

Parents' Perceptions toward Inclusive Education in Mathematics at Johor Bahru, Johor

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Abstract

This study investigates parents' perceptions toward inclusive education in mathematics at Johor Bahru, Johor. The research aims to examine parents' perceptions of the inclusive program in teaching and learning of mathematics implemented in primary schools. This study examines the impact of mathematics education on special needs students and typical students. A total of 80 respondents were selected as participants through a simple random sampling procedure from a government building sector located at Johor Bahru, Johor. The overall data analysis revealed a mean score of 2.63 (SD = 1.01) for level of parents' perception of inclusive education for mathematics in primary schools. Overall, the parents of typical students support the implementation of this inclusive education, where parents endorse the positive impact on special needs students and the positive impact on typical students in their mathematics education

Keywords: Inclusive, Mathematics, Perceptions

Introduction

It is widely known that inclusive education involves students from special education schools. Special education is the educational services and facilities provided by the Ministry of Education Malaysia (KPM) for students with mental and physical disabilities. The Person with Disabilities Act 2008 explicitly states that children with special needs have the right to equal educational opportunities without discrimination or exclusion. As a result, various parties play an important role in providing an environment and activities that are suitable for the needs of special needs students. In line with the demands of the Malaysian education system, the Inclusive Education Program (IEP) has been designed to provide equal educational space and opportunities for all students regardless of their status.

A specific emphasis on the quality of education is one of the goals of the fourth Sustainable Development Goal (SDG). As a result, the country's efforts to implement this program have somewhat contributed to global development. This is an effort to ensure that all individuals receive equal education. The Inclusive Education Program is an effective step in addressing the education crisis caused by educational discrimination. This is because inclusive education advocates for human rights regardless of factors such as race, gender, background, or overall

ability. This approach is consistent with the concept of Education for All (EFA), which forms the basis for most global education policies.

The Inclusive Education Policy in Malaysia is also in line with the Malaysia Education Development Plan (PPPM) 2013-2025. The target in the PPPM is to increase access to education for special needs students so that they can compete with mainstream students in the same classroom. According to Amin, the goal of the Ministry of Education Malaysia for 2019 is to enroll 75 percent of special needs students in inclusive education programs by 2025. This demonstrates a strong commitment from the authorities to ensure better access to education for all individuals, regardless of their needs.

In addition, Shift 9th in the PPPM 2013-2025 emphasizes the target of parental involvement and cooperation. Effective transformation of the education system can be achieved through this Shift 9 by providing information to parents to assist their children's learning through involvement and online access to their children's school progress. Overall, inclusive education is a strategic step in addressing the education crisis stemming from educational discrimination. It not only ensures better access to education for all individuals but also strengthens the values of human rights in the context of education.

Inclusive education in Malaysia has two different types of programs, namely full inclusive education and partial inclusive education. In full inclusive education, students with special educational needs will take all subjects in regular classes alongside their peers. Nevertheless, the list of students will remain in the special education class register, and mainstream class teachers can refer to or seek assistance from special education teachers if there are learning or behaviour issues. These students will also be able to take public examinations. Inclusive education can be seen as containing a set of values, goals, assumptions and ideas different challenges that are relevant to the education of children with special needs (Paseka & Schwab 2020). Study conducted by Wilson et al. (2017) stated that parents believe that inclusive education is important to meet the educational needs of students with special needs.

Meanwhile, in partial inclusive education, students with special educational needs are selected to study in regular classes for certain subjects only. They will continue the program in special education classes for the remainder of the semester. The list of students' names will be registered in the integrated Special Education program, and special education teachers will be involved in this engagement as mentors or accompanying teachers. The subject tests for these students are the same as for regular students, especially in inclusive subjects. However, the current study shows that both parents who have students with special educational needs and typical students express concerns regarding the preparation of qualified teachers and professionals as the main factor in inclusive success (Stevens & Wurf 2018).

Although the perceptions of teachers and administrators are important in the success of inclusive education, it is also crucial not to overlook the views of parents. The idea emphasizes the progressive role of families and parental involvement in the inclusive education process. Based on the literature review, parents identify positive outcomes for their children who experience learning barriers. They see these benefits in three categories, namely general developmental benefits, social and behavioral developmental benefits, and cognitive benefits.

