

## **Learning Station Method in Special Education Programs for Students with Learning Disabilities**

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### **ABSTRACT**

This study is to determine the effectiveness of the Learning Station Method (LSM) in the Special Education Programme for students with learning disabilities. LSM is a teaching and learning method equipped with effective teaching materials that emphasise '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. The objective of this study is to determine the effectiveness of LSM in increasing students' interest in learning, mastery of the skills taught and changes in students' behaviour. This study is quasi-experimental with control and treatment groups, using pre- and post-tests. Sixteen students who were diagnosed with developmental delay were recruited for this study. They were from the Special Education Learning Disabilities Programme in Astana Primary School, Kuching. Data were analysed with SPSS. Research findings showed that LSM was successful in increasing students' interest, mastery of skills taught and positive behaviour.

Therefore, this study will help the Ministry of Education and special education teachers to plan and implement better the Learning Station Method to make it more effective in developing the mental, physical and social skills of students with special needs.

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## INTRODUCTION

The teaching and learning process for students with special needs requires different and appropriate approaches (Jomtien Statement, 2011). Thus, the Ministry of Education 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)

The *Learning Stations Method* is implemented as an alternative teaching method for special needs children based on their capacity and interest. This method provides a more flexible teaching and learning approach that is focused and relevant to the ability of special needs students. 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. Through a flexible and integrated process of teaching and learning, it is expected that special education teachers would be able to produce independent, disciplined, productive special needs individuals who display a positive attitude and can contribute to their family, community and country.

In addition, the LSM allows students to use the materials. This situation can motivate them to participate actively in the teaching and learning process. Through it, their self-confidence can be increased, and they will grow to be brave and courageous in facing any challenges and in the future, will be of benefit to community and country.

## RESEARCH OBJECTIVES

The main objective of this research is to determine the effectiveness of implementing LSM in Special Education Programmes to focus on students with learning problems. This research also has its specific objectives, which are:

- a. To determine students' interest in order to decide whether to use LSM or traditional methods in learning Art Education
- b. To determine the changes in behaviour in students taught using LSM teaching compared to traditional teaching
- c. To determine the changes in behaviour in terms of self-management between students who were taught using LSM and those who were taught using the traditional method
- d. To determine students' proficiency skills in the subject of Life Skills between students who were taught using LSM and those taught using the traditional method

## LITERATURE REVIEW

The importance of a conducive learning environment has been reported by the Asian

Programme of Educational of Development (APIED, 1983), which identified a number of factors that impaired the effectiveness of a teacher's teaching; they included an ill-equipped physical environment, an imperfect learning climate, teachers who are not interested in teaching and methods that are not engaging and motivating for students. Other factors that hamper learning were identified as lack of resources and unattractive teaching methods. LSM has been designed to overcome such problems associated with teaching and learning, with special focus on students with special needs.

A study by Rounds, Ward, Mergendollar and Tickunoff (1985) found that many students actively participated in various activities at the different learning stations. The study also found that there were more activities conducted in primary schools compared to in secondary schools. This was probably due to the fact that the primary level requires diversity in order to attract and hold the attention of students with learning disabilities, especially those who have had no preparation to study.

The stations method was also used in the teaching and learning of reading for students of special rehabilitation who were weak in reading. A study by the Ministry of Education (2011) on the effectiveness of the reading stations method for students weak in reading proved that the stations method was able to improve reading skills of a target group. Using this method resulted in the target group feeling that they were more appreciated and this indirectly raised their self-confidence. A livelier teaching and

learning environment that catered for their different levels of reading control evidently led students to respond positively.

The findings of Philips, Noor Aini Ahmad, Abd. Rahim Razali, Kamaliah Muhamad and Md. Fawzi Yusuf (2005) showed a positive response to the implementation of learning stations in the Special Programme for Learning Disabilities in primary school. This is relevant because the good implementation of the learning stations method allows for more structured and comprehensive learning. Previous studies clearly show that environment, such as layout and classroom climate, also plays an important role in increasing the interest of students with learning disabilities in the process of teaching and learning (Mohd Hanafi Mohd Yasin, Hasnah Toran, Ainul Azmin Mohd Zamin & Lokman Tahir, 2012).

## RESEARCH METHODOLOGY

This research was a quasi-experimental design which involved a pre-test and post-test treatment group and control group. This study used simple random sampling. Samples were selected from students with late development or those classified as Slow Learner in the Special Programme of the Sekolah Kebangsaan Astana, Kuching. Although the ages of the respondents in the samples differ, there is little difference between them in terms of cognitive ability. The control group consists of students from Special Programmes for Learning Problems (Program Khas Bermasalah Pembelajaran) whose traditional methods. Both groups

were given a pre-test in the first week. The duration of the treatment was six weeks i.e. from week two to week seven. The post-test was conducted in the eight week in order to see an increase in the mean score.

