



Developing Microlearning-Based English Video Materials for Junior High School

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Received: 2023-11-22 Accepted: 2023-11-26

DOI: 10.24256/ideas.v11i2.4178

Abstract

This study proposed developing micro-learning-based English video materials for junior high school. This study was designed in the form of successive approximation model (SAM) by Allen (2012) to design some phases namely preparation phase, iterative phase, and iterative development phase. The English video materials needed were identified based on the observation, interview the English teacher, and interview the learners. The study found that the lesson plans did not provide learning video materials and the lesson plans did not provide suitable teaching model in learning English. Furthermore, the English teachers used conventional model in teaching and learning process and did not provide learning media to assist them in the teaching and learning process. Based on the interview with the English teachers, the researcher concluded that the learners were still having difficulties to understand materials and they have short memorization in learning English. It could be seen from the result of interview with the English teachers and the learners. Moreover, the English teachers need the suitable learning media to assist the learners in the learning process. Therefore, the researcher developed three English video materials used the micro-learning concept and combined with three teaching model namely; problem-based learning, project-based learning and discovery-based learning. The effectiveness of the develop English video materials for the learners of junior high school was evaluated using criteria of a good English materials suggested by the formula proposed by Nurkancana and Sunartana (2011). The result showed that the quality of developing micro-learning-based English video materials for junior high school was good.

Thus, the micro-learning based English video materials were good to be used as a teaching and learning English video materials for eight grade junior high school students in Denpasar.

Keywords: *English video materials Microlearning; Three teaching models*

Introduction

English is one of languages used for communicating in the global era. English allows people to express their ideas and feelings to others in different countries (Nishanthi, 2018). It can be said English has essential things in many sectors, such as economics, politics, and especially in education. Technology also significantly impacts learning English, especially in the 21st century. According to Nugraha et al. (2021), The industrial revolution 4.0, which created digital transformation after the technology was widely used, gave rise to the concept of society 5.0. It can be said that English has become a crucial requirement in this era, also known as the 4.0 industrial revolution, in which every person in the world is connected and engaged in industrial sector competition. In post-pandemic learning, the synchronous and asynchronous system makes the teacher and learners should use technology to assist them in teaching. Furthermore, the rush of information causes students to find information very easily in various sources, so learners experience cognitive loads. Cognitive load theory shows that effective learning materials facilitate learning by directing learners' cognitive resources toward activities that are relevant to learning (Chandler & Sweller, 1991).

According to Kirschner (2002), cognitive load theory could give guidelines to help in presenting information by encouraging learners' activities that optimize academic performance. It is based on a cognitive architecture consisting of working memory, which has a limited capacity if the information being thought of is new or complex information, with the interaction of long-term memory, which has an unlimited capacity to store information. From the impact of the rush of information, the cognitive load is high, so there is a need for micro-learning or bite-sized learning. According to Febrianingrum and Rabbianty (2022), micro-learning is also called bite-sized learning since it uses micro-activities, a well-organized chunk of learning activities, and is also called micro-learning. Micro-learning is a method of learning via short, bite-sized, and well-planned that the learners consume via digital media. As the teacher, the teacher can break down learning into short, manageable pieces of information. It is lined with (Srinivasan & Suresh, 2018), micro-learning is a small activity used to deliver a subject matter by breaking the material into more petite or shorter information units. Based on the statements above, it could be seen that micro-learning could help the learners to select the information properly and reduce cognitive load experienced by the learners.

There were some previous studies related to the use of micro-learning and learning videos. According to Salleh et al. (2022), using micro-learning could assist the learners' attention, and the learners have more time to think critically in solving the problem in the learning process in the classroom. It means that micro-learning could increase the learners' attention and critical thinking. Moreover, learning videos could attract learners'

interest and facilitate learning (Adhipertama et al., 2021). It can be said that using micro-learning could improve the learners' interest in teaching and the learning process. Moreover, implementing micro-learning could increase the learners' ability by up to 18% rather than the traditional method (Mohammed et al., 2018).

Based on the preliminary observation conducted by the researcher in several junior high schools in Denpasar, the researcher found that SMP PGRI 9 Denpasar has obstacles in the learning process. The researcher observed learning resources and interviewed English teachers and learners. During the observation, the researcher observed the activity in the classroom and found that the English teacher tended to use textbook as the only learning resource. The researchers found that the learning process lacked the use of learning media that suited the needs of learners. Furthermore, based on interviews conducted by researchers, researchers found that learners lacked interest in learning English in class. Also, learners tended to have low memory when teachers explained the material in front of the class. In addition, teachers lack innovation and creativity in developing the material taught in the classroom. In this case, developing practical learning in the 21st century is essential.

