The Effectiveness of the SERASI Intervention Program to Promote Students’ Positive Attitude toward Students with Special Educational Needs

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Abstract-- This research aims at investigating the effectiveness of the Sekolah Ramah Inklusi (SERASI) intervention program to promote regular students’ positive attitude toward students with Special Educational Needs (SEN) in primary inclusive school. SERASI is based on the Triandis model of attitudes, which includes three components: knowledge, affective response, and behavioral intention. To examine the effectiveness of SERASI, a quasi-experimental with pre- and post-control groups was designed. A total of 96 students participated in this study. They were divided into a control group (n = 54, M = 10.48 years old, SD = .81) and an experimental group (n = 42, M = 10.48 years old, SD = .66). The experimental group attended six training sessions over three days. The training material covered topics about disabilities in general, physical disabilities, sensory disabilities, intellectual disabilities, learning difficulties, and autism. To establish the effect of the intervention program, Chedoke-McMaster Attitudes Toward Children with Handicaps (CATCH) was used to measure the students’ attitudes at two time points: before and immediately after the intervention. A mixed design ANOVA was conducted to investigate the impact of SERASI and participants’ attitudes toward students with SEN. The results showed there was a significant difference between before and after SERASI, F (1.94) = 5.92, p < .05, η² = .059. The attitude score was higher before the intervention (M = 48.47) compared to afterward (M = 47.46). The results also showed that there was a significant difference in attitude scores between the experimental and control groups, F (1.94) = 17.76, p < .05, η² = .159. The attitude score was lower in the control group (M = 45.95) compared to the experimental group (M = 49.97). Additionally, there was no significant interaction between attitude toward students with SEN and SERASI, F (1.94) = 0.117, p > .05. Thus, the results did not suggest that SERASI was an effective practice for promoting a positive attitude toward students with SEN.

Keywords: attitudes, disabilities, special educational needs, inclusive education, intervention

Introduction

Children with special educational needs (SEN) have been educated in settings that are socially and physically excluded from other students (Wisniewski & Alper, 1994). This approach is changing with the trend toward inclusive education. “Inclusive education” is a term used to describe an educational system in which students with and without SEN are educated together in regular schools (Hallahan & Kaufman, 2006). The Salamanca Statement policies of inclusion (UNESCO, 1994) point out the importance of “education for all” in terms where students with SEN being educated alongside their regular peers. Therefore, educating students with SEN in inclusive schools is an essential goal of the educational policy in many countries, including Indonesia.
In Indonesia, the 1945 Republic of Indonesia’s Constitution Chapter 31 (1) states that every citizen has the same right to obtain an education. This statement is understood to mean that citizens with SEN have the right to education designed according to their limitations. In response to this policy, in 2009, 796 public schools in various regions were expanded into inclusive schools (UNESCO, 2009). This kind of education system requires schools to be able to adapt and cope with diversity (Kurniawati, Minnaert, Mangunsong, & Ahmed, 2012). Unfortunately, the implementation of inclusive education in Indonesia still faces challenges such as changing stereotypes and misconceptions about students with SEN (Adioetomo, Mont, & Irwanto, 2014).

One of the fundamental ideas behind inclusive education is the social benefit gained when students with and without SEN attend school together (Flem & Keller, 2000). Students with SEN benefit from being in an inclusive classroom not only academically when they learn the same materials alongside regular students, but also socially because they have more opportunities to interact with and build friendships with regular students. Studies showed that building a positive relationship through friendship improves academic, language, and cognitive aspects of students with SEN as well as their behavior and social skills (Odom, Buysse, & Soukakou, 2011; Kiuru et al., 2015; Pratiwi, 2018). Furthermore, the inclusive environment gives regular students opportunities to have direct experience with students with SEN, so they can learn to have empathy and help and care for others (Darma & Rusyidi, 2015; Schwab, 2017).

In primary school age, being accepted in a circle of friendship by peers is very important. Children aged 8 to 12 years old start to develop meaningful friendships. A meaningful friendship fosters their self-esteem and sense of well-being (Santrock, 2005).

