Surveying Learners' Attitudes Toward a Saudi E-learning System

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Abstract—**The purpose of this study was to analyse learners' perceptions of a Saudi E-learning System to support and enhance brick and mortar classroom. Accordingly, Data were collected from 25 female undergraduate students enrolled at the computer and Information Science department, in the college for women at Prince Sultan University (PSU). The survey item analysis revealed that all of the participant students regard the features of JUSUR to be helpful and enhance the understanding of course materials, and hope that this system will be adopted for other courses in the future. Results also indicate that most of the available system features were favored by the students. Nevertheless, the online chat sessions were the most preferable in this study because it seems to be convenient for female students to discuss online group project with their peers.**

Index Terms—**Asynchronous, JUSUR, learning management systems, perceptions, synchronous**

I. Introduction

Due to widespread broadband Internet connection and advancements in information and communication technology (ICT), learning settings have changed from face-to-face to blended learning or entirely online environments [1]. Different learning tools are used to support different models of online learning. In asynchronous e-learning, students access class resources and contribute at their convenience according to their personal schedule and geographic location, while synchronous e-learning facilitates real-time communication and collaboration between students and instructors [2]. These learning tools, whether used asynchronously or synchronously are important for communicating knowledge or skills among the students or between instructors and students.

Today, most of the Learning Management Systems (LMSs) provide tools to deliver instructor-led synchronous and asynchronous online teaching, based on the learning object methodology. Besides, LMSs provide added support for teachers to assist them in creating, administrating, and holding online courses. They provide a great variety of learning resources and activities which can be easily included in the courses such as learning materials, quizzes, assignments and wikis [3]. They are also commonly considered as the starting point of any web-based learning program [4] because they provide the platform for the web based learning environment. Consequently, many educational institutions use LMSs [5] to support and improve learning within their institutions.

Contemporary LMSs often include many tools and features for students and instructors. However, instructors usually find the LMSs available to them to be limited in the ability to support their teaching. To overcome this limitation, instructors chose alternative platforms or attempt to incorporate more tools for specific purposes; in their view, the tools that work better are those which are not built into the LMS [6]. Therefore, it is important for the e-learning community to evaluate both the preferences and usage of available LMS features. This study was designed to evaluate how students perceive their online learning experiences on JUSUR LMS in an introduction to Information Systems course.

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II. E-Learning In KSA

When reviewing the cornerstone of education in the Kingdom of Saudi Arabia (KSA), 1954 was the year that the Ministry of Education was established headed by Prince Fahd bin Abdul-Aziz as the first Minister of Education. In 1957, the first university "King Saud University" was founded in Riyadh. In 2002, The General Organization for Technical Education and Vocational Training in KSA established the e-learning training and resources centre. In 2004, The Deanship of Distance Learning was established in King Abdul-Aziz University.

Based on the above brief history, one can simply conclude that e-learning is still in its early stages in KSA. However, many plans have been developed over the last few years to promote, develop and coordinate the efforts on lifelong learning and distance education. In 2008, The Custodian of The Two Holy Mosques, King Abdullah bin Abdul-Aziz Al-Saud issued a decree to establish a national plan for the utilization of information technology, the implementation of e-learning and distance learning, and all their prospective applications in higher education [7]. In August 2010, the Higher Education Council approved the distance learning bylaws in higher education institutions in KSA.

In order to support the development of e-learning content, the Saudi Ministry of Higher Education established a National Centre of E-learning and Distance Learning (NCeDL) in 2005. The NCeDL adopt a group of projects [8]. JUSUR is one of these projects, which provides instructors of any local universities with ways to create, deliver, and manage interactive and engaging educational materials.

JUSUR (an Arabic word that means bridges) is a Saudi web-based application that includes functionality for launching courses, registering users, tracking student progress and assessing student learning. JUSUR uses a

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browser interface to display a public front-end for students and a private back-end for administrators and instructors. JUSUR is a locally developed platform which is freely available for academics; it can be hosted for free by NCeDL, which mean that instructors can start creating their online classes without having any programming or installation knowledge and will not be required to manage server maintenance. NCeDL is responsible for all of the administration and management of the system, as well as user registration. In addition, NCeDL offers a regular in-house workshop for its users.

III. Research Methodology

In this research, we conducted an experiment study using the JUSUR as our e-learning system to examine perceived student satisfaction of JUSUR usage, as well as feature preferences. The five main components of the system (see Fig. 1): Course Information, Collaborative Tools, Assignments Tools, Additional Tools and Admin Tool, were investigated.

