

Designing Teacher Training to Improve Early Detection of Children with Special Needs

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Abstract—The aim of this study is to provide early detection of children with special needs in early education and to offer proper handling for children with special needs. In fact, many preschool teachers experience difficulty in recognizing children with special needs with various characteristics. Difficulties in detecting children with special needs can only be identified after they attend elementary school which is late and more complicated. Based on this urgency, we try to design training which can assist to improve teachers' ability to detect children with special needs early. The early detection in the context of providing appropriate educational services to avoid learning problems in the future. This article propose a design of training intervention for teachers so that it enables them to increase their understanding of children with special needs. Also, the training can improve the teachers' ability to identify various types of child development disorders; thus, they can refer children with special needs to experts accordingly. The design of this training is expected to be applied in preschool teachers so enhance their ability to carry out early detection of children with special needs.

Keywords: *early detection, children with special needs, teacher, training*

I. INTRODUCTION

In the field of education, students are expected to possess high competence which can contribute to their daily life. To be able to accomplish this goal, a healthy and integrated physical and mental condition is needed. Hence, their potential can perform optimally. However, in reality, many students do not grow and develop in good physical and mental according to stages of development. The stages of development discussed here cover physical, motoric, cognitive, social, and emotional aspects. Few students are born with certain physical and mental conditions i.e. special needs. Special treatment is necessary for children or students with special needs so that they can grow optimally.

Children with special needs are children who need special handling because of developmental disorders and abnormalities they experience [1]. Meanwhile, the Ministry of Women Empowerment and Child Protection of the Republic of Indonesia in 2013 categorizes children with special needs as: "Children who experience limitations or exceptionalness whether physical, mental-intellectual, social, or emotional,

which significantly influence their process of growth or development compared to other children their age [1].

Unfortunately, in education, not all children with special needs can be detected early, especially when they are at preschool or kindergarten. Many preschool teachers have difficulty recognizing children with special needs with a variety of characteristics and with developmental barriers [2]. Thus, children with special needs can only be identified after they attend elementary school [3]. Unfortunately, according to previous research if special needs children are not detected early, they will develop emotional and behavioural problems which will negatively affect other children, teachers, and school, and classroom environment [4]. Therefore, as teachers, they have a great deal of responsibility to ensure that all special needs children in their school can be detected to be referred to professionals.

Children with special needs are defined as "children who in their stage of development experience abnormalities/ deviations (physical, mental-intellectual, social, emotional) which require special education services." Deviations in this case include blind, deaf, developmental impairment, mental impairment, slow learning, gifted, impaired, communication disorders, ADHD, and autism [5].

In the area of Tamansari, Bandung, preschool teachers have no ability to distinguish children with special needs because of limited knowledge they gained in their preschool education which exclude characteristics and symptoms of special needs children. Based on interview results, several educators admitted it is difficult for them to recognize children with special needs. This result should become a major concern since those children need to be immediately prepared to pursue to higher level of education and need to obtain professional treatment. Based on the results, teachers need to obtain a program which can help them enhance their insights and skills in detecting characteristics of children with special needs. Thus, early treatment of special needs student can be conducted to prevent and reduce complaints regarding learning problems or adjustment to higher level of education. . This program can be implemented through training in which teachers can learn necessary knowledge and skills in stages by using several methods.

The training itself is a process consisting of a series of activities aiming at broadening individual knowledge which can affect their behaviour changes according to environment in their work or life [6]. The approach used to implement this program is through training which uses information presentation by lectures, group discussions, role play of case study, and games. Discussions are carried out to explore and discuss illustrative issues or findings at school regarding children indicated with special needs. The targets of this training are cognitive (knowledge) and feelings (affective).

This paper will specifically describe the stages in preparing trainings for preschool teachers in the context of early detection of children with special needs. By obtaining a description of preparation steps, it is expected to provide a comprehensive picture regarding the teachers' needs and process of information implementation. Based on the results of research by Hastings and Oakford it was found that teachers expressed more negative attitudes towards inclusion of children with behavioural and emotional problems than towards children with intellectual disabilities after training sessions for teachers to cope with special needs students in their school and academic environment [4]. Similar to another finding, teacher training showed positive influences to teaching practices in school. It was revealed that teachers who take special need courses are more willing to accept the specialty of their students and are more confident in the classroom [7]. The more teachers upgrade their teaching skills, the higher the barrier among teachers, students, and stigma of special needs children.

II. METHODS

To design early detection training of children with special needs for preschool teachers, researchers used several stages and procedures. The first step in any training development is to conduct Training Needs Analysis (TNA). It is needed to obtain proper diagnoses of what needs to be trained, for whom is the training, and within what type of organizational system [8]. The outcomes of this step are (a) expected learning outcomes, (b) guidance for training design and delivery, (c) ideas for training evaluation, and (d) information concerning organizational factors that will likely facilitate or hinder training effectiveness [8]. However, this training will not provide information about organization since all participants come from different institutions/schools. The second step is to build a learning climate including how to set goal orientation and how to motivate learning.

III. RESULTS AND DISCUSSION

Explanation below consists of stages and procedures required to design the training.

