An Empirical Study about the Influence of Moodle on the Teaching – Learning Process at Higher Institutions

Said T. EL Hajjar

Abstract—An important issue in higher education institutions is to involve the interest of students in digital technology at the teaching/learning process. This study describes the effectiveness of using Moodle to teach students in all university levels. In this paper, we conduct a questionnaire survey at Ahlia University in the Kingdom of Bahrain regarding interest in how Moodle can be used to support, improve and develop student learning. Conversations with teachers and students and feedback responses from three faculty (full response) and forty-five students (partial response) are drawn upon and form the basis of this paper. The purpose of the survey is to gather evidence of the relationships between university faculty and the Moodle system, from which future practice could be informed. The findings confirmed that this system enabled the members to improve and develop student learning. Conversations with teachers and students and feedback responses from three faculty (full response) and forty-five students (partial response) are drawn upon and form the basis of this paper. The purpose of the survey is to gather evidence of the relationships between university faculty and the Moodle system, from which future practice could be informed. The findings confirmed that this system enabled the members to improve and develop student learning. Conversations with teachers and students and feedback responses from three faculty (full response) and forty-five students (partial response) are drawn upon and form the basis of this paper. The purpose of the survey is to gather evidence of the relationships between university faculty and the Moodle system, from which future practice could be informed. The findings confirmed that this system enabled the members to improve and develop student learning. Conversations with teachers and students and feedback responses from three faculty (full response) and forty-five students (partial response) are drawn upon and form the basis of this paper. The purpose of the survey is to gather evidence of the relationships between university faculty and the Moodle system, from which future practice could be informed. The findings confirmed that this system enabled the members to improve and develop student learning. Conversations with teachers and students and feedback responses from three faculty (full response) and forty-five students (partial response) are drawn upon and form the basis of this paper. The purpose of the survey is to gather evidence of the relationships between university faculty and the Moodle system, from which future practice could be informed. The findings confirmed that this system enabled the members to improve and develop student learning. Conversations with teachers and students and feedback responses from three faculty (full response) and forty-five students (partial response) are drawn upon and form the basis of this paper. The purpose of the survey is to gather evidence of the relationships between university faculty and the Moodle system, from which future practice could be informed. The findings confirmed that this system enabled the members to improve and develop student learning. Conversations with teachers and students and feedback responses from three faculty (full response) and forty-five students (partial response) are drawn upon and form the basis of this paper. The purpose of the survey is to gather evidence of the relationships between university faculty and the Moodle system, from which future practice could be informed. The findings confirmed that this system enabled the members to improve and develop student learning. Conversations with teachers and students and feedback responses from three faculty (full response) and forty-five students (partial response) are drawn upon and form the basis of this paper. The purpose of the survey is to gather evidence of the relationships between university faculty and the Moodle system, from which future practice could be informed. The findings confirmed that this system enabled the members to improve and develop student learning.

Keywords—Course design, Moodle, educational effect, course content, student learning, teaching.

I. INTRODUCTION

Recently in developing countries, disinterest in technology of students at higher institutions has become an issue. In this study, we held a Moodle system enlightenment experience targeting undergraduate students at different levels as the participants’ performance would become good evidence for the positive influence of Moodle system in the teaching/learning process at Ahlia University.

Recently, scientists have clarified that communication technology would be used to sustain the teaching/learning process in the classroom and across all subjects of the curriculum [1]. To maintain this, a balanced approach to incorporating technology, pedagogy and content should be established in order to supply a significant learning environment for students [2].

In the past, we participated in various educational software and have analyzed a number of questionnaire surveys regarding the awareness contents conducted to the awareness participants. The analysis results have confirmed that to improve the awareness of the participants for using technology and they have assured that students need opportunities to deal with technology so they may gain the skills and confidence they require to, not only to support their learning, but also to provide them with the skills they need for their future work. It is important for the faculty to prepare a wide variety of attractions, and to give easy-to-understand explanations and descriptions. To achieve this, it requires from faculty to have enough idea of how information and communication technologies (ICTs) can be used and the skills to be able to integrate it into the teaching/learning process [3]. Teachers who have a strong combination of ICT skills and pedagogical knowledge will be better prepared to “effectively use today’s technologies in the classroom as well as continue to develop and adapt to new technologies that emerge in the future” [4]. Moreover, this generation is eager to spend hours and hours on digital instruments while he quickly is fed up in facing a traditional lecture of learning. It is normal since this generation is somehow considered as a digital generation behaving like robotic. Moodle is a supportive tool to initiate an organized system for teaching and learning that is used in many universities around the world. Ahlia University is one of these universities that use this technology and the results of our survey have proven the significance of this system on student’s performance.

