

Online Learning Conveniences From Students' Perception: A Case Study in Universiti Malaysia Sabah

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ABSTARCT : Convenience is one aspect that should be considered in an online learning environment. Without convenience it is very impossible to implement successfully online learning particularly in higher learning institution. The purpose of this study was to explore the online learning conveniences from students' perception. A cohort of 61 science physics students from School of Science and Technology (SST) and 41 pre-service science teachers from the School of Education and Social Development (SESD) of Universiti Malaysia Sabah, Malaysia comprised the sample. The course involved is Modern Physics which is compulsory. Both groups were supported via an online learning environment, which acted as the main medium for learning. Participants' perception on conveniences was recorded through an open-ended questionnaire and focus group interview. The output of these qualitative data can be categorised into several themes, as in general they felt that learning through online is really convenient and ease; and they were also using online to search for information. Somehow there were also negative feedback where they felt not satisfied with the Internet coverage. In additional the SESD's student stressed that their communication skills were enhanced.

KEYWORDS: online learning; students' conveniences.

1. INTRODUCTION

The popularity of online learning has grown in recent years partly due to the continuous improvement of its design, the increasing selection of options they offer, their proven efficiency in evaluating students' effort and providing instant feedback, especially for large classes. Online learning, e-Learning, electronic learning, Information Technology and such topics represent one of the main current issues of the millennium (see Beadle and Santy, 2008; Candela et al., 2009; Clarke, 2005; Gibbings, 2008; Jennings, 2006; King, 2008; Kruhlak & Vanholsbeeck, 2008; Lycke, Strømsø, & Grøttum, 2006; Nedic, Nafalski, & Machotka, 2011; Kondratieva, 2012; Simonova, Poulouva & Cerna, 2011; Simonova, 2012; Rahmat, 2013; Faifrová & Bároch, 2013).

In Universiti Malaysia Sabah (UMS), online learning is comparatively new with other local universities. Though in early 2000, UMS has been introduced with an electronic teaching aid such as Blackboard and several computer aided instruction as one of the teaching and learning tool, both from School of Engineering and Information Technology (SEIT) and School of Education and Social Study (SESD), until now the usage of these teaching aid seems not been utilised at all or at least part of it. In School of Science and Technology (SST), a very small number of lecturers prefer to use online learning as the teaching and learning medium or at least part of it. They were really comfortable with the existing medium (i.e., face-to-face lecture based) as to deliver course syllabus and content objective throughout semester. Ironically Malaysian government through the 9 challenges in Vision 2020 that must be achieved in order to be a well-developed, advanced and higher income country in 2020 had stated through the 6th challenge that Malaysian citizens must try to adapt with these cutting edge technology and must also contribute to the science and technologies civilizations. Additionally our Prime Minister also stated the Information Communication Technology (ICT) and education service are two main key of the National Key Economic Area (NKEA), thus must be utilised very well in our daily life scenario to ensure the higher income economically and productivity country objectives can be achieved (Razak, 2010). Therefore as a rapid develop country, Malaysia really need to explore the potentials of these NKEA especially in higher leaning institution in order to reply the Prime Minister's call.