Education in the 21st century requires learners to think critically, able to collaborate in doing a project, and make discoveries in learning. Thus, nowadays, English teachers guide the learners to become independent learners by employing the three of teaching model namely, Problem-based learning, Project-based learning, and Discovery learning. Problem-based learning aims to make the learners critically in solving problems. Project-based learning aims to make the learners able to collaborate with each other. In addition, discovery-based learning aims to stimulate the learners in discovering something meaningful in the learning process. Moreover, the three concepts are appropriate to be implemented based on the characteristics of students and conditions in the field. Besides that, after achieving 21st-century learning, developing material in videos based on micro-learning is suitable.

Method

In this research design, the researcher used the successive approximation model (SAM), where one of the concepts from the SAM model criticizes many models, one of which is the ADDIE model. According to Jung et al. (2019), the ADDIE model was criticized for being too time-consuming and inflexible to implement. It means that the ADDIE model is less time-efficient, and the steps in each stage are unclear. Furthermore, the ADDIE model has many other shortcomings, namely, ADDIE pays little attention to and facilitates aspects of connectivity and collaboration. For instance, collaboration between teams and everyone concerned to ensure that the project goes well. The ADDIE model has difficulty making changes or corrections in the middle of the process. On the other hand, SAM has time efficient, and the steps in each stage are clear. According to Ali (2021), SAM is flexible and consumes less time. Furthermore, SAM can make rapid changes in the middle of the process and also SAM can facilitate aspects of connectivity and collaboration well. Therefore, SAM was used by the researcher in this research. There are two versions of SAM model; SAM 1 consists of two phases, namely 1) preparation phase and 2) iterative design

and development phase. SAM 2 consists of three phases, namely 1) preparation phase, 2) iterative design phase, and 3) iterative development phase. The researcher chose three phases in SAM because this research is developing the learning video material that requires accuracy in every step.

Discussion

The procedure for designing the microlearning based English video materials

The procedure in designing micro-learning-Based English Video Materials for eight-grade students in junior high school, there were several processes conducted: preparation phase, iterative phase and iterative development phase. In the preparation phase, the researcher collected the information by observing the lesson plans and interviewing the English teacher and the learners in the information gathering. The result found that the lesson plans did not provide the learning media and also did not provide a suitable strategy in learning. Besides that, the result found that the English teachers still used a conventional model which was teacher-centered in the learning process and they said that they never used learning media in teaching and learning process. Furthermore, based on the result found that the learners were difficulty understanding the topic that the English teachers already gave because the English teacher gave a lot of information in learning and also the English teachers did not use the learning media to support in teaching and learning process. In savvy start, the researcher used the focused group discussion from the problems in the rill class condition. In the iterative design phase, the researcher designed three scripts of English video materials, and also the researcher combined learning models namely; Problem-Based Learning, Project-Based Learning, and Discovery-Based Learning in each video. Moreover, the researcher created three videos and followed by three syntax and also the three topics which were simple past tense, present continuous tense and simple present tense that used based on the interviewed with English teachers and the learners and also the rill conditions that the learners were difficult to understand the those topic in learning process. The first topic was simple past tense combined with the five syntax of project-based learning in creating the English video materials. In the first syntax is start with the essential question. In here, the learners listened to the dialogue from characters (male and female) about the activities that they have done in the past. Then, the teacher asked about the activities mentioned in the dialogue. And the second syntax was to design a plan for the project. The teacher gave the materials about simple past tense in the form of conversation in the video. Then, the teacher asked the learners to do a project about the activities that have been done in the past in form of text. The third syntax created a schedule. The learners have 2 days to finish and submit the project to the teacher. The fourth syntax monitored the learners and the object's progress. The teacher gave the project's example and explained the project's progress that must be achieved. And the Fifth syntax assessed the outcome and evaluate the experience. Here, the teacher told the learners how to get a good result and summarizes the lesson together.