However, students with SEN do not automatically receive positive acceptance by regular students or make friends with them (De Boer, Pijl, & Minnaert, 2011). They often have low social participation in class and difficulties in obtaining acceptance and friendship (Avramidis, 2010; Koster, Pijl, Nakken, & van Houten, 2010). Although it remains unclear why this is the case, several factors have been found to play a role. Environmental factors, such as class size and facilitation, and personal factors, such as attitudes of teachers, type of disability, and most importantly, attitudes of regular students, affect the process of including students with SEN in inclusive schools (De Boer, 2012).

In inclusive education, students with SEN often face negative attitudes from other students. This can have serious effects in their lives, such as low acceptance, limited friendships, loneliness, and being rejected and/or bullied (Gannon & Gilloway, 2009; Laws & Kelly, 2005; Minde, 2003). The problem of negative attitudes raises the question of how educators can encourage positive attitudes among regular students.

Triandis (1971) stated that an attitude is an idea charged with emotion that predisposes a class of actions to a particular class of social situations. This definition shows that attitude has three components: ideas (cognitive components), emotions attached to them (affective components),
and tendencies to act (components of behavior). In the inclusive education context, the cognitive component refers to regular students’ beliefs or knowledge regarding barriers to SEN. The feelings or emotions they feel about SEN are an affective component. The behavior component includes how regular students act toward SEN in certain situations.

From an intervention perspective, inclusive schools need to develop interventions that can counter or prevent regular students’ negative attitudes toward students with SEN. Minde (2003) suggested that the reason behind negative attitudes toward students with SEN is limited knowledge of disabilities and minimal interactions with people with disabilities. It can be assumed that students are more accepting when they have the proper knowledge and understanding about their peers with disabilities. This has been used as a starting point in interventions that focus on acquiring knowledge about disabilities.

Interventions to promote positive attitudes have been widely studied, but the results remain unclear. Previous studies indicated that interventions based on acquiring knowledge have a significant effect on students’ attitudes (Krahé & Altwasser, 2006; Vignes et al., 2009; Tavares, 2011). Meanwhile, other research showed that intervention based on knowledge was not sufficient to influence positive attitudes among students (Bell & Morgan, 2000; Godreau et al., 2010; De Boer et al., 2014). De Boer et al. (2014) concluded that intervention centered only on acquiring knowledge had a limited impact on primary students’ attitudes. It is suggested that the affective and behavioral components of attitude should also be fostered in an intervention.

Another intervention approach that is often used is disability simulation. In this approach, participants who do not have disabilities are placed in situations designed to help them feel what it is like to have a disability (Flower et al., 2007). In the simulation, students not only come to understand disabilities characteristics but also experience the difficulties that students with SEN face at school. This method has been proven to effectively support students’ positive attitudes and can increase regular students’ acceptance of SEN (Hurst et al., 2012; Ison et al., 2010). However, research on simulating disability was mostly done with adults and one type of disability.

Previous studies on the effect of interventions on regular students’ attitudes toward students with SEN show that some questions are still unanswered. First, there are mixed outcomes for primary school students’ attitudes toward students with SEN. Second, the studies address only the acquisition of knowledge about disabilities, but knowledge is not enough to influence positive attitudes toward peers with SEN and students should experience the difficulties that students with SEN face in school (De Boer et al., 2014). Third, studies on primary inclusive school intervention programs are still very limited in Indonesia.

To fill these gaps, as an attempt to promote regular students’ positive attitudes toward students with SEN, we designed an intervention program called Sekolah Ramah Inklusi (SERASI), or Friendly Inclusive School. The program not only teaches students knowledge about disabilities, but also allows them to experience the difficulties that students with SEN face.
through simulations and develops skills for interacting with students with SEN in the inclusive classroom.

