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Development of Interactive Learning Model Teams Games Tournament Assisted Media Rolling Ball Game in Elementary School

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Abstract

This research aims to improve students' morale and learning outcomes by using an interactive learning model *of teams games tournaments* assisted by rolling *ball game* media. This type of research uses Research and Development (R&D) development research. The study used the Dick & Carey development model, consisting of 10 stages, but researchers only used five. The analysis stage is carried out to analyze learning needs consisting of analysis of learning objectives, analysis of characteristics of learners, developing research instruments, developing learning strategies, and developing teaching materials. Three validators further validate the model that has been created in the course: validator *design*, language validator, and material validator. Validation results are then analyzed to find out the validity of the product that has been stored and is very valid value with a percentage of 85.7%. The results are evidenced by the value of the material expert 80%, the value of the linguist 90%, and the design expert 87%. From the results of practicality data that have been obtained, it is known that 7 points score researchers there are six good with a percentage of 75%, and there is an excellent 1 with a percentage of 100%. Therefore, the total is very practical value with a percentage of 90%. From this research, it can be concluded that this learning model can improve learners' spirit and learning outcomes.

Keywords: Learning Model Development, *Teams Games Tournament*, Media *Rolling Ball Game*.

Intoduction

Education is the most important aspect that can affect progress and development. In education, teaching and learning activities are carried out to develop abilities and form a noble personality character to educate the nation's life. The implementation of formal education is inseparable from the important role of an educator as an educator. The learning process in the academic unit is organized interactively, inspiring, fun, challenging, motivating learners to participate actively, and providing sufficient space for the initiative, creativity, and independence following the talents, interests, and physical and psychological development of learners.

The Law on Teachers and Lecturers stated in article 1 that the teacher is a professional educator with his duties of educating, teaching, directing, training, assessing, and evaluating. Although an educator must be professional in carrying out his duties, one of his duties is

teaching. Therefore, in teaching, educators must be creative and innovative using learning models to make learners more adaptive to follow the learning process according to the material and mechanisms that have been determined. An interactive learning model is one way that is usually used in learning to improve learners' learning outcomes.

Interactive learning models are useful for improving learners' learning outcomes and making learning more enjoyable. However, in contrast to the reality in SDN 38 Bora, some learners are not very active. Therefore, educators should use additional interactive learning models that can increase learners' activities in the classroom, and it is expected that learners' interest in learning can be further increased.

Some problems that often occur during the learning process include a lack of interest in learning learners, some learners being less active, and having difficulty understanding the material taught. Some just sit quietly listening, and some are noisy to tell stories with their fellow citizens. This problem occurs due to several factors, including the lack of educators' interactive learning models. Thus, educators must be more creative and innovative to apply learning models that follow the learners' character.

Rolling Ball Game assisted learning model is a learning model in which there is a game using the ball to help the learning process more interesting. The game is very much loved by all circles, especially in children. Therefore, so that the atmosphere in the classroom is not boring, certain games are needed to bring a class to life in the learning process. There is a tilted board in this rolling ball media game whose bottom there are several boxes. Each box has a quiz card and prizes about the material studied, which will be the subject of discussion while learning. Educators direct learners on using this *rolling ball game* and what rules should be run. The educator divides the learners into groups, then from each group appoints a representative to advance to the front of the class to roll the ball over the prepared and rolled board media towards the box that the student wants. Representatives of the group who have taken the cards in the material box to be discussed are grouped respectively.

Method

This type of research is R&D *(Research and Development).* This type of research is done by combining existing products with other products to become better in terms of feasibility and effectiveness*. Research and Development (R&D)* is a research method that produces products and tests how effective they are. Research and Development *(R&D)* is a research method commonly used to develop products in learning.

The study used the Dick &carey model of 10 steps, but researchers only used five steps, in detail outlined as follows:

a. Analyzing the Need to Identify Learning Goals

The need analysis done to identify learning objectives is the first step in developing system design. This activity aims to determine what students should achieve after following the learning process.

b. Identifying The Behavior and Characteristics of Learners

In addition to analyzing learning goals, the important thing that needs to be done in applying this Dick &Carey model is the analysis of learners (assessment of student

characteristics). This analysis will give direction on how to teach what is taught. In analyzing learners, according to Atwi Suparman, three sources can provide information to instructional designers, namely: (a) learners or prospective learners, (b) people who know the ability of learners or prospective learners up close, such as educators or superiors, (c) managers of educational programs that usually teach these subjects. Accurate identification of the characteristics of students who will be learning can assist developers in selecting and determining the learning strategies to be used.

c. Developing Assessment Instruments

The preparation of assessment instruments or test points is carried out to measure the student's ability to achieve what has been included in ICT, 19 and as a process in collecting data and information that can be used to revise the resulting product. A good learning outcome assessment tool is a tool that can measure the level of achievement of learners in competencies that have been set in instructional goals.

d. Developing a Learning Strategy

This step is done to describe the general components of a lesson content device that will clarify the lesson's content. Lesson strategy development includes (a) teaching activities, (b) presentation of information, (c) student participation, (d) student inquiries. For an instructional designer, developing learning strategies is the basic capital in producing teaching materials.

e. Developing and Selecting Instructional Materials

Developing teaching materials, it is necessary to refer to the specific purpose of learning and learning strategies. Teaching materials developed in the form of learning models can be applied in the classroom. In the development of teaching materials, evaluation is also carried out by experts in the field of study and instructional design experts.

