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ENHANCING SEN STUDENT ENGAGEMENT IN THE CLASSROOM WITH THE LEARNING STATION ACTIVITIES

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Abstract

The purpose of this research is to determine whether Learning Station Activities (LSA) can increase Special Education Needs (SEN) student engagement in the classroom, thereby increasing the levels of numeracy, literacy and student attendance. Two SEN classes in Ayer Lanas Primary School, Jeli (sixteen students) and three SEN classes (thirteen students) in Ayer Lanas Secondary School, Jeli were chosen as the sample of my research. All the students involved are Slow Learners. Community Professional Development (CPD) and Professional Learning Community (PLC) were carried out with the teachers of both schools to discuss the progress of the LSA, to share their best practices and also to discuss any challenges that they faced during the implementation of the LSA. The research was carried out for six months. Data were gathered through observation, survey, assessment (pre- and post-tests) and student attendance collection. Research findings showed that the LSA was able to increase SEN student engagement in the classroom. SEN students (as Slow Learners) were more engaged in their lesson when they are involved in play-based learning activities. Data also showed that the numeracy level, literacy level, and student attendance increased after doing the LSA. Therefore this research will help SEN teachers to plan a more structured Learning Station module to enable students to carry out the LSA from a lower level (according to their level of achievement) until they achieve the higher levels with more challenging tasks. LSA can also be done with low-performing students (in the mainstream) in the primary school and in the lower form of secondary school as their intervention program.

Keywords: LSA, SEN students, slow learners, numeracy level, literacy level, CPD, PLC

Introduction

Active learning is an educational environment that copes up with the international changes and the huge amounts of information (Ali, 2011). One of the most important strategies that depend on the active learning is Learning Station Strategy which was described by Jonse (1997) as one of the recent teaching methods which represent the diversity and distinction in teaching methods as well as the different teaching strategies where the traditional class turns to some tables that the educators rotate around according to specific system. The learning stations became a well-known model in the 1960's and 1970's, based on Montessori at the beginning of the 1900's, then shaped by Dewey's educational philosophy, and then influenced by Piaget and Vygotsky's constructivist views (Aydognus & Senturk 2019).

In special education, students with disabilities or special education need student require different approaches and techniques (Jomtien Statement, 2011). The implementation of a special education curriculum enables teachers to modify the methods or techniques of teaching and learning, teaching time and teaching aids to achieve the aims and goals of special education (Danilo, 2019). It is to ensure that SENP are provided with an environment that allows them to be educated effectively.

In Malaysia, the Ministry of Education (MOE) has introduced the method of learning stations to increase the teaching skills of special education teachers for learning disabilities students (Manual Book, Station Teaching and Learning Special Education, Learning Problems, Primary School and Secondary School, 2003) in (Hanafi *et al* 2014). According to Jannelle Cox (2019), learning or rotation centres are places where students can self-direct their learning—usually in pairs or small groups—within the classroom. These designated spaces allow children to work collaboratively by accomplishing activities given an allotted amount of time and rotating to the next centre after they have each completed a task. Learning centres also provide children with opportunities to practice hands-on skills and social interaction. Teachers can differentiate content, process, and/or product for students (Tomlinson 1999) (Danilo V. & Rogayan Jr., 2019). Hence, it is the role of the teachers to provide appropriate and effective teaching and learning process that suit the ability of the SEN students.

The Ministry of Education (MOE) plays a very important role in bringing about changes in education in Malaysia. The Malaysian Education Blue Print 2013 (PPPM) 2013 – 2015 is a very good government policy for providing equal education to all students in Malaysia (Siti Rubiyani & Abd Aziz, 2018). The mission of education system is "leave no child behind". This is in line with the implementation of the "Zero Reject Policy" for SEN student implemented in 2019. This means that the teacher needs to make sure none of his or her pupils are left out of the learning process. They should be assisted in meeting the learning and performance standards in accordance with the standards set by the MOE (Khalid, Ahmad & Hamdan, 2015). They are only able to pay attention or focus in a short period of time on teaching and learning activities, often drowsy, easy to forget and embarrassed to ask questions (Endang, 2017).

