

THE PRACTICALLY AND EFFECTIVENESS OF LEARNING PACKAGE THAT BASED ON METACOGNITIVE TO BUILD THE STUDENTS CHARACTER

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Abstract

The aims of this research to produced learning package that qualify the practicality dan effectiveness. Learning package consist of Lesson book and RPS. It was based on metacognitive and character education. This research is the development stage in the 4D Thiagarajan development model. In this tage, researhers trial the practicality dan effectiveness of a valid learning package was based on metacognitive and character education. The practicality of learning package is measured by the learning management sheet. The measurement result show that the learning package had been practice. This is indicated by the average observastion results of all aspects at the 1st meeting until the5th meeting are in good category ($2,5 \leq X < 3,5$) and at the 7th meeting until 8th meeting are very good category ($3,5 \leq X \leq 4$). The effectiveness of learning package is measured from 4 components. They are student learning outcomes, student activities, student responses, and management of student character development. The results show that the learning package had been effective. This is indicated by the fulfillmeny of 3 of 4 criteria of effectiveness. Namely: (1) the number of clasical completion percentage of learning achievement test is 89%; (2) more than 50% of students responded positively to 85% of aspects asked; and (3) the fulfillment of 6 types of expected syudent activities.

Key word: *metacognitive, character education*

INTRODUCTION

One of the problems faced by the nation of Indonesia today is the occurrence of moral crisis that hit the people of Indonesia. It can be seen by the This can be seen from the faded values of national character

such as honesty, discipline, courtesy, respect, tolerance, and nationalism. Furthermore, the rise of immoral cases such as free sex, rape and obscenity, drugs and alcohol, corruption, collusion and manipulation involving intellectual people. Responding to this, Mulyasa (2016) say that when people and nations hit by a moral crisis, the value system needs to be revitalized again, especially in realizing the personal character and the character of the nation that there has been such keen worshiper, honest in word and action, positive thinking, and willing to sacrifice. It can be made by the revitalization of character education in every field of the nation.

The field of education had a very important role to revitalized the character education. This is based on the mandate of the Law of the Republic of Indonesia Number 20 of 2003 which states that national education functions to develop and form the character and civilization of dignified nation in order to educate the nation's life, aims to develop the potential of learners to become human beings who believe and fear God, having a good character, healthy, knowledgeable, capable, creative, independent, and being a Democratic and responsible citizen Rahman (2016).

Implementation of character education is not as easy as imagined. This requires a long process and must be implemented holistically and integrated. Character education development in universities needs to be integrated in lecturing activities. According to Mutaqin (2014), the learning process to develop character values can be developed through various approaches, methods, and learning strategies in lectures.

Higher education is expected to be able to produce graduates who have not only intellectually but also have good character. Therefore educators should be able to use appropriate learning strategies to achieve these goals. One approach that can be used in developing student character is the metacognitive approach. Learning by metacognition approach is learning that instills awareness of how to design, monitor, and control what they know; what it takes to do; focusing on learning activities; assisting and guiding students when experiencing difficulties; as well as assisting students in developing their self-concept while learning. Accordi. Kramarski and Zoldan (2008) called for a metacognitive culture, in which making errors is acceptable and students are encouraged to (a) self-question and analyze errors, (b) make corrections, and (c) formulate an action plan on how they have learned and understood the mate- rial and how they will remember this information. This

conclusion is important in light of the fact that many teachers believe that erroneous examples can be harmful because some students may memorize an error without knowledge of the error. The concern is that the error will be duplicated rather than eliminated from reasoning. Further This is in line with that expressed by Nurasyiyah (2014) that learning metacognition able to make students realize the importance of mastery of a mathematical ability, train the independence to learn, and allow students to realize the shortcomings and advantages, so as to control the knowledge.

For metacognition based learning to run optimally, it needs to be supported by metacognition based learning tools. The learning tool used in this research is RPS and textbook based on metacognitive and integrated character education which has been validated before. This study was conducted to test the practicality and effectiveness the learning device.

METHOD

This research is the stage of development research in 4D-Thiagarajan model. this is trial stage to test the practicality and effectiveness of learning package based on metacognitive that integrated to character education that consist of textbook and syllabus. This learning device had been valid before tested try.

