

FACTORS INFLUENCING LEARNING EFFECTIVENESS AMONG STUDENTS WITH SPECIAL NEEDS IN DESIGN AND VISUAL COMMUNICATION COURSE: A CASE STUDY

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ABSTRACT

As part of their social obligation to the nation, polytechnics in Malaysia offer selected certificate level programs to students with special need. Considering that these students require special education for effective learning, it is important to ensure that teaching and learning process for this group of students is carried out successfully. This study aims to explore factors that influence learning effectiveness among these students. Survey questionnaires were distributed to 27 students with special needs who were in their fourth semester at the Department of Design and Visual Communication. The data were then analysed using SPSS version 16. This study found that interpreters can increase the effectiveness of teaching and learning in the classroom. Factors related to course suitability need to be considered to ensure that it is appropriate to the level and ability of this group. Besides, learning facilities specifically for students with special needs should be provided to facilitate effective learning among them.

KEYWORDS: *students with special needs, learning effectiveness, teaching and learning, teaching facilities.*

1.0 INTRODUCTION

Living in a borderless and competitive environment, people with disabilities (PWD) face many challenges to achieve success in life. It is common for them to experience lack of self confidence and they perceive their disabilities as limitations to be successful. They also feel that they have been segregated from the normal people. However,

disability is not a barrier for this group of people to pursue their dreams and aspirations.

In education particularly, the PWD are given similar opportunities as the other normal individuals so that they are not isolated from the mainstream of the national education. According to the Bill of Persons with Disabilities 2007, “persons with disabilities should not be excluded from the general education system on the basis of disability, and children with disabilities cannot be excluded from pre-school, primary, secondary and tertiary education based on equal opportunities given to children without disabilities, including vocational training and lifelong learning”. In fact, some of them have the cognitive intelligence comparable to that normal person and some of them have performed better than the normal students (Adam, 2003; Ali, 2007; Lokman, 2007). Kirk et al (1993) clarify the definition of children with special needs as children who are different from an average or normal child with respect to the specific features such as mental ability senses, nerves and muscles in social behavior or physical or emotional in communication capabilities. Hallaham and Kauffman (1977) state that special education means a specially designed instruction to meet the needs of exceptional children, such as special teaching material and facilities. Culatta and Tompkins (1999) state that special education is a personalised teaching approach designed to meet the needs of the students with disabilities. It also important to note that each special students differs from the normal students with respect to intellectual characteristics, sensory ability (hearing and sight), physical or neuromuscular imperfections, social or emotional behavior, communicative prowess or learning abilities (Farrell, 2008). According to Bogdan & Kurgelmass (1984) and Mercer (1973), one of the problems in teaching and learning among special students are their inability to follow the curriculum taught. This means each one of them is unique and has different learning problems. They also demonstrate different learning styles and they need individual attention. Therefore, they require a specially planned curriculum, delivery and assessment in order to ensure effective teaching and learning.

In an effort to provide equal opportunities in education for students with special needs, they should receive similar curriculum as the normal students whereby, they should experience a curriculum that put emphasis on the physical, emotional, intellectual and spiritual in line with the National Education Philosophy (Mohd Dan, 2007). However, since this group of students requires special attention, the delivery system for this group of students is different from the normal students. Specifically, they require a special delivery system in education.

In Malaysia, the governments as well as the non-government bodies (NGOs) have provided several forms of supports and facilities for this group of people so that they can contribute to the development of the nation. Thus, the PWD should seize the opportunity given by the government and NGOs so that they can part of the workforce and gain success in life. In the area of vocational and technical education, the PWD have been given opportunities to develop selected vocational and technical skills. For example, the Ministry of Higher Education (MoHE) has offered a program for students with special needs (hearing impaired) who have completed their secondary five from the School of Special Education by the Department of Special Education, Ministry of Education Malaysia (MoE). In addition, there are three polytechnics in Malaysia that offer a Certificate Program in Special Skills. The three polytechnics and the programs that they offer are shown in Table 1.

