Teachers' Perceptions on the Blended Learning Environment for Special Needs Learners in Malaysia: A Case study

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[1]Abstract. The recent transformation of Malaysia's education system, among others, had highlighted the importance of special education. This can be seen in the integration of special education into a number of selected mainstream national schools. The selected schools were provided space and facilities for the special needs education. Moreover, Malaysia had been promoting the utilization of Information communication technology (ICT) for special education. This blended learning environment is the focus of this paper. The blended learning environment and the usage of ICT for the special education are still in the early stages. This study aims to investigate teachers' perceptions on blended learning for special needs learners. Interviews were conducted to collect related information on teachers' perceptions on the blended learning in the selected school. The benefits and challenges of implementing blended learning for special education are also discussed.

Keywords: Information Communication Technology (ICT), Special Education, Blended Learning.

1. Introduction

The transformation of Malaysia's education system has highlighted the importance of special education. The significance was clear as special education was specifically mentioned in the Ninth Malaysia Plan unveiled in EPU (2006); "The Special Education Integration Programme was expanded to integrate children with special needs into the normal school environment. Under this programme, the national curriculum was adopted for visually and hearing impaired children in primary and secondary schools. An adaptive curriculum was used for children with learning disabilities"(p. 242). This has led to the integration of special education into a number of selected mainstream national schools. The selected schools were provided space and facilities for the special needs education. According to the Ninth Malaysia Plan (EPU, 2006), "Educational opportunities for children with special needs will be expanded by opening special classes in regular schools to enable these children to adapt to the normal school environment. To improve the quality of teaching and learning, more teachers will be trained and the curriculum for special education will be further improved"(p. 255). Moreover, the transformation process included the utilization of Information communication technology. In the Ninth Malaysia Plan, EPU (2006) was stated that, "During the Plan period, the *Program Pembestarian Sekolah (*Smart School Programmes) refers to the process of leveraging on all existing ICT initiatives such as the smart school project, computerization project, utilising ICT in the teaching and learning of Science and Mathematics in English, SchoolNet and MySchoolNet to enhance the quality of education. This program will be implemented in all primary and secondary schools to enable

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teachers to integrate ICT in teaching, learning and management"(p. 255) This also included special education. In order to realise the transformation, the Malaysian government allocated RM 45.1 billion (US$15 billion).

The focus on ICT in the Malaysian education system can also be seen in the Multimedia Super Corridor initiative. The MSC Malaysia Smart School Flagship initiative responds to the need for Malaysia to make the critical transition from an industrial economy to a knowledge-based one. The objective is to produce a technologically literate and thinking workforce, which is well able to perform in a global environment and use information-age tools and technology to improve productivity. The Ministry of Education, with Telekom Smart School Sdn. Bhd. acting as the industrial counterpart, heads the Smart School initiative. The project's implementation plan was divided into four phases; i) Pilot project (1999 – 2002), ii) Post pilot project (2002 – 2005), iii) Making all schools smart (2005 – 2010), and iv) Consolidate and stabilize (2010 – 2020) (MDeC, 2009). According to the plan, the smart school programme was to be implemented beyond the initial 88 schools to all schools in the country between 2005 till 2010. This project benefitted from the largest allocation from the Seventh Malaysia Plan – RM 401.1 million (US$133 million)

According to the Malaysian policies on ICT in education which also has a focus on the special education, teaches are encouraged to implement the ICT as their routine by listing out the four key elements as below (MOE, 2010):

- ICT tools and devices such as screen readers and 'embosses' will be part of the ICT infrastructure provided to schools for the students with special needs.
- Teachers in schools for students with special needs will be trained and sensitized to issues specially-related to the use of ICT in teaching students with special needs.
- All teachers' in schools for students with special needs will be provided with ICT-enabled methods during their professional development.
- Web-based digital repositories should be deployed to address the lack of availability of resources for students with special needs.

In the year 2010, the Ministry of Education revised the policy on the utilization of ICT in education. The revised strategy included the adoption of a new teaching approach - blended learning. Blended learning incorporates face to face learning with ICT as the mediated-tools (Graham, in press; Reay, 2001; Rooney, 2003). ICT or e-learning tools provide a supportive learning experience (Graham, in press; Reay, 2001; Rooney, 2003). Given the importance placed on ICT and special education, it is the belief of the authors of this paper that an investigation of the impact of the latest strategy – blended learning – from the various stakeholders would be beneficial. Thus, this study aims to investigate the teachers' perceptions on blended learning for special needs learner. Teachers are the most important stakeholders involved other than the students themselves. The paper will discuss the benefits of the blended learning environment and explore how it affects the teaching methods for special education. Specifically, the paper will investigate the teachers' opinions in relation to the blended learning approach, and then the benefits and its challenges will be discussed.

