

Pre-Service Teachers' Attitudes Toward Inclusive Education

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Abstract-- Implementing inclusive education requires not only facilities and physical support but also human resources, in this case pre-service teachers. Pre-service teachers, who come from different educational backgrounds, are one of the most important components in implementing inclusive education due to their interactions with special needs children. This study aims to compare the attitudes of pre-service teachers toward inclusive education based on experiences of direct interaction, training, and teaching special needs children. Participants are college students in Jakarta majoring in Teacher Training, early childhood education, and special education. The attitudes of pre-service teachers toward inclusive education are measured by the Multidimensional Attitudes toward Inclusive Education instrument. The results of the independent-sample t-test indicated that there are significant mean score differences between the two groups—Early Childhood Education majors (M = 76.84, SD = 10.155) and Special Education majors (M = 86.26, SD = 9.275) with significance p < .005. Subsequent regression analysis demonstrated that training experience and experience teaching special needs children contributed differentially to pre-service teachers' attitudes toward inclusive education.

Keywords: inclusive education, attitudes, pre-service teachers, children with special needs, college student

Introduction

Education is basically a process of transforming knowledge toward the improvement and strengthening of all human potential (Ministry of Education and Culture, 2016). Article 31, paragraph 1, of the 1945 Constitution states that every citizen has the right to an education, including children with special needs. Following the institution of this law, the government began providing special education units, or special schools, for special needs children; these schools extended from early childhood education through secondary education. In reality, not all Indonesian regions have special schools. In connection with handling special needs children, the Ministry of National Education has established a Minister of National Education Regulation Number 70 of 2009 to organize inclusive education for special needs children, namely those who have abnormalities, intelligence potential, and/or special talents. Inclusive education allows all children, regardless of learning needs, to attend the same schools in the same classrooms. Based on data from the Central Statistics Agency, there are 32,000 inclusive schools in various regions (Sekolah, 2017).

Inclusive education at the early childhood level is important because early childhood education is the gateway to further education (Setiani, 2016). According to the latest data, the number of special needs children in Indonesia reached 1,544,184, with 330,764 children (21.42%) in the age range of 5–18 years. Of these, only 85,737 attend school (Setiani, 2016). The Assistant Deputy for Disability and Elderly Empowerment of the Coordinating Ministry for Human Development and Culture (Kemenko PMK) said that the lack of mentoring teachers with disabilities in schools is one of the factors of uneven education (Maharani, 2016). This is in



line with the results of Anjaryati's research (2011), which found that the inhibiting factors of inclusive education include the absence of Special Education (PLB) teachers, overall lack of teachers, teachers who are not trained in early childhood education, and poor coordination among teachers.

These issues show that the existence of qualified teaching staff is an important component in implementing inclusive education, especially at the early childhood level. Educators, according to Law No. 20 of 2003 concerning the National Education System Article 42 Paragraph 1, must have the minimum qualifications and certification in accordance with the level of authority to teach, be physically and spiritually healthy, and have the ability to realize national education goals. Furthermore, Article 42, Paragraph 2, states that formal early education teachers are produced by accredited universities. In Indonesia, at the tertiary level, there are study programs that focus on the field of early childhood education and special education. Students in the study program are pre-service teachers who will continue the education program in Indonesia, in which the government declares that all school institutions in Indonesia will become inclusive. Thus, pre-service teachers from various study programs will all eventually interact and deal with special needs children.

According to Norwich (1994) in Avramidis and Norwich (2002), an important component in successfully implementing inclusive education is belief and attitude. Attitudes play an important role in explaining how teachers are involved in facilitating special needs students in the classroom (Folsom-Meek & Rizzo, 2002 as cited in Tindall, MacDonald, Carroll, & Moody, 2014). According to Craighead and Nemeroff (2004), attitude is a psychological tendency expressed by evaluating certain entities (objects, people, institutions, or events) through favorable or unfavorable degrees. In addition, attitudes can also be defined as the tendency to feel or behave in a certain way toward certain entities, whether they can or cannot be observed. Attitudes that cannot be observed directly are reflected in three aspects: cognitive, affective, and conative (Craighead & Nemeroff, 2004).