A. Step 1: Need Assessment

1) *Learning outcomes:* In this stage, researchers used some basic questions to investigate purposes of this training. Numerous questions are set as the baseline to determine the purposes. 1) Who needs the training? 2) Why do they need it? 3) Is what happens is a real issue? 4) What drives them to participate in the training? 5) Will the training results be

applied in teachers' work environment? 6) What obstacles will be likely to emerge to obtain the goal of training implementation? 7) Is the training necessary?

2) *Guidance for training:* In this training, we employed one set of guidance book which concluded several materials and knowledge about special needs children. This book compilation can be used by teachers. First, to design this guidance book, the layout of guidance map needs to be set in a unit program in the form of a diagram. Next, the guidance map is designed by referring to competency achievement diagram in national curriculum. Final step is to determine the module's framework, objectives, and content form and equipment needed for the implementation.

3) *Training evaluation:* Assessment of learning outcomes from training participants is needed. Thus, the obtained data show the participants' learning progress after studying the materials provided. Evaluation is necessary to determine and measure whether the learning implementation with modules can be carried out in accordance with the development design.

B. Step 2: Learning Climate

1) *Goal orientation:* Goal orientation needs to be made by the participants at the beginning of the training session and when brainstorming is completed before they are involved in the training. Thus, the participants' expectations and whether they are in line with provided materials can be identified [8]. In addition, a pre-test on the participants' insights before the training is also conducted to examine the extent of their knowledge regarding children with special needs.

2) *Motivation in training:* To maintain motivation during the training, the material needs to be arranged in interesting way which involves teachers' practical and daily experiences [8]. Hence, the learning flow becomes more dynamic and easier to understand.

TABLE I. LEARNING FLOW

Step	Sub-step	Purpose	Results and evaluation
Need Assessment	Learning Outcomes	To identify basic needs of participants and their suitability to practices.	The results revealed that the needs include: 1. Initial knowledge of definition of special needs children, 2. Classification of special needs children 3. How to distinguish symptoms and characteristics of disorders in special needs children 4. Early detection techniques 5. Detecting practice
	Design Guidance of Training using Guidance Module	To compile order of each material and competency which need to be attained	The obtained results are: 1. topic regarding definition and classification of special needs referring to the increased insights of the participants.

Table I Cont.

			2. In session of distinguishing disorder symptoms and characteristics and detection techniques, competency targets are skills learned by the participants. Modules are arranged in this particular order: 1. Introduction 2. Basic theory: definition, classification, early detection techniques 3. Participant worksheets
	Evaluation	To investigate knowledge and skills gained by the participants after the training.	This session was not conducted due to technical issues. The cancellation of evaluation made it difficult to assess the targets of the participating teachers.
Learning Climate	Goal orientation	To set and establish same perceptions between trainers and participants	From pre-test questionnaires and discussion, it was found that several participants have limited knowledge about special needs children and some difficulties to classify types of children with special needs from the provided theory.
	Motivation in Learning	To grow enthusiasm and ease in understanding the training material	The training employed roleplay exercises, games, and group discussion. From these activities, several matters need to be evaluated. First, methods of practice and discussion need to be more varied so that they can increase enthusiasm and enable participants to apply their knowledge to the case. In addition, the duration of exercise and worksheets completion need to be considered because many participants need more time. This is important to raise their enthusiasm in completing the worksheets and performing roleplays.

According to table above, differences between planning and implementation can be examined. To evaluate the training impact, precise affective, cognitive, and behaviour measures reflected on learning outcomes need to be conducted [8].

It is significant since previous research found that after participating in a training to prepare their skills regarding inclusive education, teachers were not overwhelmed by stress since they teach students with special needs [2]. They focus more on studying materials and activities rather than on their

negative emotions. Hence, assessment and evaluation regarding affective aspects of the participants is essential to be conducted.

IV. CONCLUSION

This paper contributes to explain the compiling process of training and learning modules for preschool teachers to conduct early detection of children with special needs in their respective schools. Qualitatively, the training results depicted that there is an increase in the participants' knowledge. Lee, Yeung, Tracey, and Barker [6] revealed that preschool teachers with special education training would hold more positive views about inclusion in academic environment. They also found that teachers showed improvement in competence and attitude after training session. Thus, this article is expected to increase awareness for other researchers to pay closer attention to preschool teachers' knowledge and skills regarding early detection and treatment of children with special needs. It is because knowledge and skills concerning early detection of special needs children have not been considered as an essential skills to possess. Thus, it is difficult to be implemented by teachers since they have limited access and understanding of the procedures.

Although the training and modules have been arranged and compiled based on the needs analysis and practical implementation procedures, the process of conveying information and methods to maintain motivation of the participants still needs to be considered and improved. The learning process requires to develop multidimensional components, such as affective, behavioural, and cognitive components [8]. By involving multidimensional aspects, learning outcomes are expected to be more optimal. Furthermore, the final stage of evaluation and validation becomes an important component. It is because instruments to conduct validation and evaluation require input from various parties who possess competence or expertise in early detection of children with special needs as well as from participants. Thus, the contents of module can be designed according to the development and needs of the participants.

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