**Methods**

**Participants**

Ninety-six students participated in the study, ranging in age from 9 to 13 years old (M = 10.48, SD = .75). One primary public inclusive school was selected for this study because it had two to three students with SEN in each classroom and had students’ diagnostic records. In Indonesia, not all public primary schools are opened for inclusion, and they often lack records and/or facilities for students with SEN. Primary public schools include Grades 1–6. In our study, the participants were in Grades 4 and 5, in a total of seven classes. Two classes were appointed by the teacher as the experimental group (n = 42, M = 10.48 years old, SD = .66). This group went through SERASI’s training program. The other five classes were assigned as the control group (n = 54, M = 10.48 years old, SD = .81). The participants in the control group were selected randomly from five other classes in the same school. We set up four selection criteria to select the participants:

1. Regular primary school student aged 9–12 years old;
2. Does not have any disabilities;
3. Learning in the same class with students with SEN;

**Research Design**

A quasi-experimental study with a pre- and post-test control group design was used to examine the impact of SERASI on regular students’ attitudes toward students with SEN. The participants’ attitudes were measured prior to the first intervention session as a pre-test (Time 1). To determine the change of attitude from the pre-test, the post-test was given immediately after the last intervention session (Time 2). During the intervention, the experimental group participated in SERASI’s training program.

**Measures**

Regular students’ attitudes toward students with SEN were assessed using the measurement tool, namely, Chedoke-McMaster Attitudes Toward Children with Handicaps (CATCH) (ages 9–13). This measurement was developed by 32 and adapted in the Bahasa version. CATCH has good reliability (0.7) and was tested on 266 students in an inclusive primary school. The CATCH Scale measuring instrument used in the study demonstrates good internal consistency reliability, with a Cronbach’s alpha of 0.7 from 18 valid items. The CATCH questionnaire consisted of attitude statements about cognitive understanding, affective response, and behavioral intention toward students with SEN. The students filled out the questionnaire by indicating their level of agreement on a 4-point Likert scale (1 = totally disagree to 4 = totally agree). A higher score on the questionnaire reflected a more positive attitude. The mean score of each student was included in the analysis as the dependent variable.
Procedure
The study was conducted in March 2018 in a rural district in East Jakarta. The intervention program consisted of six hours of training sessions spread over three days, where each session was 45–55 minutes long. To ensure the implementation efficacy of the intervention program, we organized a meeting with teachers from another inclusive school and experts in inclusive education to evaluate the intervention activities. The results were used in the design of the intervention. Before the intervention, the school informed all the parents about the program. The parents were asked if their child could participate in the study.

Intervention
The intervention consisted of training programs aimed at raising regular students’ awareness of disabilities, giving them opportunities to experience the difficulties that student with SEN face in school, and training them to interact with students with SEN in school settings. It also aimed to increase three attitude components (Triandis, 1971): knowledge about disabilities, feelings toward disabilities, and behavioral intentions to interact with students with SEN. The teaching methods used in this intervention included lectures, class activities, games, simulation, discussion, and videos. Six topics were addressed: (1) Disabilities in general; (2) Physical disabilities; (3) Sensory disabilities (i.e., visual and hearing impairment); (4) Intellectual disabilities (i.e., slow learner, down syndrome, ID); (5) Learning disabilities (i.e., dyslexia, dyscalculia, and dysgraphia); and (6) Autism. (Table I).

Table I. Summary of the SERASI Intervention Program

<table>
<thead>
<tr>
<th>List of Sessions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Session 1</strong></td>
</tr>
<tr>
<td>Name of the Session: Understanding Disabilities</td>
</tr>
<tr>
<td>Purpose: Students can understand the definition, myths, and facts and can know about types of disabilities</td>
</tr>
<tr>
<td>Activities: Lecture, discussion, watch video, games</td>
</tr>
<tr>
<td>When: Day 1</td>
</tr>
<tr>
<td><strong>Session 2</strong></td>
</tr>
<tr>
<td>Name of the Session: Understanding Physical Disabilities</td>
</tr>
<tr>
<td>Purpose: Students can understand the characteristics, experience the difficulties, and interact with people with physical disabilities</td>
</tr>
<tr>
<td>Activities: Role play, lecture, discussion, games</td>
</tr>
<tr>
<td>When: Day 1</td>
</tr>
<tr>
<td><strong>Session 3</strong></td>
</tr>
<tr>
<td>Name of the Session: Understanding Sensory Disabilities</td>
</tr>
<tr>
<td>Purpose: Students can understand the characteristics, experience the difficulties, and interact with people with visual and hearing impairment</td>
</tr>
<tr>
<td>Activities: Simulation, games, lecture, discussion, role play</td>
</tr>
<tr>
<td>When: Day 2</td>
</tr>
<tr>
<td><strong>Session 4</strong></td>
</tr>
<tr>
<td>Name of the Session: Understanding Intellectual Disabilities</td>
</tr>
<tr>
<td>Purpose: Students can understand the characteristics, experience the difficulties, and interact with people with intellectual disabilities</td>
</tr>
<tr>
<td>Activities: Discussion, role play</td>
</tr>
<tr>
<td>When: Day 3</td>
</tr>
</tbody>
</table>
difficulties, and interact with people with intellectual disabilities
Activities: Games, simulation, lecture, discussion
When: Day 2