Objectives

The primary aim of the study was to determine whether LSA can increase SEN student engagement in the classroom. The objectives of this research are:

- a) To identify the relationship between SEN students attendance with Learning Station Activities
- b) To determine whether there is a relationship between SEN students' score in Malay Language subjects after implementing LSA
- c) To determine whether there is a relationship between SEN students' score in Mathematics subjects after implementing Learning Station Activities

Research Question

- a) What is the relationship between Learning Station Activities with SEN students attendance?
- b) What is the relationship between Learning Station Activities with SEN students' score in Malay Language subject?
- c) What is the relationship between Learning Station Activities with SEN students' score in Mathematics subject?

Methodology

Sixteen students from Ayer Lanas Primary School were chosen as the sample of my research. CPD was carried out with the SEN teachers from the school to discuss with them the LSA (across the curriculum). PLCs were also carried out to further discuss the progress of the LSA, to share their best practices and also to discuss any challenges that they faced during the implementation of the LSA. Focused Lesson Observation was also carried out with the SEN teachers of the school and discussed with them how to prepare the LSA for the Malay Language and Mathematics lessons. Teachers prepared a number of activities at different stations. The activities vary from a simple to a more difficult task (differentiation strategy). Students were grouped in pairs and were placed at different stations according to their abilities (they are not placed in a group of four since there are only about six or seven students in one class and sometimes only four students are present). The low ability students will start at Station one at which the teacher had prepared a simple activity for them while the more able students will be at Station two or three (more difficult task). The teacher assistant will support the students at Station one while the SEN teacher will be at Station two or three. Most SEN students need one-to-one support from the teacher for them to be more engaged in the classroom. When students have successfully carried out the tasks at the respective stations, they will go to the next station for a more challenging activity. Teachers need to prepare a number of stations since the more able students will progress to the next station faster than the less able ones.

Data Collection

Based on the researcher observations, SEN students (as Slow Learners) will be more engaged in their lesson if they are involved in play-based learning activities. Pre-test for Malay Language and Mathematics were conducted to assess their literacy and numeracy level. The next stage was to review and study the outcome of students while conducting LSA. The final stage of data collection was the Post-test to assess the SEN student achievement after doing the LSA. Student attendance was also examined to see whether there is any improvement in their attendance after doing the LSA.

Literature Review

Learning in stations is a student-centered method that teaches bringing forward what previous group did by whole class's contributing to each stage-station (Gözütok, 2007). Learning Station Method is a teaching and learning method equipped with effective teaching materials that emphasize "hands-on experience" and learning through play. This method is an alternative method to the traditional teaching and learning method that is currently being implemented in Special Education Programmes in Malaysia as it provides students with opportunities for experiential learning and is also conducted according to students' individual ability and interests. (Yasin *et al.* 2014).

The Learning Station Method (LSM) emphasises learning according to level of ability, intelligence, skills, interests and abilities and also provides opportunities for students to learn through experience and prior knowledge; all this is very helpful in enhancing students' interest and skills (Mohd Hanafi *et al.*, 2014). In addition, the angle or space devoted to a particular subject for students and teachers with supporting materials including teaching aids, furniture and equipment according to station is also a contribution in the implementation of LSM in schools. The LSM is a form of course processing in which students perform a series of learning activities in specific areas created in the learning-teaching process (within the classroom or outside the classroom) by working individually or in groups with the help of specific guidelines created by the teacher or student teacher in order to learn or review a topic (Benek & Kocakaya, 2012).

The first step in creating a great learning centre is to figure out what skills you want your students to learn or practice. The following tips can be used when setting up the classroom with learning or rotation centres (Jannelle Cox, 2019):

Groups should not exceed five students - This makes it possible for students to complete tasks and move easily through the centres.

