

## Development of Interactive Teaching Material of Semantic Course Based on Local Wisdom of Brebes

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### Abstract

Teaching materials in colleges highly support success of students in following their lecture. Moreover, the teaching material need integration of Brebes' local wisdom in order that the students have understanding on glorious values available to Brebes. The objective of this study is to describe need to develop interactive teaching materials based on local wisdom of Brebes pursuant to perception of students and lecturers, to make draft of interactive teaching materials based on local wisdom of Brebes, and to test effectiveness of interactive teaching materials based on the local wisdom of Brebes. This study was conducted by research and development methods using steps of literature study, from planning of research to implementation of end-product. Testing was conducted on limited scale. The results of study are interactive teaching materials that have met lecturers and students' needs and principles of teaching material development. Moreover, the interactive teaching materials are effectively applied to students of PBSI UMUS in semantic material.

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## INTRODUCTION

Teaching material is one most important element of learning. Teaching material of course is structured by support lecturer. Each lecturer has followed training of teaching material development. The teaching material development was conducted by considering (1) structuring of teaching material content points, (2) writing of teaching material contents, (3) planning of layout and illustration application of teaching material, (4) use of teaching material language, and (5) integration of audio-video media of teaching material by Achmad (2009).

Based on the idea, a lecturer must need development of teaching material in specific course. One course available to Indonesian Literature and language Education is semantics. Semantics is a branch of linguistics that discusses meaning. Semantics has fields of study from semantics such as lexical semantics, grammatical semantics, logic semantics, and logic semantics. Based on observations that have been conducted to students of Indonesian Language and Literature Education at Universitas Muhadi Setiabudi, students did not understand the characteristic of semantics. This is evidenced by the average predicate of semantic courses, namely C. Many things that have been background of it, for example in the area around the campus of Universitas Muhadi Setiabudi, there are still very limited sources of literature that are used as references for students. Even the campus library lacks of books that are related to semantics. Therefore, the need for teaching materials about semantic subjects so that students are rich in knowledge.

Teaching materials that can be used by lecturers are very various. Some of teaching materials are printed teaching materials, listening teaching materials (audio), listening teaching materials (audio visual), and interactive teaching materials. Lecturers need to manage the teaching materials according to their needs. In addition, teaching materials also need to contain certain values so that students do not only get pedagogic competence, but also they get affective competencies that are based on noble values. The

right values to apply to students are the values of local wisdom. The current phenomenon indicates that ancestral culture at this time began to fade away due to the flow of foreign culture that was packed into various media. The world of education is expected to be able to play a role in instilling cultural knowledge.

Brebes' local wisdom also needs to be maintained and preserved by students; for example, ideas, activities, and artifacts. The third manifestation of Brebes's local wisdom is for example *khaul* (commemorating one year of death), *kerigan* (cleaning drains and garbage), and *calung* (bamboo music). Moreover, Universitas Muhadi Setiabudi students. But in reality they do not recognize their own culture. This needs to be a concern especially education experts. Universitas Muhadi Setiabudi as the education organizer must participate in building and preserving the local wisdom of Brebes. This is in line with the regional development mission of the Brebes District in 2005-2025 (Pemerintah Daerah Brebes, 2008) namely: "Realizing the practice of religious values and local wisdom. The stronger the character of the community based on religion and cultural values indicate that it becomes a faithful human being, praying to God Almighty, noble, moral, ethic based on the philosophy of Pancasila, which is finally able to think, behave, and act as a formidable human being, competitive, virtuous, intolerant, cooperative, patriotic, upholding the noble values of national culture, promoting local wisdom, and always developing dynamically".

Seeing the mission of the regional development of Brebes District, this research is suitable to the mission because, in this study, it will raise awareness of the importance of local wisdom for students. This awareness is none other than the Brebes community, especially students at Universitas Muhadi Setiabudi. In addition, students will get a wealth of knowledge about the branches of linguistics related to sentences through interactive teaching materials. Of these reasons, this research is very necessary to do as a science repertoire and the development of interactive teaching materials based on local wisdom.

This study is based on the previous studies that are used as references. One of them is study by Harijanto (2007) with the title "Development of Teaching Materials for Improving Learning Quality of Primary School Learning Programs" in the journal of *Didaktika*, Vol.2 No. March 1, (2007). The study produced teaching materials for improving students of DII-PGSD using the Dick and Carey model. The results of his study indicate that the teaching materials as development products can improve student learning outcomes. The relevance of Harijato's study to this current study is that the similarity lies in his study method. Moreover, it is also the same in the results of its development products in the form of teaching materials. The difference lies in the load. If the contents of this study are based on local wisdom, Harijanto's study does not use contents.

The development of teaching materials in this study focuses on subjects or semantic subjects. According to the study by Kusmana (2014) with the title "Development of Semantic Teaching Material Models". Kusuma's study produced a semantic model that is applied to students according to their needs and principles. The relevance of the study to this study is that there are similarity and difference. The similarity lies in the material to be developed. While the difference lies in the form of the product that will be produced. If this study uses the form of teaching materials, the Kusuma study has a model of teaching materials.