Data analysis in this study uses Mixed Methods Research which is often abbreviated as Mix-Method. This mix-method is one of the methods that combine qualitative and quantitative approaches. Therefore, *Mix-methods* can help authors find better research results than just one approach. This mix-method consists of four types: *embedded, explanatory, exploratory,* and *triangulation*. The authors used *exploratory type* in mixed-*method sequential exploratory* type. *Sequential* (sequence) is research initially conducted qualitatively and then continues quantitative research.

Quantitative data analysis is used to describe the results of expert validation, educators' and learners' responses to learning models. In addition, it is used to see learners' success in mastering the material taught by educators. Here is the percentage formula used to analyze quantitative data.

Quantitative data formula per item: $P = \frac{X}{Xi} \times 100\%$

Information:

Q: percentage

X: the score given by respondents on an item

Xi: highest score (ideal) on a single item

The overall formula of the item: $P = \frac{\sum X}{\sum Xi} \times 100\%$

Information:
Q: Percentage
∑X: The overall score of respondents' answers
∑Xi: Highest number of items number of respondents××

Results

The research conducted by researchers is located at SDN 38 Bora Palopo located on Mungkajang Bora street, Mungkajang Subdistrict, Palopo City. , South Sulawesi Province. The potential in this research and development is to develop an interactive learning model on the theme of 5 components of the ecosystem in class V learners. This research was conducted at SDN 38 Bora Palopo, one of the public schools located in Palopo. During the research process, the number of class V learners was as many as 16. Therefore, the learning process carried out at the school uses the 2013 curriculum.

Educators have not used many interactive learning models in SDN 38 Bora Palopo. Therefore, developing learning models to support the learning process to run very well is needed. Therefore, research related to this interactive learning model is expected to be a quality learning resource and help learners understand specialized learning materials in ecosystem component materials.

Needs Analysis

Researchers have conducted research on class V learners at SDN 38 Bora Palopo, and researchers have had plans to develop products that have been planned before. Therefore, the first step in researching the development of this model is to conduct a needs analysis. First, the needs analysis is conducted by researchers based on the development steps outlined in Chapter III. Then the researcher performs a need analysis to search for information through questionnaire instruments, tests, and educator interviews.

a. Identifying learning objectives

At this stage, identification of learning objectives is carried out by analyzing learning materials, namely components of the ecosystem with standards of competition that will be developed; namely, after following this learning, learners can easily understand the material to be taught.

b. Identifying the Characteristics of Didik Participants

From the results of identification obtained the characteristics of current learners, namely low interest in learning in ecosystem component materials. It is seen from the results of the material evaluation value of ecosystem components. The characteristics expected in this study are that learners can become more active in following the learning process and quickly capture the material taught. The results of the analysis of the intelligence of learners in the classroom are presented in the following diagram:

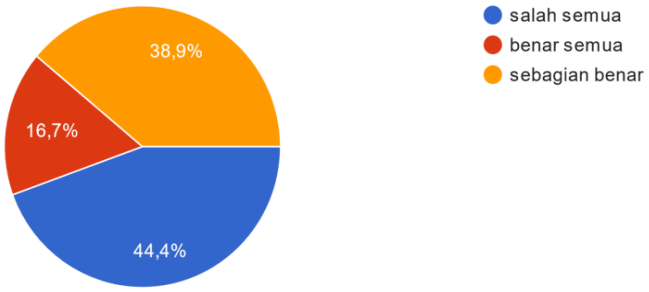

Figure 1.1 Google form angket learners

Based on the results of the diagram, only 16.7% of learners managed to answer the test correctly all, 38.9% were partially correct, and 44.4% of the answers were, on average, all wrong. The data signals to educators that learners have different bits of intelligence; therefore, the needs of individuals with other individuals cannot be equated.

