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# Textbook development on character-based active learning strategy using tournament type for elementary School student

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**Abstract.** It was indicated from the results of a preliminary study in Elementary School that textbooks used have not been compiled in the form of themes that are in accordance with the subject matter. The textbooks have also not referred to one of the learning models. They have not involved students' active learning and have not been able to develop students' character. This research aimed to develop a textbook using active learning strategy of the learning tournament type with character building for elementary school students. The research used 4D model of Thiagarajan with the steps; define, design, develop, and disseminate. The data were collected using observation sheets, interview guides, questionnaires, character assessment sheet, and test. The data were analyzed using descriptive statistics. The result of the validity test showed that the textbook developed was valid. The result of the practicality test also showed that the textbook was practical to be used in learning. The result of effectiveness test showed that the textbook was effectively helped to improve student' competence in the knowledge and character domain. The effectiveness of the textbook was based on the result of the effect size of the competence of students' knowledge which was included in a large category and most of the students' characters were in a good category.

## 1. Introduction

The availability of textbooks in elementary school is an important and very decisive thing because textbooks are a source of learning for elementary school students in Padang, Indonesia that produced by the Ministry of Education and Culture. However, the results of a preliminary study showed that the textbooks used in schools were still varied in terms of type and quality. Student activities in the textbooks do not refer to certain learning models. Meanwhile, the student learning activities in the learning process are very important, so educators have supported the importance of activities in the learning process. One of the terms popularized by Dewey is learning by doing which means learning should be conducted in real action [1]. Teachers are active while students are given less opportunity to express their creativity in some cases. On the other hand, learning in elementary school should make students be active and motivated to learn in order to raise curiosity, honesty, and an attitude of confidence. So that student was able to apply the concept they get in their daily lives [2].

The results of observations conducted on fifth-grade students in several elementary schools in Padang showed that there were still several problems in learning among them. Most students were lazy, lacking motivation, enthusiasm, and one source of learning materials obtained by students only from teachers. They are familiar with teacher explanations, less creative, thus causing them learning outcomes to be low. The solution to these problems is to implement an active learning strategy in learning.

The active learning is all forms of learning that enable student an active role in the learning process, both in the form of interactions between students and students with teachers in building



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concepts and meanings through various learning activities so that motivation and enthusiasm are expected in the learning process [3]. The active learning strategy is a way that can be done by the teacher to focus on students' attention so that they remain focused on the learning process by increasing activities in accessing various information. In this manner, they can gain various experiences and not just knowledge [4]. Active learning is a learning activity that invites students to learn actively. When students learn actively, it means they have dominated learning activities. This is important in the learning process.

There are several types of learning that can be applied to active learning. One of them is a learning tournament. Learning tournaments are active learning strategies which are a simple form of the Teams Games Tournament [5]. It combines one study group and team competition that can be used to improve understanding of facts, concepts, and skills [6]. The students discuss in groups for a better understanding of the material being studied. They also have the same opportunity to participate in groups to develop their potential actively [7].

Moreover, it is very important to introduce learning strategies for implementing learning. The active learning is a form of learning that allow students to play an active role in the learning process, both in the form of interaction between students and students with instructors in the learning process [8]. As the result, it is very important to develop a textbook that can develop students' creativity in meaningful learning according to the characteristics of the active learning type of learning tournament strategy. The formulation of the problem is how do textbooks use the active learning strategy type learning tournament with character building for elementary students?

## 2. Methods

This study used the research and development design from Thiagarajan which called 4D model. This model consists of define, design, develop, and disseminate phase. The data collection instrument were interview guidelines, observation sheets, questionnaires, and test results. The data were analyzed using descriptive statistics to test the validity, practicality, and effectiveness of textbook. The effectiveness of textbook in terms of the percentage of student learning activities, student learning mastery in the domain of knowledge, skills, and character of students.

## 3. Result and Discussion

Elementary students have limited knowledge and understanding. Therefore, the design of elementary school textbooks demands more academic and practical aspects to support meaningful learning. In addition, textbooks used in classroom learning are full of illustrations with various functions and objectives to support students' learning motivation [9]. Furthermore, the validity, practicality, and effectiveness of textbooks were discussed using active learning strategies of the learning tournament type with character building.

