

# Workshop and Assistance in Developing Elementary Classroom Teachers' Competencies to Accomodate Learning in The Students with Autism in Inclusive Schools in Yogyakarta Special Region

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**Abstract**— Autism is one of the complex developmental disorders that impairs the behavior, the ability to interact, and to communicate that can be detected before the age of 3 years, so that special treatments are needed. The increasing of autism's prevalence will affect the organizations that are able to accommodate their abilities with learning settings. The success of learning is influenced by many factors, one of them is classroom teacher's competency which may spend time more teaching students with autism. Competency improvement is one of the efforts to prepare classroom teachers in accommodating the learning of students with autism in inclusive schools. The study used descriptive study for the method. The program is designed in three stages including seminars and workshops on the development of inclusive services, simulations and practices as well as assistance to inclusive school classroom teachers in Yogyakarta Special Region. The study used the implementation method through lectures, discussions, question and answer section and mentoring section for classroom teachers about the concept of inclusive education, accommodative learning models in inclusive setting, need assessment of the process of preparing learning programs and serving gluten casein free diet menu for students with autism. The subjects in this study were 35 inclusive elementary school teachers consisting of five regions in Yogyakarta. The results showed that the active participation of participants reached 100%, the increase in the knowledge of the concept of inclusive education showed an increase of 37.78% based on the data of pretest 6.15 and the posttest 8.47. Aspects of the inclusive education concept are the understanding of basic concept of inclusive education, the willingness to deepen knowledge and understanding of inclusive education, the skill to accommodate learning process during the class, the skill in working with parents of students with autism, the skill in planning and implementing teaching learning activity, the involvement in planning and implementing special needs , the cooperation between parents and teachers, and the teacher's belief that the implementation of inclusive education will succeed and give hope for more positive student's development.

**Keywords**— *classroom teacher's competency, learning accommodation, inclusive education, students with autism*

## I. INTRODUCTION

Children with autism have complex disability in communication, language, social interaction and different behavior compared to other children, so they require special treatment, so do they who participate in inclusive education programs. This condition requires the educational services and needs adaptations that are appropriate for each child [1]. Various problems that often arise in the inclusive education service environment make it difficult for educators to provide optimal and appropriate treatment. Educator's knowledge and understanding of accommodative services in inclusive schools as well as the fulfillment of the of students with autism will optimize their potential.

Pertiwi in [2] concluded that students spend most of their times in schools. It will be the same as in inclusive schools. One of the problems faced by inclusive schools is how to empower the classroom teachers, subject teachers, and special education teachers in assisting parents to teach, love and nurture their children.

Sunardi's research results in [3] on 12 inclusive schools, in general there are currently five groups of issues and problems in inclusive education that need to be observed and anticipated for it has possibility if their implementation cannot be implemented, or even make the inclusive education failed. They are understanding and implementation, school policies, learning processes, teacher conditions, and support systems. An important part of the support system is about preparing the students. The condition of teachers has not been supported by adequate teacher quality. Classroom teachers are still considered as not sensitive and proactive yet to the special needs children.

The 2008 Center for Disease Control (CDC) in America stated that the ratio of autism of 8-year-old children was

1:80. The Hong Kong Study in 2008 reported the incidence of autism in Asia the prevalence reaches 1.68 per 1000 of children under 15 years. A teacher who handles students with autism is always required to always develop his personality and professional skill continuously, and he is asked to be able and ready to play as a professional role in the school and community environment. There are four competencies that teachers of students with autism must possess, namely pedagogical competency, personal competency, social competency and professional competency. Inclusive is a part of government program that is about inclusive education which is currently being intensively implemented in various regions and supported by the central government. Inclusive education itself is an education that allows all children to learn together regardless of the difficulties or differences that may exist in them.

Inclusive education will provide a space for equal rights to get an education, especially for students with special needs which the school allows them to learn together with non-special needs students in regular schools in their neighborhood or close to their homes. An inclusive teacher is able to adapt to the various situation of students like intelligence, cognitive abilities, affective, psychomotor and the social economy situation of the students in an inclusive classroom by accommodating all students' learning needs by modifying the curriculum, teaching methods, infrastructure, evaluation systems so that they can be used by all students in the inclusive classroom.

Staub and Peck in [4] state that inclusive education is the placement of students with mild, moderate or severe levels of disability in regular classes, as well as the opinion of Sapon-Shevin by O'Neil in [5]. Which states that inclusive education is an educational service system that requires all children with disabilities are served in nearby schools, in regular classes with friends of their age.

