

Validity Analysis of Early Childhood Language Development Textbook based on Constructivism Approach

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Abstract. The purpose of this research was conducted to describe the validity of Language Development Learning textbook for early childhood. The research method uses a Four D Development Model was developed by Thagarajan et al. The 4D Development Model consists of 4 main parts: Determine, Design, Develop and Disseminate. The results of this study can contribute in the provision of language teaching materials based on the agreement of constructivism for learning subjects and early childhood language development that can be used by students as prospective PAUD teachers as well as additional references for PAUD teachers in developing activities in PAUD. Based on the results of expert validation, the developed teaching material is categorized as valid with a value of 82.3.

Keywords: validity, language development, textbook, constructivism approach

1. Introduction

Universitas Negeri Medan is one of the Educational Institutions which has the responsibility in increasing human resources to succeed national programs in improving the quality of education. The effort was also based on Undang-undang No. 20/2003 [1] concerning the Indonesian National Education System. This law explains the learning process that can improve the quality of learning. The success of the education and learning process is very much determined by several factors, one of which is the competence of educators.

Undang-Undang No.14/2005 [2] outlines four competencies that must be possessed by educators, including the competence of educators and professionals. The competence is related to the ability of teachers to carry out teaching and learning activities as well as the ability to manage learning. One part of the ability to manage learning is that educators are able to make teaching materials to help students in learning activities. In the reflection activities on the implementation of lectures conducted by researchers in the classrooms with Early Childhood Language Learning and Development courses shows that the achievement of the goals and competencies of students is not maximal. Students have been given the opportunity by lecturers (researchers) to dig up as much information regarding lecture material on learning and language development in PG PAUD, but assignments by students show that students have not achieved the targeted results and students have difficulty in linking new information obtained with relevant concepts contained in the cognitive structure so that students' knowledge is not comprehensive and loses meaningfulness.

Based on the above problems, researchers are interested in making the development of teaching materials that fit the needs of students; curriculum, target characteristics and can improve learning activities and problem solving skills. It is hoped that the development of teaching materials will improve student learning outcomes. It is expected that students will obtain the maximum amount of knowledge in their field. This acquisition is expected to help students achieve the competence of PAUD teachers determined by the government. Based on the background explanation above, the research problem formulation is as follows: 1. What is the process of developing instructional materials based on the Constructivism approach in learning subjects and language development of early childhood 2. How is the validity of the contents of the development of teaching materials based on the constructivism approach in learning subjects and language development of early childhood?

Teaching Materials are generally defined as resources used by educators in learning. Teaching materials used by educators can help students to develop concepts and are material, information, tools / media used by lecturers to carry out learning, including creating an atmosphere that stimulates student learning. The form of teaching materials can be printed and non-printed teaching materials. Teaching materials have an important role in the learning process, namely the references used by trainers or trainers [3]. Trainers must also have knowledge of several factors that need to be considered in the development of teaching materials such as accuracy of content, accuracy of coverage, digestibility, use of language, illustrations, appearance / packaging as well as the completeness of teaching material components.

Constructivism approach is a learning approach that explains how students can think and build or construct problems in solving problems. Knowledge developed is actively developed by students through problem solving activities. The characteristics of constructive-based learning presented by your Driver Oldham 19 are as follows:

- a. Orientation, providing an opportunity to develop motivation in studying a topic by providing an opportunity to make observations
- b. Elicitation, giving students the opportunity to express ideas by discussing, writing and making posters, etc.
- c. Restructuring ideas, clarifying ideas with others, building new ideas, evaluating new ideas
- d. The use of new ideas in various situations, namely ideas or knowledge that have been formed need to be applied to a variety of situations
- e. Reviews of existing ideas need to be revised by adding or changing

The role of the educator or teacher in this constructivism approach is more as a mediator and facilitator which includes the following activities 21:

- a. Provides a learning experience that allows students to take responsibility,
- b. Providing or providing activities that undermine the curiosity of students and help them express their ideas
- c. Monitor, evaluate and show whether students' knowledge can be applied to deal with new related problems

2. Research Method

This research will be a development research. Sugiyono [4] said that research development or research and development (R&D). This research and development is a research method used to produce certain products and test the effectiveness of these products.

Meanwhile, according to Soenarto research development aims to produce and develop prototypes, designs, learning materials, media, strategies, educational evaluation tools in learning [5]. Based on the expert opinion, the research development is a systematic study aimed at producing products that can improve learning outcomes. The research developed a product in the form of Development of Teaching Material Based on Constructivism Approach in Early Childhood Language Learning and Development Subjects.