1.1. Sampling

Purposive sampling was applied in this study. Four schools were selected according to location (rural and urban) and also whether the schools were designated as smart schools or normal schools. Teachers were chosen based on the teachers' experience with using ICT to conduct classes by using the pre-question. The pre-questions will identify the teachers' background on ICT. It involved twenty teachers in difference type of school in Melaka's schools in Malaysia. The scenario in Melaka with difference types of school had been chose as a case study.

The teachers were given time to spontaneously share their knowledge and experience conducting lessons for the special needs student by using the ICT as a platform in their teaching through interviews. The questions were based on the usage of ICT in their class in terms of teaching students how to use ICT, how to learn using ICT and finally actually how the students used ICT. Their answers were recorded for the further analysis.

1.2. Instrument

Qualitative data collection techniques were employed. These were observations and spontaneous interview sessions among teachers who teach Special Education classes and teachers who were involved teaching ICT to the students. Interviews were conducted to collect related information on teachers' perceptions on blended learning in the selected schools having special education which is also called *Intergrasi Pendidikan Khas* (Integration of Special Education). Most of the questions were related on what the factors that influence the blended learning environment might be based on the teachers' experiences and knowledge on blended learning environment for special needs learners.

The observation had done spontaneously to watch the teacher conducting the class using the ICT and contents which involved teaching to the students. Within the observation, the question will be asked to identify what factors that affect the 3C element in implement the digital content (Ponter & Brown, 2007; Yusof & Aziz, 2010; Yusof & Hin, 2009).

2. Findings & Discussion

The overall elements that emerged from the interview data has been defined according to the 3C (Connect, Confidence, and Content) strategies when implementing the blended learning environment as put forward by (Ponter & Brown, 2007; Yusof & Hin, 2009). This has been conceptualized into a model based on the comment by teachers involved in the interview session (please refer to the fig.1). Most of the questions were related to factors that influenced the blended learning environment as revealed by teachers' experiences and knowledge on blended learning environment for special needs learners.

2.1. Conceptual Model

The study defined there the several factors and elements emerging from the observation and interview data. Most of the factors depend upon the important of 3C strategies that influence the usage of ICT by converting the conventional approach to blended learning approach: 1) Connection 2) Content and 3) Confidence (Ponter & Brown, 2007; Yusof & Hin, 2009). According to the fig.1 the conceptual model defines the three part key strategy that is with connected several factors that influence the special education learning environment. Based on the teachers' perceptions, the conceptual model has defined the content which consists of the standards, elements, tasks and assessment that need to be taken into consideration when applying the blended learning environment. Moreover, the connectivity on network connection, ICT facilities and infrastructure as well as accessibility are also key factors that emerged in the connection strategies. The study had identified culture as the factor that influences the confidence of people to handle the blended learning environment. Moreover, the experience and knowledge that they acquire enhances their confidence to implement ICT as the medium of their teaching. The study also revealed that three key words can depict the experience with activities integrating ICT among special learners namely Know, Learn and Use. Know is defined as the initial stage the people only know about what ICT is.. Then they learn about it and then learn how to operate it. Finally, they will use it among their students by teaching them or use the ICT in the classroom. The experiences can be repeated based on the sharing of knowledge and experience among teacher and students.
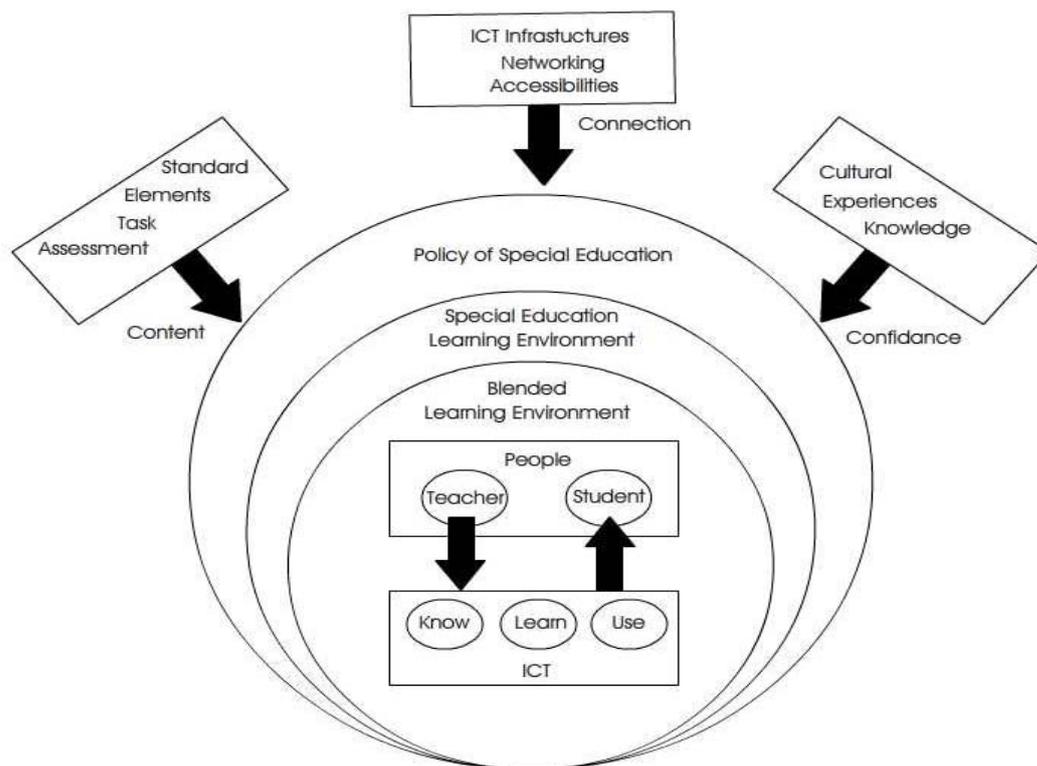
Fig. 1: Conceptual Model of Blended Learning in Special Education

