The Use of A Stimulation and Detection Guidebook for Children Development Disorders in Early Childhood Education

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Abstract

The involvement of parents and the community is required to optimize early childhood development. It is necessary to have a practical guidebook that assists parents and the community in stimulating and detecting early childhood development. This study aimed to examine the results of the try-out of a draft guide to the detection and stimulation of the development of children aged 0 to 6. This research employed quantitative and qualitative designs, and the data was collected using a questionnaire and focus group discussion techniques. The research subjects included parents and early childhood educators in the Special Region of Yogyakarta. The results show that 84 percent of respondents found the draft guidebook was easy to understand and suited users' needs. This guidebook was also practical as it provided sufficient information for carrying out a preliminary screening of development disorders and stimulating as well as detecting the development of children aged 0 to 6. However, some revisions should be made, including the revisions of sentence structure, illustration adjustment, and alignment between stimulation steps and observation as well as detection steps.

Keywords: Stimulation and detection, Development, Young children

1. Introduction

Early childhood growth and development come about rapidly, especially in the age of 0 to 6. During this period, parents or adults need to observe child growth and development. Early childhood development takes place multi-dimensionally and in succession; therefore, the progress occurring in one domain will lead to progress in another [1]. Every stage of child growth and development progresses with the intensity of stimulations received from parents and surrounding environments. Guided mapping during this period will help with the growth and development optimization in the succeeding stage, prevent any growth and development hindrance, and detect potential growth and development hindrance or dysfunction in its early stage to prevent it from developing into a permanent dysfunction [1]. Child development that takes place constantly is tremendously special and is not to be missed by parents. Earlier monitoring by parents will result in earlier action on anything happening to children, either normal or presumably delayed.

It is necessary to stimulate physical, intellectual, emotional, social, and language development soon after birth [2]. Childhood development aspects such as cognitive, motor, language, socio-emotional, religious, moral, and artistic aspects will develop according to the stimulation received by children. Every day children learn from what they see and experience in their lives [3]. In line with the concept of the convergence theory, child growth and

development are influenced by inborn quality and experience. Hence parents, teachers, and persons around children serve as supporting factors of children's intelligence.

There has been evidence showing that malnutrition and inadequate care are caused by mothers' poor knowledge on how to give stimulation correctly and appropriately [4]. Parents can tackle and prevent early childhood development hindrances using care and learning. Cognitive development stimulation and adequate nutrition intake can support children's daily activities [5]. Before detecting a child's development, it is of great importance to have guided, continuous stimulation early in a child's life. There is a synergy between this and detection because child development is essential of a cumulative nature and serves as a stepping-off point for later development [6]. Observation and stimulation may be conducted by parents, teachers, and posyandu (integrated service post) cadre at any time by referring to a child development stimulation and detection guidebook.

The results of the research by Hayati et al. show that the use of an early childhood development detection and stimulation guide was very useful to parents, teachers, and posyandu cadre in child development monitoring [7]. A practical and easy-to-understand guide is greatly required to optimize child growth and development, notably in areas with no readily accessible health and educational service centers.

Based on the problem abovementioned, optimum child development stimulation requires support from parents, early childhood educators, and posyandu cadre. This may start from a study that yields a community-based early childhood development detection and development guidebook for parents, early childhood educators, and posyandu cadre. This early childhood development detection and stimulation guidebook are expected to offer a solution for parents who send their children to preschools and those who are unable to do so due to time and financial constraints. This guidebook may also serve as a bridge connecting teachers and parents, allowing for an equal share of responsibility for child education between them. To parents and posyandu cadre, this guidebook helps solve labor, time, and distance problems that hinder coordination with puskesmas (public health center) and nearby health service centers.

