



# How Students Experience Blended Learning? (Malaysian Experience)

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## Abstract

**Context:** This research studied student's perception of using SPeCTRUM (as a platform for blended learning) at a university in Malaysia.

**Methods:** A mixed method design was employed to collect data on students' perception and experience of using SPeCTRUM in learning activities. A questionnaire, individual interviews, focus group discussion, and class observations were used as instruments for collecting the data. Participants were from the faculty of education, university of Malay (Malaysia).

**Results:** The results showed that the students had positive attitudes towards SPeCTRUM regarding its flexibility in learning activities outside the class hours, including students' peer interaction. However, the findings showed that the instructor had limited time to interact with students virtually on the SPeCTRUM outside the class, and their priority is informative quality.

**Conclusions:** According to the results, SPeCTRUM has great flexibility, which allows students to have easy access. It provides the opportunity to save time and allows learning at any time and place.

**Keywords:** Blended Learning, Experience, SPeCTRUM, Students

## 1. Background

Blended learning (BL) refers to a deliberate “blending of face-to-face and online instructional activities, with the goal of stimulating and supporting learning” (1). According to Yilmaz and Orhan (2), blended learning offers the advantage of distance learning, which includes the ability to review material at anytime and place, and the advantages of face-to-face learning, which includes classroom discussion and direct interaction. Fearon, Starr, and McLaughlin argue that because blended learning incorporates both faces to face learning and technology media use in teaching and learning activity, it will not decrease students' interaction with other students or even with the teacher; indeed, it will make them more interactive and communicative with each other (3). In the blended learning approach, students take ownership of their learning and this increases their motivation, engagement, and interaction in learning activities (4). The literature review showed that blended learning has attracted the attention of many scholars (e.g., Hakkarainen and Palonen, 2003; Lee, 2003 cited in Ferriman (5)). Also, it was shown that merging the face-to-face and virtual space offers a variety of new opportunities to enhance learning (1).

Teachers play a significant role in BL, yet it is for the ben-

efit of the students that BL is widely popular now. According to Schechter et al.'s study (6), BL addresses the needs of all students. The idea is that BL can cater a larger group of students and allow them to control most of the learning activity (6).

The term 'BL' has been around since the early 21st century. According to Sharma, the term was first used “to refer to a course designed to allow workers to both continue in the workplace and study” (7). However, little consensus has been made to BL in education. Though it is widely used over the years, the meaning ‘has constantly been changing during this period’ (8). Nevertheless, it is certain that BL is different from online education, where the latter focuses on learning from an online application without the need of going to real-time classes. On the other hand, BL focuses on the mixture of two different modes of teaching and learning. One of them is the traditional face-to-face method while the other is through an online medium.

Some studies have noted that not all subjects benefit from BL. Wakefield et al. (9), said that students' views on BL varied from positive to a belief that BL does not suit their preferred learning style or the subject matter. According to them, “many students did not engage with the e-learning resources”. Wakefield et al. (9), concluded that the different views on BL are due to lack of awareness regard-

ing the e-learning components, combined with inconsistent access to computing facilities. On the other hand, Edginton and Holbrook's study (10), on pharmacy students' attitudes towards a blended-learning in a pharmacokinetics course showed that student' anxieties towards BL decreased after the course while their enthusiasm was increased. Tselios et al. (11), said that students are more aware of the usefulness of BL after using the system.

Smyth et al. (12), reported that "the online component meant little time away from study for the students, suggesting that it was more invasive in their everyday life".

Other past researchers focused on teachers and BL suggest that there is still a negative perception among the positive ideas of online mode of teaching. Grosz (13) and Moukali (14) reported the positive attitude of educators about BL and implementing it in the classroom. However, Grosz further reported that educators believe that they need training for BL and appreciated any aid in the matter (13). Moukali, who investigated factors and barriers that influence lecturers' attitudes toward the adoption of technology-rich BL in their classrooms, reported a positive attitude from educators, although female lecturers tended to face more barriers in the implementation of BL in the classroom than male lecturers (14).

**Interaction and involvement in BL:** The most critical factor of BL is interaction and involvement. Education revolves around the interaction of students, teachers, and content. According to Wagner (15), a crucial element in online learning experience in the aspect of quality and value is interaction. Interaction appeared to be the main focus of research and theory in BL (16). However, interactions between face-to-face instructional teaching and through online media are two different matters.

Garrison and Vaughan (17) propose that the current models of BL, which involve mixed online and face-to-face interaction, result in higher levels of learning.

