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CONDUSIVE LEARNING ENVIRONMENT: A STUDY ON CLASSROOM FACILITIES FOR SPECIAL EDUCATION

Nurul Anis Humaira binti Nadzri¹, Nur Fadhilah binti Bahardin^{1*}

¹Department of Built Environment Studies and Technology, College of Built Environment, Universiti Teknologi MARA Perak Branch, 32610, Seri Iskandar Perak, Malaysia

anisnadzri00@gmail.com, *nurfa644@uitm.edu.my

ABSTRACT

The classroom environment plays an important part in establishing an effective learning activity. It is critical to optimise classroom facilities for special education in order to build inclusive educational settings. Schools may establish settings that enable special education students to succeed academically, socially, and emotionally by prioritising accessibility, integrating assistive technology, addressing sensory demands, supporting cooperation, and providing proper teacher training. These initiatives help to establish a society that values diversity and provides equal chances for all kids to achieve and attain their full potential. Problem faced by the special education students are limited disabled friendly facilities and lack of teaching aid. Insufficient multimedia materials provided for the student is also one of the problems faced by minorities. Furthermore, the objectives of this study are to identify the classroom facilities standard for special education. For this study, a qualitative method was used as the method to obtain data from the respondents which is thru an online questionnaire. An online questionnaire is being conducted to 19 respondents, which consist of respondents from teachers, assistant headmaster, headmaster from Sekolah Kebangsaan Tunku Besar Tampin, Sekolah Kebangsaan Tengku Zainun, Sekolah Dr Sulaiman and Pegawai Pendidikan Daerah (PPD). The data were tabulated, interpreted, and analysed using Statical Packages for Social Science (SPSS) version 26. Overall, it can be concluded that the infrastructure of school classrooms and PPKI in this country still needs improvement and improvement according to a standard specification issued by the responsible body.

Keywords: Special education classrooms, facilities standard

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INTRODUCTION

The special education program is a program specifically for students with special needs who study in special education classes (Hanafi,2013). There will be a special classroom and the special classroom those that provide an education for children with a special educational need or disability. Physical facilities such as classrooms, laboratories, special rooms and other facilities and a conducive school environment is the most basic need for provide optimal learning opportunities for all students including for special students.

Classroom atmosphere has a major role in producing a good learning activity. Therefore, before special education classrooms are constructed or modified, a number of factors must be taken into account. Small classrooms will create a dull and ineffective learning atmosphere. The design of the special education classroom should take into account the needs of the students. For example, classrooms for special education program should have built in latrines, allow access for children with physical disabilities, and furniture with storage space of teaching aids. This is because classrooms that are appropriate, comfortable, cheerful and attractive can foster interest in learning. (Hanafi, 2013).

According to (Hanafi,2013) for the purpose of effective teaching and learning process, layout a classroom required at the primary school level is quite different compared to at a higher level. The physical atmosphere in the room degrees especially the seating arrangement plays an important role. An effective arrangement allowing the teacher to easily move closer to the students. Furniture arrangement such as computers, cupboards, large tables for comfortable group work and tidy will create a cheerful atmosphere for students to go through the process learning.

PROBLEM STATEMENT

There are still a lot of classrooms in Malaysia that have been constructed or remodelled without taking special education kids into account. There are certain organisations that are accountable yet did nothing about it (Hanafi, 2013). Physical obstacles are created by a lack of access, which burdens PWDs, the temporarily ambulant handicapped, and the elderly. These obstacles eventually deterred student with disabilities go to school since they lack access to continuity, particularly from the entry, the restrooms, and lastly to the classroom. In Malaysia, accessibility of the built environment has been a persistent issue since legislative implementation and enforcement for PWD accessibility are not adequately integrated and executed by the Local Government in government buildings, public buildings, and public spaces.

The class sizes in a number of schools which are considered relatively small to meet the needs of Program Pendidikan Khas Integrasi (PPKI) students since some of these special children feel pressured to be in a small space. The method of dividing a classroom into three to four classes to limit the number of students in a class does not meet the real purpose of a comfortable class size for them said parents of autistic children (Kosmo, 2022).

Other problem faced by the special education students are limited disabled friendly facilities and lack of teaching aid. Insufficient multimedia materials provided for the student is also one of the problems faced by minorities. (Hanafi, 2013)

The physical environment has an impact on people's productivity. According to (Chidindi, 2012) small classrooms will create a dull and ineffective learning atmosphere. In order to ensure the effectiveness of teaching and learning, students with special needs need to feel comfortable, safe and controlled to receive lessons. Therefore, a conducive environment and infrastructural facilities need to be created according to the needs of the students.

