UM postgraduates experiences with spectrum

Amiza Mohamed Noor, Mohammad Attaran*, Norlidah Alias

Faculty of Education, University of Malaya, Kuala Lumpur, Malaysia

Abstract

This study looks at students experience while using SPECTRUM (as a virtual space in terms of Blended learning) in their learning process. The research is a phenomenological design study and uses a semi-structured interview to collect data. A total of 9 postgraduate students from the Faculty of Education in the University of Malaya were interviewed. Results based on the two main themes, which are the challenges and the benefits of BL show that students are aware of the benefit SPECTRUM has on their learning process. However, they do still face challenges regarding the BL platform.

1. Introduction

Blended learning is now becoming an important tool in the educational system. Higher Education Institutions all over Malaysia has acknowledged the benefits of e-learning to cater for a wide variety of students as well as to help renew the teaching and learning process. In a study done by Mohamed Amin Embi (2011), he found that 42.3% of 26 Higher Education Institutions in the study offered online courses to supplement the face-to-face mode. University of Malaya has also invested in creating its own e-learning tool. Every course is now available online automatically as SPECTRUM takes information on

* Department of Curriculum and Instructional technology, Faculty of Education, University of Malaya, 50603 Kuala Lumpur, Malaysia, Tel: +603-7967-5134
courses, instructors and students form the University’s database (Raja Maznah & Abdul Halim, 2011). After more than five years of implementing SPECTRUM in the university, this research sought to understand postgraduates’ students experience in using SPECTRUM as a BL tool. Two themes as pointed out by Smyth, Houghton, Cooney and Casey (2012) are the challenges and benefits of BL as a learning tool. Therefore, this article gives the finding towards the challenges and benefits of using SPECTRUM form postgraduate students’ point of view in the Faculty of Education.

2.A brief history of spectrum

The use of E-learning dates back to year 2003. However it was still in its early stages and not many lecturers used them in every classroom. In 2005 to 2006, University of Malaya used two e-learning system concurrently which were called Moodle and Learning Care. Later in 2007, an official report was made to choose one e-learning platform and further develop it. The University decided to stick with Moodle for its better benefits and user-friendly purposes. Thus SPECTRUM was developed. Dr. Abdul Halim Sulaiman, Deputy Director of University of Malaya Academic Development Center, officially coined SPECTRUM in 2009. The name SPECTRUM is an abbreviation where ‘SP’ stands for Student-Powered, ‘EC’ for E-Collaboration, ‘TR’ for Transforming and ‘UM’ for University of Malaya. Every lecturer and students now uses this e-learning tool in UM. Dr Abdul Halim Sulaiman, in an interview, says “SPECTRUM is developed in hopes to change the way students learn and the way lecturers teach”. SPECTRUM is a simple e-learning application that allows students to communicate with each classmates and lecturer online. The e-learning tool is connected to students and lecturer’s e-mail account, which further notify users of any new content. Lecturers in University of Malaya are encouraged to use SPECTRUM in their teaching for at least one of their undergraduate courses (Raja Maznah & Abdul Halim, 2011).

3.Theoretical framework

Many theories on education and technology crop up as the years pass by. With the integration of technology into education there is a need to understand how technology should be utilized to bring out the best in utilizing BL in education. Education today should focus on specific information or skills such as “learning to learn” skills that helps students to cope with technological change (Roblyer & Doering, 2013). The Technology Integration Planning (TIP) model is a model used when teachers need to select the best strategies to integrate technology in their classroom. There are three phases in its implementation and a total of 7 steps. This model gives teachers a general approach to identifying and addressing challenges involved in integrating tech into teaching.

The three phases are analysis of learning and teaching needs, planning for integration and post-instructional analysis and revisions.

Along with the TIP model there are also a few conditions that need to be met when integrating technology into classroom. This is to ensure the technology based strategies work best to support the teaching and learning process. According to Roblyer and Doering (2013), when the National Education Technology Standards (NETS) was established, necessary conditions were describe so teachers could exploit the potential power of technology. These conditions were summarized in ISTE’s NETS for teachers (2008) book, as well as online at http://www.iste.org (Roblyer & Doering, 2013). The essential conditions for effective technology integration are standards and curriculum support, required policies, access to hardware, software, and other resources, skilled personnel, technical assistance, appropriate teaching and assessment approaches and engaged community. The conditions mention focus more on the requirements that educators need to fulfill. However, we use this understanding of what necessary conditions needed to successfully have a BL in classroom based on student’s experience. These conditions will be used to identify the challenges students face in a BL classroom. When a condition is not met, there will be problems. However, when it is met there will be benefits.
4. Blended learning

There is still no ultimatum for the definition of BL. However there are ways to look at BL that may help to uncover its characteristic and usefulness for different purposes. In a general definition, BL is understood as the use of both face-to-face and online method of teaching and learning (Martyn, 2003; Gray 2006; Staker and Horn, 2012). This definition gives way to several models of BL in a classroom setting. As the term gets more attention from educators, many models of BL are developed. These models are created in an attempt to harness the usefulness of BL in the classroom. Staker and Horn (2012) reported on 4 models of BL emerging in the education sector today. The models are rotation model; flex model, self-blend model and Enriched-virtual model. The rotation model is further divided into four subcategories that are station-rotation model, lab-rotation model, flipped-classroom model and individual-rotation model.

