

# Student Density in Integrated Special Education Programme Classes and Its Implications for Teachers' Teaching and Learning

Rohani Bt Amad Bugis<sup>1,2</sup>, Salleh Bin Amat<sup>1</sup>, Khairul Farhah  
Khairuddin<sup>1</sup>

<sup>1</sup>Faculty of Education, Universiti Kebangsaan Malaysia, Bangi, Selangor, Malaysia, <sup>2</sup>SK Jalan Arang, Kuching, Sarawak, Malaysia  
Email: p145029@siswa.ukm.edu.my  
Corresponding Author Email: kfk@ukm.edu.my

DOI Link: <http://dx.doi.org/10.6007/IJARPED/v15-i1/27510>

*Published Online:* 20 January 2026

## Abstract

Student density in Integrated Special Education Program (PPKI) classes is a problem that has a potential to influence the effectiveness of teaching and learning among students with special needs. The purpose of this research is to describe and examine student density in PPKI classes, including its impact on the effectiveness of teachers' teaching and learning among students with special needs in educational institutions in the Padawan district of Sarawak. A qualitative research methodology using a descriptive study design will be used in this research. A total of 12 special education teachers, including those who teach students in PPKI classes, were chosen to participate in this research as respondents using a purposive sampling technique. Data were obtained using an open-questionnaire technique. Findings in this research have successfully demonstrated that moderate to high student density in PPKI classes contributes significantly to problems in class management and teaching implementation among students with special needs. Furthermore, this research discovered that the implementation of individual education programs among students with special needs and learning involvement is less emphasized when students with special needs are increased in numbers. Based on these observations, this research discovered that student density in PPKI classes also affects learning among students with special needs in involvement opportunities. Overall, this research highlights the significance of considering student density in an effort to improve student learning in PPKI programs among students with special needs in educational institutions.

**Keywords:** Student Density, Special Education, PPKI, Implications, Teaching Quality, Student Learning

## Introduction

The PPKI is an important initiative within the Malaysian Education System meant to ensure that students' special learning needs are responded to meaningfully and inclusively. By implementing the program, learners of different categories of disabilities are integrated into

a mainstream school with teaching support modified to meet individual needs. The implementation of the PPKI depends greatly on teachers being able to plan and implement individualized, structured, and responsive teaching to students' learning needs.

In the realm of actual practice in schools, however, the density of students has become a challenge often faced by the implementation of quality teaching in PPKI classes. The low teacher-student ratio recommended by the Ministry of Education Malaysia in the Operational Guidelines for the Integrated Special Education Program is important to ensure effective classroom management and appropriate learning interventions. However, constraints in human resources, increasing numbers of students with special needs, and the physical constraints of the classroom have caused some PPKI classes to accommodate more than the number of students recommended.

Student density in special education classes is not only a matter of the number but rather the complexity in terms of each student's individual learning needs, behavior, and support. Normally, students who attend PPKI need intensive attention, use of special teaching aid facilities, and continuous monitoring to ensure meaningful learning. When there is an increase in the number of students, the teacher's ability to give individual attention becomes highly limited; thus, it will affect the quality of planned teaching and learning.

Apart from influencing teaching practices, student density affects the learning of students with special needs directly. When teachers have to split their attention among too many students at one time, continuous support students are in danger of dropping out during the learning process. Such a situation may lead to the incomplete accomplishment of learning objectives and lesser efficiency in the implementation of Individual Education Plans.

In this regard, this study was conducted to explore the experiences of PPKI teachers regarding the issue of student density in the classroom and to understand how such situations affect the quality of teaching for teachers and the learning quality of students. By focusing on the context of schools in the Padawan district, Sarawak, this study is expected to provide a more realistic picture of the challenges of implementing PPKI at school and contribute to academic and practical discussions in the field of special education.

### **Literatur Review**

Student density in classrooms has been one of the perennial discussion issues in the education literature as a factor affecting the efficiency of teaching and learning. In the context of special education, this discussion gains greater importance as students with special needs require more intensive, structured and focused learning support. A number of previous studies indicated that small class sizes offer an opportunity for teachers to pay individual attention, closely monitor the progress of students and adjust teaching strategies according to the learning needs of the students.