*Data Collection*

Before starting data collection, a pilot study was conducted to see the suitability of the observation instrument for fixed skills. The researcher obtained permission from EPRD (Educational Planning Research Division, Ministry of Education) and approval from the State Education Department of Sarawak to conduct research at Sekolah Kebangsaan Astana, Kuching. Three stages of data collection were conducted to achieve the objectives. The first stage was the pre-test that was conducted in early March. The second stage was the six-week treatment. The treatment was conducted from the third week of March till the first week of May. The final stage of data collection was conducted in the second week of May.

*Data Analysis*

Descriptive and inferential statistics were used to analyse the data. Descriptive statistics was used to analyse data that related to the respondent’s demographics. Mean and percentage scores obtained from the analysis were presented in tables and graphs. A *t*-test was used to show the difference between the mean scores for the pre-test and post-test and to analyse the post-test increment between both groups. All the data were analysed using SPSS.

**FINDINGS**

There were 16 students who involved in this research, of whom 11 were male students (68.8%) and 5 were female students (31.2%). The number of students in the experimental and control group was the same i.e. 8 members per group. There were 5 respondents (31.3%) from the ages of 8-10 years old, 9 (56.2%) from 11-13 years old and 2 (12.5%) from 14-16 years old. These respondents came from two different ethnic backgrounds i.e. Malay and Iban. Nine respondents were Malay (56.2%) and 7 were Iban (43.8%).

*Comparison Between the Treatment Group and the Control Group Regarding the Test of Students’ Interest in Art Education*

The mean score of the pre-test for the treatment group was 2.76 (n=8, SD=.46) and the mean score for the control group was 2.50 (n=8, SD=.95). The difference between the experimental and control group is small and it is accurate with the *t*-test result  $t = .70$  and  $p = .491 > 0.05$ . Therefore, there is no significant difference in interest between using LSM and traditional methods. In general, students in the treatment group and control group showed a similar performance during pre-test.

TABLE 1  
Pre-test Result for Students’ Interest in Art Education

Group	n	$\bar{x}$	SD	<i>t</i>	sig (p)
Treatment Group	8	2.76	.46	70	.491
Control Group	8	2.50	.95		

In the post-test, the mean score for the treatment group was 3.90 (n=8, SD=.50) and the mean score for the control group was 2.79 (n=8, SP=.43). The *t*-test result showed a significant difference between the treatment group and the control group based on the *t*-value=4.7, *p*=.00<0.05. This indicated that LSM was suitable in learning art education for children with learning disabilities.

TABLE 2  
Post-test Result for Students' Interest in Art Education

Group	n	$\bar{x}$	SD	<i>t</i>	sig (p)
Treatment Group	8	3.90	.50	4.7	.00
Control Group	8	2.79	.43		

*Comparison Between the Treatment Group with the Control -Group Regarding Students' Proficiency Skill in Life Skills*

The study found that the mean score of the pre-test for the treatment group was 3.09 higher than for the control group, which was 2.39. The *t*-test value acquired showed insignificant results i.e. =2.8, *p*=12.13>0.05. Therefore, the null hypothesis was not rejected because there was no significant difference in mean proficiency between the treatment group and the control group that used LSM. The LSM method can, therefore, be implemented as an alternative teaching method for special needs children for teaching Life Skills.

TABLE 3  
Pre-test Result for Students' Proficiency Skill in Life Skills

Group	n	$\bar{x}$	<i>t</i>	sig (p)
Treatment Group	8	3.09	2.8	12.13
Control Group	8	2.39		

In the post-test, the mean score for the treatment group was 3.93 (n=8, SD=.53) higher than for the control group, which was 2.95 (n=8, SD=.49). The *t*-test result showed a significant difference with the *t*-value=3.8, *p*=.002<0.05. Therefore, the null hypothesis was rejected. The findings showed that LSM had a direct impact on control skill in Life Skills compared to traditional methods.

TABLE 4  
Post-test Result for Sudents' Proficiency Skill in Life Skills

Group	n	$\bar{x}$	<i>t</i>	sig (p)
Experimental Group	8	3.93	3.8	.002
Control Group	8	2.95		

*Comparison Between the Treatment Group with the Control Group Regarding Students' Behaviour in Self-Management*

The mean score of the pre-test for the treatment group was 3.23 (n=8, SD=.54) and for the control group was 2.90 (n=8, SD=.44). The *t*-test result was *t*=1.3, *p*=.209>0.05. Therefore, the null hypothesis was rejected because there was no significant difference in performance skills between the treatment group and control group.