1. The development model in this study uses the 4-D (Four D) development model as a learning device development model. This model was developed by Thiagarajan et al [6] consists of 4 main stages: Define, Design, Develop and Disseminate.
2. Data for research obtained through; a) documentation study, to find out important documents needed in early language learning and development, b) interviews using interview guidelines, c) Questionnaire validation for experts or expert judgment
3. Data analysis techniques in this study were carried out through 2 stages; First, validity analysis through the average score of aspects of teaching materials developed with the formula [7]:

$$R = \frac{\sum_{i=1}^n V_i}{n}$$

Keterangan:

- R = Average rating of validator
- V_i = Score assessment Results to-i
- n = Number of validator

Then the average obtained is confirmed with established criteria. Riduwan [8] sets the validity criteria as follows:

Very invalid, may not be used	: 0% – 20%
Invalid, cannot be used, still needs revision	: 21% – 40%
Invalid, can be used with many revisions	: 65% – 79%
Valid, can be used with minor revisions	: 80% – 89%
Very valid without revision	: 90 % – 100%

3. Results and Discussion

Development research was carried out with the Four-D Model. It consists of 4 stages of development, namely Define, Design, Develop, and Disseminate. This model was chosen because it aims to produce products in the form of teaching materials based on constructivism approaches in learning subjects and early childhood language development. In accordance with the stages in the 4-D Model, following the results of research that has been conducted.

1) Define

This stage is carried out to determine and define the needs in teaching materials and gather information relating to the product to be developed. This stage has been carried out by means of interviews and direct observation in lectures learning and language development of early childhood. The researcher made anecdotal notes, and discussions with a team of lecturers who were both in the subject for the PG PAUD FIP UNIMED Study Program. At this stage the initial analysis, student analysis, task analysis, concept analysis, and analysis of learning objectives are carried out

a. Preliminary Analysis

Preliminary analysis is done to find out the basic problems in the development of teaching materials. The basic problem that researchers encounter through direct observation, discussion, anecdotal notes, and interviews, the information obtained is that lecture activities have not stimulated students to think actively, students are stunned by textbooks that have been used in the PG PAUD FIP Unimed study program. The books used so far have not been appropriate and adequate in terms of quality. The language used is also difficult for students to understand. Based on this preliminary analysis, it is necessary to have constructivist-based teaching materials in learning courses and AUD language development that provide reinforcement for students' understanding of language development for early childhood as well as an overview of activities that can stimulate children's language skills and knowledge. At this stage the researcher made observations on prospective users of the teaching material to be developed. This stage is done at the beginning of planning. The target users of this teaching material are PG PAUD students, FIP UNIMED as prospective PAUD teachers.

b. Task Analysis

Task analysis is carried out to identify the main tasks that will be carried out by students as users of language learning materials for early childhood. Based on the analysis of the problems at the beginning and the analysis of the users of teaching materials, the researchers formulated the tasks that exist in the development of teaching materials. The assignments are made in the form of activities that support the process of building knowledge for students characterized by the concept of constructivism or building student knowledge

c. Concept Analysis

Concept analysis was conducted to determine the content of the material in constructivism-based teaching materials in learning subjects and language development of early childhood that was developed. Analysis of this concept is done by identifying the material and sub material that will be presented. Refer to the Indonesian National Framework Curriculum. SN-DIKTI. The extent and depth of learning material refers to the CPL listed in SN-DIKTI article 9, paragraph (2) (National Standard for Higher Education, 2015).

d. Analysis of Learning Objective

Analysis of learning objectives is carried out to determine indicators of learning achievement based on material analysis and curriculum analysis. By writing learning objectives, researchers can find out what material and activities will be displayed in teaching materials.

2) Design Stage

After getting the result from the defining stage, then proceed to the design stage. This design phase aims to design constructivism-based teaching materials that can be used in teaching learning and early childhood development. This design phase includes:

a. Selection of teaching content

Based on the analysis of the concept and analysis of learning objectives that have been carried out in the previous defining stage, then in the development of teaching materials for learning subjects and language development AUD consists of 6 (six) chapters; the first part is The Basic Concept of Language Development, the second Chapter is Language acquisition, the third Chapter is the Development of Early Childhood Language Acquisition, the fourth Chapter is the Problem of Early

Childhood Language Development and Communication, the fifth Chapter, the oral and written language development of Early Childhood, the sixth Chapter, Early Childhood Language Skills and their Development Methods. At the end of each chapter, discussion and observation activities are presented as a form of additional activities so that students can enrich their knowledge and construct new ideas through observation activities. Students are also given the opportunity to express ideas through discussion activities, writing ideas and others. This is in accordance with constructivist ways of learning.

b. Format Selection

Teaching material developed is teaching material for Early Childhood Language Development, the target users are PG PAUD students. This teaching material is made on paper with a size of B5 (JIS) 18.2 cm x 25.7 cm, in accordance with international standards book size. Paper orientation is portrait. The typeface used in teaching materials is Bookman Old Style with size 11 for writing content.

