**Interdisciplinary Social Studies**

# ENGLISH TEACHING MATERIAL DEVELOPMENT BASED ON TYNKER PROGRAM IN IMPROVING FOURTH-GRADE STUDENTS' VOCABULARIES

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| PAPER INFO | ABSTRACT |
|---|---|
| *Received: August 2022* <br> *Revised: August 2022* <br> *Approved: August 2022* | **Background:** In 21st-century learning, students must have access to communication, collaboration, critical thinking and problem solving, dan creativity, and innovation, including elementary students. Tynker is a platform for learning programming for kids that teaches them game design, web design, animation, and robotics. <br> **Aim:** The study aimed to develop English teaching material based on the Tynker program to improve the vocabularies of fourth-grade elementary students. <br> **Method:** The subject of the study was 20 students in fourth grade in Zia Salsabila Private School. The researchers used Research and Development design in this study. The techniques of collecting data were observation, interview, and questionnaire. Furthermore, the researchers analyzed the data using descriptive qualitative and quantitative analysis. The result of the study showed that English teaching material based on the Tynker program improved students' motivation for vocabulary learning. <br> **Findings:** Tynker-based teaching resources can be an alternate learning tool for fourth-grade elementary school pupils, particularly for developing vocabulary. The Tynker Program can help as a tool for learning English, but the researchers recommend using it with the proper learning resources. The teacher can download the Tynker program and develop their lesson plans using some of Tynker's topics. The teacher can use Tynker to give students resources for learning English and assist them in subjects where they feel learning English is difficult or dull. |
| *KEYWORDS* | *Tynker, vocabulary, elementary students, research and development* |

## INTRODUCTION

Learning is a process of interaction between students and educators as well as learning resources in a learning environment, according to Constitution No. 20 of 2003 regarding the National Education System. Komalasari (2013) also says that learning is a planned system, implemented, and evaluated systematically to make learners achieve learning goals effectively and efficiently.

21st-century learning provides 21st-century skills to students, namely the 4Cs, which include communication, collaboration, critical thinking, problem-solving, and creativity and innovation (Bailik & Fadel, 2015). In this learning, students must master the 4C skills themselves. In achieving these abilities, it is inseparable from the role of the learning method that applies in schools through innovative learning, such as the use of technology and mastery of program languages as the demands of the 21st century (Nurutdinova et al., 2016). In this case, learning has transformed into online learning, directly or indirectly requiring students to master various programs offered by technological development(Kuo et al., 2014). Larson and Miller (2011) state that in 21st-century learning, teachers and students work together in

implementing learning by integrating the use of technology in the classroom. Thus, students will also train to improve their critical thinking skills and solve problems in facing every challenge at school following their HOTS (Higher Order Thinking Skill) (Retnawati et al., 2018).

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There are several skills to master in learning English, one of which is vocabulary mastery (Hamer & Rohimajaya, 2018). Vocabulary is essential because vocabulary is the basis for someone to understand and use English (Nurmala Sari & Aminatun, 2021; Susanto, 2017). Currently, English learning has applied in elementary schools (Chen et al., 2011), which Elementary School aims to introduce English to students. Vocabulary is one of the essential elements to master by students in elementary school (Rozi et al., 2021). Therefore, the teacher's role is significant in increasing students' motivation to learn English vocabulary and adapting it to 21st-century learning (Pellegrino & Hilton, 2013). However, based on the observations, 21st-century learning has not been realized optimally and affects student learning outcomes.

Furthermore, based on the initial data acquisition, it is known that English teachers who teach grade 4 still tend to use conventional methods in memorizing vocabulary that is not contextual (Lestari & Suwatra, 2013). Despite so, another research by Pradana and Sholihah (2019) revealed that conversing in English during role play might also elevate students' English skills. Teachers need to put more effort into getting students to understand what they will portray as. Hence, it is difficult for students to understand the meaning of the vocabulary and use it in communication even though sometimes they have memorized it but are not practiced in contact. This situation makes students feel bored in learning English, especially vocabulary, even though the child desires to play while knowing. These children are accustomed to the times, one of which is using technology. Therefore, in educating children, teachers must use active methods to follow their needs, namely playing (Hunter & Walsh, 2014). One thing that the teacher can improve is the use of learning media.

Despite so, some teachers have utilized conventional media in their learning. For example, Hasanah et al. (2019) discovered that using flashcards might elevate students' memory, especially in learning English. Another research by Rahmawati (2021) unveiled the use of AR (Augmented Reality) in English vocabulary improvement. On the other hand, these efforts need more attention on their fundamental aspects, such as which theory they rely on to validate the proposed procedures.