TABLE 5  
Pre-test Result for Changes in Students' Behaviour in Self-Management

Group	n	$\bar{x}$	<i>t</i>	sig (p)
Treatment Group	8	3.23	1.3	.209
Control Group	8	2.90		

After treatment, the mean score for the treatment group was found to be 4.07 (n=8, SD=.51) higher than for control group i.e. 3.70 (n=8, SP=.62). The difference in mean score between the groups was very small. The

*t*-test result showed there was no significant difference in behaviour changes as a result of using either LSM or traditional methods as the  $t=1.3$ ,  $p=.213 > 0.05$ . Therefore, the null hypothesis was not rejected. Students from the treatment and control group who used LSM showed similar performance in Behaviour Management subjects.

TABLE 6  
Post-test Result for Changes in Students' Behaviour in Self-Management

Group	n	$\bar{x}$	<i>t</i>	sig (p)
Experimental Group	8	4.07	1.3	.213
Control Group	8	3.70		

The analysis showed that the students who were taught using the Learning Station Method (LSM) obtained results as follows:

- a. Students who used LSM gained high scores in all observation tests that were conducted. However, the treatment group showed the highest achievement over the control group in the proficiency test in Life Skills and interest tests in Art Education. There was a significant difference in the *t*-test result for students' proficiency skill in Life Skills and students' interest in Art Education compared to that for changes in students' behaviour in Self-Management.
- b. Students had interest in Art Education, behaviour changes in terms of Self-Management and they could master life skills better than those students who used the traditional method.

Overall, the findings of this study succeeded in answering the research questions. Through the *t*-test, two null hypotheses were rejected while one null hypothesis was not rejected. There were significant differences in mastering life skills, students' interest in Art Education and changes in students' behaviour in terms of self-management for students who taught using LSM compared to students who were taught using traditional methods.

## CONCLUSION

### *The Extent of Effectiveness in Implementing the Learning Stations Method (LSM)*

This study found that the Learning Stations Method (LSM) was effective compared to the traditional method in improving teaching and learning in the special learning disabilities programme. This is based on the mean results of the observation test conducted, which showed improvement in all three subjects studied. For example, the mean of the proficiency test in Life Skills showed a significant difference; the post-test mean was 3.93 compared to the controlled group mean of only 2.95. The mean of achievement in the test of skills in Art Education for the experimental group recorded a mean of 3.90 compared to the controlled group mean of 2.79 after treatment.

This research finding is in line with that of Philip *et al.* (2005), which explained that LSM provides positive implications for teaching and learning in PKBP in schools.

This is also in line with research by Rounds *et al.* (1985), who found that most special education students actively participated in various activities at the learning stations.

In LSM, a conducive learning environment is emphasised. Thus, these research findings support and strengthen the opinion of the Asian Programme of Educational of Development (1983), Reith and Everton (1988) and Cegelka and Berdine (1995), who reported that the influence of learning comes from environment as well, and this includes the physical environment and the school climate as well as teachers' commitment and the *hands-on experience*.

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. 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 Extent of Interests in Students Pursuing the Teaching Using LSM and Traditional Methods*

LSM emphasises the student-centred approach in the teaching and learning process. Based on the results of this research, it is believed that LSM can increase students' interest in Art Education, as the mean for the experimental group was 3.90 while for the controlled group it was 2.79. This finding

supports that of the Ministry of Education (2010), Reith and Everton (1988) and Berliner (1983), which showed that various teaching activities like cooperative learning, watching videos, visits, arts and science projects could attract students with learning disabilities to become involved in teaching and learning activities.

This study found that special students showed interest through their interest and hard work in carrying out the arts activities provided. The activities conducted focused on existing experience that could be applied in daily life in order to foster students' interest in performing the given activity. The study also found that special students should be given assignments in accordance with their interests and abilities so that learning becomes fun for them.

*The Extent of Proficiency Skills in Students Pursuing the Teaching Using LSM and Traditional Methods*

The learning stations method as recommended by the Ministry of Education (2010) was able to attract interest and give students the opportunity to display their skills such as cooking and self-management. For Life Skills, there was a significant difference between students in the two groups. A mean of 3.93 for the experimental group and a mean of 2.95 for the control group showed that the LSM had helped PKBP students to master skills. The study found that the student-centred learning stations provided an opportunity for students to learn through experience as well as gave them the opportunity to conduct practical

training such as preparing a sandwich. These activities allow special students to have learning experience and improve their mastery skills.

