

# Development of Early Childhood Inclusive Education Textbook for Student of Teacher Education in Universitas Negeri Medan

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**Abstract.** The aim of this research is to explain the development of kindergarten inclusive education textbook. This development R&D with the Four-D model. With purposive sampling technique, students of early childhood teacher education in FIP Unimed used as sample. This research using validation sheet filled in by experts of early childhood education and linguistic as instruments to check the appropriateness of content, presentation, graphics, and linguistics. Technique of data analysis is a descriptive analysis within percentage (content analysis), and results of professional validation with a value of 86.3, the developed textbook is classified as very valid

**Keywords:** validity, textbook, inclusive education, early childhood

## 1. Introduction

Early childhood education is a basic and strategic for human development. There are several reasons that underlie the importance of education for early childhood: First, the results of scientific research says that early childhood is called the golden age period. Second, early childhood education has become a national commitment as stated in Law No.20/2003 [1]. Third, there is an international commitment to Education For All (EFA) which contains six main objectives, including a specific focus on those who are vulnerable to marginalization and separation.

Based on Law of Ministry of National Education N0.70/2009 states that inclusive education is a "system of providing education that provides opportunities for all students who have disabilities and have the potential intelligence and / or special talents to attend education or learning in the educational environment together with students in generally [2]. This law explains that disability children are also entitled to receive the same education as other normal children. This means that inclusive schools are public schools that accommodate all children with or without disability of their physical, motoric, intellectual, social, emotional, linguistic and other conditions.

Inclusive education is carried out to fulfil the rights of each child to get appropriate instruction. Law Number 20 of 2003 clause 11 paragraph 1 about Obligations is that government and regional governments are obliged to supply services and facilities, as well as ensure the quality of education for each children without discrimination. Educational services for children with disability are getting the opportunity in common classes based on the capacity to take part in school exercises with a few alterations. Disability children can take portion in learning programs at school along with other normal children.

Inclusive education is an education service system that has children with disability together with other normal children in regular schools nearest from home in order that disability children are not separated from their environment as much as possible. In accordance with the conditions of each children, inclusive education is an education system that is open to all individuals and accommodates all needs.

Law of Ministry of National Education No.70/2009 [2] contains complete guidelines for inclusive education from planning to implementation. One of the noteworthy things recorded is regarding the obligation of district regional governments to appoint at least one school that must conduct this institution. However, inclusive education is not sufficient for only one school in each district but the involvement of numerous are students with disability. This is due to the phenomenon of increasing number of disability children every year.

The increase of disability children is not in line with this institution services. PSLB in 2007 [3] the number of disability children who have attended formal education has only reached 24.7% or 78.689 children from the 318.600 population in Indonesia. This implies that there are still 65.3% of disability children who are still excluded, marginalized, and dismissed in their right to education. In reality, this is estimated to be far greater considering the small prevalence rate used, which is 0.7% of the population.

While based on data from the Central Statistics Agency (BPS) in 2017, the number of disability children in Indonesia has reached 1.6 million children. Out of 514 districts/cities throughout the country, there are 62 districts/cities that do not yet have a special education. At present, the number of disability children who have attended schools has only reached 18 percent, namely around 115 thousand disability children attending SLB, while children who attend regular schools implementing inclusive education is around 299 thousand children

Meanwhile, there are still numerous schools that have experienced obstacles in conducting inclusive education. Based on research, of 12 inclusion schools in Bandung Regency and City, there were five groups of inclusive education issues, namely: understanding, implementation, school policies, learning processes, teacher condition, and support system. Adnan, et al [4], early childhood teachers as second hand after parents at home, still have numerous difficulty in recognizing and managing disability children, resulting in the difficulty of disable children accepted at normal school to learn together with other children.

Early childhood inclusive education coordinates and integrates normal children and disabled children in the same program. Inclusive education is not only a fulfillment of human rights and children's rights, but is even more important for the welfare of children, because inclusive education starts by realizing changes in community beliefs about children with special needs [5]. Thus, children will feel calm, confident, feel valued, protected, loved, happy and responsible. Inclusion occurs in all social environments of children, in families, peer groups, schools, and other social institutions.

The inclusive education is carried out based on the spirit of building an inclusive community system, namely social order that respects diversity. So that the inculcation of character will be more appropriate starting early through the implementation of kindergarten inclusive education. Inclusive education services each child that has the right to accept good education services according to their age and development, regardless of the degree, economic condition of the family or their disabilities [6]. It is important for teachers to implement good learning planning so that all children are well served.

The development of teacher competence is absolutely essential for the implementation of inclusive education. According to Suparno [5,7], there are substantially two main competency components of inclusive education teachers. First, teacher core competencies

including (a) pedagogic, (b) personality, (c) social, and (d) professional (Law of National Education Ministry No.16/2007). Second, specific competency in kindergarten inclusive education which is to have an understanding and ability in terms of; (a) the characteristics and learning needs of children with disability; (b) learning assessment for children with disability; (c) creating a friendly learning environment; (d) individualized education programs; and (e) learning evaluation for children with disability.

