The development of inclusive education management model: Practical guidelines for learning in inclusive school

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ABSTRACT
This research aimed to explore the current conditions, problems, and needs in the implementation of inclusive education, to examine the best model of the implementation of inclusive education and to investigate the effectiveness of the inclusive education model. This research was mixed method research which was conducted in three stages. Stage one was exploring the current conditions, problems, and the needs on inclusive education implementation. Stage two was formulating an inclusive education learning model and stage three was determining the efficiency of the inclusive education model. Findings reveal that students and learning are the biggest obstacle in implementing inclusive education, while management, students, and learning are the most important factors to be considered in implementing inclusive education model. Based on the findings, the whole school inclusive education model was developed which consisted of three stages namely input, process, and output. It was suggested that during the implementation of this model collaboration should be emphasized.

Keywords: Educational management, Inclusive education, Inclusive school, Learning

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1. INTRODUCTION
The oldest special education model is a segregation model that places children with disabilities in special schools, separate from their peers. These schools have a curriculum, teaching methods, learning facilities, evaluation systems, and specialized teachers which are specially designed based on the type of disabilities [1, 2]. In terms of management, the segregation model is indeed beneficial, because it is easy for teachers and administrators to manage children with disabilities who need specially-designed treatments [1]. However, from the students’ perspective, the segregation model is probably detrimental. For example, research studies by Chesmore and Reynolds [3], Stanford et al [4] and Stetser & Stilwell [5] reported that children receiving special education services mostly have lower rates of high school completion, greater rates of depression, substance misuse, and incarceration. Furthermore, it is also reported that placement in special education probably related to poor mental health functioning that often exist into adulthood [6]. Despite these findings, philosophically the model of segregation is not logical, because it prepares students to later integrate with normal communities, but they are separated from normal society. Another disadvantage that is not less important is that the segregative model is relatively expensive, particularly in Indonesia [7].

Given the negative effects of special school placement, Indonesia has implemented the inclusive education system ever since the stipulation of the Indonesia’s Ministry of Education Regulation Number 9/2009. Inclusive education is the latest development of the model of education for children with disabilities.
which was formally confirmed later in Salamanca's statement at the World Conference on Disabled Education in June 1994 that "the fundamental principles of inclusive education are: as long as possible, all children should learn together regardless of difficulties or the differences that might exist in them. Therefore, inclusive management considers education which allows each child to learn together, be recognized and given equal educational opportunities. Staub and Peck [8] explained that inclusive education is the educational placement of children with disabilities either on the level of mild, moderate, or severe in the regular class. This shows that the regular class is a place of learning that is relevant for children with disabilities, regardless of the type of abnormality and whatever the gradation. Meanwhile, inclusive education also could be understood a system of education services that requires all children with disabilities be served in the nearest schools, in regular classes with friends of their age [9]. Therefore, the school restructuring is emphasized, so that it becomes a community that supports the fulfillment of the special needs of each child, meaning that it is rich in learning resources and gets support from all parties, namely students, teachers, parents, and community. Through inclusive education, children with disabilities are educated together with other typically developing children to optimize their potential [10, 11]. This is based on the fact that in society there are typically developing children and children with disabilities who cannot be separated as a community. In addition, Stainback and Stainback [12] define inclusion as the education provided by schools for all children regardless of their background, economic, social and cultural background. Therefore, schools look for ways to facilitate children to learn together and share the benefits of learning." Similarly, Kuyani and Desai [13] state that "inclusion in school settings is to provide education for all, because it is a place where everyone participates, is accepted and supported by peers and staff and society, in meeting the needs for student development".

There are some documented benefits of inclusive education system for children with disabilities. Firstly, inclusion was mostly related to either positive or neutral effects on academic outcomes among non-disabled students [14]. Moreover, it was reported that there is no relation between the lower rates of students who continued to upper secondary education [15]. It was also evidence that non-disabled students in inclusive schools have better positive views towards students with disabilities [16]. Similarly, for students with disabilities inclusive setting has shown to positively affect their development. A study among nearly 760 students in the United States showed that students with disabilities improved their language skills [17]. Indeed, this finding is in line with studies by de Graff, van Hove, & Haveman [18] and de Graaf & van Hove [19] which reported that students with down syndrome performed better on academic skills in inclusive schools. Another research study by Schiftler [20] found that students with disabilities on inclusive schools were likely graduated on time compared to students with disabilities in segregated settings. In terms of social skill development, it was reported that inclusion would help students with disabilities to improve their social skill development [21].