The draft guide to detection and stimulation of the development of children aged 0 to 6 developed by Hayati et al. comprises two parts, namely guidebook organization, and child development detection and stimulation components [8]. The guidebook organization was meant to help parents and early childhood educators as users stimulate and detect child development. The organization was made as simple as possible to make it easy for users to understand what the authors intended to deliver due to possible differences in users' educational backgrounds. Meanwhile, the child development detection and stimulation components were meant to describe several development stages supposed to be reached by children at certain ages. The child development detection and stimulation stages were divided into eleven (11) age-based stages, namely the ages of 0-3 month(s), 3-6 months, 6-9 months, 9-12 months, 12-15 months, 15-18 months, 18-24 months, 24-36 months, 36-48 months, 48-60 months and 60-72 months [8].

The rest of this paper is organized as follows: Section 2 describes the proposed research method. Section 3 presents the obtained results and following by a discussion in Section 4. Finally, Section 5 concludes this work.

2. Research Methods

This study is a research and development study and was conducted based on Borg and Gall's model [8], by which certain products are produced. The final result produced from this study is

an early childhood development detection and stimulation guidebook for parents and early childhood educators. The flow of this study is illustrated in [Figure 1] below.
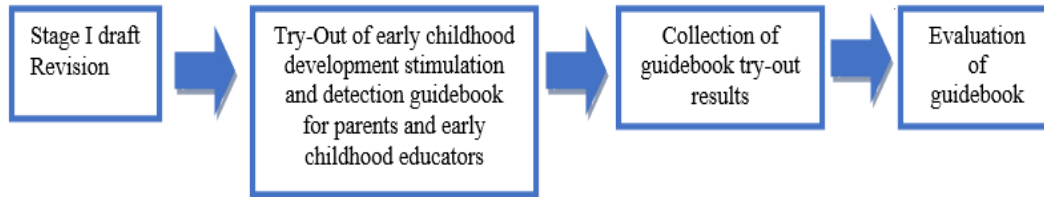

Figure 1. Research scenario

Table 1. Product assessment instrument outline

NO	ASSESSMENT DESCRIPTOR
1.	The instructions of the guidebook are easy for users to understand
2.	The language used in the guidebook is easy for users to understand
3.	The stimulation and detection steps are easy to understand
4.	The materials contained in the guidebook suit the needs of parents/early childhood educators
5.	The guidebook is considered practical as the necessary information is clearly outlined
6.	The guidebook provides adequate information for conducting child development detection and stimulation
7.	The pictures contained in the guidebook are highly helpful for parents/early childhood educators to understand the detection and simulation steps
8.	Users can understand the suggestions resulted from the detection referred to in the guidebook

Based on the [Table 1] above. The research subjects consisted of parents and early childhood educators in the Special Region of Yogyakarta, numbering 40 in total. Female parents accounted for 95 percent of the total number of parents, and the remaining 5 percent were male. Meanwhile, 100 percent of early childhood educators were female. Parents and teachers were of D2 (diploma) and S1 (undergraduate) educational backgrounds. The research subject data are detailed in [Table 2]. The research was carried out from June to October 2017.

Table 2. Parents and early childhood educators' educational backgrounds

Parents	Early Childhood Educators
SMP	SMK
SMA	D2
SMK	D3
D2	S1
S1	

3. Research Results

This research yielded two types of data, namely the data of early childhood development detection and stimulation guidebook try-out results and the data of FGD with parents and educators results. The guidebook try-out results cover the assessment of book instructions, language, stimulation and detection steps, materials, information clarity, and illustration appropriateness. Parents' assessment of the guidebook is described as follows.