An inclusive school teacher forum is a teachers gathering in inclusive schools that is very concerned about the accommodative learning model for both non-special students and students with autism. The observation results of the author in the inclusive setting class found various problems, especially difficulties in special program planning skills, method selection, behavioral control, innovative media development, preparation of learning materials, special evaluation techniques for students with autism. The inclusive school school teacher communication forum in the Bantul region said about the lack of parents attention to special handling, the lack of collaborative and optimal interaction between parents and school principals.

Classroom teachers in inclusive schools in the era of globalization are the determinants of the success of learning together with parents. Educators really need a lot of knowledge and information about handling the special needs students in accordance with their characteristics and needs. Based on mentoring several inclusive schools since 2011 until now, the writers found that there are still many elementary school teachers who do not understand about special needs students and accommodative learning.

One of the accommodative aspects of learning for special needs students in inclusive settings is special services according to the needs of students so that they are able to

provide inclusive inclusive education services. Special nutritional care services need to be given to students with autism affected in inclusive schools. Therefore, classroom teachers in dealing with students with autism in inclusive classroom settings are required to be able to demonstrate integrated pattern competencies such as having knowledge about students with autism, mastering various special skills in handling students with autism (development of aspects of language, social interaction, behavior), understanding modification curriculum according to the needs of students with autism, mastering the learning materials of students with autism, choosing methods that are appropriate to the focus of handling, utilizing appropriate learning media and providing services from various aspects. The writers try to implement a program with the topic "Increasing Competency of Classroom Teachers Through Workshops and Assistance to Accommodate Learning of Students with Autism in DIY Inclusive Schools". Many classroom teachers have not received training, mentoring in handling students with autism in inclusive classroom settings.

The different strategies used also for students with autism, which is one of the most difficult strategy because of their different style of learning [6]. Elements of structured teaching can easily applied in special education classrooms or inclusive settings. These elements cover it or the location held in the classroom must be clearly marked for different areas activities such as individual work, time groups, transitions, technology, and playing time to help eliminate distractions and help students with autism to focus on the task. Modifications like shortening tasks, simplifying demands, explaining instructions, or providing additional instruction in the prerequisite skills can reduce the challenging in this situation. In specific, this strategy can reduce students' motivation to escape [7].

Schwartz, Billingsley, & McBride (nd) suggest several strategies to help teachers and students with autism in general education activities. They are (1) Teaching communication and social competency, (2) Preparation of IEP, (3) Teaching that provides opportunity and independence, (4) Creating a child's learning environment that is fun for all, and (5) generalization and providing new skills.

Potential effective procedures to improve behavior in inclusive school settings is self-management [8]. Self-management has effectively used in the inclusive settings to improve behavior and completion of school assignments [9]. Self-management procedure which requires some initial preparation. Preparation may include (a) teaching children with autism spectrum disorder (ASD) to distinguish between desirable and undesirable behavior, (b) building a strength system, and (c) gradually and systematically increase time and response.

The rest of this paper is organized as follow: Section II describes the proposed the problem formulation. Section III describes the proposed method. Section IV presents the obtained results and following by discussion. Finally, Section V concludes this work and highlight future research.

## II. PROBLEM FORMULATION

The formulation of the problem in this study is as follows: (1) how to implement classroom teacher competency improvement activities in the implementation of inclusive education? (2) what are the methods and materials for improving the classroom teacher? (3) what is the result of increasing the knowledge and understanding of the pretest and posttest about implementation of inclusive education? (4) how are the results of mentoring to classroom teachers in overcoming the problems of students with autism in inclusive schools?

## III. PROPOSED METHOD

The implementation of the activities in three stages includes seminars and workshops on the development of inclusive services, simulations and practices as well as assistance to inclusive school class teachers in Yogyakarta Special Region. Implementation methods through lectures, discussions, question and answer section and mentoring section for classroom teachers about the concept of inclusive education, accommodative learning models in inclusive setting, need assessment process for the preparation of learning programs and special services in the presentation of CFGF-free healthy food menus for students with autism. The subjects in this activity were 35 inclusive elementary school teachers of 5 Yogyakarta regions.

The purpose of this activity is to find out the understanding and knowledge of classroom teachers about the implementation of inclusive education, as well as the accommodation model of learning for students with autism in an inclusive education setting.

Results analysis is carried out using qualitative and descriptive percentages.