Parents found that through inclusive education, their children experienced improved self-concept, better social and emotional development, and acceptance of individual differences.

The objective of this study is to identify the level of parental knowledge regarding inclusive mathematics education in the Johor Bahru district, Johor, and the research question in this study is what is the level of parental knowledge regarding inclusive mathematics education in the Johor Bahru district, Johor?

Based on a study conducted by Norlia and Mohd Hanafi (2016), the study aimed to evaluate the implementation of the Inclusive Education Program (IEP) in Wave 1 of the Malaysian Education Development Plan (PPPM) 2013-2015 by the Ministry of Education Malaysia. (KPM). The results of the study found that there were teachers who used the same teaching and learning techniques for all students when implementing the Inclusive Education Program in the classroom. This will contribute to student dropout rates because they are unable to compete due to inappropriate teaching methods used throughout the learning sessions. As a result, students from the program are unable to complete the assignments given by the teacher. However, 40% of the teachers at the school were able to teach effectively and provide comprehensive reports on the students from the Inclusive Education Program.

It is widely known that the Inclusive Education Program can be seen as one of the branches of goals and ideas that can be applied to provide the best education for special education students. Parents believe that the existence of the Inclusive Education Program can enhance the development of a student. Family involvement in schools is one way for teachers and parents to build trust, mutual respect, and the ability to communicate openly in both directions.

There have been past studies that have shown that parents of special needs students often exhibit a lack of confidence in the programs implemented being the best for their children. There are parents of special needs students who often have a more ambivalent view about inclusivity, especially in terms of the perspective regarding the impact on special needs students in the social dimension. (Boerm Pijl dan Minnaert 2010).

The implementation of Inclusive Education also involves stigma where the acceptance of school members who believe that the program is biased and the services provided are unfair to people with disabilities. (Devlieger 2005). However, there is a lack of research conducted on the perspectives of parents who have children with disabilities and typical children.

Methodology

The design of this study is a survey study that uses a quantitative approach. The questionnaire instrument was conducted in a hybrid manner, both online through the Google Form application and physically with paper questionnaires distributed to respondents. This approach was chosen because the construction of the questionnaire is inexpensive, saves time during the data collection process, and can prevent any data loss during the collection of the questionnaire forms. Questionnaires are also a very useful survey tool that allows for the easy assessment of large populations.

This study was conducted on the staff of the Government Building in the Johor Bahru district with a population of 300 people. A total of 80 respondents were selected using the simple random sampling technique. The questionnaire used is an adaptation of the Parent Attitude Towards Inclusion questionnaire. (Palmer et al., 2001). This questionnaire instrument serves as the basis for the parents' evaluation criteria. A four-point Likert scale is used in this instrument. Basically, this instrument is used to assess the knowledge of primary school parents about inclusive education. This questionnaire has been divided into three sections. Table 1 shows the details of the questionnaire instrument.

Table 1
Instrument Study

Section	Construct	Item
A	Demographic Information	9
B	Level of parents' general perceptions towards inclusive education	5
C	Parents' level of knowledge about the impact of the Inclusive Program in schools <ul style="list-style-type: none"> • Impact on students with special educational needs • Impact on typical students • Impact on the parents of students with special educational needs • Impact on the parents of typical students 	7 8 5 4

This study involves descriptive analysis. Descriptive analysis in this study includes frequency, percentage, and mean. Table 2 shows the interpretation of the mean level of parents' general knowledge about students with special educational needs in schools and their knowledge of the impact of the Inclusive Education Program in schools.

Table 2
Mean Interpretation for General Perspective and PPI Impact

Min Score	Interpretation
1.00-2.33	Low
2.34-3.67	Medium
3.68-5.00	High

This study contains a questionnaire to examine parents' level of knowledge regarding inclusive mathematics education practices. The purpose of developing this questionnaire method is to examine the level of parents' knowledge about the benefits and risks of inclusion for students with disabilities and typical students.