The Practicality of Learning Package

Learning package based on metacognitive that integrated to character building was implemented by lecturer in learning process to observe the practicality of learning package. The observation of the practicality of learning device that integrated to character education is aimed at the implementation of aspects in Learning Plan (RPS) by using observation sheet of learning management.

The observed data of learning management is recapitulated by finding the average of every observation aspect and the average of all aspects of observation as a whole, then determining the assessment criteria for the management of learning is saw by Table 1

Table 1. Criteria for the Management of learning process

Value	Criteria
$3,5 \leq \bar{X} \leq 4$	Best
$2,5 \leq \bar{X} < 3,5$	Good
$1,5 \leq \bar{X} < 2,5$	Bad
$\bar{X} < 1,5$	Wost

The criteria was used to conclude that learning devices have adequate degree of adequacy if the average value of every aspect and the average value of all minimal aspects are in “Good” category.

Furthermore, the reliability of observation sheet of learning management is calculated by the formula of percentage of agreements from Grinner in Nurdin (2016). It showed below:

$$\text{Percentage of agreement (R)} = \frac{\text{Agreements}}{\text{Disagreements} + \text{agreement}} \times 100\%$$

The observation sheet of learning management was called reliable if $R \geq 0,75$

The effectiveness of Learning Package

The analysis of the effectiveness of learning device is supported by the results of data analysis form four components of effectiveness, namely (1) student learning outcomes or classical completeness, (2) student activities, (3) student responses, and (4) the development of student character values.

The scores obtained by students from the Teaching Mastery Test given after all the finished material was used to analyze the student learning outcomes. Student learning outcomes are directed towards the achievement of individual completeness and classical mastery. If a student earns $S \geq 6.5$ then the student reaches the completeness of the individual. If at least 85% of students achieve a minimum score of 6.5, then the classical completeness has been achieved.

Analysis of observation result of student activity data during the learning took place by calculating mean of frequency and mean of percentage of time used by student during learning activity.

Analysis of student response data on instructional devices is done by calculating the percentage of many students who responded positively according to the aspect asked. The criteria set out to state that students have a positive response to the mathematics learning package if 50% of them respond positively to at least 70% of the number of aspects asked. If the results of the analysis indicate that the student's response has not been positive, then the revision of the device being developed or giving direction to the teacher to improve the aspects that its value is less.

Analysis of the management of the students' character value is conducted by giving the self-assessment sheet to the students and the observation sheet to the observer. Activities undertaken to analyze data of students' character development is to calculate each percentage of character values based on student answers to a given questionnaire then matched with observations made by the observer. The criteria of value in the students character development during the research process is described by Tabel 2

Tabel 2 The criteria of value in the students character development

Value	Criteria
$0 \leq SK < 0,5$	Not yet seen
$0,5 \leq SK < 1,5$	Start to look
$1,5 \leq SK < 2,5$	Start developing
$2,5 \leq SK \leq 3$	Visible

The criteria was used to decide that the character of the student is develops if the minimum SK score is in the category "start developing".

In the end the criteria set out to state that learning package based on metacognitive that integrated to character education is effective if at least 3 of the above 4 points are fulfilled with the terms of point (1) that the standard of achievement of learning outcomes must be fulfilled (Nurdin, 2016)

RESULT AND DISCUSSION

The trial was conducted for 8 meetings including 1 meeting for the test. The subject of this research is the students of mathematics education program of the Sulawesi Barat University force of 2017 with the number of 33 students. The results of the study provide an overview of the practicality and effectiveness of learning package described as follows:

Practicality Analysis

The practicality of learning package is based on the results of the analysis of the data of the district on the management of learning using the observation instrumen of learning management. Observations were made by two observers to observe the ability of teachers to manage mathematical learning using te learning package based on metacognitive that integrated to character education. The result of learning management observation is shown in Table 3 below:

Table 3. The result of learning management observation

Aspect	Result of observation						
	P1	P2	P3	P4	P5	P6	P7
Preliminary activities	3	3,5	3	4	4	4	4
core activities	2	2	3	2,5	3	3,5	3,5
Cover activities	3,5	3	3,5	3,5	3	4	4
Average	2,8	2,8	3,2	3,3	3,3	3,8	3,8
Percentage of Agreement	77	81	78	80	95	97	97

Table 3 shows that the percentage of agreement for each meeting is greater than 75%. Based on predetermined criteria, the observation sheet of learning management is stated reliabel so that the data obtained can be used to describe the observation result of the ability to manage the learning.

