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The Effectiveness Learning Materials and Activities in e-Learning Portal

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Abstract

The article seeks to present the effectiveness of the learning materials and activities provided in the e-learning portal of the School of Distance Education, Universiti Sains Malaysia. The analysis involved a sample of 1,080 students based on age, gender, ethnicity, place of Internet access and frequency of the e-learning portal usage. Questionnaires were administered to the students and completed during the two weeks of the intensive course. The results indicated that all of the learning materials had contributed to the effectiveness of the portal with the respondents strongly agreeing that assignments had the highest correlation compared with other learning materials. The students were more comfortable with receiving the assignments through an e-learning portal. They also agreed that feedback about their assignments had to be included in the portal. The e-learning portal helped them to keep pace with their studies. By using the e-learning portal, learners could easily get any information that they needed for their learning.

Keywords: e-learning portal, learning materials, effectiveness

Introduction

Technology and knowledge exchange is a very complex process. In the era of globalisation, the development of electronic communication and the Internet has removed the barriers of place, time and space. In the last 30 years, many approaches have been developed to optimise communication and information technologies for the purposes of education and learning. According to Ally (2004) as well as Kim and Bonk (2006), higher educational institutions are increasingly moving toward the use of the

Internet for delivery of their courses, both on campus and at a distance. The Internet technology provides a significantly different and interesting learning method from other forms of educational technologies and possibilities for computer-meditated communication (Weller, 2002). Therefore, one of the ways to address the need of education which is technology based is by e-learning. The e-learning policy is to promote lifelong learning and to improve human capital for those learners who are unable to access education through conventional means.

Universiti Sains Malaysia (USM) introduced the distance education (DE) programme in 1971 through the School of Distance Education (SDE), previously known as the Centre of Off-Campus Studies; the aim is to provide education opportunity for working adults. Through this educational approach, working adults can still remain in full-time employment and at the same time, are able to undertake undergraduate courses. The advancement in technology has opened up the possibilities of personal and group interactions via the e-learning portal. According to Issham et al. (2010), the USM distance learning programme has been using the e-learning portal as a medium for teaching and learning through a home-grown electronic portal since 2003, followed by the migration into the Moodle Learning Management System (LMS) in 2004 (Issham, Siti Sarah and Rozhan, 2010).

e-Learning

Learning and teaching have been transformed as a result of the Internet which has speedily grown in popularity and widespread use (Jones and Peachey, 2005). Web-based learning is a means of implementing education that can be applied within different educational paradigms: distance learning, blended learning and face-to-face learning (Hadjerrouit, 2006). According to Harasim (2000), the real value of web-based learning lies not in accessing knowledge at any time, any place and byanyone, but helping the right students to acquire the right skills and knowledge at the right time in order to function as active, self-reflected and collaborative participants in the information-based society.

The growth of e-learning is phenomenal. The development of online courses and products is increasing in number every day. e-Learning represents a good opportunity to reduce the digital divide and to ensure

higher and faster development trends (Campenella et al., 2008). Several universities are currently involved in using e-learning systems to provide valid teaching-learning solution; notwithstanding this, several problems related to e-learning activities still remain. Educational institutions are attempting to integrate and implement better ways of new technologies in order to provide more learning possibilities to their students (Ortiz-Rodriguez, 2005).

For a sustainable educational transaction in the electronic medium and cyberspace, higher education institutions need to establish an e-learning infrastructure that requires the development of a virtual learning environment, known as an e-learning portal. This portal helps learners to gain access to educational materials at anytime and anywhere. With this portal, lecturers can spend less time on paperwork and more time teaching while learners can benefit from a richer, more robust learning experience.

The e-Learning Portal

The e-learning portal provides a space or place for students to make searches across a multitude of electronic resources which include electronic books and many other useful links. A portal is one of the websites or services that are normally provided by companies and educational institutions which offer a broad array of information, services and resources such as search engines, emails, forums and others. Portals are springing up like mushrooms (Winkler, 2003). They exist to help users find information on the worldwide web. The purpose of a portal is to be a major starting site for users when they visit an anchor site or when they are connected to the web.

Portals allow students to log in via passwords and the transactions that follow will be tracked. Through portals, students and lecturers can disseminate messages, announcements, notes, questions and answers. They provide an integration of sources for searching the location and delivery of materials in any format, physical or digital. Portals provide highly useful tools that make it easier for students to achieve their potential (Robin, 2003).