Table 1: The Polytechnics and Certificate Programs in Special Skills

| Polytechnics | Programs : Certificate in Special Skills |
|---|--|
| Politeknik Ungku Omar (PUO), Ipoh, Perak | <ul style="list-style-type: none">• Civil Construction |
| Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam, Selangor | <ul style="list-style-type: none">• Mechanical Maintenance |
| Politeknik Johor Bahru (PJB), Pasir Gudang, Johor | <ul style="list-style-type: none">• Hotel and Catering at the Department of Hospitality• Design and Graphic at the Department of Design and Visual Communication• Fashion and Clothing Design at the Department of Design and Visual Communication |

This paper aims to report a case study conducted at Polytechnic Johor Bahru that offers a certificate program in Special Skills on Design and Visual Communication to students with special needs. At the polytechnic, there were only six students registered for the certificate program for Special Skills in Graphic Design. This program is a two year program commencing from January 2008 until July 2009. The highest achievement of these students was a grade cumulative average (GCA) of 3.61, while the lowest GCA was 2.55. Based on the performance of the six students, only one female student managed to achieve the highest GCA, that was 3.61 and she has been nominated for the recipient for the Head of School Award. Two male students did not perform and they have been terminated from the program due to attitude problems. The purpose of this study is to explore students learning problems by gathering feedbacks from them. Therefore, this case study was conducted in order to achieve two objectives which are:

- to identify factors that influence the effectiveness of teaching and learning of the special needs students, and
- to identify the level of satisfaction among the special needs students with respect to the teaching and learning facilities provided by the institution.

2.0 METHODOLOGY

This study is a descriptive case study using a survey questionnaire. It is particularly conducted at the Polytechnic Johor Bahru. The focus of this study was to explore the opinions among respondents regarding the factors that influence their learning effectiveness in the classroom, particularly their learning abilities to acquire the knowledge disseminated during the teaching and learning process in the classroom, their level of satisfaction on the usefulness of the program for their future undertakings and the effectiveness of the communication between the lecturers and students using sign language. The respondents' satisfactions on the facilities provided by the polytechnic were also explored.

2.1 Sample

The sampling of the study was a non-random purposive sampling consisting of 27 students with special needs that registered in a certificate level program on Fashion and Clothing Design at the Department of Design and Visual Communication. According to Mohd Najib (1997), purposive sampling allows researchers specifically choose a sample that represents the population of the study. In this case, students with special needs were purposively chosen to represent students with special needs who are studying at Polytechnics in Malaysia. Specifically, the sample of this study consisted of students who have problems with hearing and speaking.

2.2 Research Instrument

This study adopted survey questionnaires to collect the data. Considering that the respondents were students with limited abilities in hearing and speaking, all questions were structured questions using simple and straight forward Malay language for easy understanding. Specifically, the questionnaire consists of three sections: Section A, B and C. Section A focuses on the respondents' background, Section B focuses on the factors that influence the effectiveness of teaching and learning, and Section C focuses on the learning facilities provided by the institution that facilitate the teaching and learning process among

students with special needs. In section B, eight statements were designed and respondents were expected to indicate their level of agreement based on four levels of Likert scale beginning with 1- totally agree, 2 - some agreement, 3 - disagree to 4 - totally disagree. Section C contains four statements and respondents were expected to indicate their level of satisfaction based on five levels of Likert Scale from 1 the highest to 5 the lowest. The data were then analysed using the SPSS Version 16.0 in order to determine the mean score for each statements.

3.0 FINDINGS AND DISCUSSION

The following presents the findings of the study based on the two research objectives mentioned earlier.

3.1 Factors Influencing Learning Effectiveness

Factors influencing learning effectiveness of students with special needs were identified based on eight statements as shown in Table 2. Table 2 also shows the mean scores for respondents' agreement and disagreement, in which respondents' agreement is represented by the combination of mean scores for levels one and two, while respondents' disagreement is represented by the combination of mean scores for levels three and four.

Table 2: Mean Score Related to Factors influencing learning effectiveness among Special Needs Students

| Items | Statements | Agree (1+2) | Disagree (3 +4) |
|-------|--|-------------|-----------------|
| 1 | This polytechnic is my preferred learning institution | 65% | 35% |
| 2 | The knowledge and skill learnt from the certificate program improves my skills and knowledge | 74% | 26% |
| 3 | The program relates to my interest and the needs of the public | 68% | 52% |
| 4 | Teaching and learning approach is easy to follow | 55% | 45% |
| 5 | Students can easily communicate with lecturers | 68% | 32% |
| 6 | Lecturers provide suitable notes and learning materials | 63% | 37% |
| 7 | Discussions outside lecture hours facilitate my understanding of the content | 45% | 55% |
| 8 | Interpreters facilitate my understanding of the content | 92% | 8% |

With reference to Table 2, statements 1, 2 and 3 relate to the relevance and usefulness of the program for students with special needs. 65 percent of the students with special needs agreed that the polytechnic is their preferred learning institution. In addition, 74 percent agreed

that the program improves their knowledge and skills while 68 percent felt that the program matches with their interest and is useful for the nation. Based on the three statements, it can be inferred students with special needs agree that the program is beneficial for them as it is relevant to the current needs of the country.