In addition, this survey method aims to provide information on important issues that parents consider when determining the best inclusive settings for their children. There are several factors that prompted the selection of this specific research instrument. The first reason is

because the largest party, namely the Ministry of Education Malaysia, has implemented an education model for students with disabilities that is on par with other developed countries. The second factor is that the survey period and the questions asked are suitable for use in the current research.

Finding

Section A: Respondents Information Demography

Based on the demographic profile analysis of 80 respondents. It was found that 46 people (57.50%) were in a mother-child relationship, while 34 people (42.50%) were in a father-child relationship. For the age category, the age range of 35 to 44 years constitutes the majority, with 45 individuals (56.25%). The majority of respondents hold diploma and bachelor's degree qualifications, with 48 individuals (60%) holding diplomas and 32 individuals (40%) holding bachelor's degree.

In the income category, the income range of RM 3,500 to RM 4,500 has the highest number of respondents, total 28 people (35%). Two mothers have children with special needs, while one father has a child with special needs. The remaining respondents have typical children. For the gender of the children, 44 respondents (55%) have daughters, while the remaining 36 respondents (45%) have sons. For the student age category, the most recorded age was 9 years old, with 21 individuals (26.25%).

Table 3

Respondents Information Demography

Demography Variables	Category	Percentage Score (%)
Relationship	Mothe r Others Fathe r	57.50 42.50 0
Education Level	SPM Diploma Degree Bachelor Master PhD	0 60.00 40.00 0 0
Age	25 – 34 years old 35 – 44 years old 45 – 54 years old 55 – 64 years old	25.00 56.25 18.75 0
Monthly Income	RM 1,500 – RM 2,500 RM 2,500 – RM 3,500 RM 3,500 – RM 4,500 RM 4,500 – RM 5,500 RM 5,500 and above	0 6.25 35.00 32.50 26.25

Child's Gender	Boy	45.00
	Girl	55.00

Child's Age	7 years old	22.50
	8 years old	25.00
	9 years old	26.25
	10 years old	12.50
	11 years old	10.00
	12 years old	3.75
Having a child with special needs	Yes	3.75
	No	96.25

Section B: Level of parents' perception of inclusive education for mathematics in primary schools

Table 4

Level of parents' perception of inclusive mathematics education in primary schools

Item	Disagree (1)	Less Agree (2)	Agree (3)	Very Agree (4)	Min	Standard Deviation
Your child is educated in an inclusive classroom that includes both special needs students and typical students?	16 20%	20 25%	26 32.5%	18 22.50%	2.600	1.063
Special needs students are educated alongside typical students who are at the same developmental learning stage as other typical students?	18 22.50%	20 25%	24 30%	18 22.50%	2.525	1.079
Should students with special needs be given the same math assignments and assessments as typical students?	17 21.25%	23 28.75%	25 31.25%	15 18.75%	2.463	1.030

There is a positive impact on typical students from the inclusive program that takes place throughout the teaching and learning sessions in	10 12.50%	23 28.75%	28 35.00%	19 23.75%	2.700	0.973
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mathematics?						
Is there a positive impact on special needs students from the inclusive program that takes place throughout the teaching and learning sessions in mathematics?	11 28.75%	23 13.75%	32 40.00%	14 17.50%	2.613	0.934
By educating special needs students alongside typical students, does it enable them to understand mathematics learning topics more easily?	17 21.25%	23 13.75%	27 33.75%	13 16.25%	2.450	1.005
Do mathematics learning activities in inclusive classrooms help students with special needs improve their social skills?	8 10%	16 20%	26 32.50%	30 37.50%	2.975	0.993
Does inclusive mathematics teaching and learning sessions have a positive impact on students' emotional development about themselves?	9 11.25%	13 16.25%	26 36.25%	32 40%	3.013	1.013
Inclusive classes provide students with special needs more opportunities to participate in math learning activities in the classroom?	8 10%	9 11.25%	35 43.75%	28 35%	3.038	0.934