Session 5
Name of the Session: Understanding Learning Disabilities
Purpose: Students can understand the characteristics, experience the
difficulties, and interact with people with intellectual disabilities
Activities: Watch video, games, simulation, lecture, discussion
When: Day 3

Session 6
Name of the Session: Understanding Autism
Purpose: Students can understand the characteristics, experience the
difficulties, and interact with people with autism
Activities: Watch video, games, simulation, lecture, discussion
When: Day 3

The appropriateness of the intervention program was reviewed by two experts in educational
psychology and three special needs teachers from another inclusive school. They gave
feedback on the contents and teaching methods and suggested adding more games and group
discussions for the students.

Analysis
To answer the research question, a mixed design analysis of vari-
ances (ANOVA) was conducted to examine the mean differences caused by the between- and within-groups factors
(i.e., main effects), as well as interactions between these two types of variables. Attitude
scores (pre- and post-test) were included as the dependent variables. The variable “group”
(experimental or control group) was used as a between-subjects factor.

Before the analysis, Levene’s test was used to check the assumptions for equality of variance.
A p-value of .05 was considered statistically significant. Partial eta squared served as an
indicator of effect size, which is judged to be small at .01, medium at 0.06, and large at .14.

Results
Descriptive statistics
The descriptive statistics showed that regular students’ mean attitude score was 49.97 (SD = 8.72). Three percent of the students had a negative attitude (score < 37). The majority (94%) had a neutral attitude, with scores from 37 to 57. Both the experimental and control groups had a lower score post-test measurement (Time 2). The descriptive statistics for both measurements are presented in Table II.

Table 2. Means and SDS of Regular Students’ Attitude toward Students with SEN

<table>
<thead>
<tr>
<th>Group</th>
<th>Pre-test M</th>
<th>SD</th>
<th>Post-test M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental (n=54)</td>
<td>50.55</td>
<td>4.07</td>
<td>46.39</td>
<td>5.25</td>
</tr>
<tr>
<td>Control (n=42)</td>
<td>49.39</td>
<td>4.64</td>
<td>45.52</td>
<td>5.80</td>
</tr>
</tbody>
</table>
Effects of the Training Program on Attitudes

The ANOVA showed that there was a main effect of SERASI, indicating a significant difference in attitude scores between the pre- and post-test, $F(1.94) = 5.92$, $p < .05$, $\eta^2 = .059$. Attitude scores were higher before the intervention ($M = 48.47$) than after it ($M = 47.46$). This means that for the students who participated in SERASI there was a significant overall negative effect; that is, the students’ attitudes became more negative after the intervention. There was a significant difference between the experimental and control groups, $F(1.94) = 17.76$, $p < .05$, $\eta^2 = 0.159$. The attitude score was lower for the control group ($M = 45.95$) compared to the experimental group ($M = 49.97$). This outcome indicates there was a significant difference between students’ attitude in the experimental group and the control group after the training sessions. Furthermore, there was no interaction effect between the SERASI intervention and group.