Someone who has a positive attitude toward an object will tend to have affective and positive behavior toward the object (Markova, Cate, Krolak-Schwerdt, & Glock, 2015). Therefore, the attitude plays a role in directing someone's behavior (Fazio, 1990 as cited in Markova, et al., 2015) and can direct someone to make an assessment or judgment of an object (Kunda & Spenceer, 2003; Sanbotmatsu & Fazio, 1990 as cited in Markova et al., 2015). Teachers who have a strong negative attitude toward special needs children can be uncomfortable when those students are in the classroom. This negative attitude can encourage teachers to only focus on special needs children, have negative expectations about the students, engage in negative interactions with special needs children, and make negative assessments of these children's competencies (Markova et al., 2015). Therefore, pre-service teachers' attitudes become important in accepting special needs children in the context of inclusive education (Todorovic, Stojiljkovic, Ristanic, & Djigic, 2011).

Pre-service teachers' attitude toward special needs children is inseparable from several factors that influence it. The results of research conducted by Markova et al. (2015) show that study



programs (secondary school teacher education and elementary school teacher education) influence pre-service teachers' attitudes toward special needs children. Teacher candidates in the elementary school program have more positive attitudes than pre-service teachers in the secondary school program. This is influenced by the role of inclusive and intercultural courses offered to pre-service teachers; as many as 60% of pre-service teachers think that the course only plays a small role in academic studies, and as many as 78% think that inclusive education is not a major issue in the learning process (Markova et al., 2015). The influence of this diversity and an inclusive course is also in line with the results of Lucas and Frazier's (2014) study, which found that pre-service teachers who received service-based, introductory diversity courses had a more positive attitude toward inclusive education than pre-service teachers who did not receive the course. This shows that the study program courses influence pre-service teachers' attitudes toward inclusive education.

The results of research conducted by De la Rosa, Alegre, Angulo, and Pestano (2014) also showed that there were significant differences in attitudes about inclusive education among students with Early Childhood Education degrees, Primary Education degrees, Pedagogy degrees, and Master's degrees in teacher education. This is influenced by their experiences interacting in a multicultural environment and training experience. Kim's (2016) study also found that pre-service teachers showed a more positive attitude toward inclusive education when they had teaching experience with special needs children in an inclusive education setting. This can be seen from the increasing interest (68.6–76.5%) in inclusive education after participating in training. In addition, the results of research conducted by Sokal and Sharma (2017) clearly also show that teaching experience with special needs children affects preservice teachers' attitudes. Research compared the attitudes of pre-service teachers who receive inclusive education courses but have limited experience in teaching at inclusive schools, teachers who work in inclusive schools but are not trained in the field, and teachers who teach in inclusive education and get courses in the inclusive field. The results showed that the average score of teacher candidates' attitudes was significantly lower than teachers who had experience and obtained courses in inclusive education. Gokdere's (2012) study also revealed similar results: teachers who have teaching experience have a more positive attitude toward inclusive education than pre-service teachers who do not have similar experiences. The study results show that teaching experience and education in the field of special needs children, or inclusive education, have a positive influence on the attitudes of teachers and pre-service teachers.

This finding is also in line with the results of Shaukat, Sharma, and Furlonger (2013), in which the training experience and the level of teaching experience with special needs children influenced the attitudes of pre-service teachers from Pakistan. Interestingly, this condition does not apply to other groups of participants, namely pre-service teachers from Australia. Even so, overall, there is no difference in the attitudes of pre-service teachers in the two groups toward inclusive education. Researchers suspect this is influenced by the participants' values. In addition, the results of Haq and Mundia's (2012) study also showed no significant differences between the attitudes of pre-service teachers from two different study programs, where both participants were students at one of the universities in Brunei Darussalam. This is due to the culture and values developed in a country where residents are mostly Malays and Muslims. As



Muslims, they believe that every child is a gift given by God that must be cared for properly, and the presence of special needs children is considered as a test of the strength of their faith (Haq & Mundia, 2012).