The rotation model is a program where students rotate on a fixed timetable or at a teacher’s decision between learning modalities. At least one of the stations uses online learning. The other method or station might include activities such as small-group or full-class instruction, group projects, individual tutoring and pencil-and-paper assignments (Staker & Horn, 2012). Station rotation and lab-rotation modal have the same concept in which students rotate between places or groups. The difference is station rotation happens in the class while lab-rotation modal happens on campus in several classes or computer labs. Individual rotation looks at students have a personal schedule in which they will use to rotate between different stations. This model differs from the other three because student does not necessarily go to every available station or modality.

Flex model in a BL model where primary delivery of content and instruction are done through the Internet. Face-to-face support by teachers is provided on a flexible and adaptive as-needed basis. Some activities that is used in this model are small-group instruction, group projects, and individual tutoring (Staker & Horn, 2012). Self-blend model is where students take one or more online courses to enhance the learning process of certain subject. The last model is the enriched-virtual model. This model concept started out as a full time online learning which was later adept to be a BL learning model. Students get to decide between attending a face-to-face class and learning online. It may seem similar to Flipped classroom and enhance-virtual model. However, student does not attend the on line campus every weekday and it is a whole-school experience.

Farahiza Zaihan Azizan (2010) proposed several other frameworks for effectively implementing BL in higher education institution such as Khan’s Octagonal Framework and Carman’s BL Process. Khan’s Octagonal Framework has eight dimensions where each of them represents a category of issues to be addressed. The dimensions are Institutional pedagogical, technological, interface design, management, resource support and ethical. Carman’s BL Process (Carman, 2005) applied 5 different learning theories to propose a framework that focus on 5 key ingredients of BL process, which are live events, self paced learning, collaboration, assessment, performance support materials.

In the higher education in University of Malaya, BL model used is a simplified version of the flipped-classroom model as proposed by Staker and Horn (2012). Students are required to attend classes on a weekly basis as well as monitor their activity online using SPECTRUM.

5. Past researches on bl

Technology has taken center stage in education and many researchers have shown an interest in BL. Delivery modes in classroom now differ from face-to-face, blended, and fully online. However, Bleffert-Schmidt (2011) and Risner, (2011) reported no significant difference between the three different delivery modes. Even so, classroom pedagogy was more student-centered (Ruck, 2012), and has attained a general appreciation in the educational community.
Several research focusing on students as the sample shows that BL does in fact benefit students. From student’s point of view, blended learning is a positive affect toward the value of intercultural awareness (Risner, 2011). Edginton and Holbrook (2010) reported that student' had concerned when using BL platform for the first time. They were unsure about their ability to communicate with the instructor about the online components. However, at the end of the course, their perception shifted to focus on their time management skills (Edginton & Holbrook, 2010). In another research, Shroff and Vogel (2010) observed that students engage in textual dialogue in the online discussions and participated more compared to the face-to-face discussions. According to Vaughan (2007), lecturers suggested that blended courses create enhanced opportunities for teacher-student interaction, increased student engagement in learning, added flexibility in the teaching and learning environment, and opportunities for continuous improvement.

Though BL platform has been in used for a few years now, there are some challenges towards online learning tool. According Mohamed Amin Embi (2011). One of the two major challenges lecturers faced are concerning the integration of e-learning into their lesson while balancing between teaching and research. The other major challenge would be time constraints educator face (Mohamed Amin Embi, 2011). In his study, Mohamed Amin Embi (2011) also highlighted challenges student faced are lack of access and feedback from lecturers.

6. Research question

The study looked at postgraduate students’ experiences in using SPECTRUM in a BL class. The research questions of the research are as below;

- What are the challenges students faced when using SPECTRUM?
- What are the benefits students’ experiences when using SPECTRUM?