The second topic was present continuous tense combined with the five syntax of problem-based learning. In the first syntax was the orientation of the problem. Here, the

learners watched the conversation between two characters on the video. Then, the teacher asked questions about the time signals in the conversation. The teacher asked the learners to discuss about that question with their groups. The second syntax organized learners for investigation. Here, the teacher helped the learners organize the problems already given at the beginning. The third syntax was the conduct of the investigation. The teacher encouraged the learners to collect the information to get a clear explanation and solve the problem. The fourth syntax developed and present the result. The teacher helped the learners design and prepare based on the video. The next syntax analyzed and evaluate the investigation process. Here, the teacher helped the learner evaluate the investigation and the learner's process.

The third topic was simple present tense combined with six syntax discovery-based learning. In the first syntax was stimulation. Here, the teacher gave the dialogue in the video about the activities that mentioned two characters and the learners watched and listened carefully to the conversation. Based on the video provided, the English teacher tried to stimulate the learners and increased their feelings to identify by themselves. The second syntax was the problem statement. In here, the learners tried to identify the statements of the dialogue about the time signals and the tenses that the dialogue used based on the video. And the last, the teacher guided the learners to make the hypothesis. The third syntax was data collection. Here, the teacher allowed the learners to collect information based on the video and answer the question. The fourth syntax was data processing. The teacher guided the learners to create the concept, and the teacher asked the learners to analyze the information data. The fourth syntax was verification. In here, the teacher gave chance to the learners to check carefully and to make the evidence correctly or not based on the hypothesis previously, and the learners tried to relate the result of data processing. And the last syntax was a generalization. The teacher and the learners concluded the answers to the question previously. The three learning models used micro-learning concept in every English learning video material. After the script was done, the researcher sent the script to the two supervisors and the two supervisors gave some input about the script the researcher had already done. The suggestions of the three scripts were about the grammar error. Furthermore, the researcher revised the script based on the input by two expert judges. The next step was creating the prototype of the three micro-learning-based English video materials. The researcher sent to the expert judges and the expert judges reviewed and gave some input of prototype of the three videos.

Based on the result above, the researcher revised the three prototypes based on the input from the two expert judges to make the prototype quality good. Moreover, the researcher reviewed the prototypes twice and then sent three prototypes to the expert judges. And the last, the expert judges approved and the researcher continued to the Iterative development phase. In addition, in iterative design phase the researcher was done some cycle which about the reviewed the prototype until the prototype was good quality and moved the next phase was Iterative development phase. In iterative development phase, the researcher developed the prototype which was three English video materials. In developing process, the researcher developed the content of three

English video materials. In three English videos, the researcher used micro-learning concept which was every video divided into some activities. In the first video, the researcher used the material of simple past tense and the first video divided into five activities namely; pre-activity (chunk one), whilst activity (chunk two, chunk three, chunk four) and the last was post activity (chunk five) in the video. In the second video, the researcher used the material of present continuous tense and the researcher divided the second video into five activities namely; pre-activity (chunk one), whilst activity (chunk two, chunk three, chunk four) and the last was post activity (chunk five) in the video. In third video, the researcher used the material simple present tense and the third video divided into five activities namely; pre-activity (chunk one), whilst activity (chunk two, chunk three, chunk four) and the last was post activity (chunk five) in the video. In addition, those of three English videos materials used the concept of micro-learning which was those videos divided into some activities. After developing the prototype, the researcher implemented the prototype in learning process and it was found that the learners were enthusiastic and gave a good response. After implementing of the prototype, the learners gave some input to make the voice of the presenter's became more clearly. At the end, the researcher tried to evaluate again the prototype became a good and became more clearly.

Conclusion

There were micro-learning based English video materials produced for teaching and learning process. There were three topics in eight grade students that developed in the three videos namely; simple past tense, simple present tense and present continuous tense. Therefore, the three topics integrated with the three of syntax in teaching model and also the English video materials used the concept of micro-learning which was the process bit by bit in each video. In every video, there were three activities namely; pre activity, whilst activity and post activity. Those were used the concept of micro-learning combined with the three syntax models in teaching and learning process. Therefore, the developing micro-learning based English learning materials assisted the English teachers and the learners in learning process especially for eight grade students in junior high school. Besides that, the evaluations of the product already assessed by the two expert judges and the expert judgement used the theorist of evaluating an instructional product by litz (2005), Fitria (2022) and (Pouyanfar et al., 2022). The result of the two experts judge of the three videos were good.

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