Furthermore, Table 3 provides information that the average observation results of all aspects at the 1st meeting up to the 5th meeting are in good category ($2.5 \leq <3.5$), while the average observation result of all aspects at the meeting the 7th and 8th are in very good category ($3.5 \leq \leq 4$). If it was confirmed by the learning implementation criteria, then it can be concluded that learning device had been practice.

Effectiveness Analysis

The effectiveness of learning package is based on the results of data analysis of 4 components of effectiveness, that is:

Students Learning Outcomes

The analysis was performed on the scores obtained by the students from the Learning Results Test given after all the materials had been discussed. The data of the next analysis are presented in the frequency distribution table. The tendency to spread the frequency distribution of student learning outcomes is presented in Table 4 below:

Table 4. Frequency Distribution of Student Learning Outcomes

Interval	Categori	Frequenci	Percentage (%)
0 - 34	Very low	0	0
35 - 54	Low	2	7
55 - 64	Middle	2	7
65 - 84	High	16	53
85 - 100	Very high	10	33
Total		30	100

Table 4 gives information that no students were in very low categories, students in the low and middle categories were 30%, 53% of the students were in high category, and 33% of the students were in the category is very high.

If the score of student learning outcomes is analyzed, then the percentage of students' learning achievement after applying learning package based on metacognitive can be seen in Table 5 below:

Table 5. Percentage of Mastery of Student Learning Outcomes

Score	Categori	Frequenci	Percentage (%)
0 – 66	Not complete	4	14
67 - 100	Complete	26	86

Based on Table 5, it is known that from 30 students there are 86% who have completed the study so that it can be stated that learning succeeds in a classical.

Students Activities

Based on the results of data analysis of student activities, there are 6 types of 8 activities that are fulfilled, namely activity-1, activity-2, activity-3, activity-4, activity-5, and activity-6, while

activity-7 and activity- 8 is not fulfilled. Although there are 2 unfulfilled activities, it can be concluded that student activity meets the ideal time achievement criteria because 6 of 8 activities are fulfilled and activity-2, activity-4, and activity-5 are fulfilled.

Students Responses

Student response to the application of learning package based on metacognitive that integrated to character education is divided into 2 aspects; (1) student response to learning, and (2) student response to textbook.

Based on the results of student response analysis to the application the application of learning package based on metacognitive that integrated to character education is known that there are 96% of students who respond positively to learning, and 92% of students give positive responses to textbooks. Thus, according to predetermined criteria, it can be concluded that the students gave a positive response to the application of the application of learning package based on metacognitive that integrated to character education.

Observation of character value

The results of data analysis observation of students character development during the learning process shows that of the 10 character values were observed, there are still some character values that have not been in the category began to develop at the end of the learning process. In general, religious values, discipline, respect, independence, honesty and logical are in the category of developing, while the values of responsibility, unyielding and critical are in the category beginning to appear at the end of the learning process. therefore the development of these character values still needs to be improved.

Not achieving the character development criteria can be caused by several factors, such as (1) time limitations because to form the character of a person required a long process that is conducted continuously; (2) the learning process applied is still relatively new for the students especially related to the application of cognitive strategy and the construction of the material by the students so that the students need time to adapt; and (3) the development of the character value has not been integrated in all lecture processes followed by the students.

CONCLUSION

Based on the results of previous research, the conclusions of this research are as follows: (1) Developed tools meet the criteria of practicality based on the results of the management of learning with the fulfillment of every aspect of the average learning management activities are in good category and very good with range $2.5 \leq \text{TKG} < 3.5$ and $3.5 \leq \text{TKG} < 4.0$; (2) The resulting learning tool meets the effective criteria shown by fulfilled 3 of the 4 defined effectiveness indicators. Indicators that are met are the value of the test results of learning, student activities, and student responses.

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