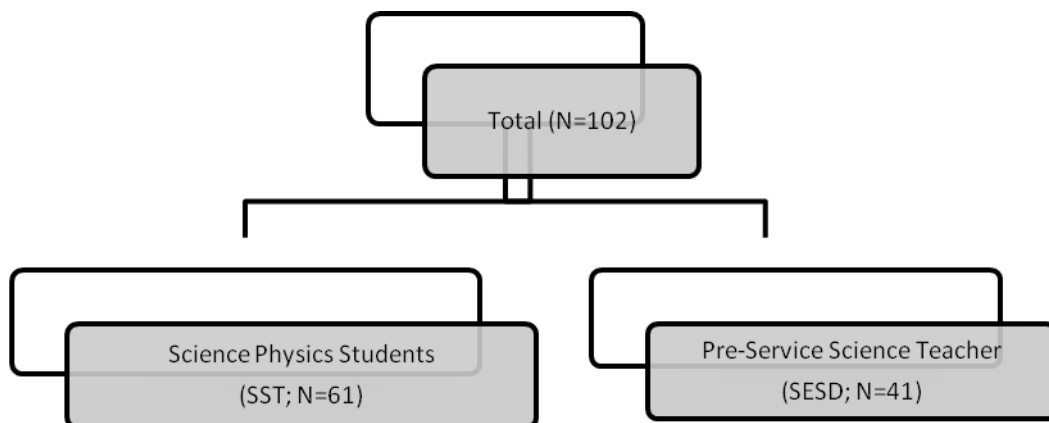
Media & Educational Technology Unit (METU) was then established in UMS to ensure the nation's vision and mission in higher education particularly in UMS can be achieved. The main objective for METU is to cater the service and facilities in Information Communication and Technology (ICT) such as computer and software component to the university including the teaching and learning aspects,

besides it is also deliver digital information across all academic disciplines for research, administration and management of the university activities (Media & Educational Technology Unit, 2012). Therefore this preliminary research was to address an issue concerning about online learning and what was really happen when the online learning being implemented in UMS. It is a critical factor for researchers to consider many factors before implementing online learning fully. As stated by Kišićek, Lauc and Garić (2012) understanding students' preferences can guide to a better learning instruction through online. Additionally the use of ICT in modern teaching aid (e.g., internet technologies; web portals; and multimedia software) contribute positive output to parts of teaching and learning process such as, cooperation amongst students and the learning becomes more interactive (Mandic, Dzinovic, & Samardzic, 2012). It also might be one of the powerful tools to lesser lectures' teaching workload. Thus the researcher took steps integrated online learning in a particular physics course. Students' perceptions after experiencing the online learning were analysed qualitatively under *convenience of learning through online*.theme.

II. METHODOLOGY

The study was conducted throughout Semester II during the 2008/2009 academic year at Universiti Malaysia Sabah (UMS), Malaysia. One hundred and two students were involves, which consist of sixty-one (61) science physics students from Physics With Electronic Programme at the School of Science and Technology (SST), and another forty-one (41) pre-service science teacher from Science Education Programme at the School of Education and Social Development (SESD). The samples pursued all the learning activities in an online learning environment (i.e., learning management system, LMS) which acted as the main medium to support the full learning process throughout the semester. The flow of group sample shows in Figure 1.

Figure 1: Group Sample for the Study



The teaching and learning via online was conducted within sixteen (16) weeks. During this intervention, all assessment being delivered using the LMS organised by Educational Technology and Multimedia Unit (ETMU) at the Universiti Malaysia Sabah. The researcher prepared the learning requirement criteria to fulfill the learning and teaching activities via online. The learning activities are including finds their own information, knowledge and sources in order to find the appropriate knowledge and facts via Internet. Students also have to access to the LMS to do their chat room at least once in a week and monitored by a facilitator. In this chat room they will argue, share thoughts and most probably constructed their own thinking regarding to the particular problems. They also are able to enter the forum room to post any inquiries or any ideas asynchronously. Additionally some linkages, sources and lecture note also uploaded by the facilitator for them just to ensure the students did not lose their ways in sequence to find the suitable solution and just to give them the correct path in searching their resource. This LMS system was using Moodle2007 course management systems. Jayasundara et al. (2007) suggested that the online service and implementation rate of system perhaps more improve and even better if it is incorporated with existing course management systems such as Moodle2007 and Blackborad2007. In this study the intention was to investigate Malaysian Undergraduate Science Physics Students' and Pre-Service Science Teachers' Perceptions of online Learning in terms of convenience. Data was collected through an open-ended questionnaire and focus group interview and were done one week after their finish with the intervention.