Another past research found that the mixing of online and face-to-face interaction is perceived by students to have some influence on their academic achievement (18). Nevertheless, the communication between teachers and students is vital in learning whether it is online or face-to-face. Hung and Chou (19) reported that the arrangements of blended learning make students more responsible, more engaged, and more collaborative in learning.

Another research found that the mixing of online and face-to-face interaction is perceived by students to have some influence on their academic achievement (18). Furthermore, Garrison and Vaughan (17) proposed that the current models of BL, which mixed online and face-to-face interaction, result in higher levels of learning.

For this research, Wagner's definition of interactions was used that requires at least two objects and two actions

in reciprocal events (15). The objects refer to the students, teacher, and content on their roles, and the action refers to the act of replying or receiving.

In Malaysia, almost all higher education institutions have acknowledged the benefits of BL to provide the necessary knowledge for a wide variety of students. Also, they agreed that BL enhanced the teaching and learning process. Furthermore, BL has increasingly gained the interest of higher education leaders in Malaysia (20-23).

In 1991, vision 2020 (W2020) was introduced by Malaysia government with the objective of becoming a developed country by 2020. Since W2020 has presented the effect of technology, especially information and communication in Malaysian economic and social activities, it has never left education as the main contributor to social capital and economic development of the country.

In this regard, BL at the university of Malaya (UM), started out like any other university with new changes. In 2003, e-learning platforms were used, such as learning care and moodle. Both learning care and moodle had their advantages and disadvantages. In 2009, a decision was made to choose between the two e-learning platforms. Moodle was selected as it was easy to customize to the users' needs. Thus, SPeCTRUM was created to allow educators and students to harness the power of the internet in their classroom easier. SPeCTRUM is a simple e-learning application that provides a convenient space for students to communicate with each classmate and lecturer online. All courses are now available on SPeCTRUM as a platform for instructors and students from the university's database (24).

SPeCTRUM could be accessed through <http://SPeCTRUM.um.edu.my/>.

The SPeCTRUM has been used for more than eight years at the university of Malaya, and the current research sought to understand postgraduate students' experience in using the SPeCTRUM in a blended learning classroom. In other words, the objective of this study was to explore students' attitudes and experiences in using the SPECTRUM platform in the blended learning activities in Malaysian higher education, particularly at the university of Malaya.

## 2. Methods

A research conducted in 2015, considered the data through survey and phenomenological research designs. Data collection was carried out through a questionnaire, personal interview, focus group discussion, and observation. The sample was limited to one classroom of postgraduate students at the university of Malaya. Purposive sampling was chosen to determine the sample through researchers' judgment or criteria. The participants of this study were considered to provide adequate sources of data

needed to answer the research questions, and they had experience in using the SPeCTRUM for at least one semester of the academic year.

Individual and one to one interviews were conducted with nine students and also two group interviews were implemented.

The survey questionnaire consisted of five sections; section A, consisted of questions regarding the respondents' background, section B consisted of 20 statements on the content of the SPECTRUM, section C looked at students' reason for using SPeCTRUM, section D was about students' interaction on the SPeCTRUM platform, section E asked about the function of SPECTRUM in classroom activities, and section F was about the general layout of SPeCTRUM.

As already mentioned, personal interviews and focus group discussions were also conducted with students from the faculty, to elicit a deeper understanding of student's attitude and opinion towards SPeCTRUM. First, through reading of interview data, similar concepts or ideas were found. A second reading was carried out to connect the concept or ideas of similar traits. The findings analyzed for themes and triangulated to validate qualitative data while the data from the survey was analyzed and reported descriptively.

The researchers informed all students, who participated in the study about the objectives of the study and they had been given the chance to discuss any questions or issues. Written informed consent was obtained from each participant.

### 3. Results

As noted earlier, BL has two critical features, including flexibility and students' interaction. Findings of the survey and interviews showed that students accept the flexibility of the SPeCTRUM use in learning activities. The report indicates that most students flexibly accessed the SPECTRUM at their own preferred time and location, such as home, hostel, library, dorm or office. The percentage shows that more than 60% of students allocated their time to access the SPeCTRUM at home and 8% at the library. Figure 1 summarizes various places spent by students to access the SPeCTRUM outside of class hours.

Most students also confirmed that they had a flexible time to access the SPeCTRUM.

Regarding frequency of accessing this online platform, about 60% of students accessed the SPeCTRUM nine to ten times a week. In other words, from a total of 35 students, 12 repeatedly accessed the SPeCTRUM ten times a week, and 11 students nine times and the duration of once accessing the SPeCTRUM was about 20 to 50 minutes (Figure 2).