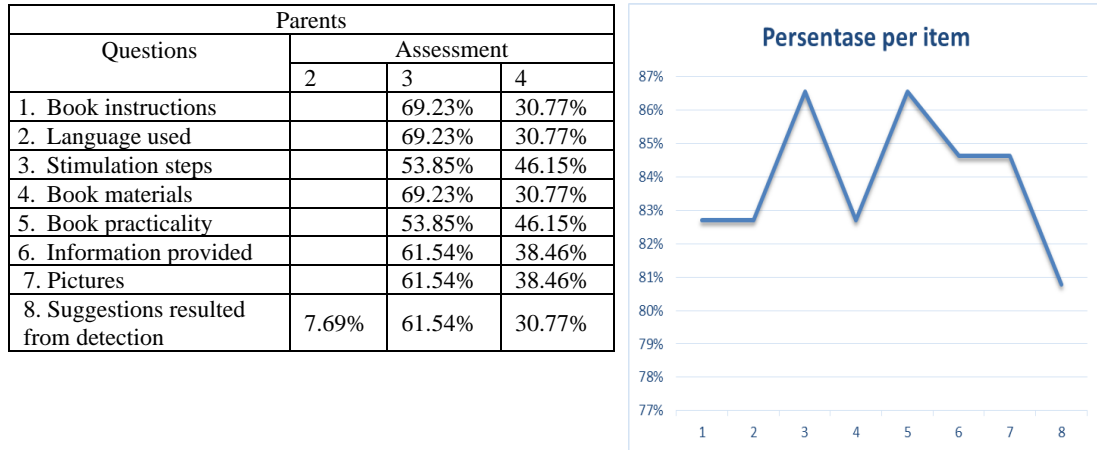| Parents			
Questions	Assessment		
	2	3	4
1. Book instructions		69.23%	30.77%
2. Language used		69.23%	30.77%
3. Stimulation steps		53.85%	46.15%
4. Book materials		69.23%	30.77%
5. Book practicality		53.85%	46.15%
6. Information provided		61.54%	38.46%
7. Pictures		61.54%	38.46%
8. Suggestions resulted from detection	7.69%	61.54%	30.77%

Figure 2. Chart and table of percentages of parents' guidebook assessment

According to [Figure 2], parents' assessment of the guidebook is outlined as follows.

(1) The instructions of the guidebook were easy for users to understand. Based on the research results, users were able to understand the guidebook instructions well, evidenced by 69.23 percent of users stating good and 30.77 percent stating very good.

(2) The language used in the guidebook was easy for users to understand. Based on the research results, users were able to understand the language used in the guidebook with ease, evidenced by 69.23 percent of users stating good and 30.77 percent stating very good.

(3) The stimulation and detection steps were easy to understand. Based on the research results, users were able to understand the stimulation and detection with ease, evidenced by 53.85 percent of users stating good and 46.15 percent stating very good.

(4) The materials contained in the guidebook suited the needs of parents/early childhood educators. Based on the research results, the guidebook materials suited users' needs, evidenced by 69.23 percent of users stating good and 30.77 percent stating very good.

(5) The guidebook was considered practical as the necessary information is clearly outlined. Based on the research results, the guidebook was considered practical as necessary information was clearly outlined and easy for users to understand, evidenced by 53.85 percent of users stating good and 46.15 percent stating very good.

(6) The guidebook provided adequate information to conduct child development detection and stimulation. Based on the research results, the guidebook provided users adequate information to conduct child development detection and stimulation, evidenced by 61.54 percent of users stating good and 38.46 percent stating very good.

(7) The pictures contained in the book made it easy for parents/early childhood educators to understand the detection and simulation steps. Based on the research results, the pictures contained in the book made it easy for users to understand the detection and stimulation steps, evidenced by 61.54 percent of users stating good and 38.46 percent stating very good.

(8) Users were able to use the suggestions resulted from detection referred to in the book. Based on the research results, users were able to use the suggestions resulted from detection referred to in the book, evidenced by 7.69 percent of users stating fair, 61.54 percent stating good and 30.77 percent stating very good.

Meanwhile, the data of early childhood educators' assessment as users of the guidebook is described as follows.