Following that, the built environment is based on the context for human activities and interactions, and it must encourage their freedom and become barrier-free. Furthermore, all other public facilities, such as school structure must allow complete access to users of varying abilities to assist their ease of use. At this moment, the only available rules, and laws in support of accessibility consideration are Malaysian Standard legislation.

Because of architectural and layout barriers, human beings with disabilities had been denied get admission to social, cultural, economic, and civic affairs. (Azmal, 2017). Thus, the responsible authorities must ensure provision of facilities to the disabled in public premises known as "disabled-friendly". Basic disabled-friendly facilities should be established for them and are easily accessible and safe.

RESEARCH QUESTION

The research question for this research is what are the classroom facilities based on the planning standards of school development for special education?

Objective

The objective of this research is to justify the classroom facilities based on the planning standards of school development for special education.

Scope of Study

The focus of this research is on classroom facilities for special education in public school with special education at Tampin, Negeri Sembilan. The criteria of school that selected is school that have 1 to 2 classes of special education with range 5 to 20 students.

The study will be conducted at Tampin, Negeri Sembilan. The school that will be involve are Sekolah Kebangsaan Tunku Besar Tampin, Sekolah Kebangsaan Tengku Zainun and Sekolah Kebangsaan Dr. Sulaiman. The study will be carried out to determine whether the selected case study met the requirement based on the planning standards of school development.

STATEMENT SIGNIFICANCE

This study is carried out to identify the classroom facilities for special education based on the planning standards of school development This study also will be advantageous to gaining knowledge about the importance of classroom facilities for special education. Besides that, it is to increase awareness of how the importance of classroom facilities at rural school for student with disabilities to have an optimal learning and environment opportunities like all students.

LITERATURE REVIEW

Definition of Classroom

Classroom refers to a specially designed space to teach the students without any interruption. Students are expected to be obedient and quiet in the classroom. The classroom also uses an adaptive learning technology method to enhance better training and education for the students. It makes it the students with the status deferred admissions easy to catch up with the course. Adaptive learning in a classroom is a method of great erudition. Beside that, classroom also a place which students interact with one another (Applebee et al., 2003).

Characteristic of Classroom

An environment that is conducive to learning physically is one that is secure, orderly and clean, well ventilated, roomy and adequately lit, acoustically sound, has good air circulation and an appropriate temperature, as well as other environmental factors that do not interfere with the child's mental health. Physical and psychological components are two of the most important elements of the learning environment (Fraser, 1994 and Kilgour, 2006). All physical elements, including as classrooms, instructional supplies, learning facilities, and the outer environment, both within and

outside the classroom, are considered physical components. The psychosocial component is connected to the interactions that take place between students, instructors, and their surroundings. These two elements work together to create the learning environment and have an impact on the learning process that takes place in it.

DEFINITION OF FACILTIES

Facilites is a something that have been designed, built, installed and to serve a specific function affording a convenience or service. Facilities also defined as a place, building, or equipment used for a particular purpose or activity. Facilities are the tangible tools that make teaching and learning effective. Along with furniture, consumables, energy, water, visual and audio-visual aids, tables, desks, seats, play areas, storage space, and restrooms, they also feature blocks of classrooms, labs, workshops, and libraries. (Asiyai, 2012).

Characteristic of Facilities Design Classroom for Special Education

Based on The Architect's Handbook, (2002) the characteristic of facilities design classroom for special education Numerous students in special schools may require more teaching and support services, and meeting their educational requirements may put extra strain on other parts of the institution. Based on The Architect's Handbook, (2002) the characteristic of facilities design classroom for special education must be consider on several aspect which are for teaching spaces, these must be substantial enough to accommodate additional persons working in the area in addition to the teachers. Every class need to have a unique class base. Typically, groups consist of six to 10 students. Additionally, there should be offered specialised teaching facilities with practical areas for science, art, cooking, and design technology (the size of which will depend on the students' ages).

DEFINITION OF SPECIAL EDUCATION

Hallahan and Kauffman, (2020) stated that Special Education means teaching specially designed to meet the unique needs of a person extraordinary children. Special materials, teaching techniques, or equipment and/or facilities are required. Culatta and Tompkins (2003) states that Special Education is an individualized pattern of instruction designed for meet the educational needs and relate to the students less effort Special Education provides learning opportunities that are not available provided in a standard or common curriculum or services normal school. Both definitions above emphasize the characteristics of special education, namely:

- a) A specially designed lesson plan
- b) Individual lesson plans
- c) Special ingredients
- d) Special teaching techniques
- a) Special facilities / equipment

Types of Special Education Disabilities

In general, disabilities or problems experienced by children with special needs can be categorized as follows:

- a) Hearing problem
- b) Sight problem
- c) Learning problem
- d) Attitude problem
- e) Speech problems
- f) Spasticity (cerebral palsy)
- g) Mentally retarded
- h) Limb disability

Planning Standards of School Development for Special Education

The proposition of Malaysian Ministry of Education (MoE) is to practices the principle of democratization Education in planning education for all groups of children. All children regardless of race, background, economic status and disabilities have the right to have access to inclusive education disabled children. They have an equal right to study and play in a barrier-free learning environment). Based on MoE, schools need to take into account several aspects to ensure the class of PPKI is opened to managed and ready for implement the program. Furthermore, aspects that need to be emphasized during the opening class of PPKI are must consider the class safety for the student, an appropriate location and the minimum area for one class is one or one half bay (1 ½ bay).