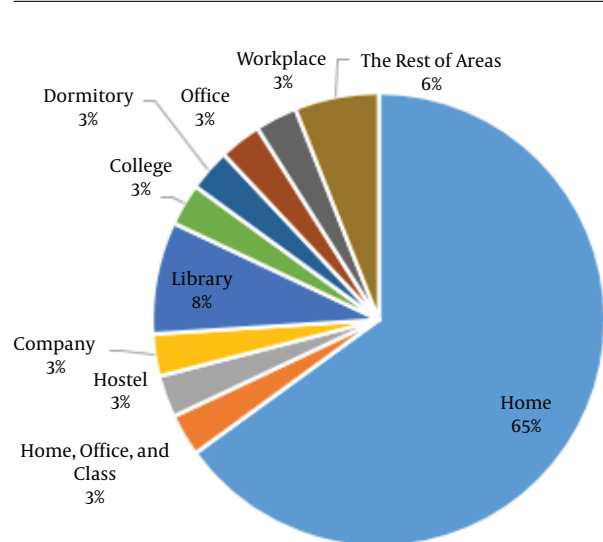


Figure 1. Place of accessing the SPeCTRUM

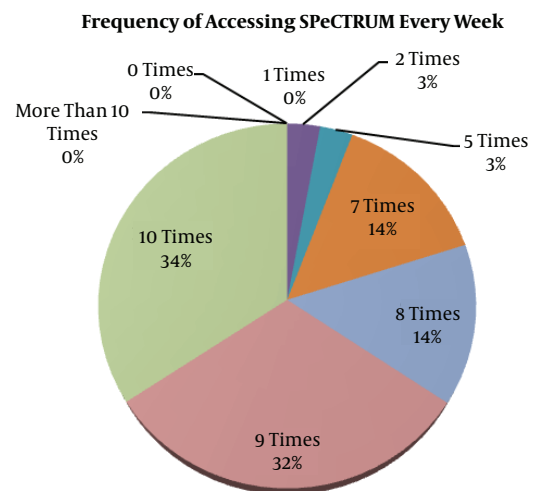


Figure 2. Frequency of accessing the SPeCTRUM

The students, who were interviewed, also mentioned about their times and place flexibility of accessing the SPeCTRUM. Students also claimed that they could learn independently according to their needs and own pace. The contents (articles) were provided on the SPeCTRUM and made them easy to learn immediately without spending much time in searching other materials. One of them mentioned:

"We just read, we do not have to find other articles. They have been provided in SPeCTRUM by friends and instructor. It is easier for us. Because some of our friends are

working and they do not have time to search for other articles.”

Another student acknowledged:

“Maybe because we have a lack of time as a part-time student to search our material, SPeCTRUM is helpful...”

Furthermore, the most critical of virtual space on the SPeCTRUM is students’ interaction and involvement while outside class hours. However, according to the survey report, there was no significant interaction and participation on the SPeCTRUM. Figure 3 shows that only 51% of students interacted virtually outside class hours.

The challenge faced by students in the interaction process was that SPeCTRUM is not like other social networks (e.g., Facebook, Twitter or Instagram). Compared to other social networks like Facebook or Twitter, students feel SPeCTRUM has more formal and serious atmosphere. Students mentioned:

“...it’s more professional and educational...”

“and most of us do not put personal things; we put on our Facebook.”

“We have the conversation on Facebook.”

“Just formal language with the lecturer.”

Regarding contents provided on SPeCTRUM, students reported that contents, such as powerpoint and course information, were used for students’ learning outside class hours. Students believed that they were beneficial and ap-