Get creative with the setup - Don't be afraid to use rugs, libraries, and even hallways for your centres. Students are flexible and enjoy experiencing learning in new ways and from new angles, so don't hesitate to have some working on the floor and some standing up if the activities allow for this.

Keep materials organized - It's not enough to just keep them in one place, you also need a system for making materials easy for students to find and keeping the supplies together after they have been used. Utilize baskets, folders, and totes for easy organization and efficiency.

Make a schedule - Assign each student a group to rotate with and centre where they will begin and end. Give each group and centre a colour/shape and number to help children know where to go next.

Provide clean-up time - After each centre is completed, give students time to return materials to their places for the next group and a place to turn in their completed centre work. This makes it easier to collect all finished work at once.

Findings

There were 16 primary school SEN students involved in this research. This study was carried out for six months.

Table 1

Percentage of Student Attendance (April – September 2019)

Month	SEN CLASS A	SEN CLASS B
April	86.2	87.3
May	86.5	87.5
June	87.2	87.8
July	88.2	88.5
August	89.9	90.3
September	90.09	91.02

Figure 1 Graph of SEN Student Attendance

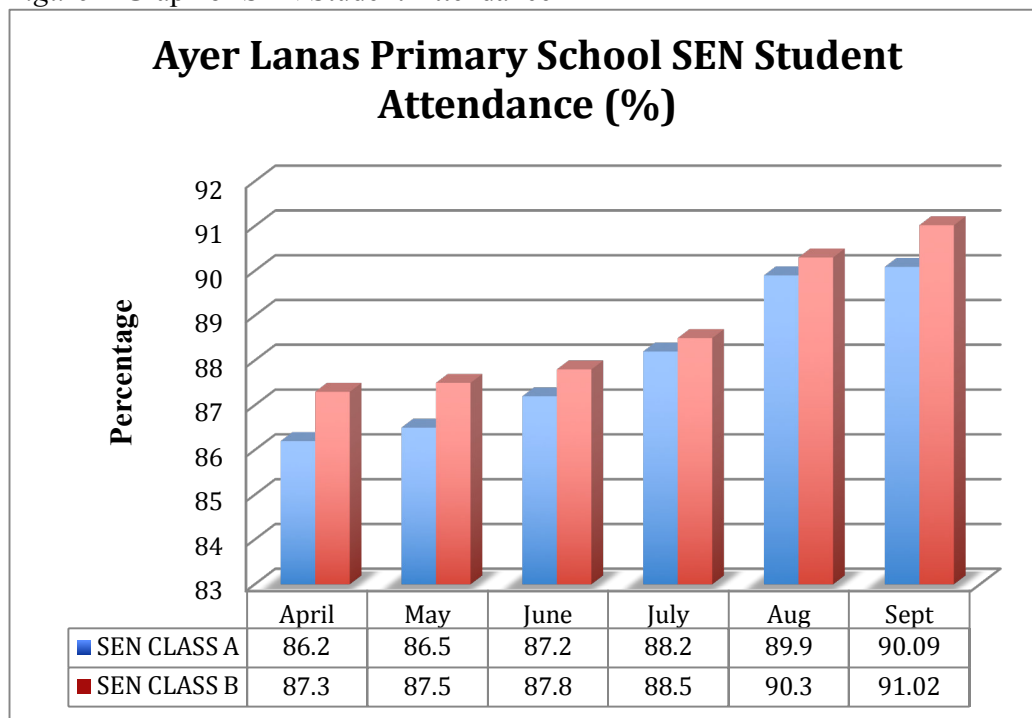


Table 1 dan Figure 1 illustrate the percentage of Ayer Lanas Primary School SEN student attendance from April to September 2019. After the implementation of the LSA, the attendance of the students increased by 2.54%.