Research Methodology

This study was conducted during the 2007/2008 academic session. A total number of 1,200 questionnaires was distributed to the students from four different courses offered by the School of Distance Education. A total of 1,084 questionnaires was returned. The questionnaires were completed by the students during the two weeks' intensive course.

Instrument

The questionnaire consisted of seven parts which included demographic data, technical aspect, design, learning materials, learning activities, improvement and effectiveness. The demographic data captured details on the respondent's demographic information and personal background such as age, gender, ethnic group, course type, year of study, current CGPA, place of frequent access to the Internet and the frequency of using the e-learning portal and others.

All questions, except for questions on demographic details, were measured by using the five-point Likert scale ranging from 1 to 5, with 1 for "strongly disagree," 2 for "disagree," 3 for "neutral," 4 for "agree" and 5 for "strongly agree." The data analysis was achieved via the Statistical Package for Social Science (SPSS) Version 12.0.

Analysis and Findings

Table 1 illustrates the demographic details of the respondents. There were a large number of Malay respondents amounting to 760 persons, followed by 232 Chinese. There were 48 Indians with the rest being from other ethnic groups. The data collected also showed that among the respondents, 579 (53.1 %) were females and 508 (46.9%) were males.

Table 1 Demography of the respondents

Items		Frequencies	Percentage (%)
Gender	Male	508	46.9
	Female	576	53.1
Ethnic group	Malay	760	70.1
	Chinese	232	21.4
	Indian	48	4.4
	Others	44	4.1
Courses	Bachelor of Science	348	32.1
	Bachelor of Art	86	7.9
	Bachelor of Social Science	316	29.2
	Bachelor of Management	334	30.8
Marital status	Single	331	30.5
	Married	739	68.2
	Single parents	14	1.3
Place of Internet access	Home	934	86.2
	Office	932	86.0
	University	694	64.0
	Cyber cafe	812	74.9
Frequency of use of e-Learning portal	Never	33	3.0
	Not more than once per week	250	23.1
	At least once per week	428	39.5
	More than once per week	373	34.4

Table 2 shows that learning materials and activities were significantly correlated with the effectiveness of learning using the online portal. Lecturers normally put additional notes, examination questions, assignments and many more types of information in the portal. The most correlated dimension of learning materials and activities were the assignments. The respondents agreed that the assignments helped them in their study. They felt comfortable when receiving their assignments through the e-learning portal with appropriate feedback that helped them in their learning.

The data also revealed that any information related to studies must be included in the e-learning portal. Additional notes are some of the important learning materials that can also help learners in their studies. Online notes or e-notes may offer a feasible way to students to look at the learning materials with a different perspective, thus resulting in an improvement in their learning (Writh, 2003). According to Ku'Azam (2005) who studied the same portal, 85% of the learners accessed the e-portal to download online notes while 80% accessed the e-portal to download examination questions. Table 2 shows that the teleconferencing dimension is also significantly correlated to the effectiveness of using the online portal. This is consistent with findings recorded by Ku'Azam (2005) who reported that video conferencing is effective enough in helping the students to comprehend their course materials.

Table 2 Correlations between learning materials and effectiveness

Learning materials and activities	Sig
Additional notes	0.116**
Teleconferencing	0.061*
Examination question	0.077*
Assignment	0.159**

Table 3 shows that the results of regression are based on the learning materials and activities in the e-learning portal. Assignments give the most significant regression results compared with other learning materials. This indicates that the respondents statistically agreed that the assignments created the highest impact in learning when using the e-learning portal. The feedback they received from their lecturers provided corrective information to enable them to enhance their understanding.

The regression analysis for examination questions was the least insignificant compared to other learning materials and activities. This indicates that the provision of examination questions did not get much impact on the effectiveness of the use of the portal.

Table 3 Regression analysis between learning materials and effectiveness

Learning materials and activities	Beta	Sig
Additional notes	0.090	0.009
Teleconferencing	0.075	0.024
Examination questions	0.034	0.332
Assignments	0.140	0.000*
Links	0.109	0.001

Conclusion

The results asserted that the e-learning portal is very useful to learners in order to enable them to collaborate with and assess the learning materials. All learning materials and activities undertaken within the learning portal contribute to the effectiveness of the use of the portal. The students can easily access those materials and participate in relevant activities provided within the portal. The online learning enhances students' understanding via the feedback they obtain from the assignments, thus creating a meaningful learning environment.

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