Based on the background of the problems that have been described, the researchers felt the need to develop kindergarten inclusive education textbook for students in FIP Unimed as prospective kindergarten teachers

## 2. Research Method

This research uses R&D model [6]. Textbook development model is a set of procedures that will be carried out sequentially to develop instructional materials. This type of development in this study will use the Four-D (4-D) model suggested by Silvasailam Thiagarajan et al.. This model 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 kindergarten inclusive education textbook for students of early childhood teacher education.

Define stage is useful for determining and defining needs in textbook and gathering information related to the product to be developed. In this stage there are several steps, namely front-end analysis, learner analysis, task analysis, concept analysis, and specifying instructional objectives. After getting the results from define stage, then proceed to the design stage. This stage aims to design kindergarten inclusive education textbook, which includes content selection and format selection.

The third stage is development stage, aims to produce revised kindergarten inclusive education textbook based on experts appraisal and trials to students. There are two steps in this stage, which are experts validation and product tryout. After trial and revising the textbook, next stage is the dissemination stage. The purpose of this stage is to disseminate kindergarten inclusive education textbook for students of early childhood teacher education in FIP Unimed.

Instrument for this research was used to obtain data on expert evaluations of kindergarten inclusive education textbook. The results of this assessment serve as the basis for development of textbook before being trialled. This validation sheet contains appropriateness of content, presentation, graphic, and linguistic. Table 1 below shows the blueprint of instrument.

**Table 1.** Blueprint of Textbook Validation Instrument

No	Indicator	Number of Items
<b>A. Content</b>		
1	The suitability of the material with curriculum	3
2	The accuracy of the textbook material	4
3	Supporting learning material	3
4	Up to date material in textbook	3
<b>B. Linguistic</b>		
1	Straightforward	3
2	Communicative	2
3	Dialogical and Interactive	2

No	Indicator	Number of Items
4	Suitable with the level of student development	2
5	Tuning and integrated thought flow	1
6	Use of terms, symbols, icons	2
<b>C. Presentation</b>		
1	Presentation Techniques	2
2	Supporting Presentation	4
3	Completeness of Presentation	3
<b>D. Graphic</b>		
1	Use of Fonts	2
2	Display Design	3

The results of the experts validation are presented in tabular form. Then calculating average score using the formula [6]:

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

R = the average rating of the validators

V<sub>i</sub> = score of the result of the i-validator assessment

n = number of validators

Then the average obtained is confirmed with established criteria. How to get these criteria is as follows.

76 - 100 = very valid

51 - 75 = valid

26 - 50 = less valid

0 - 25 = invalid

### 3. Results and Discussion

In accordance with the stages in the 4-D Model, the following results of the research have been conducted:

#### a. Define

This stage has been carried out by interview teacher education of early childhood education students and early childhood teachers in Unimed. In addition to interviews, the researchers also made direct observations during the inclusive education classes and discussions with inclusive education lecturers. At this stage the initial analysis, student analysis, task analysis, concept analysis, and analysis of learning objectives are carried out.

##### 1) Initial Analysis

Based on the observations, students have been able to understand the management of inclusive classes, but they still experience confusion in implementing inclusive education in early childhood education. This is due to the lack of teaching materials or textbook that provide an overview of the inclusive education application in kindergarten. Researcher also conducted interviews with kindergarten teachers to look for information about basic issues related to teaching materials for early childhood inclusive education. Based on the results of the interview, so far there has been no

teaching material that specifically discusses inclusive education for kindergarten children, so that if there are disability children in school the teacher has not been able to facilitate their learning needs. Therefore, it is necessary to have inclusive education textbook for kindergarten children that provide reinforcement to students and teachers understanding about the application of inclusive education in kindergarten.

2) User Analysis

At this stage the researcher made observations on prospective users of the developing textbook. The target users of this textbook are students of early childhood teacher education, especially students in FIP UNIMED. They should understand the scope and the characteristics of children, not only normal children but also have knowledge about children with disability. Students are also expected to be able to understand the learning needs of children with disability and appropriate handling is carried out in inclusive classes. By understanding the characteristics of children, students as teacher candidates must be able to design and do learning, especially for disabled children together with normal children in an inclusive class.

3) Task Analysis

Task analysis is carried out to identify the main tasks that will be carried out by students as users of kindergarten inclusive education textbook. Based on the analysis of the problems at the beginning and the analysis of the users of textbook, the researcher formulated the tasks that exist in the development of kindergarten inclusive education textbook. The assignments are made in the form of exercises, observation tasks, and assignments to design learning in inclusive classes so that students of early childhood teacher education can understand and apply inclusive education in early childhood education.