Figure 2 Graph for Pre- And Post-Test For Malay Language Subject

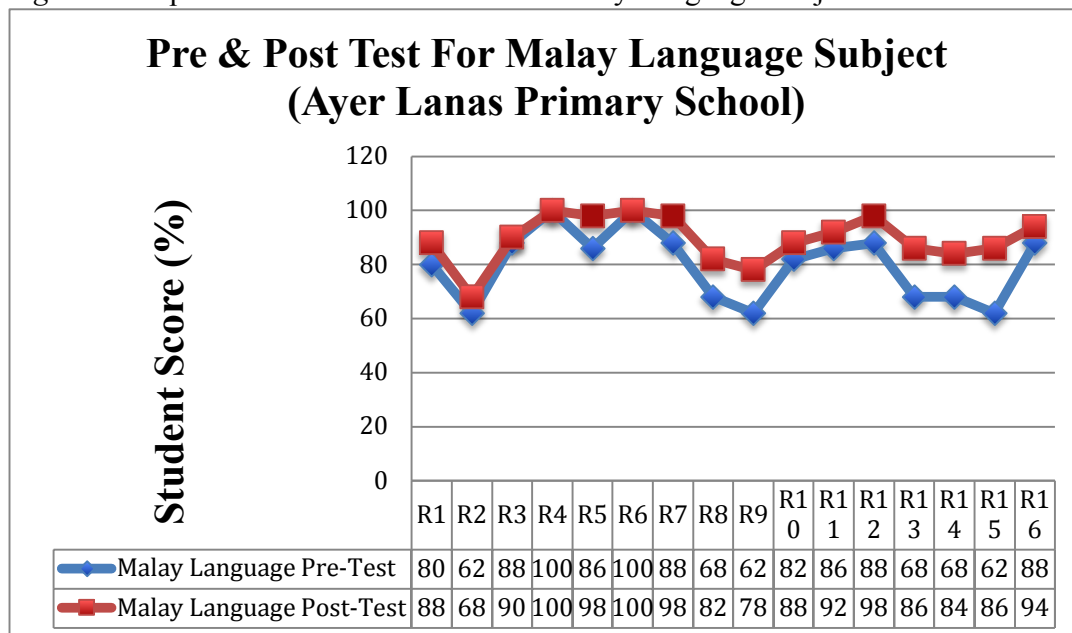
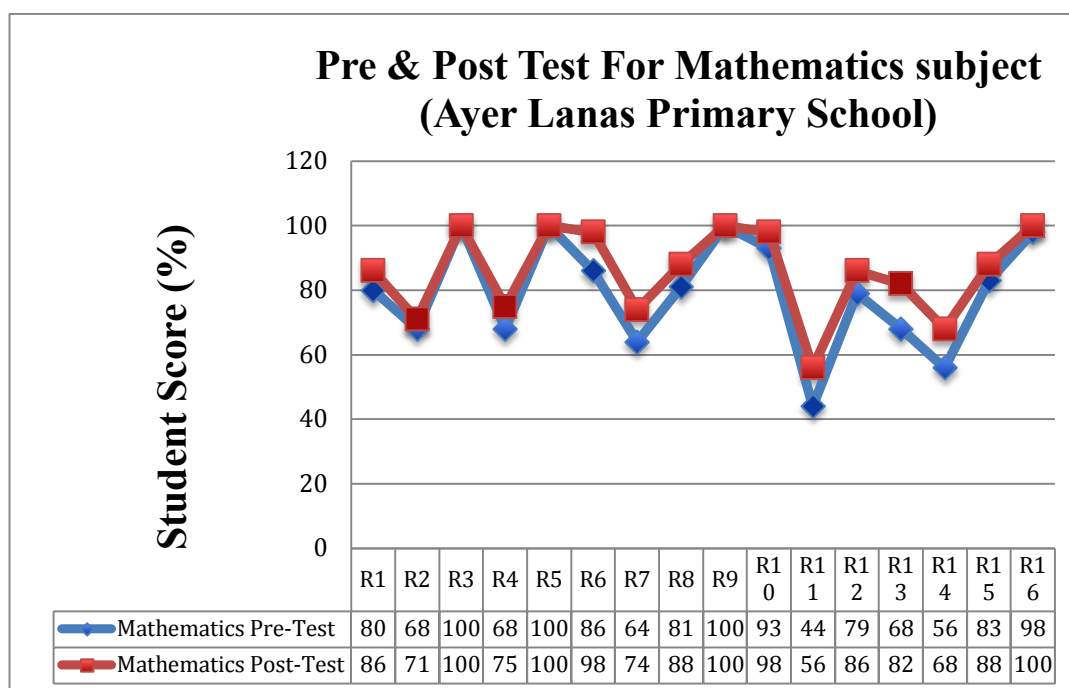