In addition to conducting tests, researchers also share questionnaires about learners' learning styles. The results of learning style analysis of learners obtained data about 75% of learners are difficult in understanding the material taught and only about 25% can understand the material quickly. Researchers can conclude this could be because educators lack interactive learning models. Can be seen in figure 4.2 below:

Figure 1. 2 Google form angket learners

Furthermore, researchers get learners quite difficult in learning about ecosystem materials in the classroom, it is seen from the results of questionnaires that researchers have obtained, which is about 81.3% feel difficult, and 18.3% feel ordinary. It can happen due to the lack of learning models used by educators. For example, it can be seen in figure 1.3 as follows:

Figure 1.3 Google form angket participants in the audience

The results of the questionnaire that has been obtained, many learners also feel bored with the learning process. As a result, many of them are dispossessed during the teaching and learning process. About 81.3% of learners felt bored, and 18.3% were mediocre. From the results, it can be concluded that these learners desperately need an interactive learning model to learn with fun. Can be seen in figure 1.4.

Figure 1.4 Google form angket participants in the body

Furthermore, the questionnaire results about what if in the classroom learners learn while playing. Data obtained that learners prefer to learn while playing, seen from the results of the questionnaire that has been obtained that students like if there are games that can eliminate the boredom of learners in the learning process.

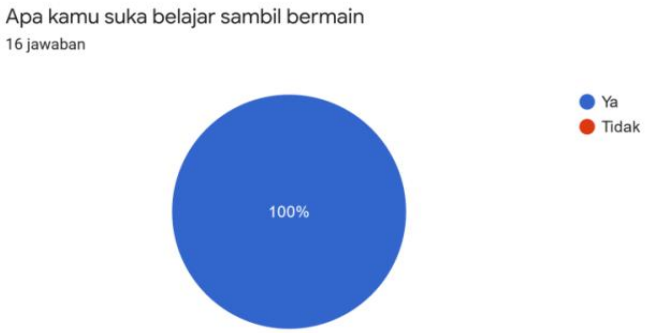

Figure 1.5 Google form angket participants in the body

Design Learning Model *Teams games Tournament* Interactive Assisted Media *Rolling Ball games*

The reason for selecting this model in the material components of the ecosystem is that learners will be easier to remember or receive the material taught. In preparing this learning model, of course, it must be with many literature studies and field observations. For that researcher conducted a literature study by looking for references related to the learning model researchers developed, namely *teams games tournaments* assisted by *rolling ball game* media. For library sources that discuss the learning model *of teams' games tournaments*, many books discuss it, and it is very easy for researchers. While the learning model *teams games tournament* assisted by *rolling ball game* media is a new learning model whose sources are very limited, this is what triggers researchers to compile this learning model.

Based on the syntax *of the team games tournament* learning model assisted by *rolling ball game* media on ecosystem component materials, the design of the learning model compiled by the author can be seen with the following steps:

a. Class Presentation
   1) Educators greet and ask about the news of learners.
   2) Pray.
   3) Educators license learners.
   4) Educators convey the theme of the lessons that will be taught.
   5) Educators explain the purpose of learning.

b. *Teams* (Group)
   1) Educators divide learners into four or more groups; each group has four people with different understandings; there are low, medium, and high.
   2) After the group is formed, the educator directs the group representative to play *the rolling ball game* media to discuss the material with the group.
   3) Each group got different material and was given 5 minutes to understand it.
   4) After 5 minutes, each group appointed a representative of his group to explain to the other group the material he obtained.
   5) There is a question and answer session if the learner does not fully understand the material.

c. *Games* (using *rolling ball games*)
   1) There is an oblique papan or cardboard designed in this media rolling ball game whose bottom there are several boxes. Each card has a quiz card that deals with the material studied.
   2) Educators guide learners on using this *rolling ball game* and what rules should be implemented.
   3) Each group appointed a representative to go forward, rolling the ball over the prepared board media.

d. *Tournament*

The group representative then took the card in the box that contained the ball and then read out the quiz question that the group would answer and was given 2 minutes to complete it.

e. *Team Recognize* (Penghargaan Kelompok)
   1) The group that manages to answer the question quickly, correctly, and completely will get the prize that has been provided.
   2) A gift can be a word of praise, or it can be in the form of an object.

f. Cover
   1) Together do reflection activities.
   2) Educators and learners together conclude learning outcomes.
   3) The prayer closes the lesson.

Product Validation Of *Teams Games Tournament* Model Development With Media *Rolling Ball Game*

The results of the analysis from the design expert questionnaire showed that from 10 aspects, there are five that are very valid values with a percentage of 100%, there are five that are valid with a percentage of 75%. Therefore, the total of all aspects is valid with 87%.

The material expert questionnaire analysis results showed that among the ten aspects, there are two that are very valid values with a percentage of 100%, and there are eight that are valid with a percentage of 75%. Therefore, the total of all aspects is valid with 80%.

The analysis results from linguists showed that of the eight points of questions, there are five that are very valid values with a percentage of 100%, and there are three that are valid with a percentage of 75%. Therefore, the whole is very valid with a percentage of 90%.

Based on the three validation results and percentages, the learning model of teams games tournament assisted by rolling ball game media has a total value of 85.71%, which is interpreted as valid.