Fig. 1. JUSUR main features

Twenty five female students participated in the study on a voluntary basis. Most of the participants were in their second year, 19 to 21 years old, and were from the computer and Information Sciences department at Prince Sultan University (PSU). At the end of the semester, the subject evaluation survey was administered online in order to gather students' opinions on various features of the system and to gain insight into their perceptions of the course. All the survey submissions were anonymous; therefore, the instructor could not identify who submitted which survey, but could still keep track of who had submitted a response and who had not. The questionnaires were accessible to students for a period of two weeks.

The study spanned one semester and data was collected through the administration of 30 online question surveys. The survey contained a mixture of mixed scaled, 12 Yes/No questions, 12 three-point Likert type questions, and 6 multiple choice questions. In addition, one open-ended question was included to allow the participant to respond, in their own words, about their own experience using JUSUR. The data was then analyzed using frequency and percentage techniques.

IV. Finding and Results

The response rate was 92% with 23 students completing the survey. The survey was designed to assess students' prior experiences with LMS, preferred communication methods, students' perceived satisfaction with LMS, and students' perceptions of various JUSUR features, usage, and keenness to use the system in other courses in the future. The responses from the participants in this study were classified as below:

1) The majority of participants, 81.6%, responded that they had no previous experience with LMS as a learning tool.
2) 62% of the participants showed a preference for face-to-face communication above all forms of JUSUR synchronous and asynchronous communication tools. This complies with previous results [9], [10], showing that face-to-face communication is usually favoured over other forms of communication because it provides more interaction and immediate responses, and allows for instant clarification of questions.
3) Most students reported that they were satisfied with the online materials, 74.4% believed that online content was a helpful resource and easy to use, 74% believed that sample assessments were useful, and 56% found that the online resources enabled them to prepare ahead for lectures, and advanced their learning. These findings compliment previous research [11], [12], which suggested that there is a correlation between the quality of the course content and student satisfaction.
4) The majority of the students were satisfied with most of the JUSUR features:
   - 95% of the students thought that the system was a good place for the instructor to make announcements.
   - 56% of the students preferred to use online assessment with immediate grading and feedback; 75.8% read the instructor comments/feedback associated with assignments.
   - The online chat sessions with the students and their peers were the most popular feature with 97.6% of the participants reporting that they were useful especially for group project discussion. 96.4 % believed that they were a great way to interact with fellow students. This very positive response can be attributed to the fact that Saudi female students find it difficult to gather collectively, whether on or outside campus for group meetings due to cultural challenges.
   - 96% of the students considered online chat sessions with the instructor to be useful, and 96.8% reported that they were a great way to interact with the instructor. It is considered that the main reason for this is the scheduling of specific days and times of the week to suit each student. However, this was possible to achieve due to the small number of students in the class.
   - About 70% of the students believed that forum / discussion board was useful for sharing information with fellow students. This is congruent with previous research [5] showing that discussion boards increased student-to-student conversation and collaboration.

- With respect to the grade book usefulness, 95.4% of the participants stated that they liked having the ability to check their assignment grades online. It seemed that students preferred having access to up to date information about their performance any time without having to contact their instructors.
- Only 34.6% of the participants considered the course glossary a valuable resource. A possible reason considered is that not many terms and definitions were published. However, this ratio is expected to increase substantially in the future, once the glossary is updated with more terms.
- 56.5% of individuals reported that they regularly used the file exchange to share different types of files with their peers, especially for the final group project.

5) With respect to their experience with JUSUR LMS, an overwhelming 98.1% of students were satisfied with the overall experience.
6) From the results, it was also found that 91% of students would like to use JUSUR in the future.

Finally, the analysis of open-ended survey questions showed that students' responses were mainly positive. This is perhaps due to the students' computer science background which may have made them generally interested and enthusiastic to try a new system.

V. Discussion and Conclusion

The survey item analysis revealed that students highly value the teaching and learning tools within JUSUR. Moreover, this study showed that experimenting with JUSUR has proven to be beneficial and the feedback received was mainly positive. Despite the fact that the students in this study did not have any prior experience of any LMS, they managed to become used to the system very rapidly. Some had the opportunity to use an online assessment for the first time, submit their assignments electronically, as well as remain in contact with their peers and instructors throughout the semester through the use of the chat feature. The level of satisfaction shown by the optimistic responses of the students has enforced the suggestion that JUSUR LMS can be used as a supplement to face-to-face classroom instruction augments the overall learning experience. These findings are in line with research conducted by [13].

Despite the small sample size, the study revealed students' satisfaction with their online learning experience and with various features of JUSUR. The current students also welcomed the use of such a tool in other courses in the future. This led to the conclusion that JUSUR can be a very useful tool for blended learning because it can provide students with a variety of resources, greater flexibility, and better opportunities for communicating, sharing ideas, and engaging in the learning process.

VI. Future Work

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