To ensure that these selection factors are complied with, the JPN need to carry out the process of upgrading or renovating the room existing degrees. It is recommended that Special Education classes must be open at strategic location and must be on the ground floor of the building schools and have disabled-friendly facilities. This is intended facilitate the movement of special education students. Beside that, the teacher needs to identify and make sure the class is suitable for used as a P&P place for the student. The things that need to identify are:-

- Learning angles in class can be provided based on student needs such as kinesthetic angle, fine motor angle, aquarium and other angles that are thought of need.
- ii) Learning charts and models as well objects can be exhibited in class according to P&P.
- iii) Some special rooms that need to be given priority are such as kitchen room, self-care room, life skills room, room audio visual, recovery/intervention room and guest room.

Students with special needs need equipment and aids learning that is suitable for P&P sessions. These requirements are different according to the program category to be opened. Among the requirements the necessary basics are mandatory furniture and equipment such as chairs, tables, shelves/cabinets, media equipment, ICT equipment, equipment kitchen, sports equipment, sanitary equipment and appliances self management.

RESEARCH METHODOLOGY

Research Design and Strategy

Data for this study will be collected through a google form which is questionnaires to the special education teachers. The survey instrument was designed by the researcher to obtain information about the classroom facilities for special education at public school in Tampin, Negeri Sembilan. Google form was selected as the most time and efficient method of collecting this data.

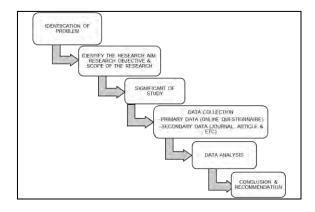


Figure 1: Flow Chart of Research Methodology

Sampling and Case Study

This case study will conduct at Tampin, Negeri Sembilan. The characteristic between all the case study is there are special education with the same disabilities and the number of students in a class is also same. This case study is made in a rural area to identify whether the facilities in their special education classes are in good or bad condition.

In this research, the questionnaire will be distributed to the school that have special education program which are SK Tunku Besar Tampin, SK Tengku Zainun and also to Sk Dr. Sulaiman at Tampin, Negeri Sembilan. Case study will be conduct at Sekolah Kebangsaan Tunku Besar, Sekolah Kebangsaan Tengku Zainun and Sekolah Kebangsaan Dr Sulaiman which is locatedat Tampin, Negeri Sembilan. This school is located in the countryside which is implementing the same program for special education.

Data Collection

Structured questionnaire was developed, which covering as much as possible the items that might be pointed to achieve the objective of the study. An online survey which is questionnaire that create by google form were used as a primary data in this research to the selected respondents which are special education teachers. The researcher also used secondary data as a method to collect data, in such situation that primary data will no longer to be used and the research need to be confine with these secondary data. There a several sources that used by researcher as a secondary data, which are database, journals, and internet articles.

FINDING

Data Analysis

The questionnaire has been disseminated to 19 respondents involving special education teachers, headmaster form each school which are Sekolah Kebangsaan Tunku Besar Tampin, Sekolah Kebangsaan Tengku Zainun, Sekolah Kebangsaan Dr Sulaiman and Pegawai Pendidikan Daerah Tampin. It is distributed through online platform such as WhatsApp. The data analysis from the questionnaire for this study will be described in detail according to the section of the question.

Objective of the study: To justify the classroom facilities based on planning standards of school development for special education.

The method that has been used is through observation and distribution of questions to teachers, assistant headmaster, headmaster from SK Tunku Besar Tampin, SK Tengku Zainun, SK Dr Sulaiman and Pegawai Pendidikan Daerah. Based on the questionnaire provided, the data shows that all respondents gave the same answer regarding to determine classroom facilities based on standards school development planning for special education. All respondents answered no to the given question because there is no standard applied for their special education class facilities.