### 3.1. Textbook Validity

The students were given the opportunity to actively learn concepts and their meaning through various learning activities in active learning so that learning can foster enthusiasm. The textbook developed using character-based active learning strategies using tournaments type for fifth-grade students of elementary school was said to be a valid category (average score was 89.7). The textbooks use a combination of text and images are better and motivate student learning [10]. The textbooks for elementary school students must be according to the cognitive development of students, the skills and attitudes they have.

### 3.2. Textbook Practicality

The practicality of textbooks was based on teacher and student responses were stated to be in very practical categories, such as Table 1.

**Table 1.** The teacher's and students' respond toward the textbook

Respondent	Score Average	Category
Teacher	88.9	Highly practical
Student	88.8	Highly practical

### 3.3. Textbook Effectiveness

The effectiveness of the textbook was obtained from two aspects: student activity (learning process) and student learning outcomes (product).

#### 3.3.1. Students' Activity

The results of the effectiveness test showed that the students in the fifth-grade elementary school in Padang showed a percentage of the average of 85.0 that included to be an active category. It can be concluded that the learning process using the textbook with an active learning strategy of the learning tournament type that contains character building as effective in the active category. The active learning is a learning strategy in which students are required to be creative and responsible in learning, assess alternatives, and evaluate learning [11]. In the end, the process and also students are asked to be active in every step of the learning process, including group discussion activities in the classroom [12].

#### 3.3.2. Learning Outcomes

The students' learning outcomes were viewed from the domain of knowledge, skills, and attitudes as in table 2.

**Table 2.** The students' learning result using active learning textbook

Domain	Meeting1	Meeting2	Meeting 3	Average
Attitude	27.63	28.11	29.02	84.76
Knowledge	28.02	28.86	30.01	86.89
Skill	26.75	28.10	28.43	83.28

##### 3.3.2.1. Knowledge Domain

Character-based active learning strategy using tournament type enabled the formation of knowledge and character, student-centered learning. The students had roles as researchers, observers, and at the same time problem solvers. Thus, the students played a role in the learning process [8]. There are three dimensions of active learning, namely active involvement in learning (but not necessarily on the physical level), learning experiences, and cognitive involvement are shown through choice and direction of learning [3]. As the result, the tournament-based thematic learning assessment was high (86.89%) with the highest achievement (87%) among other learning outcomes.

##### 3.3.2.2. Skills Domain

The students discussed in groups to get a better understanding of the material being studied. They also had the same opportunity to participate in groups so that students can develop their potential actively. The application of the active learning strategy that integrated computer simulations significantly affected students' critical thinking abilities [13]. This result was evident from the hypothesis test that the students who taught using active learning strategy acquired better understanding compared to conventional learning strategy. On the other hand, the active learning strategies are effectively used in science learning and positively showed improvement in student learning outcomes [14].

##### 3.3.2.3. Attitude Domain

This textbook was developed using character-based active learning strategy with the implementation of tournament type. The character that measured in the attitude aspect of fifth-grade elementary school students were honest, hard work, discipline, curiosity, and cooperation. Furthermore, the assessment of learning outcomes aspects of the students' attitudes after using the textbook got an average score of

84.76% with a good category. It means that during the activities, the students really understand learning, then they apply in school activities. The research on students' activities such as thinking, reasoning, accompanied by motivation (active) in active learning were able to change students' negative perceptions of learning into positive learning (fun) [15]. Meanwhile, the application of active learning supported by the web has a positive effect on students' attitudes in learning [13].

#### 4. Conclusion

The textbook using character-based active learning strategy with tournament type is categorized as valid, very practical, and effective for increasing the activities and results of thematic learning in fifth-grade students of elementary school. The validity of textbooks is based on the judgment of expert judgment, the practicality of textbooks based on teacher and student responses, and the effectiveness of textbooks based on activities and student learning outcomes.

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