Student density in special education does not pertain to the number of students in a class but also involves the level of diversity of needs of students in the same learning space. Usually, the PPKI students consist of all categories of disabilities including learning disabilities, autism, ADHD and multiple disabilities. Such diversity necessitates teachers to implement differentiated instruction and provide interventions appropriate to the capabilities and

potentials of each student. As the number of students increases, the ability of teachers to apply such an approach becomes increasingly limited.

From the perspective of classroom management, Kounin (1970) stressed that the success of teaching to a great extent depends on how well the teacher can manage the sequence of class activities and keep students engaged. In crowded classrooms, controlling all students simultaneously becomes increasingly complicated for the teacher, especially when the class includes students with behavioral issues or those who need additional support. Prior research has shown that the greater the number of students in special education classes, the higher the chances of experiencing severe behavioral disruptions and losing valuable learning time for students (Emmer & Sabornie, 2015).

In addition, it affects the quality of learning for students with special needs. According to Vygotsky (1978), optimal learning occurs when appropriate support or scaffolding is given in their Zone of Proximal Development. For PPKI, the support is given through close interaction between teachers and their students. The process of scaffolding, however, is less effective when the teacher has to divide attention among so many students, thus affecting the achievement of students' learning objectives.

In addition, local literature reflects that the problem of student density of PPKI classes is often intimately connected with resource constraints of human resources and organizational support. Several Malaysian studies have documented that special education teachers are burdened by a high workload, which includes the management of IPPs, documentation, and continuous assessment needs (Kementerian Pendidikan Malaysia, 2019). As the number of students with disabilities increases in PPKI classes without appropriate support, work stress among teachers also rises and, potentially, emotional well-being and professional motivation are affected.

Although the issue of class size and student density in special education has been discussed in various studies, most have focused on overseas contexts or used quantitative approaches. Therefore, studies concerning the real experiences of PPKI teachers in local contexts, especially in rural areas like Padawan, Sarawak, are still very limited. This study is hence important to fill the literature gap by exploring the issue of student density from the perspective of teachers who are directly involved in the implementation of the PPKI program.

### **Methodology**

This research is using a qualitative approach with a descriptive research design to explore the experiences and views of Special Education teachers in relation to the issue of student density in Integrated Special Education Program classes. The study adopted a qualitative approach because it investigates the phenomenon concerning actual experiences of the respondents, rather than a statistical measurement of the correlation between variables.

A total of 12 Special Education teachers teaching in the PPKI program at schools within the Padawan district in Sarawak were targeted to take part in this study. The drawing of samples was purposive to ensure that the respondents would have direct experience in managing classes within the PPKI and be actively involved in teaching students with special needs. Such

a diversity background in the teaching experiences of the respondents enables this research to obtain a more comprehensive view of the issue under study.

Data collection was carried out through the open-response questionnaire instrument, developed via the Google Form platform. This allowed the respondents to describe the experience of the challenges and their views on student density, classroom management, the implementation of RPI, and how it affects students' teaching and learning. The fact that the questions were open-ended provided space for the expression of views in a reflective manner not inherent when there were limited choices for answers.

The obtained data were analyzed using thematic analysis methods. First, there was a reading and re-reading of the data; codes that described the respondents' utterances were assigned and grouped into key themes that kept emerging throughout the respondents' responses. These themes were then interpreted to a higher level so as to illustrate patterns of teachers' experiences related to the issue of student density in PPKI classes. Confidentiality was maintained through unnamed identification of respondents with codes such as G1, G2 and so on.

What pertains to the issues of ethical research was that participation by the respondents was voluntary, and this information was used strictly for academic purposes. Data was handled confidentially, reported in aggregate form and the identities of respondents and schools could not be disclosed.

### **Findings**

In this chapter, part of the findings obtained from the analysis will be presented based on the themes identified from the responses given by 12 Special Education teachers teaching in the Integrated Special Education Program (PPKI) in the district of Padawan, Sarawak. Through an analysis of data obtained, it can be concluded that the theme of class density stood out among all aspects of teaching and learning, including class management, implementation of Individual Education Plans (RPI), teacher capability in teaching, and learning opportunities among students with special education needs. The findings obtained from this research will be presented in this chapter based on themes which have consistently emerged.