Then the study used as a reference in an international journal, namely Parris (2010) with the journal article of "Cultural Dimensions of Learning: Addressing the Challenges of Multicultural Instruction" Vol 11. No. 2 (2010) explained that culture-based learning is very necessary for students. By applying culture-based learning, it will indirectly teach attitudes of love for culture and nation. Because culture-based learning, the implication is introducing to students about the potentials of an area so that participants are more familiar with their local culture. Culture-based learning also teaches children to be considerate with their peers who have different cultural backgrounds. So the article

written by Parris is used as a reference to this study to stimulate the application of cultural values in the development of interactive teaching materials in semantic courses. Based on a number of reasons behind the study and relevant literature studies, it can be concluded that the title of the study is the development of interactive teaching materials for semantic courses based on Brebes' local wisdom. The objective of this study is to describe the needs and principles of developing semantic teaching materials according to the perceptions of students and lecturers, making drafts and validating teaching materials, and testing the effectiveness on a limited scale.

## **METHODS**

This study used research and development (R & D) design or development research. Sugiyono (2012) explained that development research is a research method used to produce certain products and test the effectiveness of these products.

The stages of this research were carried out up to three stages adapted from the 10 steps of development research proposed by Borg, and Gall (2003). The details of each step or steps are as follows.

### **Stage I (Preliminary Study and Initial Development)**

The activities carried out in the preliminary study are (a) looking for relevant sources of references and study results, and (b) identifying the needs of teaching materials based on local wisdom towards lecturers and students. All results of this activity are used as material for consideration to prepare the principles of teaching materials.

In the early stages of development, the carried out activities were to formulate the principles of developing interactive teaching materials based on Brebes' local wisdom using the perceptions of students and lecturers.

## **Stage II (Development)**

This stage includes the following activities: (a) drafting teaching materials (components of content, presentation, language and legibility, and graphic), (b) expert tests (linguistic lecturers, linguistic lecturers, and graphic lecturers); and (c) revision and improvement of draft of teaching materials. Experts are asked to rate product designs. The assessment format used score assessment numbers, suggestion columns, and expert input for improvement materials.

## **Stage III (Testing)**

In this stage, the carried out activities were product trials and description of study results. Product trials were carried out on a limited scale. The description of the study results is the activity to describe the use of semantic teaching materials based on Brebes' local wisdom in PBSI UMUS students.

## **RESULTS AND DISCUSSION**

This study obtained the following results (1) the principles to develop interactive teaching materials for semantic courses based on Brebes' local wisdom, (2) draft and results of expert validation tests on interactive teaching materials for semantic subjects based on Brebes' local wisdom, (3) effectiveness of interactive teaching materials for semantic courses based on Brebes' local wisdom.

### **Results of Need Analysis and Principles of Teaching Material Development**

The results of the need analysis are used as references to development of interactive teaching materials for semantic subjects based on Brebes' local wisdom according to the perceptions of lecturers and students.

The principles of interactive teaching materials for semantic courses based on Brebes'

local wisdom are developed using the results of the conducted questionnaire needs and interviews. There are 10 principles contained in these teaching materials, namely (1) accordance principle, (2) practical principle, (3) creative principle, (4) innovative principle, (5) easy principle, (6) interesting principles, (7) cultural principles, (8) systematic principle, (9) communicative principle, and (10) sufficiency principle.

Interactive teaching materials are developed in the four main aspects: aspects of content, presentation, linguistic, and graphic. The aspect of content includes reading texts, the form of Brebes' local wisdom, illustration of Brebes' local wisdom, and semantic material. The aspect of has sub-aspects including presentation technique, material presentation, and presentative presentation. Furthermore, the linguistic aspect also has sub-aspects including language used, word choice, sentence usage, and greeting words. Then the last one is the aspect of graphic including CD design, font type, display color, figure arrangement, and cover.

### **Draft of Interactive Teaching Materials and Expert Validation Test**

The draft of interactive teaching materials for semantic courses based on Brebes' local wisdom was developed based on the needs and principles to develop the teaching materials. The needs of students and lecturers are compiled into draft of interactive teaching materials. For more detailed information on interactive teaching materials, see the following figure 1.

Based on the picture, interactive teaching materials for semantic courses based on Brebes' local wisdom are compiled in a systematic and communicative language. In addition, this teaching material is accompanied by attractive illustrations and videos. Validation test of this teaching material was carried out by linguists, cultural experts, and graphics. The results of the validation of interactive teaching materials can be seen in table 1.



Figure 1. Draft of Interactive Teaching Materials

Table 1. Recapitulation of Expert Validation Test Results

Aspect of teaching material feasibility	Score	Category
Content/Material	82	Good
Presentation	85.30	Very good
Language & Legibility	80	Good
Graphics	89.25	Very good
Average	84.13	Good

Based on data of table 1, it can be concluded that it is very good for students of Indonesian Language and Literature Education of Universitas Muhadi Setiabudi to obtain an average score of 84.13 with good category. Teaching materials are feasible to proceed to the next stage, namely limited trials.