## IV. RESULTS AND DISCUSSION

The activities included the stages of preparation through seminars (lectures, question and answer and discussion), workshops and mentoring inclusive schools to optimize the handling of children with special needs. Preparation of activities in the form of determining participants' schools, time and place of implementation. Participants of 40 people, i.e. 4 representatives from 10 inclusive elementary schools in the Yogyakarta Special Region environment were classroom teachers. The participant elementary schools came from 15 schools i.e SDN Baleharjo Wonosari Gunungkidul, SDN Karangmojo 2 Gunungkidul, SDN Panjatan Gunungkidul, SDN Gadingan Kulonprogo, Elementary School Growing 1, Elementary School Growing 2, SDN Bangunrejo 2, SDN Kadipiro, SD Budi Mulia Dua, SD Taman Muda, SDN Giwangan, SDN Jambidan Bantul, SD International Islamic School, SD N Karanganyar, and SDN Pakel.

The regions distribution of the participants in the workshop and mentoring can be described as follows in Figure 1:

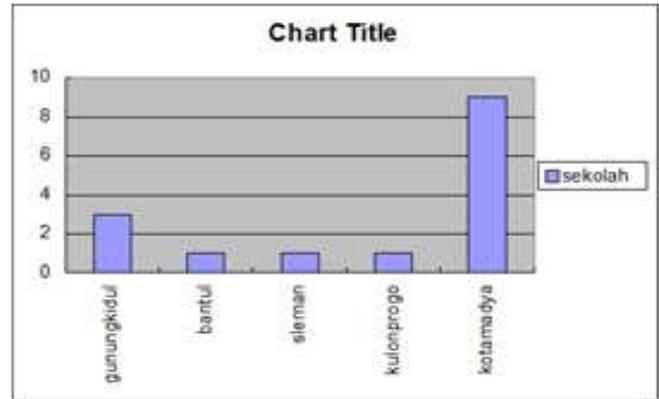


Fig 1. Distribution of inclusive elementary schools

The material in the seminar was on the implementation of inclusive education issues, the role of educators in optimizing the potential of students with autism in inclusive schools. The success of the activities was seen from the test of inclusive education which includes understanding the basic and concept of inclusive education, knowledge and understanding of inclusive education, skills in accommodating classroom learning / home, skills in collaborating in planning learning in inclusive classes, involvement in compensation planning and implementation in inclusive education Parent-teacher cooperation between special needs students in inclusive education and the beliefs in the implementation of inclusive education will succeed and give hope for more positive child's development.

As Sunaryo's opinion in [10], inclusive education will run well if it is supported by: (1) a positive attitude, commitment and confidence of all teachers, school staff and parents, (2) availability of special services and physical adaptation of the environment and equipment , (3) support systems, such as the availability of special education teachers, appropriate policies and procedures to monitor the progress of each student with disabilities, including for assessment and evaluation, (4) collaborative harmony between special education teachers and teacher classrooms in designing and implementing the Individualized Educational Program (IEP), (5) flexible curriculum and appropriate learning methods, and (7) public awareness, participation and support from the society.

The results show that the opinions of participants were varied but none of them expressed very little for all statements. Participants felt the meaningfulness and benefits of attending a seminar and it required assistance in handling patterns for students with special needs including students with autism in inclusive classes.

**TABLE I. RESULTS OF PARTICIPANT RESPONSES ON INCLUSIVE EDUCATION**

No	Aspects of Inclusive Education	Percentage				
		1	2	3	4	5
1	Teacher's understanding of the foundation and concept of inclusive education	0	12,25	55,10	30,61	2,04
2	Teacher's desire to deepen knowledge and understanding of inclusive education	0	6,12	16,30	44,90	32,65
3	Teacher skills in accommodating classroom / home learning, especially for students with special needs	0	16,30	65,31	18,37	0
4	Teacher skills in working with parents / families of students with special needs	0	12,25	51,02	32,65	2,04
5	Teacher skills in planning adaptive curriculum and planning learning in inclusive classes	0	22,45	63,26	14,29	0
6	Teacher involvement in planning and implementing compensatory programs in inclusive education	0	10,20	69,39	20,41	0
7	Parent-teacher-children with special needs student collaboration in the implementation of inclusive education	0	6,12	36,74	55,10	2,04
8	Teacher's trust that the implementation of inclusive education will succeed and give optimism for more positive child's development	0	0	18,37	53,06	28,57

