about something/someone. They were really interested in the story and learn a lot of vocabulary from the video. Aside from the pronunciation of each emphasized vocabulary, the video also provided bolded words for the vocabulary so the students will remember the spelling of the vocabulary. Besides, the video was also supported with clear image representation on the emphasized vocabulary. When they were asked about the difficulty, they admitted that they could understand the mentioned vocabulary because they were supported with real life-like images.

This research aimed to develop storyjumper-based teaching media in order to enrich kindergarteners' vocabulary. In order to achieve the aim of this research, the researcher used ADDIE model in developing the media. The ADDIE stages are: Analysis, Design, Development, Implementation, and Evaluation. That model was proven to be effective in teaching design that can be used in any environment as online or face to face (Tegeh, Jampel, & Pudjawan, 2015). The media were developed by considering a lot of aspects such as, preliminary observation and teachers' interview in the analysis stage, syllabus analysis in the designing stage, and revisions in the development stage to know the eligibility of the product before implementation stage.

During the implementation of the developed media, the researcher observed that the students were very enthusiastic, attentive, and very participative to either ask or answer questions. Moreover when the students were interviewed, they admitted that they learned a lot of vocabulary that was proven during the observation that the students could repeat the vocabulary in both English and Bahasa Indonesia. This was related to what Parvin & Salam (2015) found which was that students showed a quicker pace of learning English when they are exposed with the implementation of e-content (in this case, storyjumper-based media) in their learning. Zomer & Kay (2016) add that the use of technology-based learning has a significant effect on improving students' phonological awareness, vocabulary, and general literacy.

Beside the capability of the students on learning English quickly, the researcher observed that the students were also enjoyed the displaying of the media, the

implementation on the topic '3 elements' in particular, where there are elements who are talking instead of real people. That is because as what Pinter (as cited in Salazar & Larenas, 2018)) has stated about one of the characteristics of young learners that is enjoying fantasy and imagination.

As what Ghavifekr & Rosdy (2015) and Blackwell (2014) on the importance of schools in providing technical support for teachers who are less capable in operating ICT-based media, by developing storyjumper-based teaching media, teachers will no longer need intensive training on using ICT-based media because storyjumper was easy to use. This proven by the finding on this research which based on the questionnaire for the teachers which was given after the implementation to check the quality of the media based on the teachers' perspective, all teachers who filled out the questionnaire said that the storyjumper-based teaching media is very easy to use.

CONCLUSION AND SUGGESTION

As the results shown, the media development were using ADDIE model, and in order to know the quality of the media, the researcher used experts' judgment rubric, teachers' questionnaire, and students' interview. Based on those three, the quality of the media were considered to be good enough and ready to be proceeded into further testing.

The suggestion from the present researcher for the future researchers was that the future researcher could develop more based on this present study and then try to find out the significance effect towards students' learning outcomes, or more specifically their vocabulary choice toward the use of pre-test and post-test. By knowing the result on both tests, the quality of ICT-based teaching media developed using Story Jumper can be trusted to be able to help teachers and students.

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