Discussion and Conclusion

In this study, we explored opportunities for promoting regular students’ positive attitudes toward students with SEN through an intervention based on three components of attitude (knowledge, affective response, and behavioral intention). We examined the effectiveness of the intervention program received by the experimental group compared to a control group. Based on those findings, we conclude that the students held significantly less positive attitudes after SERASI. Students in the control group, as well as in the experimental group, showed a decrease in their attitude score. On the other hand, students who completed the intervention program had a more positive attitude than students in the control group. Based on the effect size, we found that this intervention had a large effect on students’ attitude. These outcomes were not as we had expected.

The findings of this study reveal that the intervention based on raising awareness about disabilities had a negative influence on students’ attitude. However, most of the students indicated they had a neutral attitude toward students with SEN.

There are some explanations for the decrease in attitude score. It might be related to the stigma of disabilities that came as a consequence of the intervention. The intervention program made the students realize what it feels like to have a disability and affected their willingness to interact with SEN students. In line with other studies (Bell & Morgan, 2000; Godeau et al., 2010; De Boer et al., 2014), this result showed non-significant outcomes. From the intervention, students formed a new stigma of disabilities. The characteristics of disabilities that are described in the intervention can produce stigma against disability (Bell & Morgan, 2000). Regular students might be frightened by characteristics of certain types of disabilities, such as behaviors of students with multiple severe disabilities or students who are using a wheelchair, have difficulty talking, or cannot control their movements (De Boer et al., 2012).

This study measured only the short-term effect of the intervention. Yet attitudes cannot be changed in just one attempt; interventions should be repeated in the daily school environment. Studies have suggested that interventions can be merged into the school curriculum or in-class...
activities so that students experience them in everyday classes (Godeau et al., 2010; Rahman, Mubbashar, Gater, and Goldberg, 1998). It is also essential to add programs that can facilitate interaction between regular students and students with SEN (i.e., summer camps, sports tournaments). Interaction in such programs can build the direct participation of regular students with students with SEN and can have a positive influence on attitudes toward the inclusion of children with SEN (Xafopoulos, Kudláček, & Evaggelinou, 1998).

Rosenbaum, Armstrong, and King (1987) also suggested that giving an intervention to students should be accompanied by the involvement of parents and teachers. As adults, parents and teachers have an essential role in the development of children’s attitudes and determine the opportunities children have to establish relationships and interact with students with SEN.

Finally, the decrease in attitudes score in the control group can be seen from another perspective. Since most of the participants held a neutral attitude toward students with SEN, they rarely talked about disabilities. Filling out the questionnaire was in itself an intervention because the questionnaire contained information about disabilities that the students might not have heard before. It is also possible that the students in the experimental group shared knowledge about the topics of the intervention to students in the other classes or control group. This condition is called the contamination effect, and it can reduce the point estimate of an intervention’s effectiveness (Torgerson, 2001). A solution is to draw students for the experimental and control groups from different schools.

This study also has some limitations to be improved in future research. The first limitation is that the use of a questionnaire as a self-reported measurement may yield high social desirable responses. With respect to the outcomes of this study, it could be assumed that the students might have reported attitudes that were more or less positive than their real attitudes.

The second limitation is that this study was conducted in a short-term period. The outcomes of the short-term intervention in this study might not achieve the intended objectives. The effect regarding actual attitudes toward students with SEN remains unanswered. It is likely that the improvement of students’ attitudes toward SEN may not be reflected in real life.

The other limitation is related to the participation of students with SEN in the classroom during the intervention. A few students with disabilities exhibited behavior such as screaming or throwing a tantrum during the simulation session. The research also has limitations regarding the training venue. The classroom layout was not convenient for activities like the role play and group discussion. Moreover, the classrooms were not soundproof. At certain hours like during school recess, noise from outside might have disturbed the learning process in the training room.

The following suggestions should be considered for further improvement of the research.

- To have more reliable results, it is recommended to add other measurement tools, such as vignettes, structured interviews, and observations, to establish what students learned from the intervention and to evaluate their attitudes in a more natural setting.
• A study of the long-term effect of the intervention should also be considered in future research.
• Excluding students with SEN from the classroom will help to limit any external factors that may occur during the intervention.
• The training room should be arranged ideally so that the participants do not experience disturbances that may reduce their concentration during the intervention program implementation.

References


