DEVELOPING A LEARNING TEXTBOOK FOR CHILDREN WITH PHYSICAL DISABILITIES

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ABSTRACT

The development of a learning textbook for children with physical disabilities is crucial to supporting inclusive education and preparing future special education teachers with practical, evidence-based resources. This study aims to understand the concept, structure, and content of a learning textbook for student with physical disabilities in develop and validate the textbook to ensure its effectiveness as a practical and inclusive teaching guide. Using a Research and Development (R&D) approach adapted from Borg and Gall's model with seven stages, research and information collecting, planning, develop preliminary form of product, develop preliminary form of product. Data were collected through focus group discussions, expert validation, student questionnaires, and user feedback. The results indicated that the developed textbook achieved high validity scores from media experts (88%) and material experts (88%), as well as highly positive responses from users with an average score above 90%. The textbook successfully integrates theory and practice, offers structured intervention strategies, and supports teacher candidates in understanding and implementing inclusive learning for children with physical disabilities. The findings imply that the textbook can serve as a reference for universities, teachers, and inclusive schools to enhance the quality of education for students with physical disabilities. The novelty of this research lies in its comprehensive integration of theoretical foundations and practical applications tailored to the unique learning needs of children with physical disabilities, supported by case studies and interactive features to improve student engagement and accessibility.

Keywords : textbook, teaching, children with physical disabilities

INTRODUCTION

Several experts have their own understanding of what "learning" is. One of them is Achjar Chalil. He argues that learning is a process of interaction between students and educators and learning resources in a learning environment. In contrast, Rahil Mahyudin states that learning is a process of behavioral change, cognitive skills, namely the mastery of knowledge and the development of skills. It can be concluded that learning is a process of interaction between learners, educators, and learning resources in a learning environment. Learning is assistance provided by educators to facilitate the process of acquiring knowledge and understanding, mastering skills and habits, and forming attitudes and beliefs in learners. In other words, learning is a process to help students learn well.

Loesl (2024) states that in the education of children with disabilities, seven aspects need to be developed, including intellectual and academic development, this aspect can be developed formally at school through learning activities. Assisting physical development, with the main obstacle in learning is motor impairment. Therefore, teachers must be able to overcome these impairments so that children can more easily participate in education. Teachers must help maintain children's physical health, correct their wrong movements, and develop them in a normal direction. In the educational process, teachers must work with psychologists to instill positive self-concepts regarding disabilities so that children can accept themselves. This can be done by creating a conducive school environment that encourages harmonious interaction. Social aspects, which include group activities and togetherness, need to be developed by giving children with disabilities roles so that they are responsible for the tasks assigned to them and can work together with their group. In the educational process, children need to be taught about values, norms of life, and religion to help them mature morally and spiritually. The self-expression of children with physical disabilities needs to be improved through art, skills, or crafts. In the educational process, teachers and other personnel are tasked with preparing children for the future. This can be done by accustoming children to work according to their abilities and equipping them with skills training so that they can produce something that can be used as a foundation for life.

In classroom management, teachers must be fair and balanced and treat all children equally, including children with special needs. Seating arrangements should ensure that students feel comfortable and not discriminated against. Each student will differ in their understanding of the material; therefore, teachers must be sensitive and prepared to handle situations using various models and methods. The most important principle in conducting learning activities is fairness and mutual respect among students, especially toward those with special needs.

METHOD

The type of research used in the development of teaching materials for the course on teaching children with disabilities as a support for online learning for undergraduate students in Special Education is based on the adaptation of the development model by Gall, Gall, and Borg (2003). This development consists of 10 steps, but in this study, only 7 steps are required. The steps in the research and development model above can be described as follows.

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1. *Research and Information Collecting* (Preliminary Study and Information Gathering) At this stage, an analysis of the needs and problems in online learning of early intervention for children with disabilities in undergraduate students majoring in special education was conducted through *Focus Group Discussion*. In addition, a literature study and observation of existing teaching methods were conducted, as well as considerations to obtain appropriate theoretical references.

2. *Planning* This activity is to create a plan for developing a textbook tailored to the needs of S1 PLB students in studying early intervention for children with disabilities online. The product design is determined by involving special education experts, information technology experts, and S1 PLB students.

3. *Develop Preliminary Form of Product* (Development of Design or Initial Product) Based on the planning results, the next stage is to create an initial product for early intervention textbooks for children with physical disabilities. The textbook design can be adjusted to the characteristics of undergraduate students majoring in special education and the specifications of online learning media.

4. *Preliminary Field Testing* (Initial Field Testing) After the initial product is created, it is tested by content experts and design experts to obtain feedback as a basis for product revision.

5. Main *Product Revision* After reviewing the input from experts and users, the main product of the early intervention teaching book for children with disabilities is refined as a model suitable for solving problems in online learning for the course.

6. *Main Field Testing* (Main Field Testing) The revised product will be tested on a larger scale by undergraduate students in Special Education as users. Subsequently, the results of the user testing will be evaluated by the research team, information technology experts, and special education experts.

RESULT AND DISCUSSION

During the Preliminary Study and Information Gathering stage, the development of a Textbook on Learning for Children with Disabilities for Special Education Students has produced several important points in the outline of the book that will be developed through Focus Group Discussions. The results of the FGD on the table of contents for the "Learning for Children with Disabilities" textbook reflect a comprehensive structure that guides readers through various important aspects related to identification, assessment, and therapy for children with disabilities. The textbook is divided into two main sections: theory and implementation, each of which delves deeper into understanding children with disabilities and effective ways to conduct interventions.