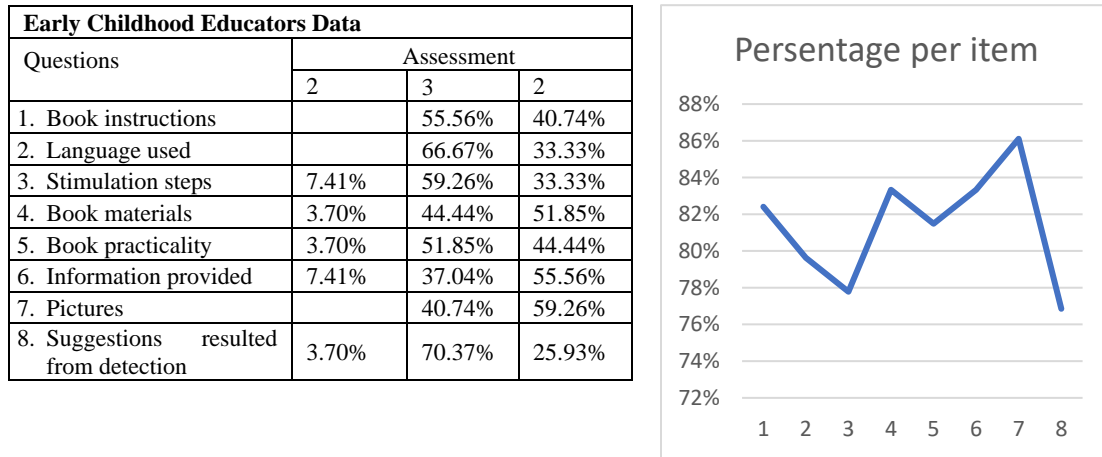| Early Childhood Educators Data			
Questions	Assessment		
	2	3	2
1. Book instructions		55.56%	40.74%
2. Language used		66.67%	33.33%
3. Stimulation steps	7.41%	59.26%	33.33%
4. Book materials	3.70%	44.44%	51.85%
5. Book practicality	3.70%	51.85%	44.44%
6. Information provided	7.41%	37.04%	55.56%
7. Pictures		40.74%	59.26%
8. Suggestions resulted from detection	3.70%	70.37%	25.93%

Figure 3. Chart and table of percentages of early childhood educators' guidebook assessment

According to [Figure 3], early childhood educators' assessment of the guidebook is outlined as follows.

(1) The instructions of the guidebook were easy for users to understand. Based on the research results, users were able to understand the guidebook instructions well, evidenced by 55.56 percent of users stating good and 40.74 percent stating very good.

(2) The language used in the guidebook was easy for users to understand. Based on the research results, users were able to understand the language used in the guidebook with ease, evidenced by 66.67 percent of users stating good and 33.33 percent stating very good.

(3) The stimulation and detection steps were easy to understand. Based on the research results, users were able to understand the stimulation and detection with ease, evidenced by 7.41 percent of users stating fair, 59.26 percent stating good and 33.33 percent stating very good.

(4) The materials contained in the guidebook suited the needs of parents/early childhood educators. Based on the research results, the guidebook materials suited users' needs, evidenced by 3.70 percent of users stating fair, 44.44 percent stating good, and 51.85 percent stating very good.

(5) The guidebook was considered practical as the necessary information is clearly outlined. Based on the research results, the guidebook was considered practical as necessary information was clearly outlined and easy for users to understand, evidenced by 3.70 percent of users stating fair, 51.85 percent stating good, and 44.44 percent stating very good.

(6) The guidebook provided adequate information to conduct child development detection and stimulation. Based on the research results, the guidebook provided users adequate information to conduct child development detection and stimulation, evidenced by 7.41 percent of users stating fair, 37.04 percent stating good, and 55.56 percent stating very good.

(7) The pictures contained in the book made it easy for parents/early childhood educators to understand the detection and stimulation steps. Based on the research results, the pictures contained in the book made it easy for users to understand the detection and stimulation steps, evidenced by 40.74 percent of users stating good and 59.26 percent stating very good.