Figure 3 Graph for Pre- And Post-Test For Mathematics subject



The graph shows changes in the percentage of SEN students scores between the pre- and post-tests in Malay Language subject (Figure 2) and Mathematics subject (Figure 3). Both graphs show that there is an increase in the scores for both subjects, implying that students understand better the subjects after implementing LSA.

Table 2
Paired Sample t-Test : Mean

	Subjects	Mean	N	Std. Deviation
Pair 1	MLPre	79.75	16	13
	MLPost	89.375	16	8.8459
Pair 2	MathPre	79.25	16	16.91351
	MathPost	85.625	16	13.6815

Table 3
Correlation of Malay Language Subject for pre & post test

	Item	MLPre	MLPost
MLPre	Pearson Correlation	1	.877**
	Sig. (2-tailed)		0
	N	16	16
MLPost	Pearson Correlation	.877**	1
	Sig. (2-tailed)	0	
	N	16	16

** Correlation is significant at the 0.01 level (2-tailed)

From the results shown in Table 2, the mean for Malay Language post-test score was approximately higher by 10 than that of pre-test while for Mathematics, it was higher by 6 than that of pre-test. The Pearson correlation between pre- and post-tests (Table 3) shows good and positive correlation with the value of $r = 0.877$, with a significant value of

< 0.01 . This indicates that the SEN student performance in post-test was better than pre-test after implementing LSA.

Table 4
Correlation of Mathematics Subject for pre & post test

	Item	MathPre	MathPost
MathPre	Pearson Correlation	1	.976**
	Sig. (2-tailed)		0
	N	16	16
MathPost	Pearson Correlation	.976**	1
	Sig. (2-tailed)	0	
	N	16	16

** Correlation is significant at the 0.01 level (2-tailed)

From the results shown in Table 4, the Pearson correlation between pre- and post-tests shows very good and positive correlation with the value of $r = 0.976$, with a significant value of < 0.01 . This indicates that the SEN student performance in post-test was better than pre-test after implementing LSA.

Discussion

After the implementation of LSA, SEN students were happy and enjoyed participating in the station activities. They worked in pairs and were able to collaborate with each other. Teachers were able to carry out differentiation strategy with LSA. The students were more active and were able to respond to teacher questions. Students became more engaged in their lesson and were more confident to present their work in front of the class. According to Hanafi *et al.* (2014), the Learning Station Method made students feel more appreciated and this indirectly raised their self-confidence.

The study showed that the literacy level of students in the school increased. This is also in line with the findings of MOE (2011) on the effectiveness of the reading station method for students who are weak in reading. It proved that the station method was able to improve the reading skills of a target group.

The SEN students also joined the school functions like the weekly assembly, School Co-curriculum Day, School Sports Day and District Scout Camping. They also sell their bakery and agricultural products to the mainstream students. They were not shy anymore to socialize with other pupils. This is in line with the study by Hanafi *et al.* (2014) that suggested that special students should be given assignments in accordance with their interests and abilities so that learning becomes fun for them. Studies by Zainuddin *et al.* (2004) showed that life skills provides basic skills to SEN students as well as to educate them to be independent and to grow as useful citizens.