### Effectiveness of Interactive Teaching Materials of Semantic Course Based On Brebes's Local Wisdom

The values of semantic courses in the initial test (pre-test) of the PBSI students' experimental class at Universitas Muhadi Setiabudi were in the form of students' final grade data. The values can be seen in table 2 below.

Table 2. Initial Scores (Pre-test) of Experimental Class

Score interval	Category	Total Students of PBSI UMUS
85-100	Very good	-
75-84	Good	3
65-74	Medium	12
00-64	Less good	10
Total		25

Based on table 2, it can be found that the results of the initial test or pre-test were carried out using general linguistic books, namely the lowest score is 64 and the highest score is 84. From these data, it is seen that there were 22 students who had not yet completed the study. This is proven by the achievement of semantic values between the ranges of 75-84 of 3 students, 65-74 of 12 students and 00-64 of 10 students.

Furthermore, the semantic value in the final test (post-test) of the experimental class also shows the student's final value data. The test value can be seen in table 3 below.

Table 3. Data of End Scores (Post-test) of Experimental Class of PBSI UMUS' Students

Score interval	Category	Total Students of PBSI UMUS
85-100	Very good	-
75-84	Good	3
65-74	Medium	12
00-64	Less Good	10
Total		25

Based on table 3, it can be found that the results of the semantic final test conducted by using interactive teaching materials in semantic courses based on local wisdom Brebes had fulfilled the completeness of the study, namely the lowest score is 75 and the highest score is 89. It can be said that the final test results indicate that all students have finished the study. This is proven by the achievement of the value of the

ability to write the procedural text ranging from 75 to 84 of 18 students and 85 to 100 of 7 students.

The effectiveness of interactive teaching materials in semantic courses based on Brebes'

local wisdom used Independent Sample Tests. The following results of the calculation can seen in table 4.

**Table 4.** Independent Samples Test

	Levene's test for equality of variances		t-Test for equality of means		
	F	Sig.	t	df	Sig. (2-tailed)
Value equal variances assumed	.173	.679	8.665	48	.000
Value equal variances not assumed			8.665	47.024	.000

Based on table 4, it can be found that  $t_{\text{value}} = 8.665$ , whereas  $t_{\text{table}} = 2.00$ . This means that  $t_{\text{value}} > t_{\text{table}}$ . This means that  $H_0$  is supported. So, there is an influence between independent variables with a 95% confidence interval or  $\alpha = 5\%$  with  $(df) = 48$ . Therefore, it can be concluded that there is a significant difference between the students' average values of pretest and posttest using experimental materials. It can be said that interactive teaching materials for semantic courses based on Brebes' local wisdom can improve the competency of PBSI students at Universitas Muhadi Setiabudi of Brebes, especially in semantic course.

Students' academic competencies can be seen from the results of the completeness of the subjects being taught. In this study, students must complete semantic courses. The completeness of the course must be supported by several following factors. These factors include teaching materials. Lecturers must be able to develop teaching materials in their respective universities. This is caused by the teaching materials being effective in improving students' abilities. In accordance with what was stated by Harijanto (2007), Wijayanti, Zulaeha, and Rustono (2015), Oka (2017), and Arsanti (2018) that teaching materials can facilitate students in studying certain subjects. So that, the competencies of students can increase.

The competencies of students are not only emphasized in pedagogic competencies, but also these must also be balanced with affective competencies. Affective student is reflected in the scope of the class at the time of the lecturing. However, students must reflect affective competencies not only limited to the scope of the class, but also these must reflect in everyday life in society. The attitude of students stands

complying with the norms that exist in society. The applicable norms are usually the traditions of the ancestors of the area. One example of tradition or noble heritage that is still thick is the local wisdom of Brebes. The Brebes community, especially the current younger generation, lacks of existing ancestral norms. This has an impact on the rampant values or behavior of the younger generation. This must be taken seriously. The young generation must instill the values of local wisdom. One way of planting is to integrate in learning. According to the opinions of Winarto (2016), Parris (2010), Zinnurain (2017), Lestariningsih (2017), Ferdianto (2018) that, by integrating local wisdom in learning in the classroom, it will inspire students about the awareness of the importance of local wisdom. Especially, the students need to preserve the noble values.

## CONCLUSION

The needs for teaching materials of semantic subjects that contain Brebes' local wisdom are complying with the perception of lecturers and students. The teaching materials are complying with the feasibility aspects of teaching materials such as aspects of material, presentation, language, and graphic.

Interactive teaching materials for semantic subjects based on Brebes' local wisdom are complying with the principles of the development of teaching materials. The principles are the compliant principle, practical principles, creative principles, innovative principles, easy principles, attractive principles, cultural principles, systematic principles, communicative principles, and sufficiency principles.

Effectiveness testing is done by testing the independent samples test on a limited scale. The results of the conducted tests stated that there were significant differences in the results of pretest and posttest in PBSI UMUS students. So, it can be concluded that teaching materials are effectively applied in semantic lectures.

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