Previous paragraph has discussed the benefits of inclusive education but for all students. In terms of its implementation, each component of the school providing inclusive education needs to understand the key indicators which are the minimum criteria of inclusive education [22-24]. By understanding key indicators, the management of inclusive education can be measured and improved on an ongoing and accountable basis. There are a number of indicators that must be a concern for education units that administer inclusive education, namely institutional indicators, curriculum and learning, workforce, student affairs, facilities and infrastructure, and financing (Peder). Each indicator has developed a number of items that can be used by educational units to conduct self-assessments. From the results of self-assessment, schools can find out their position (level of performance) as a school providing inclusive education. Recognizing these ideas, a proper inclusive education model needs to be developed in order to ensure that the implementation of inclusive education is appropriate and beneficial.

There is a plethora of studies that have investigated the proper development of inclusive education model. A study by Van der Bij, Geijsel, Garst and Dam [25] has developed the three core aspects of inclusivity namely the learning environment, the general care and the guidance provided by the teachers. Another study in Kenya showed that it was essential to work with stakeholders and government, while at the same time expanding the cooperation with other relevant parties [26]. This mirrors the comparative research study by Engelbrecht et al. [27] which suggested the importance of collaboration. Furthermore, a qualitative study in New Zealand reported that there is a need of a flexible Index tool in order to reach the sustainable whole school development and professional learning in implementing inclusive education [28]. Another inclusive education model was implementing the three-block model of Universal Design for Learning which has positively impacted the teachers’ self-efficacy and job satisfaction in inclusive schools in Canada [29]. In Asian countries, there was only one study that explicitly developed the inclusive model which was held in Thailand. This study reported that there were three important aspects of inclusive education model [30].

Based on the previous paragraphs, the appropriate inclusive education is beneficial and important to support the development of students with disabilities, yet the study on the development of inclusive
education model particularly in Indonesia is still scarce. Therefore, this present study aimed to explore the
current conditions, problems, and needs in the implementation of inclusive education in Pasuruan City,
Indonesia and aimed to examine the best practices of inclusive schools in that city alongside with find out the
effectiveness of the inclusive education learning management model.

2. RESEARCH METHOD

This research was mixed method research based on the [31] Quantitative data were collected using
surveys on the topics of current conditions, problems, and requirements for inclusive education
implementation, while on the same time collected the opinions from experts. Whilst, qualitative data were
collected using in-depth observations and in-depth interviews. This research was conducted during three
stages in the one city in Indonesia. Stage one was intended to understand the latest conditions, and the issue
of implementing inclusive education. Participants from the stage 1 were 120 people including school
administrators, teachers, school committees and parents from six secondary schools in Pasuruan City. Data
were analyzed to identify the conceptual framework of research and the issue of the implementation of
inclusion education. Stage two was aimed at formulating an inclusive education model based on the result of
the stage one. This stage consisted of three steps namely creating the inclusive education model, review
process by four experts, and revising the model based on the experts’ suggestions. The third stage was
determining the efficiency of the inclusive education model in. In this stage, the effectiveness of the inclusive
education model was examined in the pilot schools.

3. RESULTS AND ANALYSIS

3.1. The result of analysis on the issues on the inclusive education implementation

Based on the table 1 the results of the analysis showed that the issue of inclusive implementation is
at a moderate level, with an overall average value of 3.38. This duplicate the previous finding by Bubpha,
Erawan and Saihong [30] which reported that the level of problem on inclusive education provision was on
the moderate level. In detail, the aspect of management was on the moderate level with the mean of 3.47.
Other aspects which achieved the moderate level were curriculum, evaluation, and external support.
As seen in Table 1, students and learning have the high level of issues. This finding mirrors the previous
study by [32-34]. All these studies reported that teachers are struggling in delivering learning in inclusive
schools. Moreover, this finding supports the importance of teacher training to ensure teachers can understand
their students and deliver the lesson that is benefit for all students [35].

<table>
<thead>
<tr>
<th>Implementation of inclusive education</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Level of issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management</td>
<td>3.47</td>
<td>.54</td>
<td>Moderate</td>
</tr>
<tr>
<td>Students</td>
<td>3.55</td>
<td>.54</td>
<td>High</td>
</tr>
<tr>
<td>Curriculum</td>
<td>3.32</td>
<td>.52</td>
<td>Moderate</td>
</tr>
<tr>
<td>Learning</td>
<td>3.17</td>
<td>.80</td>
<td>High</td>
</tr>
<tr>
<td>Evaluation</td>
<td>3.47</td>
<td>.54</td>
<td>Moderate</td>
</tr>
<tr>
<td>External Support</td>
<td>3.32</td>
<td>.52</td>
<td>Moderate</td>
</tr>
<tr>
<td>Total</td>
<td>3.38</td>
<td>.49</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