SEN students enjoyed doing the LSA especially when they were doing play-based learning activity. This finding is in line with the study done by Hanafi *et al.* (2014) that shows that for students in the category of Slow Learner, learning while playing can increase their interest in learning. When interest can be nurtured, it becomes easy for teachers to form the attitudes of their students. A study by Lee Tze Kie *et al.* (2019) proved that Play Learning games using Gold Balls help SEN students improve addition skills within 1 – 10 as recommended in the 21st century learning.

Data collected in this study showed that the LSA increased student engagement in the classroom, increased the rate of literacy and numeracy level and also increased in student attendance. This is in line with the study conducted by Aydogmus & Senturk

(2019) which showed that the learning stations technique is more effective at the primary education level might be due to the developmental characteristics of this age group because this technique helps students to develop more intimate relations with their peers by creating a genuine gaming atmosphere. Hence, this study will help the SEN teachers to plan and implement more effective and appropriate LSA module.

Limitations

This research only covered one school in Jeli, Kelantan, Malaysia since it was initially an action research to determine SEN student engagement in the classroom using the LSA. The research was only confined to two subjects, which were Mathematics and Malay Language.

Recommendation

It is suggested that the SEN teachers should go for special training on how to set up appropriate and effective Learning Stations in the classrooms since some SEN teachers are not creative in setting up the Learning Stations. According to Supiah (2005), the success of an intervention depends largely on the efforts of teachers and parents. A student with SEN aggressive behavioural problem occurred because of the failure of the teacher to control the class during the teaching and learning process (Murnie, 2014) and teacher factor can be a major barrier to the implementation of an educational programme (Lee Keok Cheong, 2018).

From the results obtained, it is recommended that SEN teachers use the LSA as an effective method to increase SEN student engagement in the classroom as compared to the traditional approach. Teachers should be encouraged to use the LSA in other subject areas and with other group of students as well. Thus, more research is needed to investigate the effect of the LSA on pre-school pupils and low-performing students in the mainstream (as their intervention programme).

Conclusion

Starting January 2019, there will be no more mid-year and year-end examination for Level 1 (Year 1, 2 and 3). It is replaced by the classroom-based assessment (CBA) with the enforcement of no streaming of classes to be carried out. CBA is an ongoing process of teaching and learning sessions to gain information on pupil development, progress, ability and mastery of the desired curriculum goals (CBA Guideline Book, 2018). CBA for special education needs pupil (SEN) is a bit different because their progress needs to be based on the implementation of interventions that has been planned in the Individual Education Plan (Standards-Based Curriculum and Assessment Document, 2019). Implementation of CBA is intended to get an insight on the development and progress of learning, identify the strengths and disadvantages of the student special needs so that appropriate actions (either to enhance or improve learning of SEN students) can be taken immediately. Hence, teachers can also support and assess students in CBA by looking at how they carry out the activity/project at the Learning Stations.

It is crucial for special education programmes to be individualised so that they address the unique combination of needs in a given student. In the United States, Canada, and the UK, educational professionals use a student's Individualised Education Programme (IEP). Another name for a student's IEP is a student's Individual Learning Plan (ILP). The Education Act for Persons with disabilities or IDEAS (Individuals With Disabilities Education Act) is a federal rule, which also includes the provision of formal processes to conduct ratings against the disabled students and provide Specific programmes and services to help them succeed in school education. Under the IDEAS,

programmes and services required by disabled children will be determined through the individual teaching plan (RPI). RPI is a written document that explains the services that will be provided for children, and this is a very important part of education for the Disabled children (Siegel, 2009). By implementing the CBA with LSA, SEN teachers will be able to develop and implement student's IEP effectively. By developing IEP, teachers can identify the needs and abilities of the SEN students, thus will be able to provide various LSA for the students.

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