Statements 4, 5, 6, 7 and 8 in Table 2 relate particularly to the factors that influence the effectiveness of learning among students with special needs. Based on the mean scores of the five statements, it shows that 55 percent of the students with special needs agreed that the teaching approach is easy to follow, 68 percent agreed that they can communicate easily with lecturers, 63 percent agreed that lecturers provide suitable notes and learning material, 45 percent agreed that discussions outside lecture hours facilitate their learning and 92 percent agreed that interpreters have helped them to understand the content subject. Based on these findings, it can be inferred that some of the students have difficulties to follow the program, discussions outside classroom does not really facilitate their learning and interpreters contribute significantly in their learning progress.

Students' responses on the highest level of agreement Level 1 of the Likert Scale) regarding the eight statements were also analysed in order to determine the significance of these items in influencing the effectiveness of learning among students with special needs. The differences in the mean scores of the eight items are shown in Figure 1. Based on Figure 1, the highest percentage (58 percent) is the assistance of interpreters (item 8), followed by the program has improved their knowledge and skills (44 percent). The third highest is students' preference of the institution as a place to study (26 percent), while the fourth is the ease of communication with lecturers (22 percent). This is followed by discussion outside lecture hours (11 percent) and the provision of notes and teaching materials (7 percent). Finally, there were two items that have the lowest percentage (4 percent) which are the alignment of the program with students' interest and the needs of the public and the easiness to follow the program.

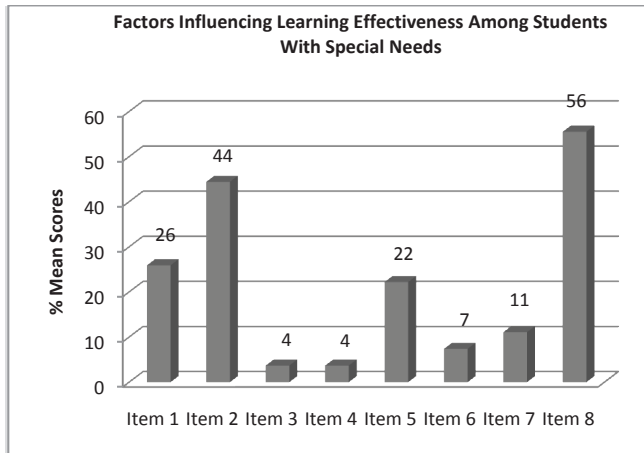


Figure 1: Factors Influencing Learning Effectiveness Among Students With Special Needs

The findings as shown in Figure 1 indicate that students with special needs have difficulties to follow the content of the program and they require the assistance of interpreter to facilitate their learning. In addition, although they claim that the program can improve their knowledge and skills, but only small number of students find that this program matches their interest and aligns with the needs of the public. They also claim that they can communicate easily with their lecturers but discussion outside classroom and the notes as well as the teaching materials do not make much contribution to facilitate the effectiveness of their learning.

3.2 Levels of Satisfaction on Learning Facilities at the Institution

Levels of satisfaction on learning among students with special needs were also explored based on four items as showed in Table 3. As shown in Table 3, the mean scores that represent students' level of satisfaction were categorised according to three categories: satisfied (combination of responses for levels 1 and 2 of the Likert Scale), average (level 3 of the Likert Scale) and not satisfied (combinations of levels 4 and 5 of the Likert Scale). This paper will focus on the findings for the satisfied and non-satisfied categories only.