The front cover is designed with a white background combined with light blue, dark, green and there are pictures of children and things related to activities to develop language skills, namely singing. According to Gross (2018) the color blue gives the impression of communicative, calm and is a universal color that is often chosen. Even some world-famous trademarks use blue to show reliability, authority and quality of harmony. Pictures of children and things related to language are made in the front cover to reflect and reinforce the content we provide through these teaching materials.

The table of contents contains information about all the material in each chapter that is presented in this teaching material. This sheet will explain the learning achievements that must be achieved by students when taking courses in early childhood learning and development

Each chapter is given a dividing sheet that reads the contents of the chapter of teaching material. This teaching material consists of 6 (six) chapters; the first part is the Basic Concept of Language Development, the second Chapter is Language acquisition, the third Chapter is the Development of Early Childhood Language Acquisition, the fourth Chapter is the Problem of Early Childhood Language Development and Communication, the fifth Chapter, the oral and written language development of Early Childhood, the sixth Chapter, Early Childhood Language Skills and their Development Methods. The contents of the chapter contain material related to the main material seen in the chapter title. At the end of the chapter is completed with discussion activities and observation columns for students to facilitate student learning activities and the ability to build ideas and knowledge through proving activities and analysis of existing concept

3) Development Stage

This development phase aims to revise teaching materials through expert input relating to the content / material of teaching materials, namely through the validation process. Development of teaching materials based on constructivism approaches in Early Childhood Language Learning and Development Subjects is validated by 2 (two) validators, an expert in the field of ECE and experts in the language field.

The results of data processing from the validity test of teaching materials can be informed in the following table:

Table 1. Results of Data Processing from Validity Test

No.	Criteria	Percent (%)	Results
1	Content Eligibility	84	Valid, can be used with minor revisions
2	Presentation Eligibility	90	Very valid without revision
3	Constructivism Approach	80	Valid, can be used with minor revisions
4.	Linguistic Aspect	74	Invalid, can be used with many revision
5.	Graph Aspect	83	Valid, can be used with minor revisions
	Average	82,3	Valid, can be used with minor revisions

Based on the result of the questionnaire test of the questionnaire test the validity of instructional materials based on constructivism approach in learning and language development courses for young children it can be said that this teaching material is valid with a percentage of validity of 82.3%. This means that the teaching materials developed already meet the validity requirements, which are worthy of content, worthy of presentation and meet the requirements of the constructivism approach and development of teaching materials and are valid in linguistic and graphic aspects. The average percentage of teaching material from the aspect of content eligibility is 84% which means it is very valid, meaning that the material of teaching material is in accordance with the Decree, BC and Indicators, the teaching material is in conformity with the needs of the user of teaching material / student, the presentation of material is supported by relevant theory, teaching material in accordance with the development of science, presentation of material is accurate, coherent and in accordance with the facts and concepts

The average percentage of teaching material/textbook from the aspect of presentation eligibility is 90%, which means it is very valid. The feasibility of the presentation regarding the systematic presentation in every learning activity obeying the principle (having introduction, content and closing), the presentation of concepts is presented coherently ranging from easy to difficult, from concrete to abstract and from simple to complex, from known to unknown, the presentation of material is interactive and participatory (there is a section that invites students to participate, the presentation of material is supported by pictures, diagrams, and factual illustrations. This is relevance with research or Eza [7] and Arywiantari [9].

The average percentage of textbook from the aspect of the constructivism approach is 80% which means it is valid. The constructivism approach in teaching materials developed in this case is related to the relationship of the material being taught to the real world situation of students, the presentation of teaching materials provides an opportunity for students to study the topic deeper through observation activities, the presentation of teaching materials that give students the opportunity to express ideas through discussion activities and the presentation of teaching materials facilitate students to use their ideas and idea reconstruction through a project.

The percentage of teaching materials seen from the linguistic aspects, teaching materials have many revisions relating to the use of language in this teaching material so that the validity level is around 74%. Linguistic, regarding the use of simple and straightforward sentences, communicative and interactive, Improved Spelling, use of sentences in accordance with Indonesian Rules of General Indonesian Spelling Guidelines, effective and efficient use of sentences and use of terms, symbols and icons. Percentage of graphic teaching material get

a value of 83, meaning that the use of graphics in the form of designs and drawings and the use of letters is still categorized as valid. The greatest value in this aspect is in the selection of the cover and color of the theme / background of teaching materials.

4. Conclusion

This research activity concludes that The Textbook for Early Childhood Learning and Language Development that can enhance knowledge, positive attitudes and train skills consist of; The concept of language development, Language acquisition, Language acquisition development, Early childhood language development disorders, AUD oral and written language development, AUD language skills and development methods. The learning activities and textbook developed based on constructivism are developed through discussion and observation activities. Students are facilitated with the activity of extracting ideas and constructing their knowledge through observation activities The teaching material developed is valid with a validity value of 82.3 so this textbook is suitable for use in Early Childhood Language Learning and Development courses.

5. References

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