2.2. Challenges

There are several factors shown in the model that defined challenges in learning environment according to the teachers' perceptions. They had shared that, they have limited content on ICT based materials to apply and implement in the learning environment. These also included the lack of digital resources suitable for special needs learners, the non-digitalized assessment and tasks. Moreover, the elements of interactivity are limited in the learning environment. In terms of connection, the space and the facilities for special education is still limited. Moreover, it has been assumed that the special needs learners had limited confidence to use the ICT facilities and to operate it. The teachers felt that they could not the ICT facilities in learning because they lacked the skill and experience to operate the ICT facilities. "Although access to ICT is not a problem; teachers felt they lack the necessary skills to integrate ICT"(Ngah & Masood, 2006, p. 238). The government has provided the facilities, however, the teachers are unable to utilise it.

2.3. Benefits

In term of benefits of a blended learning environment, the teachers felt that ICT will give them the opportunity to enhance their computer literacy skills. They might only know what it is, but they can learn and use it in their teaching. Moreover, it wills build-up teacher creativity to build their own learning environment that suits the students. For example, the animation project helped the special needs students to learn a new skill and enhance their attention and motivation (Yusof & Aziz, 2010; Yusof & Song, 2010). According to previous research by Mayer & Moreno (2002), Mayer's principle had shown the benefit of using the multimedia as the tool help enhance student engagement. He also stated the guideline to ensure the suitable elements in the multimedia content (Mayer & Moreno, 2002; Yusof & Aziz, 2010). The use of ICT helps them to minimize the use of paper, and the activities on a computer can be repeated.

3. Conclusion and Future Research

In conclusion, the case study on the teachers' perceptions in blended learning helps to identify the key factors according to the 3C strategies. Moreover, the conceptual model helps to understand the relationship between teachers' experience, learning environment, and the policies of government influence in the use of blended learning environment in the Malaysian classroom for special needs students. With the latest

technologies, the learning environment can be more dynamic with the use of edutainment by integrated game-based, augmented reality, and other elements of edutainment (Song & Yusof, 2010; Yusof, Daniel, Abdullah, & Aziz, 2010). This research can be replicated in various ways in the future perhaps on a bigger scale in order to further improve the conceptual model as a guideline and reference for other researchers. The case study was in involved the four selected school in difference types which involved twenty teachers had been observe and interviewed in state of Melaka, Malaysia. The further research will be implement it in other state of Malaysia to define the pattern of blended learning environment in term of culture, teaching method and learning environment.

4. Acknowledgements

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