#### *Level of Student Density in PPKI Classes*

Generally, the respondents indicated that they were handling PPKI classes with a moderate to high class density level. While the population in PPKI classes seemed smaller compared to those in other classes, most of them thought that the population in PPKI classes is substantial given the population in special education. Several respondents indicated that they were handling classes with populations above eight, including students with varying levels of capabilities.

"Though the number of students is not massive, the variety of students' needs makes it more complicated," stated one participant. Other participants shared this sentiment when they said that students in PPKI need more intensive individual support, especially students with behavioral disorders, communication disorders, and multiple disabilities. Teachers took this moment to state that students in PPKI classrooms have a density in such a way that they can't be measured by numbers but considered in terms of students' total support requirements.

### *Student Density and Classroom Management Challenges*

The results showed that student density affects teachers' management capability in PPKI class management. A vast majority of respondents indicated they had difficulties controlling students when student numbers increased in class. They were forced to focus on students in need academically, students exhibiting indiscipline, and those in need physically or emotionally. Teachers were struggling to focus on students in need academically, behaviorally, and physically/emotionally.

Some of the respondents gave examples of situations where minor disruptions were common when the teacher's attention was fixed on one student. In this case, teachers did not think they were able to focus attention on all students in class, therefore leading to disruptions in learning time. The problem was observed to be more prevalent in learning environments with hyperactive students or students with ADHD, where constant focus would be a challenge given the magnitude of students in class.

### *The Impact of Student Density on the Quality of Teachers' Teaching*

The analysis of data also indicated that student density significantly implies the quality of teaching of PPKI teachers. Most of the respondents expressed that they were constrained to implement individualized teaching when the number of students increased. According to teachers, planning different learning activities according to the ability level of students became more difficult, especially for those classes when teaching time was limited.

Some participants reported having to water down learning targets in order to implement them for the whole class, when in fact they knew they were not capturing the learning requirements of each learner in this way. In this respect, student density impacted negatively on teachers' creativity and flexibility in designing learners-centered teaching. As a consequence, teachers were of the view that they were impacted on in their teaching quality, not in terms of their capabilities but in relation to class structure.

### *Student Density and Implementation of Rancangan Pendidikan Individu (RPI)*

The application of *Rancangan Pendidikan Individu (RPI)* is a vital part of special education. But from the findings of this study, it can be concluded that the major factor which affects the application of RPI in class is student density. A larger number of students in a class make it difficult for respondents to apply RPI in class. As clarified by respondents, individualized planning, implementation, and follow-up in RPI become problematic when a teacher is dealing with a large number of students simultaneously. Moreover, in some cases, teachers have postponed some interventions or carried out RPI in general without thorough implementation because they have a large number of students to handle. Such a scenario has become a concern to teachers, considering they are conversant with the significance of RPI in facilitating students with special learning needs in their learning development.

### *Implications of Student Density on Student Learning*

Apart from impacting teachers, another direct effect of student density is related to learning in special need students. The respondents indicated that students with special needs are at a risk of not completing their learning when teachers are not in a position to assist them due to class overload. Some of these teachers indicated they have observed students making slower progress in class when compared to smaller class sizes.

Coming to learning, teachers have observed a reduction in hands-on learning and manipulative learning when the class size is large. The main reason for this is time and space to monitor students. As a consequence, learning shifts largely to desk work, which may not be ideal for all students with special learning requirements.

### **Discussion**

To represent this analysis, this discussion will focus on the results obtained from this research by linking these results with relevant literature available in this connection. Overall, based on results emerging from this research, it can be observed that such a student population in PPKI affects not only the teaching methodology adopted by teachers in these institutions but learning achieved by special students as well. Such effects can be termed not only technical but have a wide array of educational elements.

The results of this study, which indicate that teachers in PPKI classes regard the number of students in class to be moderate to high, support the contention that student density in special education classrooms can never be simply measured in numbers. In this respect, PPKI students have different learning requirements, behaviors, and support requirements, which make classroom management a rather handicapping factor. In support of this argument, Tomlinson (2014) puts forth her views on differentiated education in an emphasizing manner when she says that in differentiated teaching, a teacher would need sufficient space and time to cater to different students in class. With increasing numbers of students in class, a teacher can never implement student-centered education effectively.