4) Concept Analysis

Concept analysis is carried out to determine the content of material in kindergarten inclusive education textbook. This concept analysis is carried out by identifying elements of inclusive education and systematically compiling the parts of learning material in the elements of inclusive education. Referring to Law of Ministry of National Education No.70/2009 [2] concerning Inclusive Education for Students Who Have Disabilities and Have Potential Intelligence and / or Special Talents, there are 15 clauses as a reference for the implementation of inclusive education. Based on these clauses, the researcher compiles and develops material to create kindergarten inclusive education textbook. The structure of the learning program at early childhood teacher education FIP Unimed is adjusted to the Learning Achievements agreed by representatives of 26 Public Universities and 3 Private Universities held by the Indonesian Teacher Education of Early Childhood Education Association (APG-PAUD Indonesia) in the Workshop of Teacher Education of Early Childhood Education Learning Achievement.

Based on the analysis of the concept from Law of Ministry National Education No.70/2009 [2] kindergarten inclusive education textbook will include seven materials, namely the basic concepts of inclusive education, children with special needs, curriculum in inclusive class/schools, evaluation of learning in inclusive education, professionals in inclusive education, special services in inclusive education, and the role of families in inclusive education.

#### 5) Analysis of Learning Objectives

Analysis of learning objectives is carried out to determine indicators of learning achievement based on material analysis and curriculum analysis. Academic competencies at Unimed are formulated into 8 (eight) graduate competencies, namely:

- a) Competent to logical and analytical thinking in solving problems
- b) Competent to work independently and cooperate with others
- c) Competent to communicating ideas and information verbally or in writing
- d) Competent to improve science and expertise independently
- e) Competent to mastering and using technology
- f) Competent to conduct evaluations, analyze data, and create effective solutions to overcome problems
- g) Competent to plan and organize activities
- h) Competent to adapt to the work environment and society

In developing early childhood inclusive education textbook, researcher use and develop competencies 1, 2, 3, 4, 6, and 7.

#### **b. Design**

After getting the results from the defining stage, then proceed to the design stage. This design phase aims to design early childhood inclusive education textbook that can be used in learning program in the teacher education of early childhood education FIP Unimed. This design phase includes:

##### 1) Selection of Teaching Content

Based on the analysis of concepts and learning objectives that have been carried out in the previous defining stage, then in the development of early childhood inclusive education textbook, teaching content consists of seven parts. The first part with the topic of the basic concepts of inclusive education contains material about the background of inclusive education, the principles of inclusive education, and the foundation of inclusive education. The second part about children with special needs discusses the characteristics of children with special needs and children learning needs according to the child's disability. The third part is the curriculum in the inclusive classroom/school which contains material on modification, adaptation, and design of learning in the inclusive classroom. The fourth part is the evaluation of learning outcomes in inclusive education which is concerned with accommodation and evaluation methods for students with special needs. The fifth part, namely professional staff in inclusive education, contains material on general education teachers, special education teachers, and other related service providers/specialists. The sixth part is about the types of special services in inclusive education. It is relevance with last researches [9,10]. The seventh part contains topics about the role of the family in inclusive education, discusses the forms of parent and family involvement in inclusive education.

##### 2) Format Selection

Teaching materials developed are early childhood inclusive education textbook whose target users are teacher education of early childhood education students. This textbook 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 font used in teaching materials also follows the book's international standards, namely Bookman

Old Style with size 11 for content writing, and size 26 for title. The front cover is designed with a light blue background and there are images related to inclusive education. 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. Images relating to inclusive education are made on the front cover to strengthen the content. The components in the front cover are the title of teaching material and the identity of the author. The beginning of each chapter contains the title and learning objectives related to the material in the chapter. This is intended so that students know what competencies are expected after studying the chapter. In the contents of each chapter, there are pictures / charts / diagrams to make it easier for students to understand the material. At the end of each chapter, there are evaluation, summary, and bibliography.

c. Development Stage

This development phase aims to produce early childhood inclusive education textbook that have been revised based on experts validation. This textbook was validated by two validators, consisted of experts in the field of early childhood education and experts in the field of linguistic. The results of the validity test of teaching materials by the validator are shown in Table 2 below.

**Table 2.** Test Results of Textbook Validity

No.	Criteria of Module	Value	Note
1	Content eligibility	86,5	Very valid
2	Presentation Eligibility	83,3	Very valid
3	Graphic	90	Very valid
4	Linguistic	85,4	Very valid
	Average	86,3	Very valid

#### 4. Conclusion

Early childhood inclusive education is declared to be very valid (validation value 86.3) and is suitable use for teacher education of early childhood education students. For future research, it is better to expand and deepen the content of early childhood inclusive education textbook, especially about inclusive classroom curriculum.

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