Part I: Learning for Children with Disabilities This section provides a strong theoretical foundation on children with disabilities, including definitions, classifications, characteristics, causes, impacts, needs, and problems commonly faced by children with disabilities. This section also discusses in detail the concepts of intervention, identification, assessment, and appropriate therapy for children with disabilities, all of which are critical steps in the process of supporting their development. Chapters I to V explore the definition, characteristics, and needs of children with disabilities, as well as the importance of learning.

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This includes an in-depth discussion of various aspects of learning, including techniques that can be applied to support children's development.

Part II: Learning Programs for Children with Mild Disabilities This second part focuses on the practical application of the theories discussed in Part I. It includes specific steps, techniques, and strategies for identifying, assessing, and treating children with various types of disabilities, including motor, cognitive, communication, and social-emotional. Chapters VI through IX offer detailed guidelines

The book concludes with a reference list providing sources for readers who wish to explore the topic further. The results of this focus group discussion are expected to serve as a guideline for developing effective and relevant learning books to improve the quality of education for students with special needs.

In the second stage, Planning, the focus group has done several things in developing a Teaching Book for Children with Physical Disabilities for Special Education Students, including: Setting clear and specific learning objectives, covering aspects of knowledge, skills, and attitudes. Planning the structure and plan of the book systematically, including the division of chapters, sequence of material, and arrangement of information in the teaching book. Identifying the availability of relevant resources to ensure the accuracy and relevance of the information presented in the textbook. Developing a detailed chapter outline or table of contents to organize the material logically. Selecting an appropriate teaching approach that aligns with the characteristics of students in special education.

The third stage of developing a Textbook for Teaching Children with Disabilities for Special Education Students produced a design or initial product. At this stage, important elements were selected, such as relevant images or illustrations, an interesting and informative book title, author and related institution information, clear and organized page layout, the use of graphics and illustrations that support concept explanations, a structured chapter and subchapter structure, interactive techniques to enhance student engagement, attention to inclusivity by using inclusive and easy-to-understand language, providing references and additional resources, and editing and proofreading to correct general errors. The initial design is then tested by experts in the subsequent stage to produce a high-quality and effective final product that supports the learning of students in special education.

The fourth stage of developing the Teaching Book for Children with Physical Disabilities for Special Education Students involved initial field testing with media experts and content experts to obtain input that would serve as the basis for revising the product. The results of the expert review by media experts indicate that the textbook design has successfully integrated visual elements, prioritized readability, and effectively utilized graphics to support student understanding. Meanwhile, the results of the content experts' review indicate that the textbook content comprehensively covers topics relevant to early intervention and special education. However, there were suggestions from media experts and content experts to improve the page layout and use more attractive graphics, add more varied case examples, and provide more detailed explanations of certain concepts. These revisions were made to ensure that the textbook meets quality standards and the learning needs of students in special education.

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Table 1 Results of Expert Validation

Expert	Validity	Comments
Media Expert	88	Appropriate
Subject Matter Expert	88	Appropriate

A limited test of the Textbook for Teaching Children with Disabilities for Special Education Students has not yet been conducted. The limited test will involve students as potential users of the textbook to provide input and feedback on concept understanding, material completeness, readability, and ease of use of the textbook. The students involved in the limited testing will be selected purposively based on specific criteria, such as semester or learning profile that matches the target audience of the textbook. The results of the limited testing will be used as the basis for conducting a final evaluation of the final product before it is launched to the public. The next article will discuss the results of the limited testing by students and how the feedback can be integrated into the refinement of the final product of the Early Intervention Textbook for Special Education Students.

Table 2 User Test Results

Users	Validity	Notes
D	97	Very Suitable
TWR	89	Very Suitable
JC	95	Very Suitable
R	98	Very suitable

CONCLUSION

The development of a textbook for teaching children with disabilities (children with special needs) is a crucial step in supporting inclusive education, particularly for undergraduate students in Special Education (PLB) who will become future educators. The validity and relevance of this textbook have been evaluated through assessments by media experts, subject matter experts, and end-users, namely students or practitioners in the field.

1. Expert Evaluations

    Media Experts : With a validity score of 88%, the media are effective in supporting the learning process (Clark & Mayer, 2016).

    Content Experts : An 88% rating from content experts indicates that the textbook content meets the required standards for special education materials, although there is room for further improvement and refinement (Cook, Tankersley, & Landrum, 2009).

2. User Feedback

    Positive feedback has also been received from users, with an average validity rate exceeding 90%, indicating that this textbook is not only theoretical but also practical and relevant to the real-world needs and challenges faced by undergraduate students in Special Education (PLB) and special education practitioners (Mastropieri & Scruggs, 2010). Responses such as "Very Appropriate" and "Very Worthwhile" confirm that this textbook has met users' expectations in providing clear and applicable guidelines.

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Taking into account feedback from experts and users, this textbook has successfully combined theory and practice in a coherent and accessible manner, thereby supporting students in understanding and applying early intervention strategies for children with intellectual disabilities. However, it is important to continuously update and refine this material to ensure that the textbook remains relevant to current developments in special education and the individual needs of children with disabilities (Friend, 2018).%, this textbook was rated appropriate in terms of presentation, including design, format, and visual clarity. This indicates that the textbook has successfully integrated the elements.

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