7. Research methodology

The purpose of this research requires a focus on the qualitative aspects of the experience. Therefore a phenomenological method is chosen to answer the research question. This method allows data to be analyzed and reported in a descriptive and interpretative manner. Data collection was carried out by interview sessions with postgraduate students. To get an in depth account on students experience in using SPECTRUM, a semi-structured interview method was used. A guide was developed prior to the semi-structured interview to aid researcher in getting answer from respondent. The interview guide addressed several questions such as; students general view of SPECTRUM, Experience of using SPECTRUM, Purpose of using SPECTRUM, Program content and, Program delivery.

All students are postgraduate students from the faculty of Education with different courses. Students were chosen by purposive sampling method based on availability and convenience. Students were allowed to use any language they are comfortable with. The study was designed to investigate students’ experience in using SPECTRUM in their studies as well as their feelings towards the online system.

Consequently, researcher plays an important role in the study as an active interpreter. Postgraduate students from the faculty of education were first contacted to find a suitable time for an interview. 9 students were available for interview. Two interviews were conducted in a group while the rest was one-to-one. Then data was collected through a semi-structured interview. Initial question were asked followed by additional question derived from students answers. Students’ responses were then transcribed into text for further analysis. Initial readings of the data were done to find similar concepts or ideas. A second reading was carried to connect the concept or ideas of similar traits.
8. Findings

The findings presented here are of two themes where each contains sub-themes. Several benefits found in the data are accessibility to information, time saving, and helpfulness to the learning process. Some of the challenges students met while using SPECTRUM are learning to use SPECTRUM, Technical difficulty and formality in interactions. The first part will talk about the benefits students experience when using SPECTRUM in a BL class. The next part will look at the challenges students face when using SPECTRUM.

8.1 Benefits of using spectrum

Students have positive perception to the usefulness of SPECTRUM in their learning process. They claim that SPECTRUM allows them to have access to the subject content easily. They see SPECTRUM as a place to get and share information with one another.

“I think SPECTRUM is a useful platform for us because for postgraduate students sometimes when the lecturer upload notes or “friends sharing” you know, we can read before the class starts and can share something like that…”

“...and when people do their presentation they can upload their slides as well.”

Another benefits that students feel helped them were the ability to download notes before and after classes. This aids them in their note-taking process and also allows them to prepare for lesson.

“Yeah, sometimes when the lecturer is giving notes in the class, power point, we don’t have enough time to write or we miss the class, we still can download from the SPECTRUM.”

Another benefit students experience with SPECTRUM is the flexibility of time. This is one benefit that is known to the educational world and is often reported on. Students in this study find that they are free to choose when to engage in the subject content uploaded in SPECTRUM. Students claim that it saves their time from having to look for reading materials on their own.

“We just read, we don’t have to find other articles. They are provided in SPECTRUM. It’s easier for us. Because some of our friends are working and they don’t have time to search for other articles.”

“Maybe because we have a lack of time. Maybe fulltime students will have more time to read up.”

SPECTRUM was also considered a helpful tool for the students learning process. Students were not told of the benefits SPECTRUM has on their education but by using it they realize that BL does help them be independent learners. Students expresses that SPECTRUM help them to keep track of the course content and lessons.

“...You can go back to the notes if you accidentally lose the hardcopy given by lecturers... with SPECTRUM we can go back and print them again or read it online.”
“We can still keep track of what happens... sometimes we forget what we had learned last week, so we go back to SPECTRUM to check.”

“So if you have the time...the whole syllabus is there, so roughly you know what the lecturer is going to teach... it is very good, because, let say you missed out something, you don’t understand, you can go back.”

Overall findings shows that students did in fact realized the benefits of SPECTRUM by experiencing it firsthand. There was no need to specifically tell them the objective of such e-learning platform. The few benefits here are all related to students learning process. Thus SPECTRUM has indeed change the way student learn but giving them the independence of taking charge of their studies.

8.2 Challenges in using spectrum

Even with the benefits mention above nothing is without its challenges. One of the challenges that students experience when using SPECTRUM is learning to use SPECTRUM. The criteria of a successful integration of technology in classroom are standards and curriculum support where certain skills need to be set in order to support both subject and content with technology. However, students only receive little guidance towards using SPECTRUM. Thus they are left to explore SPECTRUM on their own. Older students claim that it is rather difficult for them to get used to SPECTRUM. Often they would acquire help from friends and family member. On the other hand, younger students who are IT savvy still claims that it takes time to get used to SPECTRUM without proper guidance.

“..It takes time.”
“Of course I have difficulties, I have to ask my kids to help me...”
“I only have a problem with uploading assignments. Ah, maybe I don’t know how. Maybe I’m not skillful in using SPECTRUM yet.”

Lack of technical assistance does not only occur towards educators. In fact, technical difficulty is still a pervasive challenge that students face. Though UM has various means to counter these problem, students are still unsure of the support that is available to them. In this case, data shows that students sometimes face a problem with their username and password. Students also expresses that they initially did not know whom to turn to when problems like this occur.