Students' Believe of Using the SPECTRUM for Discussion Purpose

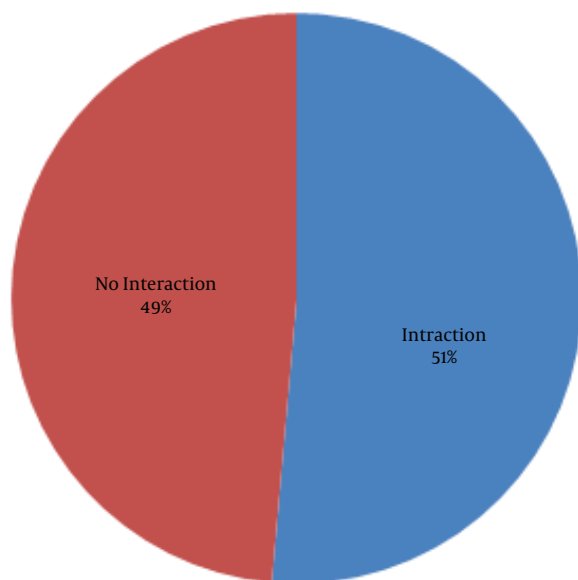


Figure 3. Place of accessing the SPeCTRUM

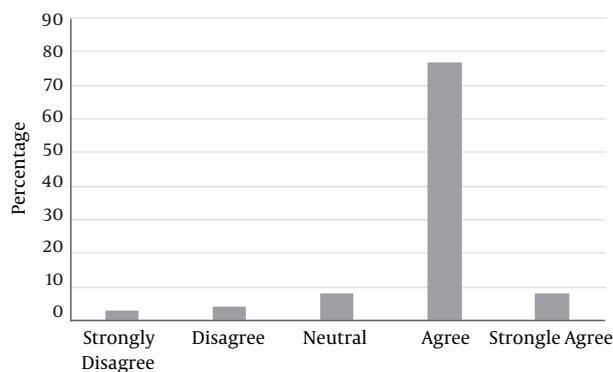


Figure 4. Content of SPeCTRUM

propriate for their program level (85.7%) (Figure 4).

A student also reported in the interview:

“So far for me, it’s easy to use SPeCTRUM because it is [organized] week by week, it is like a textbook. I’ll know that this week we’ll be learning about what topic because it follows a week by week view.”

Although the contents of SPeCTRUM have assisted students in learning activities outside class hours, some students in the interview also mentioned that some contents were indeed textbooks and there were no clear explanation or instruction. The students also suggested that lecturers should post notes on a weekly basis so that the students will know what they should do with the content.

Most of the students preferred to read or go through notes before classes to get a general idea of the lesson. Some lecturers used SPeCTRUM to upload notes for students before classes yet with less instruction. An excerpt from the interview below expressed how students use SPeCTRUM:

“...in case she [the lecturer] is going to ask us anything, and we still blur, we can still refer to the notes she has given before”.

“Especially when the lecturer asks us to read the article... then we really need to study and go through the article. Because sometimes the article is really hard to understand, the lecturer needs to explain about the contents on the SPeCTRUM...”.

The observations also show that the lecturer is very wordy in the classroom and little or no interaction with students on the SPeCTRUM outside the class hours. One student said:

“I find that SPECTRUM is a hub for my course content. All my lecturers use SPeCTRUM to upload notes, announcements, and related reading materials. It works like a drive where I get my materials. However, if there is any forum en-

abled, I use it to exchange and discuss the assigned topic. Since we (students) are unable to form the forum on our own”.

Students also suggested that the 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”.

It is necessary to mention that there is a center at the university of Malaya for teaching lecturers how to use SPeCTRUM. This center is called the e-learning team. The center is a section of the academic development center (ADC). E-learning team is responsible for teaching lectures how to use SPeCTRUM efficiently. During three years, this center has implemented three workshops including:

1. Basics of SPeCTRUM, SPeCTRUM,
2. Quiz workshop,
3. Workshop on how to use SPeCTRUM effectively.

Also, lectures of UM should attend the SPeCTRUM clinics. In these meetings, lecturers discuss their problems individually and solve them. One of the authors of this article has attended all workshops, and his observation showed that in the mentioned workshops, the focus was technical issues and not an educational problem, including interaction and involvement of students in the course. Even though in the last workshop, the lecturer talked a little about flip blended learning very briefly yet did not give detail on how lecturers could encourage students’ interaction with lecturers, content, and other students. It seems that it is the task of educationalist to mention the interaction as a strategy and tactic for SPeCTRUM.

#### 4. Discussion and Conclusion

According to the research results, SPeCTRUM has a flexibility, which helps students have easy access to it and the course content. It has provided the opportunity for them to save time and also be able to learn at anytime and anyplace to read and learn. This increased flexibility, as Horn and Staker (25) showed, implies the control of students over time, place, path, or pace of learning. Blended learning may offer flexibility regarding time, by using asynchronous instead of synchronous communication, and place, as learners, can be anywhere and no longer have to be co-located in classrooms (26).

In this regard, the students believed that the contents, such as powerpoint and course information, were used for students’ learning outside class hours. Students believed that they were beneficial and appropriate for their program level.

However, some contents in SPeCTRUM are indeed texts without any explanation or instruction. It could be better to use a different version of content, including movies, shout clips, quiz, etc.

The survey results showed no significant interaction and participation amongst students on SPeCTRUM. According to interviews, the lack of interaction among students themselves and students and lecturers is that the SPeCTRUM is not like other social networks (e.g., Facebook, Twitter or Instagram). Thus, when they use SPeCTRUM for discussions, students felt a total opposite to online interactions they are used to.

#### Footnotes

**Authors’ Contribution:** Study concept, design, and critical revision of the manuscript for important intellectual content were developed by the authors who participated through the overall process.

**Conflict of Interests:** Authors declared no conflict of interest.

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