Based on the explanation above, the author is interested in researching to increase students' motivation in developing English vocabulary through the Tynker program. Tynker is a programming platform that teaches children to create games and programs. Tynker uses a system of visual code blocks that are easy to assemble into a match (Purwadhika, 2019). With

the use of this program, learning will become contextual learning which will lead to a learning process that involves student activity. Furthermore, the use of this program fulfills contextual knowledge and the use of technology through programming languages (Coding). Thus, the demands of 21$^{st}$-century learning will be complete.

Therefore, the purpose of this study was to find out the increase in motivation of Zia Salsabila's 4$^{th}$-grade private elementary school students in developing English vocabulary through the Tynker program. This study focuses on increasing the motivation of fourth graders at Zia Salsabila Private Elementary School to develop English vocabulary through the Tynker program.

This study used the Tynker program as a learning medium because this media is designed like a game and requires English vocabulary to complete. The vocabularies have been developed based on the user's age. The researchers conducted the research at Zia Salsabila Private Elementary School, Pendidikan Pasar XII Bandar Setia Percut Sei Tuan Street, District of Deli Serdang, North Sumatra.

**METHOD**

This study aims to determine the increase in the motivation of 4$^{th}$-grade students of Zia Salsabila Private Elementary School in developing English vocabulary through the Tynker program using a Research and Development design by applying a qualitative method through observation and the distribution of questionnaires. This method is a research method used to produce products and test their effectiveness of these products (Sugiyono, 2019).

**Preliminary Stage**

The preliminary stage is the development stage conducted to determine the problems and needs of students and teachers at Zia Salsabila Private Elementary School. This initial stage consists of analyzing the requirements of learning devices in the form of learning media using the Tynker program to improve students' vocabulary skills at Zia Salsabila Elementary School.

**Development Stage**

The development stage is the stage used to collect information and develop learning media products. These stages consist of:

1) Learning Media Development Phase through the Scratch Program: At this stage, media development will be carried out to learn in improving vocabulary skills at Zia Salsabila Private Elementary School;
2) Learning Media will be validated by two specialists, including a lecturer from the department of English language and literature and an English teacher from Zia Salsabila Private Elementary School, as part of the Tynker Program's learning media validation phase; and
3) Produce Early Products.

**Evaluation Stage**

The evaluation stage is a stage that aims to find out the Development of the Tynker Program Learning Media on the vocabulary ability of students. The evaluation stage consisted

of a limited trial, questionnaire distribution, and questionnaire data analysis to find initial conclusions regarding the quality of learning media as the initial product of this study.

## RESULTS AND DISCUSSION
### Need Analysis

The questionnaires were used to investigate students' target needs and learning needs. It consisted of 30 items in which 20 items were used to analyze students' target needs, and ten were used to investigate their learning needs. It was administered to teachers of grade IV, which consisted of two teachers. Both of the teachers are females, and they graduated from English Language Teaching Department.

The demand of the target situation determined necessities; that was what the learner had to know to function effectively in the target situation. The students' needs in speaking were described in the following table.

**Table 1.** Interview Results

| No | Questions | Answer | Yes | Why |
|----|-----------|--------|-----|-----|
| 1 | What kinds of skills which students in grade V need? | Micro Skill | ✓ | The 4$^{th}$-grade students are novice learners, and they need to know more about the meaning |
| | | Macro Skill | ✓ | They need macro skills such as speaking but in a simple expression |
| 2 | What do you think about technology usage in learning? English for young learners? Would you like to explain its contribution to teaching English since you have been an English teacher? | It is helpful to entertain students in learning English | ✓ | Because English is not their mother tongue, so to make them familiar with English need joyful strategies, which include technology as media |
| | | It helps the teacher to explain the meaning of English Words | ✓ | |
| | | It makes students enjoy learning English | ✓ | |
| 3 | What is the learning atmosphere you like in the classroom? | Active | | Language should be practiced; students must be allowed to talk |

| | Fun and interesting | Students have to enjoy English as the foreign language |

*Source: Researchers' Interview*

The data mean that novice students need to be persuaded to explore English as a global language which all students in Indonesia must have. The strategies used should motivate students to know more about English.

**Designing Learning Materials**

After administering the needs analysis, the researcher found that the students needed an improvement in the teaching-learning process, especially in learning vocabulary. Then, the researcher selected the topics and objectives based on the needs analysis results. The materials should attract the students to learn a language with Tynker. The learning materials were designed in several steps. They were:

**Warming Up**

In starting the instructions, the teacher should provide exciting material, which includes watching a cartoon.