In addition, the results of the research by De la Rosa et al. (2014) also found that previous experience with special needs children did not significantly influence pre-service teachers' attitudes toward inclusive education. This is because the experience of interacting with special needs children provides a complex influence on pre-service teachers' attitudes toward inclusive education (De la Rosa et al., & Pestano, 2014). Another study, conducted by Yuknis (2015), also showed that there were no significant changes in pre-service teachers' attitudes toward inclusive education after attending special teacher preparation programs for hearing-impaired special needs children. The results of the study by Gill, Sherman, and Sherman (2009) for pre-service teachers from three different study programs who underwent four stages of teacher preparation programs at one university in America also showed the opposite result, where pre-service teachers who have received special education programs and programs teaching special needs children tend to have a negative attitude toward inclusive education. After phase two, there is a slight change in attitude. Pre-service teachers tend to believe that special needs' children are better off in a special program or special room and that it is difficult to maintain order in a general class that contains students with special needs.

Changes in teacher candidates' attitudes in phase three are consistently more negative toward students with special needs. Teacher candidates tend to believe the interaction between general education and students with special needs in general education settings may be dangerous. They increasingly believe that students with special needs should be in a special classroom. Furthermore, after going through phase four, pre-service teachers have the most significant attitude changes regarding students with special needs. After gaining teaching experience, participants significantly believed that special needs students should be in a special classroom, that they need time to interact with their peers, that it is difficult to maintain order in a classroom where they are present, students with special needs should not be in general education classes, special needs children cannot learn the same things as general education children, and that students with special needs will develop skills faster in special education classes. They do not believe that combining special needs and general education children in the same class will encourage growth and understanding.

The results of the study of Gill, Sherman, and Sherman (2009) are different from the results of other studies; they found teacher candidates' positive attitudes toward inclusive education are influenced by the experience of interacting with special needs children during a practicum (Kim, 2017) or in a classroom (Gokdere, 2012). In addition, teaching experience and the experience of interacting with friends or family members with learning difficulties or behavioral problems also influence pre-service teachers' implicit and explicit attitudes (Markova et al., 2015).

Based on the explanation above, this study will compare pre-service teachers' attitudes from two different study programs to inclusive education. The characteristics that distinguish



students in the two study programs are the experience of interacting, the experience of training, and the experience received in college of teaching children with special needs. Students in the study program are pre-service teachers will special specifications will become educators in early childhood education and other school levels and, later, join inclusive schools and interact with children with special needs. Therefore, pre-service teachers' attitude toward inclusive education in early childhood settings is important.

Methods

Design

This research is a cross-sectional study where data is collected once in each sample. This research is a non-experimental study with no manipulation of respondents.

Participants

There were 231 respondents consisting of two groups: 116 final semester students (minimum semester 6) in early childhood teacher education study programs and 115 final semester students (minimum six semesters) in special education programs. The two groups' distinguishing characteristics are their college backgrounds, teaching experiences, and training experiences related to inclusive education and special needs children. While special education study programs, through various assignments, facilitate interactions, teach children with special needs, and participate in various related training, the opposite condition occurs in early childhood education programs, where the focus of student competence is directed at teaching general education children. The accidental sampling technique was used, where the sample was chosen based on the criteria set above.

Procedure

The data collection process of this research was conducted online. Online collection is necessary because, during the data collection, the students are in different phases of their programs. Both groups may not have completed the necessary learning processes at collection time. However, to identify the respondents accurately, the names and contact information of students were recorded. Gradually, respondents were contacted personally and asked about their willingness to fill out the questionnaire. Although some participants did not respond, most of them expressed their willingness to fill out the questionnaire. The next step was to send a questionnaire link to willing participants.

Research Instruments

The measuring instrument used to measure pre-service teacher attitudes toward inclusive education is the Multidimensional Attitudes toward Inclusive Education (MATIES) scale constructed by Mahat (2008). This measure has been transformed into an Indonesian version and adapted by Kurniawati et al. (2012). The researcher adopted the MATIES-VI measurement tool to be used for respondents who were pre-service teachers. This measuring instrument is in the form of a self-report questionnaire measuring three components of attitude—cognitive, affective, and behavioral. Reliability of each component in the MATIES measuring instrument is $\alpha = .725$ (cognitive component), $\alpha = .732$ (affective component), and $\alpha = .897$ (component of behavior). There are 18 items with six items in each of three categories. The questionnaire



measurement scale consists of six Likert type scales with a score interval of 1 (Strongly Disagree) to 6 (Strongly Agree).