II. BACKGROUND

Students who plan to get an education diploma or equivalent diploma to it should have the opportunity not only to gain theoretical knowledge, but also to develop and support this knowledge with technology tools. Flinders University has implemented a PE Program (Professional Experience) as a practicum course [5]. So it is preferable in these practicum courses to give a space for the use of technology such as Moodle. Mark has proven Moodle in the classroom can be used to support, enhance, and extend student teaching [6]. Kennedy has stated that the pre-service teacher is using Moodle to supply pupils with practical technology in order to encourage them to actively involve with the content-based learning materials, interactive activities and their peer learners [7]. The development of e-learning has become an important aspect of teaching and learning [8]. In 2009, one Australasian university embarked on an ambitious three-year digitalization and curriculum renewal project. The key initiative was replacement of WebCT with Moodle. In fact, Moodle is an...
opportunity for the University to transform the traditional boring model of teaching to a more modernized independent and activated system. On the other hand, some faculty prefer to mix e-learning into traditional as a way of enhancing teaching and learning.

The Moodle site had to be easy to use otherwise students would be discouraged to use it [9]. Therefore, the Moodle site required to be visually interesting, simple to navigate, and contained information that was relevant and up-to-date. Unfortunately, the feedback from teachers and students about how it looks and how they feel towards Moodle exposed that this was not the case and a sense of frustration at how difficult it was to find things was a re-occurring theme. A Moodle front page that included the whole structure of the Moodle site (learning areas were added as a category, year levels as a sub-category and then subjects as a course) proved to be unusable. In addition, what was mixing the confusion was the fact that a course was visible to teachers and students when it did not have to be, because the course had already been completed or was a course they did not need to undertake. Arteaga said that this highlighted the need to have a Moodle site that helped the teacher and was student focused which meant it needed to be personalized and tailored to the specific needs of each person. Faculty has found that Moodle is a great way to organize and deliver course materials [10]. Arteaga said that using Moodle to create a student-focused environment will enable students to increase their understanding based on their knowledge and skills. The feedback, particularly from students revealed the importance of getting the course design right. The Faculty has designed each course so it was clear, not too text heavy, included lots of white space and specific icons to indicate key things (e.g. tasks to do, assessment tasks) to make it easy to navigate. Other studies have shown that one of the key factors of student satisfaction is that interactivity and autonomous learning modes can also have an influence [11].

According to some scientists, online teaching has approximately nothing to do with computers and everything to do with time, motivation knowledge and the new agency of cyber-experience, as well as good appropriate teaching [12]. To investigate this further, the aim of this study is to gather evidence of the relationships between Faculty and students and the online environment using Ahlia University as a case study. The intention is to determine the significance use of Moodle, to understand staff and students perceptions of the use of Moodle, and to assess the types of supports needed for the effective digital delivery of learning resources. As the faculty and students had a strong background in information and communication technologies and expertise in e-learning, the opportunity is used to determine the extent to which Moodle could be used in the teaching/learning process to enhance and extend student learning.

III. RESEARCH DESIGN

In the Kingdom of Bahrain, Ahlia University made a decision to provide each college with an online learning environment created in Moodle and this is what was used for this case study. This research involved a survey that collected responses from faculty and students through a questionnaire. The study took place in November 2013 in the Mathematical Sciences Department. The sample included two academics in this Department, of which 100% responded, and 84 students, of which 67 (approximately 80%) responded. The survey included 30 questions that required responses against a Likert-scale. Table I provides a summary of the number of responses received.

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Two teachers completed the survey (100%)</th>
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<tr>
<td>Students</td>
<td>67 out of the 84 students completed the survey (80%)</td>
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Faculty in this department were supposed to input all course requirements on Moodle, such as course syllabus and outline, slides, assignment, handouts, online exercises, quizzes, tests, … Students from their sides had to have access to these requirements through Moodle. Faculty were using a local network drive as a depository for the content students needed to access and were receiving submitted work from students as a hardcopy, email or USB drive they were using an Excel spreadsheet to maintain student completion and grades. Students and faculty express a negative impression on the use of Moodle at the beginning due to technical problems and due to both Faculty and students had a very basic understanding of Moodle. However, they reported that after two semesters they have started two realize the benefit of this system.