This findings of this study are in line with the studies of Zainuddin, Sanitah and Sabilah (2006), which shows that Life Skills provides basic skills to special students in addition to educating them to be independent and to grow into useful citizens. It also helps parents. A conducive learning space and learning through experience clearly can increase students' proficiency. Supported materials in a particular station are also able to help students to master a particular skill more effectively to achieve the objectives of teaching and learning. The research results are in line with the subject's objectives, which are to provide training and skills to enable students with learning disabilities to be independent and confident in carrying out their daily activities (Special Education Curriculum for Learning Problems, 2003).

#### *The Extent of Changes in Behaviour in Students Taught Using LSM and Traditional Methods*

The findings of this research suggest that LSM can help students with learning disabilities to achieve behaviour change through learning activities while playing, where students learn a specific new skill that also brings enjoyment to them. LSM has a tendency to create student-centred learning situations. In this study, a mean of 4.07 for the experimental group and a mean of 3.70 for the controlled group in the skill of self-management were recorded, showing that there was a change in behaviour in students

being taught using the LSM compared to students being taught using traditional methods. 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.

This study found that the special students showed behavioural change when using the toilet, after teachers conducted teaching using supported materials and actual situation. The teachers took students to the toilet and demonstrated how to use the toilet. Afterwards, a significant change in behaviour was shown by students in the practice of hygiene i.e. they washed their hands after using the toilet, as well as informed teachers when going to the toilet. This is in comparison to the traditional method, where teachers only use support material in the form of images rather than real situation. These research findings support the belief of Cegelka and Berdine (1995) that the activity and the physical restructuring of a classroom could influence students' behaviour.

In the special class for learning problems, the space station, layout and equipment in a classroom are very important because they can nurture and develop mental, physical and social skills (Mohd Hanafi Mohd Yasin, Hasnah Toran, Mohd Mokhtar Tahar, Noraini Mohd Salleh, & Rabaishah Azirun, 2011). The use of school equipment such as the school field and toilets can facilitate teaching so that students can easily master the skills taught.



## **IMPLICATIONS AND RECOMMENDATIONS**

It is suggested that the Ministry of Education (2010) build special classrooms to accommodate the special education curriculum for students with learning disabilities. These classrooms should be equipped with furniture and equipment for the creation of learning stations that are suitable for the students in terms of students' physical needs, location and class size. It is recommended that the tools provided also should be suitable for the students.

The Curriculum Development Centre of the Ministry of Education should be more sensitive to the needs of the special education curriculum and should re-evaluate the existing curriculum so that its content is more practical and relevant to the level of students with learning disabilities. The ministry also needs to provide a proper and systematic syllabus so that the teachers can understand and master, and, subsequently, deliver to students effectively. This curriculum should be standardised for use throughout the country so that it can be implemented simultaneously and can be used by each special student with learning disabilities.

The findings of this research are expected to provide guidance for teachers in special schools to help them diversify teaching activities so that they are more student-centred so that students are encouraged to experience the learning process for themselves. In enhancing students' interest in their education, teachers should use appropriate teaching aids and need to be well informed of KSSR .

Special education teachers should be given opportunities to attend long courses in order to refresh and update their knowledge in this field. According to the Educational Planning and Research Division (EPRD, 2002) the teacher factor is one of the reasons for the effectiveness of teaching and learning. Thus, a short course would not help them to gain the experience and knowledge they will need to teach children with special needs. Daut Yusuf (2006) found that most teachers inducted into a special programme of learning problems consisted of mainstream teachers who lacked experience in conducting teaching and learning of special education students. In addition, teachers can also diversify their teaching activities with information obtained from attending special education courses organised by the Ministry of Education.

Placement of special education teachers should use the proper channels. Often different teachers give a different impact on a particular programme. The teacher, therefore, needs to fit the course; in addition, skilled teachers would know the complexity of a problem as well as how to fix it (Mohd Hanafi Mohd Yasin, Noraidah Sahari, & Arbi Haza Nasution, 2013). Passion for special education is another commitment that is needed. Therefore, teacher-training colleges and universities should select students who are capable and who have a love for teaching, especially when it comes to special education.

This study showed that the method of learning stations brings positive change in interest, skills and behaviour of children with special needs. Therefore, it is hoped

that this study will help the Ministry of Education and special education teachers to plan and implement better learning stations so that the implementation of LSM will be more effective for the development of the mental, physical and social needs of students with learning disabilities.

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