III. RESEARCH FINDINGS AND DISCUSSIONS

For this study, data gathered from focus group interviews after they finish with the intervention. These data suggest that as far as the online learning approach is concerned the student feedback varied from satisfied to not satisfied, for convenience. Feedback for the SST and SEDS students is first presented combined and any differences between the cohorts are then discussed. This section ends with summaries for both groups of students.

Table 1 shows the theme categories of the open-ended questionnaire and interview for students' perception of online learning. The themes clustered based on a question: *Convenience of learning through online.*

Table 1 Themes in the open-ended questionnaire and interview of student perception of online learning

Generally	SST	SESD
i. Convenient and ease;		i. Enhanced communication
ii. Using online to search for information;		
iii. Not satisfied with the Internet coverage.		

Analysis of the open-ended questionnaire and interview data indicated that a majority of students felt satisfied. However, there were minority of students who did not. The responses can be categorised into several main arguments: *i. Convenient and ease; ii. Using online to search for information; and iii. Not satisfied with the Internet coverage.*

Convenient and ease : A participant felt that this kind of learning has provided a useful method to learn and she even compared it to overseas styles of learning:

It is convenient for learners of modern physics because we just have to click to get any kind of information in the net at an instant. It is a suitable and appropriate way of learning for me because I like to learn independently and take all this as a challenge. It is useful to use e- learning like in overseas study method. (Student #15, SST, Female, *questionnaire*) A member added that this approach gave them the ability to take charge of their own learning process: they can study the way they want, and at their leisure.

Overall I can say it is convenient. I am comfortable to study this way. I can study any way I want. I need no rush to go to class. Only the line in the hostel is sometime too bad.
(Student #3, SEDS, Female, *questionnaire*)

Using online to search for information : A participant gave several advantages that she gets from online learning, from the technology to knowledge acquisition. This suggests that the online learning had upgraded her convenience and speed while learning modern physics:

This programme is fully conducted through Internet. For me, there is no problem because I always surf the Internet by using the WIFI facility. We always need to login into LMS and update the task given inside physics modern side. I feel this is very convenient because we can get the information and instruction given wherever and whenever we want. Besides that, the chat session which provided by LMS also give us a chance to discuss our solution without need attend any meetings. The submission through Internet also easier compare than need print out and send to the lecturer. In campus life which provided with WIFI facility, PBL is a convenient programme for me. (Student #13, SST, Female, *questionnaire*)

A participant also stressed that collaborative learning with group mates and facilitator contributed to her learning: Knowledge will be gained via online learning as students can download a comprehensive note or receive any announcement or the information need from the instructor. Two-way interaction and discussion available among students n with instructor so that some unclear information can be validated (Student #25, SEDS, Female, *questionnaire*). One student also commented that it is not necessary to gather in one place at the same time, since there were times that it was really hard for them to gather the team at the same time and place to discuss a matter: Yes. I am more convenient using this kind of learning. We can talk to each other without holding a discussion in round table like a meeting. Just turn on the Internet and we can discuss it online. (Student #9, SEDS, Female, *questionnaire*)

Not satisfied with the Internet coverage : Again, the unsatisfied feeling of this approach arose from the technical aspects. The Internet access inside the university is sometimes bad as mentioned by some participants:

Not satisfied because of the coverage of campus (Student #14, SESD, Female, *questionnaire*).