**Main Activities**

1) Listening, reading, and practicing short conversation;
2) Giving exercises such as answering some questions;
3) Playing Tynker; and
4) Practicing Tynker to identify some vocabularies.

**Closing**

1) Doing some worksheets as the evaluation of students learning process
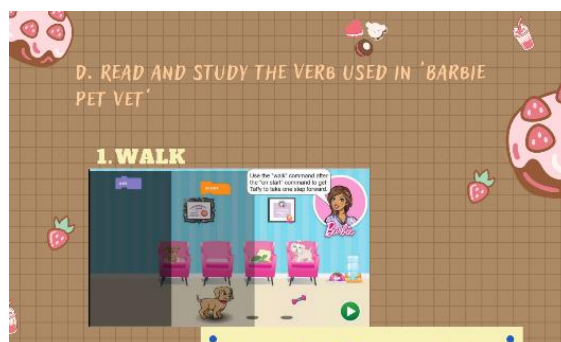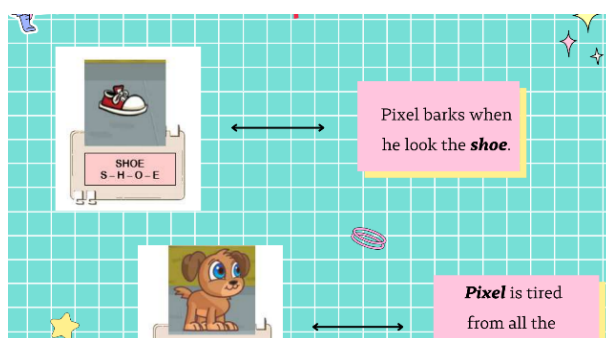


**Figure 1.** Activity Suggested

**Figure 2.** Worksheet 1


**Figures 3.** Worksheet 2

**Validating by Expert**

After the learning materials were successfully developed, the experts evaluated the materials to analyze if they were appropriate or not. The evaluation was given by using the questionnaire to the experts. It was used to get suggestions, evaluations, and comments in order to make the learning materials better and ready to be tested. The questionnaire was made up of a Likert scale rating with five ratings, namely:

**Table 2.** Likert Scale and the Categories

| Value | Category |
|---------|----------------------------------|
| Value 5 | Very Good/Relevant/Appropriate |
| Value 4 | Good/Relevant/Appropriate |
| Value 3 | Enough |
| Value 2 | Less |
| Value 1 | Significantly Less Good/Relevant/Appropriate |

For qualitative classification of data in the Likert scale, it consists of 5 categories, namely: Excellent, Good, Sufficient, Unsatisfied, and Awful. The following is a table of classes based on Likert scale intervals.

**Table 3.** Categories Based on Likert Scale Intervals

| Score | Category |
|-----------------|-----------|
| 81.00% - 100% | Excellent |

| | |
|---|---|
| 61,00% - 80,99% | Good |
| 41,00% - 60,99% | Sufficient |
| 21,00% - 40,99% | Unsatisfied |
| 0,00% - 20,99% | Awful |

The first expert is Dr. Widya Andayani, M.Hum (English lecturer in Universitas Negeri Medan). The expert evaluated this media about the image selection is more focused on local wisdom. The second expert is Ms. X (English teacher of class IV at Zia Slasabila Private Elementary School in Bandar Setia, North Sumatra). The expert evaluated that the learning materials follow the material presented to students, and students will study easier like the lessons and achieve excellent achievement.

**CONCLUSION**

After obtaining the research findings, the researchers discovered that learning materials using the Tynker model in teaching vocabulary engage students to be active in the class with the process, which included warming up, main activities, and closing. The learning materials attracted the students' attention and improved their creativity while learning English.

Based on the result of this study, Tynker-based teaching materials can be an alternative learning resource for grade 4 elementary school students, especially in enhancing students' vocabulary. Tynker Program can be a tool for learning English, but it is suggested to be used whether it was combined with the appropriate learning materials. The teacher can download the Tynker program and create learning materials based on some themes in Tynker. The teacher can use Tynker in providing English learning material and help students in subjects that they consider studying English complex and tedious.

The other researchers are expected to conduct research to test this English material in teaching vocabulary. The trial of these teaching materials can be carried out by using action research. This method is used in several meetings so that the effectiveness of its use can be observed.

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