Description: 1 (very little), 2 (less), 3 (enough), 4 (good), and 5 (very good)

Based on Table I above, participants who attended seminars and workshops on the implementation of inclusive education received the material before and after the

seminars from the team and also a pretest and posttest were held for the seminar participants. The 8 aspects of responses to inclusive education summarized in Table I can be described in the graph as follows:

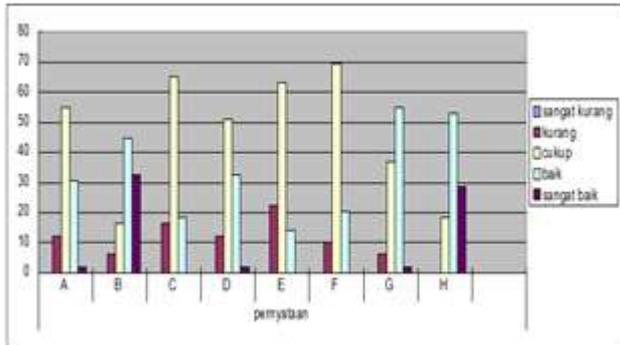


Fig 2. Recapitulation of the Questionnaire for Inclusive

A. Implementation Results

The aspects in Figure 2 show that the highest is sufficient in the involvement of teachers in planning and implementing compensatory programs in inclusive education with a score of 69.39. In accordance with the need for a different strategy including for students with autism then for educators, students with autism are one of the hardest to reach because of their distinctive style of learning [6]. After attending workshops and mentoring as an effort to improve the competence of handling students with autism, Classroom teachers are expected to be able to understand the characteristics, learning styles and various behaviors of autistic children that are very unique and give understanding to other children in aspects of acceptability. The role of the classroom teacher in an attempt to arrange the classroom environment greatly determines the success of the learning pattern in an inclusive setting including arranging a safe, comfortable and hassle-free classroom so that the children's learning concentration increases.

The average value of pretest is 6.15 while posttest is 8.47 shows an increase of 37.78% compared to pretest. The increase in participants' knowledge can be seen from the average pretest score shows that the participants had understood the material given by the lecturer team as resource persons in the seminar. One indicator of increasing the knowledge and skills of seminar and workshop participants is about materials relating to accommodating learning of students with autism.

The description of the average pretest and posttest scores of participants is as follows:

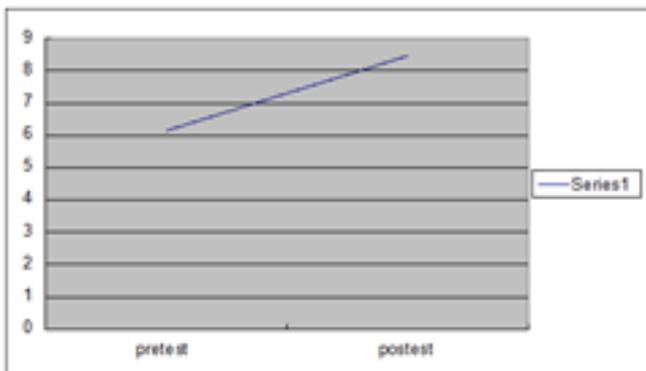


Fig 3. Comparison of pretest and posttest scores

Participants were given an opinion questionnaire on inclusive education with a list of statements in 8 aspects and filled in with 5 criteria: 1 (very little), 2 (less), 3 (enough), 4 (good) and 5 (very good).

Figure 3 shows that there are no participants who consider it very little for all statements. Participants gave enough dominant responses to the understanding of the foundation and concept of inclusive education, skills in accommodating classroom / home learning especially for students with autism, adaptive curriculum planning skills and planning of inclusive classroom learning, as well as involvement in planning and implementing compensation programs in inclusive education. Most of the participants considered the involvement in planning and implementing compensatory programs for inclusive education was already good.

One of the pedagogical competencies that classroom teachers must have in an inclusive classroom setting is that there is a great deal of diversity with respect to strengths, abilities, functional levels and challenges among students with autism, one core thing that is universal. Some of these include sensory responses, communication, and socialization. Therefore, focusing more on creating a sensory responsive environment, developing effective oral and / or non-verbal communication, and nurturing sincere relationships (Dagmara, Isabel, ...).