3.2. The result of analysis on the level of needs on the inclusive education implementation

Relating to the Table 2, overall there is a need to improve every aspects of the implementation of
inclusive education. The aspects which got the highest-level including management, students, and learning.
Indeed, this finding consistent with the finding on the previous aspect which shows that learning and
students are the biggest issue on inclusive education implementation. Whereas, other aspects received the
moderate level of needs. Studies have shown that management of inclusive education is important which
involves the collaboration process to support the inclusive school [25-27].
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Table 2. The level of needs on the inclusive education implementation

<table>
<thead>
<tr>
<th>Implementation of inclusive education</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Level of needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management</td>
<td>3.63</td>
<td>.76</td>
<td>High</td>
</tr>
<tr>
<td>Students</td>
<td>3.68</td>
<td>.67</td>
<td>High</td>
</tr>
<tr>
<td>Curriculum</td>
<td>3.47</td>
<td>.54</td>
<td>Moderate</td>
</tr>
<tr>
<td>Learning</td>
<td>3.63</td>
<td>.76</td>
<td>High</td>
</tr>
<tr>
<td>Evaluation</td>
<td>3.43</td>
<td>.82</td>
<td>Moderate</td>
</tr>
<tr>
<td>External Support</td>
<td>3.43</td>
<td>.82</td>
<td>Moderate</td>
</tr>
<tr>
<td>Total</td>
<td>3.51</td>
<td>.58</td>
<td>High</td>
</tr>
</tbody>
</table>

3.3. Inclusive education model – the whole school system

Based on findings on section 3.1 and 3.2, it can be recognized that the main problems are related to students with special needs and the learning process for students with special needs in inclusive schools. Therefore, efforts are needed to overcome these problems by developing an appropriate and effective learning model for inclusive schools. There are two things to be considered on developing the inclusive education model. Firstly, an efficient, effective and useful educational setting is needed by conducting an ecological approach to detect and correct teaching programs by discussing the main variables on learning. Secondly, in inclusive school, students have diverse needs and all their needs must be met.

Based on these ideas, there are three important phases on inclusive education model including 1) Planning for the development of every child with special needs using the instructional program. 2) Carry out student development activities for inclusive education; and 3) Measuring and evaluating real situations to improve individual student development.

The Figure 1 illustrates the model that was developed. In general, this inclusive education model was based on the whole school system. This model includes input (aspects of management), process (learning management), and output (developing student quality). The detail explanation is as follows:

![Figure 1. Inclusive education model.](image)

a. Management of F2P (Physiological Environment, Physical Environment and Psychotic environment) is an input that gives a big influence on the learning process environment in schools. This environment will gather to influence behavior in students and teachers so that proper analysis of each instructional setting is needed.

b. Instructional Management is a dynamic process to produce a dynamic system, an ecosystem in which there is a balance between different elements of the environment. The principles in instructional management in learning are:
   - Build a positive climate
   - Arrange settings orderly
   - Implement preventive planning
   - Make an efficient schedule
   - Group students for learning
   - Use materials and tools effectively
   - Convey the appropriate teaching instructions
   - Develop an effective discipline plan
   - Interventions in school, home and community settings
   - Teach with joy and satisfaction.

The principle developed when applied to the inclusive schools will have an impact on the success of the inclusive school learning process namely learning without discrimination. Katz [29] and Bupha, Erawan and Sailong [30] argued that diversity in providing educational services must accommodate the whole...
between regular students and students with special needs. Schools must be able to transform an appropriate approach for children with special needs. Quality assurance is done by modifying the curriculum, administrative organization, and appropriate pedagogical strategies. Collaboration is very supportive in the management of inclusive education [25-27]. Consistent support and services are provided, according to the special needs of inclusive students. Every child must get services for justice and equality.

3. Development of the students’ quality who are smart, meaning that with careful planning in the management of inclusive education, the function is to produce intelligent students. Students who have the potential that can be developed in inclusive schools. This process is based on proper identification and assessment so that the students’ quality will be developed.

3.4. The effectiveness of the development of the inclusive education model

The results of the development of the learning model then were validated by experts on the effectiveness of the model that was previously developed. Moreover, small-scale trial was done in schools. Results from the trial showed that collaboration is essential to ensure the better implementation of inclusive education. This is in line with the findings from previous research studies [26-28] which showed that collaboration between school members and cooperation with stakeholders and government is essential.

4. CONCLUSION

This study aimed at exploring the current conditions, problems, and needs in the implementation of inclusive education in Pasuruan City, Indonesia and aimed at developing the best model for inclusive education implementation alongside with find out the effectiveness of the inclusive education model. Findings reveal that students and learning are the biggest obstacle in implementing inclusive education, while management, students, and learning are the most important factors to be considered in implementing inclusive education model. Based on the findings, the whole school inclusive education model was developed which consisted of three stages namely input, process, and output. It was suggested that during the implementation of this model collaboration should be emphasized.

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