Table 3: Levels of Satisfaction Among Students with Special Needs on Learning Facilities

| Items | Statements | Percentage (%) Score | | |
|-------|--------------------------------|----------------------|-------------|-----------------------|
| | | Satisfied (1 + 2) | Average (3) | Not Satisfied (4 + 5) |
| 1 | Comfort in the classroom | 41 | 30 | 29 |
| 2 | Facilities in the classroom | 37 | 22 | 41 |
| 3 | Reference books in the library | 41 | 37 | 22 |
| 4 | Facilities at the hostel | 45 | 26 | 29 |

As shown in Table 3, 41 percent of the students with special needs were satisfied studying in the classroom, while 29 percent were not comfortable studying in the classroom. This shows that students were generally satisfied with the condition of the classroom. 37 percent were satisfied with the facilities in the classroom, while 41 percent were not satisfied with the facilities. This means that students were generally dissatisfied with the facilities of the classroom. This can be inferred that the facilities in the classroom did not really facilitate students' learning in the classroom. 41% were satisfied with the reference books in the library, while only 22 percent were dissatisfied with the reference books in the hostel. This means that students were generally satisfied with the reference books provided in the library. With respect to the facilities at the hostel, 45 percent were satisfied with the facilities while only 29 percent were not satisfied. This shows that generally students were satisfied with the facilities at the hostel.

Students' responses on their highest level of satisfaction (level 1 of Likert Scale) based on the four statements were also analysed in order to determine their satisfaction on the teaching and learning facilities at the institution. The differences in the mean scores of the four items were shown in Figure 2.

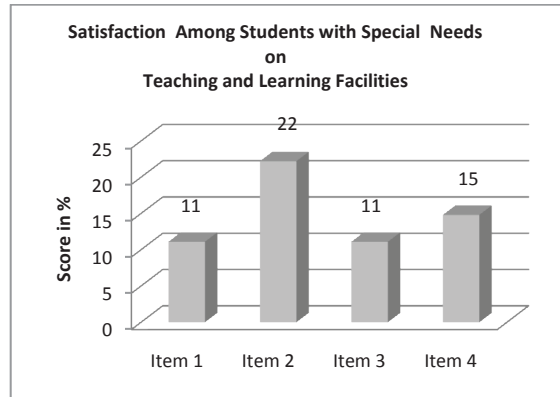


Figure 2: Satisfaction Among Students With Special Needs On Learning Facilities At The Institution.

According to Figure 2, the range of mean scores is between 11 to 22 percent which shows that less than half of the respondents indicate their highest level of satisfaction on the four aspects related to the facilities of the learning at the institution. The highest mean score (22 percent) is facilities in the classroom and followed by facilities at the hostel (15 percent). There were two items that have the lowest percentage (11 percent), which are the comfortability in the classroom and references books in the library.

Based on Figure 2, these findings show that overall, not many students with special needs have high satisfaction on the four aspects related to the facilities provided by the institution. Students with special needs have the highest satisfaction on the facilities of the classroom and the facilities in the hostel. However, lesser students show their highest satisfaction on the comfortability of the classroom and the reference books in the library. This means that the institution has to find ways to improve the learning facilities for students with special needs.

4.0 CONCLUSION AND RECOMMENDATIONS

This study explored eight factors that can facilitate the effectiveness of learning among students who have problems with hearing and speaking at the Department of Design and Visual Communication. The findings of the study revealed that the presence of an interpreter to assist lecturers in teaching and learning process is a significant factor in facilitating their understanding of the subjects. It was also found that the courses offered did not match to the interest and needs of the students. In addition the teaching approach was not effective as students faced

difficult to follow the courses. Students also claimed that discussion outside the classroom and lecture notes did not facilitate their learning at the institution.

The study also investigated students' satisfaction on the learning facilities provided by the institution based on four aspects : comfortability, facilities in the classroom, facilities in the hostel, and reference books at the library. The overall satisfaction level of students with special needs on infrastructure based on the provided by the polytechnics in the process of teaching and learning is low.

In this regard, there are several suggestions to facilitate the effectiveness of learning and to provide a conducive learning environment among students with special needs. These suggestions are:

- i. Reviewing the curriculum for students with special skills to make it compatible with students' ability and their interest to attend the courses offered;
- ii. Teaching and learning methods should be adapted to their abilities as a demonstration and tutoring methods with the help of a teaching tool.
- iii. Lecturers should be given special training to educate students with special needs because it requires a level of patience, motivation and creativity.
- iv. Infrastructure facilities to be upgraded to ensure that the teaching and learning of students with special needs can be executed properly

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