Table 1: Data for question 1

Q1: In your opinion, do the tables and chairs in the special education class meet the standard criteria for special education students?					
	Frequency Percent Valid Cumulative				
				Percent	Percent
Valid	No	19	100.0	100.0	100.0

Table 2: Data for question 2

Q2: In your opinion, does the learning space in the special education class meet the standard criteria for special education students?					
		Frequency	Percent	Valid	Cumulative
				Percent	Percent
Valid	No	19	100.0	100.0	100.0

Table 3: Data for question 3

Q3: In your opinion, are the facilities for learning in special education classes sufficient and meet the standards for special education students?					
		Frequency	Percent	Valid	Cumulative
				Percent	Percent
Valid	No	19	100.0	100.0	100.0

Table 4: Data for question 4

Q4: In your opinion, does the environment in the special education class meet the standard criteria for special education students?					
		Frequency	Percent	Valid	Cumulative
				Percent	Percent
Valid	No	19	100.0	100.0	100.0

Table 5: Data for question 5

Q5: In your opinion, is the space provided in the special education class sufficient and meets the standard criteria for special education students?					
		Frequency	Percent	Valid	Cumulative
				Percent	Percent
Valid	No	19	100.0	100.0	100.0

CONCLUSION

Overall, the result of the study shows that special education classes in all three schools were found not to meet the standard of special education class facilities because there were no standards provided. Therefore, the facilities in the special education classes are provided based on the needs of special education students and not based on specific standards that have been set. Furthermore, most of the teachers think that the facilities of special education classrooms in schools needs to be upgraded and given attention because the average of special education students have to study in narrow classrooms and lack facilities. The provision of equal teaching and learning opportunities must be held including for students with special needs to enable them to be independent and develop their respective potential. It is essential to optimise classroom facilities for special education in order to build inclusive educational settings. Schools may establish settings that enable special education students to succeed academically, socially, and emotionally by prioritising accessibility, integrating assistive technology, addressing sensory demands, and have supporting cooperation. These initiatives help to establish a society that values diversity and provides equal chances for all kids to achieve and attain their full potential.

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REFERENCES

- Applebee, A. N., Langer, J. A., Nystrand, M., & Gamoran, A. (2003). Discussion-based approaches to developing understanding: Classroom instruction and student performance in middle and high school English. American Educational Research Journal, 40(3), 685–730.
- Asiyai, R. I. (2012). Assessing School Facilities in Public Secondary Schools on Delta State, Nigeria.
- Chidindi, J. (2012). Creating enabling environment for inclusion of students with developmental disabilities.
- Culatta, R. A., Tompkins, J. R. & Werts, M. G. (2003). Fundamentals of Special Education: What Every Teacher Needs to Know (2nd ed.).
- Fraser, B.J. (1994). Handbook of Research on Science Teaching and Learning. New York: Macmillan.
- Hallahan, D. P., Pullen, P. C., Kauffman, J. M., & Badar, J. (2020). Exceptional learners. In Oxford Research Encyclopedia of Education.
- Kilgour, P.W. (2006). Student, teacher and parent perceptions of classroom environments in streamed un-streamed mathematics classroom. Ph.D. Thesis. Curtin University of Technology, Sydney, Australia.
- Kirk, S.A. etal, "Educating Exceptional Children" (7th ed.), 1993 MALAYSIA, B. P. (2015). Buku Panduan Pengoperasian Program PendidikanKhas Integrasi.
- Mohd Hanafi Mohd Yasin, H. T. (2013). "Current Special Education Classroom And Its Limitations Towards Teaching Process". Asia Pacific Journal of Educators and Education, Vol. 28, 1–9.
- Musa, S. H. (2021). Something important for special education In Malaysia. Turkish Journal of Computer and Mathematics Education (TURCOMAT), 12(11), 5211-5216.

- Nelson C. Brunsting, Melissa A. Sreckovic & Kathleen Lynne Lane (2014). Special Education Teacher Burnout: A Synthesis of Research from 1979 to 201. Education and Treatment of Children, Volume 37, Number 4, November 2014,pp. 681-711.
- Norizan Abdul Ghani, Zahidah Anisah Mohamad & Che Wan Takwa Che Wan Abu Bakar (2013). Teachers' Challenges in Educating Special Children in Special Classes of Three Selected Primary Schools, Kuala Terengganu, Terengganu, Malaysia. Advances in Natural and Applied Sciences, 7(3):284-291, 2013.
- Utaberta, N., Sabil, A., & Niya, M. D. (2018). The Evaluation Of Universal Design And Accessibility For People With Disabilities In Masjid Putra By Using Malaysian Standard Of Ms 1184: 2014, "Universal Design And Accessibility In The Built Environment-Code Of Practice.". International Journal for Studies on Children, Women, Elderly And Disabled, 4, 185-190.

Universiti Teknologi MARA Cawangan Perak Kampus Seri Iskandar 32610 Bandar Baru Seri Iskandar, Perak Darul Ridzuan, MALAYSIA Tel: (+605) 374 2093/2453 Faks: (+605) 374 2299



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