(8) Users were able to use the suggestions resulted from detection referred to in the book. Based on the research results, users were able to use the suggestions resulted from detection

referred to in the book, evidenced by 3.70 percent of users stating fair, 70.37 percent stating good and 25.93 percent stating very good.

The results of the book evaluation through FGD with parents and educators show that this guidebook was appropriate to use and could improve the community's insight into young children. Early childhood educators suggested that this guidebook should be published in a wider scope to give access to parents to use it. It is expected that parents as users will be able to detect the early stage of child development and identify signs of child development delay. In this way, some parents who had little confidence in educators' recommendations regarding their children's development will be better informed with the use of this early childhood development stimulation and detection guidebook. This guidebook can be used as a reference when consulting health personnel or psychologists should a child experience a development disorder. As a result, the stimulation and detection outcome can minimize child development delay and disorders, and in the long run, can optimize early childhood development.

4. Discussion

This early childhood stimulation and detection guidebook were highly useful in improving parents' and educators' insight into the importance of performing stimulation and detection on children aged 0 to 6 in appropriate steps and manners. The results of parents' and educators' assessment of the guidebook prove that the stimulation and detection steps in this guidebook were easy to understand, assisted with some illustrations of detection and stimulation steps. This guidebook provided parents with sufficient information to conduct child development detection and stimulation. Furthermore, the suggestions provided in this guidebook could be applied by parents and educators to perform first actions should some child development problems be found.

Many children suffer from health and development problems due to some causes, one of which is lack of stimulation [9]. Child development stimulation can be performed easily by all parents of all educational backgrounds with the help of this early childhood development stimulation and detection guidebook. Earlier monitoring by parents or early childhood educators may prevent child development problems. Parent's and teacher's participation is necessary for child development optimization. Children will undergo optimal development in every developmental aspect if they receive warmth and sensitivity of parents' affection, responsiveness, cognitive stimulation, and appropriate nutrition [10].

Parents can provide stimulation through exciting plays appropriate to child development stages. Play-assisted stimulation refers to play and game activities that stimulate child development [9]. The right stimulation through communication and play activities will help parents or educators identify development problems faced by children [11]. Comprehensive and easy-to-understand information contained in the stimulation and detection guidebook can help parents and educators take further measures to optimize child potentials. Many parents are still unaware of what they should do and how to handle children with delayed development. They need a guide to know the steps of identifying child development problems. The research results show that the materials and 0-to-6-year-old children's development stimulation and detection steps were highly practical and easy to apply in any situation and condition. Thus, parents were enabled to take quicker actions when they found development problems or delay in their children.

Parents must pay close attention to children's development in their first year of life. From this observation, parents will be able to detect whether their children's development is normal or delayed or whether problems exist. According to Zhao and Kuhl, infants' hearing experience early in their lives can predict their language ability. This notion underlies parents' belief that

the results of early childhood development detection need to be followed by stimulation in every aspect of child development [11].

Children's development early in their lives serves as a foundation for their wellbeing and productivity later in their lives. Child development covers several interconnected aspects, namely cognitive, language, motor, social and emotional as well as adaptive behavior aspects [4]. Identification of communication ability, cognitive ability, social and emotional behaviors as well as sensory and physical development assist teachers to a great extent in determining appropriate stimulation activities for children with developmental disorders [12]. The suggestions presented in the early childhood development stimulation and detection guidebook may guide parents and teachers in consulting competent persons. The results of the identification of children's early abilities are used in need assessment to design appropriate and acceptable learning activities suiting the needs of all children.

5. Conclusion

This study concluded that this early childhood development detection and stimulation guidebook was declared appropriate and can be used as a guide for all parents and educators in optimizing the stimulation of children's development from an early age. This detection guidebook can also be used in preliminary screening when a hindrance or delay is found in children's development for their ages. By using this guidebook, parents and teachers will be able to give appropriate stimulation to children who suffer from developmental delays or disorders.

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