Results

Based on the results of demographic data processing, most of the respondents are women, and the average age is 21 years. As many as 95% (n=110) of students majoring in early childhood education had interacted with children with special needs when undergoing Teaching Skills Practices and Practicum Tasks. Then, based on teaching experience, 53% (n=62) of the preservice teachers from the early childhood education major have taught and become assistant teachers for children with special needs in less than three months. The type of disabilitywhich most pre-service teachers in the early childhood education major interact with and teach have autism, learning difficulties, or slow learning.

In contrast with pre-service teachers from the early childhood education major, 100% (n = 115) of students majoring in special education have interacted with special needs children, and as many as 96% (n = 111) have taught, become assistant teachers, or help teachers with special needs children for at least 3 months. In addition, the most common diabilities are autism and intellectual disabilities.

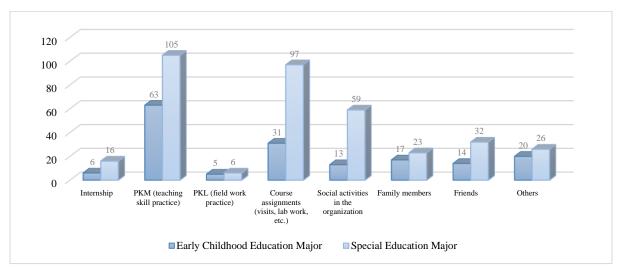


Fig.1. The number of context interactions with children with special needs



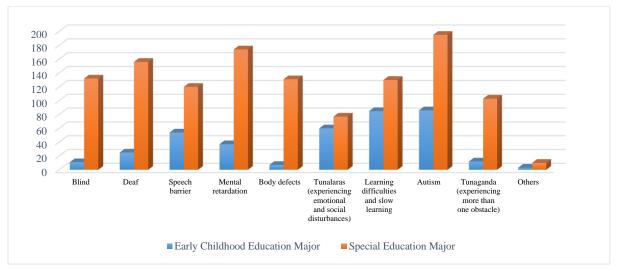


Fig. 2. Types of disabilities that are most commonly encountered when interacting with and teaching children with special needs

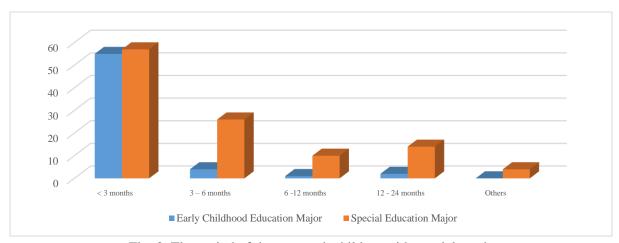


Fig. 3. The period of time to teach children with special needs

Meanwhile, based on the percentage of experience participating in training, seminars, or workshops, it was seen that pre-service teachers from the education study program specifically attended more training, seminars, or workshops than early childhood education major students, with a ratio of 97% (n = 112) and 23% (n = 27). The material that is mostly obtained by early childhood education major students in training is related to how to handle children with special needs and related inclusive education. Meanwhile, for special education major students, the most widely obtained material is related to inclusive education and dealing with children with special needs and related disabilities.