“...Except in the beginning of the semester, I don’t know why it took so long to log in. I couldn’t log into spectrum. In fact, after that thing happened, I also didn’t bother. I don’t know if mine can’t open or what.”

Another criteria that is necessary when using technology in classroom is presence of an engaged community. The benefit of BL is its flexibility to be access by students wherever and whenever they want. However, data shows that a challenge student face is regarding the interactions that happen in SPECTRUM. SPECTRUM is not like a social network. Most students nowadays interact in different social network such as Facebook, Twitter or Instagram. Social network gives them the freedom to express themselves. Thus, when they use SPECTRUM for discussions, students feel a total opposite to the online interactions they are used to. Students feel that SPECTRUM has a more formal and serious atmosphere when it comes to communications.
“...it’s more professional and educational....”
“and most of us don’t put personal things, we put it in our Facebook.”
“We do the conversation in Facebook.”
“Just formal language with the lecturer.”

There is little engagement between communities. Interactions are perceived as forced and formal. Furthermore, students are more reserved when it comes to using SPECTRUM to interact. They perceived it being as a formal setting where each member are supposed to exhibit a certain level of knowledge that is expected from a master students. Students feel a little pressured when it is made compulsory to post comments in the forum on SPECTRUM.

“...We’re afraid if we’re late to do the task in SPECTRUM or missed an announcement...”
“Did we give the right link that’s useful...”
“...There’s nothing to interact on there except if there’s a new forum. Another thing is if we want to chat with friends there’s no chat box”

Students also express that they feel SPECTRUM should be more user friendly in regards to the changes made. Their experiences using SPECTRUM is affected by the layout display of the e-learning platform.

“There must be some instruction or guidelines on how to use... if you really want to change that, make a workshop or something... Let the students know that it has changed...give fliers or give information on the changed version.”

“In my opinion, sometimes SPECTRUM is not user-friendly. One reason is when we want to start a new forum topic and another is I’m not familiar with SPECTRUM.”

9. Discussion

The findings contribute to the understanding of postgraduate students experience in using SPECTRUM in a BL classroom. Their experience highlighted the benefits and challenges of pursuing BL in classroom in higher education. The data reveals that SPECTRUM supports students to gain accessibility to information, in saving time, and to help in their learning process. The flexibility SPECTRUM offers to students on where and when to engage with the content supports past research (Staker & Horn, 2012, Smyth et al., 2012). BL allows students to easily monitor their lesson and receive course content. Furthermore it save time in having to find reading materials. SPECTRUM is seen as a place to share information. The benefits of BL in the Faculty of Education are probably because of the educator’s activeness in using SPECTRUM in their class. This support past research on BL where educators still plays an important role in determining the successfulness of a BL model (Peruso, 2012).

Some of the challenges students experience while using SPECTRUM were the fact that they had to get used to using SPECTRUM. Though SPECTRUM is easy to use, students perceive it as a not so user-friendly e-learning platform. They need guidance instead of having to explore the platform on their own. Technical difficulty is also one challenges students face as they have trouble logging into SPECTRUM. Another challenge student’s face is the unattractiveness of SPECTRUM elements. According to Mohamed
Amin Embi (2011), students expresses that e-learning platform has lack of interesting content and uninteresting content as compared to other online applications such as Facebook. This is also shown in the data collected for this research where student expresses the dullness SPECTRUM as compare to social networks they are used to. Furthermore, students are more used to the conduct of a social network and feel the interaction in SPECTRUM as a problem.

BL has to have a clearer objective when implemented into classroom as well as a develop community for student to feel it as more user-friendly. There are other ways for interaction to happen and those that do happen in SPECTRUM are either too formal or forced engagement from lecturers. Thus the corresponding activity such as discussions is seen as another activity for the course requirement. It masked the fact that SPECTRUM can be used for educational or beneficial interactions between students and teachers. The study does have its limitation and may not be able to represents other students from different faculty. Therefore further research should be done to identify the similarities and differences of students experience in using SPECTRUM throughout the campus.

10. Conclusion
This study aimed to understand postgraduate students from the faculty of education’s experience with using SPECTRUM in a BL classroom. It confirmed past research about the usefulness of BL in classroom and gave a first look at how students use SPECTRUM and in what context. Though the research is still in its early development, it is clear that further study into this matter might help educators understand students’ perspective towards BL. There is a need to see what students face everyday in order to help educators to carry of an effective BL class on campus.

Acknowledgements
This research paper is funded by University of Malaya Research Grant (RG442-13HNE)

References