Some SESD students felt they *i. Enhanced their communication skills*, by inquiring synchronously through the facilitator who was in another place made it easier for her, as stated by a participant:

Enhanced communication : Enhance my communication with others. I can ask the questions to lecturer and answer me immediately via web site. Lecturer posted class assignments, directions to me and others, so no need to meet her/his at office. (Student #32, SESD, Female, *questionnaire*)

Apart from enhancing their communication skills, a participant also added that she enjoyed the idea of integrating learning activities with the ICT and not depending too much on the normal lecture class all the time:

It is convenient to learning via online learning cause we don't have to get busy in getting information and instruction from the lecture. Plus it is more interesting because we can integrate the use of ICT in learning. (Student #30, SESD, Female, *questionnaire*)

IV. DISCUSSION AND CONCLUSION

Along with the development of modern communication technology, the Internet has also effectively influenced students' experiences in terms of conveniences, where students reported feeling *really comfortable* learning through the Internet and using computers. The massive amount of information available from the Internet played important role in developing their critical thinking, as they had to synthesise and analyse their results and consider carefully what they needed to report in their final findings. This is in line with work by Chan Lin and Chi Chan (2007) who report that students have to use divergent thinking when a variety of sources and information are accessible for analysing problems. Additionally, although most of the students reported previous experience in using Internet Messenger, Facebook, Skype and so on, to chat with others, conversing on academic work was new to them. Students posted queries about technical issues, for example, the use of special fonts and symbols in science terms, writing formulae for physics such as $H\psi = E\psi$ or $E = mc^2$. Students also first learned how to register, sign-in, and manage their own personal data electronically through the LMS.

In this paper, the main concern is to see the convenience of an online learning approach, and one of the concerns is *the communication linkage* between group members when they were apart (in space and time). Although they were not at the same place and time they still managed to have meetings (e.g., asynchronous meetings via a forum) to gather relevant information in the process for writing up the final findings. From this, they shared experiences of searching, investigating - in addition to gathering information and identifying diverse resources. Thus, advanced searching strategies were observed among students as they became more knowledgeable about a topic. Due to their familiarity with the topic, more relevant keywords were also used during the search for resources. This is in line with work by Gursul and Keser (2009) whose students working in a PBL environment were able to share their tasks and cooperate in the solution of problems using online learning compared using face-to-face learning.

Notwithstanding this, like many other online learning strategies, the use of the learning management system (LMS) and Internet for the study had some limitations. As noted above, some students complained about a *poor Internet connection* in some places within the campus making them more irritated when learning on-line. Though they have the facilities, the difficulty of getting reliable Internet access coverage suggests that the campus requires some improvement in this area, and needs to upgrade some facilities if the University is to see this new approach of learning as successful in the future. Finally, some students from the SESD group said that it was *very hard to visualize what they were talking about through online* (i.e., synchronously), since they conversed in a very limited online chat room provided by the LMS.

With the advent of electronic learning technology, students are facing new challenges with respect to perceiving knowledge and setting new goals to manage today's global knowledge. In the Modern Physics course, an innovative approach using LMS and facilitated by the lecturer was implemented in order to enrich the online experience. Through the help from the online discussion forums and the help from group members and the facilitator, students shifted towards independent learning establishing more regular self-directed learning practices. They were also exposed to the virtual library and information science fields, particularly in the modern physics domain by exploiting the advantages of information communication and technology (ICT).

Thus in this paper the conveniences learning through online was being exposed and provide some descriptions to lecturers and curriculum providers that how physics' students and pre-service science teachers' acceptance learning through this approach in terms of convenience of learning through online.