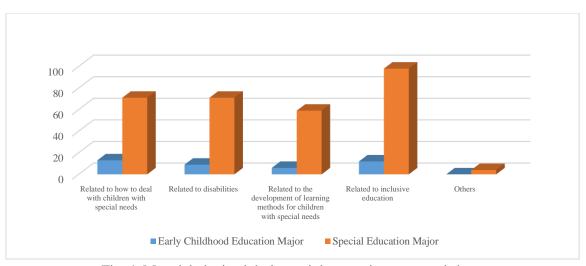


Fig. 4. Material obtained during training, seminars, or workshops

Table I. Summary of Demographic Variables

	n	%		
Major	Early Childhood Education			50.21
	Special Education		115	49.78
Gender	Early Childhood	Male	2	1.72
	Education	Female	114	98.27
	Special Education	Male	15	13.04
		Female	100	86.95
Age	Early Childhood	≤21 years old	72	62.06
	Education	>21 years old	45	38.79
	Special Education	≤21 years old	80	69.56
		>21 years old	35	30.43
Semester	Early Childhood	≤ Semester 7	62	53.44
	Education	> Semester 7	54	46.55
	Special Education	≤ Semester 7	79	68.69
		> Semester 7	36	31.30
Interaction with	Early Childhood	Yes	110	94.82
children with special needs	Education	No	6	5.17
	Special Education	Yes	115	100
	Special Education	No	0	0
Teaching children	Early Childhood	Yes	62	53.44
with special needs	Education	No	54	46.55
	Special Education	Yes	111	96.52
	•	No	4	3.47
Training experience,	Early Childhood	Yes	27	23.27
seminars, or related workshops	Education	No	89	76.72
_	Special Education	Yes	112	97.39
		No	3	4.22

The independent-sample *t*-test was carried out to examine the difference between early childhood education and special education pre-service teachers' attitudes toward inclusive education.



Рисаном	Early Childhood	Special Education				
Education Major and Special Education Majors Toward Inclusive Education						
Table II. Compar	rison of Mean Scores of P	re-Service Teachers' A	ttitudes of Early	Childhood		

Program	Early Childhood Education		Special Education		t	df
Study	M	SD	M	SD		
Attitudes toward inclusive education	76.84	10.15	86.26	9.59	-7.24	229
Cognitive components	23.65	4.00	26.71	4.40	-5.53	229
Affective components	24.73	5.50	28.16	5.27	-4.82	229
Behavior components	28.46	4.14	31.39	3.48	-5.81	229

There are significant mean scores difference between early childhood education and special education pre-service teachers' attitudes toward inclusive education.

Table III. Regression Analysis of Three Variables

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		Unstandardized Coefficients		Standardized Coefficients	I	
	Model	В	Std. Error	Beta	t	Sig.
1	(Constant)	15.335	.774		19.807	.000
	Interaction	.407	.740	.036	.550	.583
	Teaching	698	.282	172	-2.477	.014
	Training	910	.251	245	-3.621	.000

a. Dependent Variable: MTOTAL

Based on the regression analysis, there are two variables that have a significant effect on the pre-service teachers' attitudes toward inclusive education, namely the experience of training and teaching experience with children with special needs.

Discussion and Conclusion

This study further wants to realize the potential of human resources, in this case, pre-service teachers, in implementing inclusive education in Indonesia through comparing attitudes between two groups of students who are pre-service teachers in the fields of early childhood education and special education. Based on the results of the independent-sample *t*-test, it appears that there are significant differences in attitudes toward inclusive education between the two groups; pre-service teachers from special education study programs have more positive attitudes than pre-service teachers from early childhood education programs. The results of this study are in line with the results of research conducted by Muwana and Ostrosky (2014) on pre-service teachers in Zambia, where pre-service special education majors have a more positive attitude in educating students with physical impairments, visual impairments, and hearing loss than pre-service middle education major teachers.



Pre-service special education teachers attitudes' are inseparable from the teaching experience with children with special needs and related training experience obtained from the study program. The results of this study are in line with the results of research by Sharma, Forlin, and Loreman (2008), which compare the attitudes of pre-service teachers from four different countries, Australia, Canada, Hong Kong, and Singapore, all of which have a positive attitude toward inclusive education. In pre-service teachers from Australia 1 and Hong Kong, this positive attitude is influenced by programs that emphasize understanding of the nature and needs of diverse children with special needs. Meanwhile, the positive attitude of Australian teacher candidates is influenced by programs that emphasize identifying the right teaching strategies to meet all students' needs. Another focus that has a significant effect on this program is the provision, applied in its first three weeks, of an understanding of the impact of teachers' negative attitudes on all students when designing educational programs. Furthermore, the program followed by Canadian teacher candidates is almost the same as the pre-service Australian teacher one with more emphasis on the sociological aspects of disability.