The tantrum behavior of some special education students will disrupt the emotions of typical students throughout the mathematics teaching and learning session?	24 30%	27 33.75%	15 18.75%	14 17.5%	2.238	1.070
Will students with special needs slow down typical students in learning mathematics in	18 22.5%	28 35%	20 25%	14 17.5%	2.375	1.023

the classroom?						
A typical student will not receive enough attention from the mathematics teacher because the mathematics teacher pays more attention to special needs students?	15 18.75%	26 32.5%	22 27.5%	17 21.25%	2.513	1.031

Based on the findings of the study on parents' perceptions of inclusive education in the subject of mathematics obtained through the Statistical Package for Social Science (SPSS), the overall mean value is at a moderate level, which is mean = 2.625. The item with the highest mean score was 3.038, which is the ninth item, where 35 parents agreed with the question "inclusive classes provide special needs students with more opportunities to participate in mathematics learning activities in the classroom," followed by the eighth item with a mean score of 3.013. Where there are 35 respondents who answered 'strongly agree' to the question "inclusive mathematics teaching and learning sessions have a positive impact on the emotional development of students about themselves." Meanwhile, the lowest mean value in the above item is 2.238, where 27 respondents answered 'disagree' to the question "The tantrum behavior of some special education students will disrupt the emotions of typical students throughout the mathematics teaching and learning session."

For the first question, which is "Your child is educated in an inclusive class that includes both special needs students and typical students," 26 respondents agreed that typical students should be placed in the same class as special needs students. This is because, in the respondents' opinion, special needs students do not disrupt the mathematics teaching and learning sessions as stated in question item 10 where "the tantrum behavior of some special education students will disturb the emotions of typical students throughout the mathematics teaching and learning sessions." A total of 27 respondents answered disagree. This indicates that the majority of respondents have a positive perception of this inclusive mathematics teaching and learning.

Additionally, respondents also believe that "inclusive classes provide special needs students with more opportunities to participate in mathematics learning activities in the classroom," with 35 respondents agreeing with this statement. Respondents believe that if special needs

students are placed together with typical students in mathematics teaching and learning sessions, these will boost the confidence of special needs students to learn alongside typical students. This is supported by the question "Inclusive mathematics teaching and learning sessions have a positive impact on students' emotional development about themselves." Where 32 respondents answered 'strongly agree' with that statement. The students' confidence is closely related to their emotional development.

Discussions

This study aims to examine parents' perceptions of the inclusive program in teaching and learning of mathematics implemented in primary schools. This study examines the impact of mathematics education on special needs students and typical students. The research questions were formulated to understand parents' perceptions of special needs students and typical students comprehensively regarding inclusive education in the teaching and learning of mathematics in primary schools in the Johor Bahru district, Johor.

This study shows that parents' perceptions are generally positive about inclusive education in mathematics, but sometimes show less support on the impact scale that measures the perceived benefits for special needs students and typical students (Sosu & Rydzewska 2017). Overall, the parents of typical students support the implementation of this inclusive education, where parents endorse the positive impact on special needs students and the positive impact on typical students in their mathematics education. One of the suggestions for future research is that the researcher could conduct a study on the inclusive mathematics education program implemented in rural areas. This is to further expand the sample size and enable comparisons with the findings of the study conducted by the researcher in this study. Next, future researchers are advised to use different methodologies such as qualitative methods or mixed methods, including interviews with parents, to gain a deeper understanding of parents' perceptions regarding inclusive programs in mathematics education.

Conclusions

In conclusion, this study has examined parents' perceptions of inclusive programs in mathematics education in the Johor Bahru district, Johor. By understanding the perceptions of parents towards inclusive programs in mathematics education can provide important information to the community and especially to educators in enhancing the effectiveness of inclusive programs in mathematics education. All parties play an important role and need to cooperate with each other to ensure the success of the implementation of this inclusive mathematics education program. The inclusive program indeed has a positive impact on the students, providing opportunities for special needs students to receive mathematics teaching and learning, as well as early adaptation in social relationships. Therefore, continuous efforts are necessary to ensure that this program can be conducted in an orderly and successful manner. We will also be able to elevate these special needs students from a liability to an important and valuable asset to the nation, where they can become outstanding human capital one day.

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