REFERENCES

- [1]. Beadle, M., & Santy, J. (2008). The early benefits of a problem-based approach to teaching social inclusion using an online virtual town. *Nurse Education in Practice*, 8, 190-196.
- [2]. Candela, L., Carver, L., Diaz, A., Edmunds, J., Talusan, R., & Tarrant, T. A. (2009). An online doctoral education course using problem-based learning. *Journal of Nursing Education*, 48(2), 116-119.
- [3]. Clarke, A. (2005). CLaSSProject: E-Learning skills. Retrieved January 20, 2010 from www.uclan.ac.uk/
- [4]. Coleridge, S. T. (2005). Editorial: Rhetoric and reality: The present and future of ICT in education. *British Journal of Educational Technology*, 34(2), 131-136. doi:10.1111/1467-8535.00315
- [5]. Faifrová, V. & Bároch, V. (2013). *New Approaches in the Use of Modern IT Technologies for Management Teaching*. Proceeding of the 4th International Conference on education and Educational Technologies (EET'13). 30Jan - 2Feb, Cambridge, MA, USA.
- [7]. Gibbings, P. (2008). *Experience of problem-based learning (PBL) in virtual space: A phenomenographical study*. Unpublished doctoral dissertation, Queensland University of Technology, Brisbane, Australia.
- [8]. Jayasundara, C., Balno, S., Farmer, R., & Kirley, M. (2007, December). Speclad: An online collaborative problem-based learning environment. Paper presented at the 2007 Australasian Association for Engineering Education (AaeE) Conference, Melbourne, Australia.
- [9]. Jennings, D. (2006). PBLonline: A framework for collaborative e-learning In M. Savin-Baden (Ed.), *Problem-based learning online* (pp. 105-125). Buckingham, England: Open University Press.
- [10]. Kisceck, S., Lauc, T., & Garic, A. (2012). Using Multimedia Resources in an Online Course with respect to Students' Learning Preferences. Paper presented at the The 8th WSEAS International Conference on Educational Technology (EDUTE '12) 1-3 July, Porto, Portugal.
- [11]. King, E. (2008). Can PBL-GIS work online? *Journal of Geography*, 107(2), 43-51. doi:10.1080/00221340802202237.
- [12]. Kondratieva, M. (2012). On-line tutorials in undergraduate mathematics. Proceeding of the 3rd WSEAS International Conference on Education Technology (EDU'12), 7-9 March, Athens, Greece.
- [13]. Kruhlak, R. J., & Vanholsbeeck, F. (2008, October). *Adding value to physics education technology simulations*. Paper presented at the Symposium Proceedings: Visualisation and Concept Development, UniServe Science, University of Sydney, Australia.
- [14]. Lycke, K. H., Strømsø, H. I., & Grøttum, P. (2006). Tracing the tutor role in problem-based learning and PBLonline. In M. Savin-Baden (Ed.), *Problem-based learning online* (pp. 45-60). Buckingham, England: Open University Press.
- [15]. Mandic, D., Dzinovic, D., & Samardzic, B. (2012). Informational Technologies in Creating Modern Teaching Aids. Paper presented at the The 8th WSEAS International Conference on Educational Technologies (EDUTE '12). 1-3 July, Porto, Portugal.
- [16]. Media & Educational Technology Unit. (2012). Official Website of Media & Educational technology Unit.
- [17]. Nedic, Z., Nafalski, A. & Machotka, J. (2011). *Online International Collaboration - a Case Study: Remote Laboratory NetLab*. Proceeding of the 2nd International Conference on Educational & Educational Technologies 2011 (WORLD-EDU'11). 14-16 July, Corfu Island, Greece.
- [18]. Rahmat, R.A. (2013). *Application of On-line Facilities in Producing Human Capital for Malaysian New Economic Model*. Proceeding of the 4th International Conference on education and Educational Technologies (EET'13). 30Jan- 2Feb, Cambridge, MA, USA.
- [19]. Razak, N. (2010). Rancangan Malaysia Kesepuluh (2011-2015): Kearah Negara BerpendapatanTinggidMaju. Retrieved from http://www.epu.gov.my/c/document_library/get_file?uuid=9c88f35a-a4ac-4b49-96e7-1f6cc5a9d456&groupId=34492.
- [20]. Simonova, I. (2012). *Communication in Online Courses under the Virtual Observation: case study*. Proceeding of the 11th WSEAS International Conference on Education Technology (EDUCIT'12), 11-13 May, Singapore.
- [21]. Simonova, I., Poulouva, P., & Kriz, P. (2011). *Personalization in eLearning: from Individualization Flexibility*. Proceeding of the 2nd International Conference on Education and Educational Technologies (WORLD-EDU'11). 14-16 July, Corfu Island Greece.