Practicallty Stage of Learning Model

This practicality test is carried out after the validation process has ended. It is done to determine how practical this learning model is if applied in the learning process. Practicality is carried out in class V with fewer learners as many as 16 people. The allocation of time used by researchers in this learning is already regulated in the RPP (learning implementation plan) that the researcher has compiled before. With the steps as in the arrangement of the learning model *teams games tournament* assisted rolling *ball game* media.

During the learning process, researchers make observations using observation sheets that have been prepared for learners. Furthermore, the results of observations of learners during learning take place. Readiness of learners, the courage of learners, the interaction of learners with educators in the learning process are good. The activeness of learners even when the learning process has increased from before.

After all the learning process in the classroom ended, researchers conducted interview steps for educators and learners to find out the responses of educators and learners

to the learning model *of teams games tournament* assisted by *rolling ball game* media that has been compiled.

Discussion

The results of the analysis that has been done by researchers, that in the initial condition analysis, researchers obtained information in the material learning components of the educator ecosystem more focused on using lecture methods only, so that learners feel bored and lack understanding of the material. In agreement with Siti, Uswatun Hasanah said that the lack of lecture methods, when always used and for too long, will be boring; educators conclude that learners understand and are interested in his lectures, causing learners to be passive.

Based on the data of results regarding the analysis of learners conducted using test instruments that aim to determine the level of understanding or knowledge of learners to the material that educators have provided. Where the test results on the material components of the ecosystem have not reached the KKM value that has been set.

1. *Design* (design)

Learning design is the development of learning systems and their implementation systems, including means and procedures to improve the quality of learning. In other words, learning design is the practice of preparing communication technology media and content to help transfer knowledge between teachers and learners effectively. At this *stage of design*, researchers design development of learning models following the results of needs analysis at the analysis stage, which is then designed by making *flowcharts* to facilitate compiling or developing products that have been designed. The design of the learning model in the material components of this ecosystem is a model or technique in learning where learners are invited to play while learning.

The results of this study that in developing a learning model, *teams games tournament* assisted rolling *ball game* media is expected to create or stimulate educators to develop other learning models that are more interactive. So that educators no longer only focus on one learning model, that is all.

2. *Develop* (Development)

The results of this study that in developing a learning model, *teams games tournament* assisted rolling *ball game* media is expected to create or stimulate educators to develop other learning models that are more interactive. So that educators no longer only focus on one learning model, that is all.

3. Practicality Stage

Practicality is defined as ease in the implementation, making instruments, and examining or determining objective decisions, so that decisions are not in doubt. With this stage of practicality, researchers can conclude the results of observations and interviews with some learners on the development of the learning model *of teams games tournament* assisted by *rolling ball game* media can be concluded as follows: (1) Learners are more active in learning, (2) Learners are more eager in following learning, (3) Learners are easier in capturing learning materials, (4) Can foster a sense of responsibility in each learner,

especially responsibility as a member of the group, (5) The learning process is more enjoyable.

Based on these explanations, educators and learners are important factors in the learning process in the classroom. One of the roles of educators as the main element in the learning process certainly requires the involvement of learners to achieve learning goals. Therefore educators need to develop learning models as variations in learning, especially in thematic learning.

Conclusion

Based on the results of this study, researchers can conclude the results of this development, namely:

1. The results of the needs analysis conducted by researchers on class V learners at SDN 38 Bora Palopo in subtheme one components of the ecosystem that an interactive learning model is needed to help educators run smoothly. Learners will be more active and feel happy during the learning process. Therefore, the interactive learning model *teams games tournament* assisted rolling *ball game* media on subtema one ecosystem component for class V SDN 38 Bora Palopo.
2. The process of designing this learning model refers to *the flowchart* of products that have been created. The learning model developed was also revised several times on several aspects: (a) clarifying the relationship between the learning model and the material. (b) clarify the objectives of the learning and the selected material.
3. The feasibility or validity of this learning model can be seen from validity tests conducted by several experts or experts. As for the results of the assessment of some experts and after being processed using the formula, the results of 85.7% were declared very valid. it is evidenced by the calculation of the value of the material expert 80%, the value of the linguist 90%, and the value of the design expert 87%, so that the total overall results are very valid.$\mathrm{P} = \frac{\sum \mathrm{x}}{\sum \mathrm{xi}} \mathrm{x}100\%$
4. The practicality of the development of this learning model certainly has a positive impact on learners and educators and further learning. The results of observations and interviews with some learners on the development of the learning model *of teams games tournament* assisted rolling *ball game* media can be concluded as follows: (1) Learners are more active in learning, (2) Learners are more eager in following learning, (3) Learners are easier to capture learning materials, (4) Can foster a sense of responsibility in each learner, especially the responsibility as a member of the group, (5) The learning process is more enjoyable.

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