Various strategies / accommodations that teacher can provide for students with autism in class are (1) Increasing physical closeness with peers, (2) Helps to allow more natural opportunities for social interaction, (3) Partnering students with autism together with colleagues during academic assignments, (4) Verbally highlight similarities between students with autistic and peers, (5) Making communication cards focused on social exchange, (6) Peers in Teaching how to communicate with target students using sign language movements, (7) Utilizing interactive technology, (8) Giving responsibility in class to autistic children that can encourage interaction with peers by Causton-Theoharis and Malmgren in [11]. The above aspects show that classroom teachers in an inclusive class setting must have those skills.

The expectation is that after participants attending workshops and mentoring, they will have more knowledge and skills in accommodating learning for autistic children in an inclusive education setting according to their characteristics and needs. Prior to the inclusive education policy, class teachers did not know the concept of autistic children, inclusive education and accommodating appropriate learning. One of the efforts that the writer did was to conduct a seminar process through lectures followed by mentoring to schools that accept autistic children to learn together with their peers.

The mentoring results show that classroom teachers' friends experienced various problems in the aspects of identification, learning assessment, planning assessment-based learning, compiling the IEP, modifying the curriculum and not having an evaluation model for specific students with autism. There is an increase in knowledge and understanding of the pretest, which is 6.15 while the posttest is 8.47 shows an increase of 37.78% compared to the pretest, it is expected that the participants can implement

and accommodate the learning process of autistic children according to their needs. Teacher competency in potentially effective procedures for improving behavior in inclusive school settings is self-management by Dunlap, *et al.*, in [8]. Self-management has been effectively used in inclusion settings to improve the behavior and completion of school assignments by Stahmer & Schreibman in [9]. Self-management procedures require some initial preparation. Preparation may include (a) teaching children with autistic spectrum disorder (ASD) to distinguish between desirable and undesirable behaviors, (b) building a strengthening system, and (c) gradually and systematically increasing time or increasing responses. The competency of classroom teachers can teach autistic children in the basic concept of knowing themselves, desires, have strengthening skills, also structured and systematic skills in improving the ability to respond the children.

Competencies that classroom teachers with autistic children must have in the inclusive class setting are as follows:

TABLE II. COMPETENCIES THAT CLASSROOM TEACHERS WITH AUTISTIC CHILDREN

No	Competence	Ability that must be owned by Autistic Children Class Teachers
1.	Pedagogic Competence	The ability of a teacher to understand the characteristics or abilities of students with autism through various ways. The main way is by understanding autistic children through their cognitive development, designing learning and implementing learning and also evaluating learning outcomes as well as the developing of students with autism
2.	Personality Competence	Personal skills that must be owned by professional classroom teachers are by reflecting a good personality to themselves, being wise and discerning, being mature and authoritative and having noble character to be a good example of a student with autism
3.	Professional Competence	One element that must be owned by students with autism classroom teachers is by mastering the learning material widely and in depth in accordance with the potential of the child, seen from the strength and weakness of students with autism
4.	Social competence	Competencies that must be owned by student with autism classroom teacher through a good way of communicating with students and all education personnel or also with parents / guardians of students and the surrounding community.

Based on the Table II, competencies above, the professional teachers are required to have four competencies as mandated in Law No. 14/2005 concerning Teachers and Lecturers and PP No. 74 about Teacher. After conducting workshops and mentoring class teachers in inclusive class settings, participants are expected to be able to improve their professional, personal, social and pedagogical competencies.

## V. CONCLUSION AND RECOMMENDATION

The implementation of the activities in three stages includes seminars and workshops on the development of inclusive services, simulations and practices as well as assistance to inclusive school classroom teachers in Yogyakarta Special Region. The implementation methods are through lectures, discussions, question and answer, and mentoring for classroom teachers about the concept of inclusive education, accommodative learning models in an inclusive setting, need assessment of the process of preparing learning programs and special services in the presentation of CFGF-free healthy food menus for students with autism. There is an increase in knowledge and understanding of the pretest, which is 6.15 while the posttest 8.47 shows an increase of 37.78% compared to the pretest, it is expected that the participants can implement accommodate the learning of students with autism according to their needs. The results of the mentoring show that classroom teachers' friends experienced various problems in the aspects of identification, learning assessment, planning assessment-based learning, compiling the IEP, modifying the curriculum and not having an evaluation model for students with autism specifically.

### A. Suggestion

Classroom teachers are expected to always improve their knowledge and skills in accommodating the learning of students with autism in inclusive classes. Assistance to students with autism in inclusive classes must be intensively conducted so that problems that arise can be overcome immediately.

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