IV. FINDINGS

Results revealed that the two Faculty have had an essential Knowledge of Moodle, and most of the students’ respondents (90%) had a fundamental knowledge of Moodle (FK&FA). Both Faculty members had made an effort to fully integrate it into their teaching or paper(s), and 88% of students had made an effort to fully integrate it into their learning (FI&FA). Both faculty expressed confidence in their ability to use Moodle, and the majority of students (75%) expressed confidence in their ability to use Moodle (CA). In terms of long-term adoption, the almost all students’ respondents (93%) intended to make further use of Moodle while one Faculty (50%) intended to make further use of Moodle (UOM). Conceivably expecting given that Ahlia University had clearly stated its commitment to widespread adoption of Moodle in all papers and programmes. Fig. 1 provides a summary of Faculty and students’ responses to questions relating to their adoption of Moodle.
50% of faculty agreed that Moodle had helped them improve their teaching (IT); while 50% agreed that implementing Moodle in the teaching process had helped them think more profoundly about teaching (IMT). On the other hand, a limit number of students’ respondents (37%) agreed that Moodle had helped them improve their learning (IL); while 30% agreed that implementing Moodle in the learning process had helped them think more profoundly about learning (IML). In perception, the last item did not allow respondents to qualify whether they are not thinking more profoundly because they consciously decided not to take the implementation of Moodle as an opportunity to reflect or they consider themselves reflective thinkers on a continuous basis. Fig. 2 provides a summary of Faculty and students’ responses to questions relating to their teaching and learning practice.

Faculty and students believed that there are many benefits of Moodle. They believed that Moodle makes content available for study and revision [Faculty (100%), students (83%)]; reduces the cost of producing student handouts [Faculty (100%), students (100%)]; offers more variety of content [Faculty (100%), students (85%)]; helps to keep the course up-to-date [Faculty (100%), students (82%)]; offers students more flexibility over their learning [Faculty (50%), students (76%)]. These are aligned with Moodle’s passive’ features and primarily the ability to post lecture notes online. On the other hand, Moodle’s interactive’ benefits gained positive votes by almost half of respondents: Increases staff-student interaction [Faculty (50%), students (48%)] and increases student-student interaction [Faculty (50%), students (52%)]. The item relating to teaching or learning practice was considered among the weakest benefits: Increases the effectiveness of my teaching or learning [Faculty (50%), students (32%)]. This result indicates that most of respondents feel neutral about the pedagogical benefits of Moodle. A possible clarification was related to respondents’ responses to the item “Helps to save the teacher time.” While only few respondents responded positively [Faculty (50%), students (31%)], it was the only item to generate a negative response by more than 50% of respondents.

The lowest ranking benefit related to learning “Helps to keep students motivated and on track” [Faculty (50%), students (22%)], which was closely accompanied by Promotes more active learning” [Faculty (50%), students (26%)] and increases student interaction with content” [Faculty (100%), students (41%)]. It is unknown whether these results represent respondents’ perceptions of Moodle’s potential benefits for learning or whether responses were given in the context of current limitations facing effective teaching via Moodle. However, one Faculty respondent’s perception was that Moodle has been seen to promote passive learning: Students are provided with more material, given better access to academic staff and this can lead to individual learning, and accessing databases and locating articles is part of the learning process for academia.
V. CONCLUSION

This case study on Faculty and students’ perspective of using Moodle has shown that it can be used effectively to support, enhance and extend student learning. The findings describe a successful implementation of Moodle at a system’s compliance level, which was considered an outstanding achievement considering that implementation was above and beyond the existing pressure of teaching and research. Moreover, creating a digital environment can motivate students and generate an engaging and enriching learning experience that students will enjoy providing they find it easy to use. With these advances, it was widely appreciated that Moodle had begun to offer students more flexibility over their learning. To achieve this, Moodle courses need to be well designed, easy to navigate, tailored, populated with activities and resources that students can access at any time and from anywhere. It is important that Faculty need to develop their course use Moodle in the classroom as students may prospectively lose interest, and find it delay their learning. Although students are able to quickly familiarize themselves with Moodle, the use of some course formats, conditional activities and completion status to tailor student learning can also affect negatively on the student’s experience. When Moodle is using well, students will be provided with a “one stop shop” they can access at any time and teachers can track student progress, identify at risk students more easily and spend more time in the classroom interacting with students. However, the current survey exposed significant scope for Moodle to manipulate teaching and curriculum design at a deep level. This would involve a shift in attitudes away from seeing Moodle as a dried tool, towards becoming the border of innovation in teaching and learning. However, consistent with the literature surrounding the uptake of e-learning (Salmon, 2005; Stein, 2011), respondents of the current survey reported that their dedication to Moodle was seriously limited by their lack of time. Faculty respondents expressed that they were under pressure not only to teach but to post files and, as long as this was the case, their capacity for Moodle as a transformational teaching tool would remain limited. This tension suggests both academics and traditional distance education providers are in a transition period as they struggle to find the most appropriate combination of predictable and digital learning resources.

REFERENCES