Another study, conducted by Oswald and Swart (2011), showed that pre-service teachers who interacted with children with special needs during the intervention show a positive change in attitude toward inclusive education. In addition to intervention, close relationships (Forlin et al., 2009; Subban & Mahlo, 2017) or previous interactions with special needs children (O'Toole & Burke, 2013; Subban & Mahlo, 2017) also encourage positive attitudes toward inclusive education, whereas pre-service teachers without similar experiences were uncomfortble interacting with children with special needs. Positive changes in the average score also result when pre-service teachers get training. In other words, after getting training, pre-service teachers show a more positive attitude toward inclusive education. The experience of training, in addition to improving the positive attitude of pre-service teachers, also reduces discomfort and feelings of anxiety when dealing with children with special needs (Forlin et al., 2009). Training on inclusive education also influences the increase of knowledge and the level of confidence pre-service teachers have when interacting with children with special needs (Forlin et al., 2009). In addition, the results of Cologon's (2010) study also show that the development of practical skills in educating children with special needs increases pre-service teachers' positive attitudes toward inclusive education.

The differences in attitudes in the two groups of pre-service teachers were also influenced by their college courses. The Chairperson of the Early Childhood Education Program revealed that currently, the subjects related to children with special needs have been removed from the early childhood education program curriculum. This is because the subject is part of the realm of special education programs. Therefore, courses related to children with special needs are eliminated to avoid overlapping student competencies from the two study programs. Thus, the focus of the early childhood education program is teaching general education children, although, in reality they will also face children with special needs. While the results of research conducted by Stella, Forlin, and Lan (2007) show that there is a significant change in attitudes, knowledge, and level of trust in inclusive education in pre-service teachers after taking a 20-hour course, the researchers mentioned that this course was relatively short. In addition, the results of Sharma and Nuttal (2016) conducted on pre-service teachers who took a nine-week



course focusing on the importance of inclusive education and techniques for implementing it also found there was a significant increase in attitude and self-efficacy scores after attending the course. The biggest change of attitude occurs in pre-service teachers who do not have prior teaching experience with children with special needs.

Interesting findings from this study, based on regression testing, showed that the experience of interacting with children with special needs did not significantly influence pre-service teachers' attitudes toward inclusive education. This may be influenced by the quality of interaction between pre-service teachers and children with special needs. Based on the results of interviews with the Chairperson of the Early Childhood Education Study Program, it is known that the focus of the practice of teaching skills for pre-service teachers in early childhood education programs is teaching general education students. The researcher suspects that this has implications for the focus on applying teaching strategies only to general education students, while special needs children do not receive the same attention, even though in the classroom all students interact with each other. This condition is also driven by the absence of knowledge about children with special needs and effective teaching strategies for them. So, there is no high quality interaction between pre-service teachers and children with special needs. Meanwhile, the opposite condition occurs in pre-service teachers from special education programs, where interacting with children with special needs has become commonplace. For this reason, the researcher suspects that the interaction variable with children with special needs does not significantly influence the attitudes toward inclusive education of pre-service teachers in the two study programs compared to the two other variables—teaching experience and training experience. The limitations of this study are the inability of researchers to control or classify each participant's equally interactive experiences, teaching experience, and experience in participating in training. This experience is the given experience gained by pre-service teachers from universities.

Regardless of these limitations, the main findings of this study reinforce the idea that pre-sevice teacher attitudes toward inclusive education can be improved through participation in learning experiences and integrating lectures on children with special needs as well as inclusive education with direct and sustainable practical experience. In addition, it is also important to introduce the principles and strategies for implementing inclusive education for pre-service teachers (Savolainen, Engelbrecht, Nel, & Malinen, 2012). Thus, pre-service teachers are able to develop a deeper understanding of how to involve children with special needs through direct interaction, parents, caregivers, and peers so that pre-service teachers feel more prepared to implement and facilitate physical activities for children with special needs to be involved in general education classes (Tindall et al., 2015).

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