The discourse on the results equally highlights that student density affects class management in a direct manner, in terms of controlling behavior in class and a seamless learning process. The implication of dense student population in class affects teachers' whiteness in a negative way since, in such a class, a teacher has to focus on too many students, especially when they are all under constant surveillance. Such a class is most likely to experience disruptions and time wastage in learning.

Apart from class management, student density is very important in determining teacher performance in teaching. Among the findings obtained from this research, it is evident that students pose a problem to the teacher in providing personalized teaching based on learning activities suitable for the level of students' abilities. This really goes against the fundamental principles of special education. As Vygotsky (1978) put forth in sociocultural learning theory, learning in class takes place effectively when teachers are in a position to support students in their Zone of Proximal Development. In a dense class, this scaffolding function will not work properly since teachers are unable to guide students closely.

Based on findings concerning the implementation of RPI for students with special needs, another factor proved to be a major influence in making special education programs successful is student density. RPI implementation is a task which requires meticulous planning and implementation in order to make sure that students are able to attain progress. When this task is undertaken by teachers with a heavy load of students in class, the implementation of RPI will become more broad in nature rather than in-depth. This is in contrast with an important requirement concerning guidelines for PPKI implementation through the Ministry of Education Malaysia in 2019 regarding personalized class handling.

The discourse on the results further reveals that student density affects students with special needs in a direct manner. Students with special needs have a high possibility of dropping out of the learning process if teachers are not in a position to support them all along. The above-mentioned study is in line with previous studies, which have established that students with special needs benefit from smaller class sizes in special education because they can have more meaningful encounters with teachers, consequently making them more engaged in learning and progress. With regards to this study, a reduction in hands-on learning because of student density demonstrates a direct influence of classroom structure on students' learning curve.

Apart from the findings in relation to teaching and learning, the results of this study are a manifestation of how student density affects Special Education teachers in terms of their professional welfare. As a matter of fact, being under pressure to cope with a heavy load of students, deliver RPI, and complete other documents can be considered a heavy work burden for Special Education teachers. Evidently, this scenario can be associated with Demerouti et al. (2001) Job Demand-Resources Model, which simply puts forth a possibility of a work environment with insufficient support resources leading to a consequence of emotional exhaustion and lower work motivation.

In this manner, it can be seen in this discussion on the findings of this research that it is important to put emphasis on the fact that student density in PPKI classes is a matter concerning structure because this affects completely a wide array of special education implementation. Inherent in this consideration is not simply an affirmation of existing literature but a necessity to review how teacher-student ratio implementation takes place in an actual school setting. Also, it can be important to focus on learning from PPKI teachers engaged in a direct class setting in a manner establishing a basis for consideration in improving effectiveness in special education programs offered in a school setting.

### **Conclusion and Implication**

This study was conducted to explore the experiences of Special Education teachers on issues related to the density of students in the class in the Integrated Special Education Program (PPKI) and its impact on the teaching and learning quality for special needs students. Through the findings, it is believed that student density is one of the important factors that influences almost every aspect of special education implementation in classrooms, ranging from classroom management, RPI implementation, quality of teaching by teachers and learning of students.

According to findings from the study, in as much as the proportion of students in PPKI classes may appear small, students with diverse needs make up a big challenge for teachers in terms of density. The teacher must manage students with different abilities, behaviors and needs for support in the small space and time available. As a result, this limits the ability of the teachers in the implementation of individualized teaching and providing focused attention to each student, as stipulated in the principles of special education.

Also, the study found that student density has a direct impact on the learning of students with special needs. When teachers cannot provide enough interaction and scaffolding, students who require continual support are in jeopardy of dropping out of the learning process. Moreover, when classroom management constraints further reduce the possibility of hands-

on and manipulative learning activities, it means that quality learning experiences for students may be directly affected by the structural factor of a classroom.

From a teacher professionalism perspective, this study indicates that student density has implications for the emotional well-being and workload of Special Education teachers. The demands of meeting teaching needs, behavior management, and RPI documentation in crowded classrooms heighten work stress and have the potential to affect teachers' motivation and job satisfaction. For this reason, addressing the issue of student density should not be solely considered as one of class management but rather as a systemic one involving organizational support and educational policy.

Based on the findings of this study, the following are some practical implications of the findings that can be identified. School administrators and education policymakers should rethink how teacher-student ratios in PPKI classes are implemented by considering not only the number of students but also the level of student support needs. The provision of added support like student management assistants, modification of learning spaces, and reduction of non-teaching workloads has the potential to help teachers implement teaching more effectively. Besides, training on classroom management and differentiated teaching is continuously required for professional purposes to support teachers in managing classes with challenging student densities.

Although this study gives a meaningful picture of the issue of student density in the context of PPKI, it has several limitations. The present study only involves a limited number of respondents and focused only on one district. Therefore, further studies are suggested to involve deeper school contexts and use in-depth interview methods or longitudinal studies to gain a more comprehensive understanding of how student density affects changes over time. In this regard, the study posits that student density is an influential factor that necessarily affects the effectiveness of carrying out the Integrated Special Education Program. It therefore calls for the voices and experiences of those classroom teachers who are directly involved in teaching to be given attention in efforts to strengthen the quality of special education at schools. It is also hoped that the findings of this study will contribute to academic discussions and serve as a basis to improve practices and policies of special education in Malaysia.

## References

- Alias, A., & Cheong, L. S. (2018). Cabaran guru pendidikan khas dalam menguruskan murid berkeperluan khas. *Jurnal Pendidikan Bitara Edisi Khas FPEND*, 11(1), 1–9.
- Australian Department of Education. (2017). *Review of the Disability Standards for Education 2005*. Australian Government Department of Education.
- Giangreco, M. F., Suter, J. C., & Doyle, M. B. (2010). Class size and teacher workload with students with disabilities: Implications for inclusion. *Education and Training in Autism and Developmental Disabilities*, 45(1), 127–143.
- Gresham, F. M., & MacMillan, R. (2017). Social skills interventions for children with autism spectrum disorder: A meta-analysis. *Journal of Autism and Developmental Disorders*, 47(11), 3501–3517. <https://doi.org/10.1007/s10803-017-3282-1>
- Idris, A., Ismail, S., & Roslan, S. (2016). Cabaran dan penyelesaian perkhidmatan sokongan pendidikan khas di Malaysia. *Jurnal Pendidikan Malaysia*, 41(2), 1–10.
- Mastor, S. R., Mohammad, S., & Razali, N. (2017). Kesediaan guru pendidikan khas dalam melaksanakan pengajaran dan pembelajaran bermakna. *Jurnal Penyelidikan Pendidikan*, 19(1), 1–12.
- Sarimin, M. H., & Abdul Rahman, M. N. (2019). Keberkesanan latihan dalam perkhidmatan terhadap pembangunan profesional guru pendidikan khas. *Jurnal Kurikulum dan Pengajaran Asia Pasifik*, 7(1), 1–12.
- Jouflin, S., & Mohd Yasin, M. H. (2022). Persekitaran fizikal pembelajaran dan indeks keselesaan guru program pendidikan khas integrasi daerah Kota Kinabalu. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, 7(1), 59–72. <https://doi.org/10.47405/mjssh.v7i1.1234>
- Md. Noordin, S. S., & Ismail, A. (2017). Tahap sokongan pentadbiran terhadap pelaksanaan program pendidikan inklusif di sekolah rendah. *Jurnal Pendidikan Malaysia*, 42(2), 1–10.
- Kementerian Pendidikan Malaysia. (2020). *Peramalan kemasukan murid berkeperluan pendidikan khas*. <https://www.ftsm.ukm.my/v5/file/research/technicalreport/PSFTSM-2020-006.pdf>
- Kementerian Pendidikan Malaysia. (2019). *Buku panduan pengoperasian program pendidikan khas integrasi*. <https://anyflip.com/dxvte/atnp/basic>
- Jabatan Pendidikan Negeri Pahang. (2018). *Soalan lazim sektor pendidikan khas*. <https://jpnpp.moe.gov.my/soalan-lazim/sektor-pendidikan-khas>
- Kementerian Pendidikan Malaysia. (2013). *Pelan pembangunan pendidikan Malaysia 2013–2025*. Kementerian Pendidikan Malaysia.
- Kementerian Pendidikan Malaysia. (2013). *Peraturan-peraturan pendidikan (pendidikan khas) 2013*. Kementerian Pendidikan Malaysia.
- Kementerian Pendidikan Malaysia. (2016). *Kurikulum standard sekolah rendah pendidikan khas (KSSR PK) semakan 2017*. Kementerian Pendidikan Malaysia.