

A Statistical Approach Describing the Impact of Using Moodle at Higher Institutions

Said T. EL Hajjar

Abstract---An important issue in Universities and colleges 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 the use of Moodle would sustain, improve and develop student's learning in higher institutions. The feedback obtained from two faculty (full response) and sixty-seven students (partial response) are randomly selected and they are essential for the foundation of this study. The purpose of the appraisal is to collect data to verify the associations among higher institutions' faculty and the Moodle system, along which potential training would be formed. The results obtained confirmed that this system enabled the members to promote understanding and greater respect for digital technology. Although a limited number of respondents indicate that educational institutions were motionless in an era of change from trivial schemes observance to profound academic transform, a significant number of the collected answers testified very few assimilation of Moodle in their teaching methods, in conjunction with a lasting dedication to the use of Moodle system and enhancement eventually.

Index Terms - Course design, course content, educational effect, e-learning, Moodle, and student learning

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 in the Kingdom of Bahrain.

Lately, scientists have clarified that communication technology would play a major role in sustaining the teaching methodology used in the classroom along with all subjects of the programme [4]. In order to maintain this approach, there should be a creative curriculum to make a balance between pedagogy and content from one side and integrating technology from the other side so that students will be provided and supported by a valuable teaching – learning environment [11].

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In the past, we have participated in different 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 we need to improve the awareness of the participants for using technology, and have assured that participants require a chance to deal with educational technologies so that they get the possibility to get more skills and self-confidence they require in their learning process, not only to enhance their learning, but also to provide them with the required skills that they have to hold 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 about the Information & Communication Technologies (ICTs), and hold the skills required in the teaching-learning process [1]. Faculty that hold a powerful skill in combining ICT with academic knowledge would have the capability to be more 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” [17]. Moreover, this generation is eager to spend hours and hours on digital instruments while he quickly 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 using 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.

Moodle at Ahlia University was designing to help students, teachers and administration to communicate and involve the technology in the university's curriculum from one side and to improve the teaching /learning process. To achieve these objectives, it is important to help assess some indicators about the quality of this learning environment from a social constructivist perspective. Some of these indicators are to examine how relevant is Moodle to students' professional practices, does Moodle stimulate students' critical reflective thinking, to what extent do students engage Moodle in rich educative discussion, how well do faculty enable students to participate in using Moodle, and do students and faculty make good sense of each other's communications.

Using software in a lecture to support faculty at Higher Institutions in meeting their educational and academic aims

has grown to be everywhere while the beginning of the twentieth century. The days of using traditional blackboards has passed away. The overflow of interactive learning can be irresistible in a way that it requires a faith from the user to believe that technologies are very useful and would add value to the societies.

Moodle is becoming a good system that implements business training and is being adopted to be used in universities and colleges. Nowadays,

Institutions have the option to choose such system from different teaching and learning executive competent systems either from software producers or projects resources.

Moodle is a software application designed for assisting faculty in gathering their educational objectives of distributing pedagogical objectives to learners. The type of this system project considered is a complex network designed website and easily be connected to internet. This web-based system gives opportunity for the learner to have access to learning resources supplied for learners and assists the gain for a university or a college to have an opportunity to launch a distance-learning programme.

Currently Moodle is considering the most popular open source learning management system. Based on the Moodle website, there are approximately 19350 are currently registered sites along with 42 sites are supporting at least 20,000 users. For example, some universities, such as California State University, have established guide tasks depending on the learning management Moodle system. UCLA declared in December 15th, 2006, "In November, 2006, the UCLA Faculty Committee on Educational Technology decided that UCLA should converge on Moodle as the single open source platform for its common collaboration and learning environment." [18].

II. DEFINITION

Moodle is defined as an object-directed model which provides learning with dynamic environment. Actually, Moodle as a software may be implemented in the teaching – learning process in the classroom to generate an interactive or an online learning environment [20]. Moreover, it is considered as a system that pedagogical foundations use to convey courses and learning facilities to learners. Mostly it is used in Universities and higher institutions, but some schools and other administration officers use the software, too [19]. A good reason for applying Moodle system in learning is that it is on hand at a remarkable price, it includes many incentives that faculty find them very useful in their teaching methods; Therefore, the disadvantages in using Moodle are quite very few comparing to other software implemented in the teaching-learning process- anyone can be aware of these disadvantages.

III. BACKGROUNDS

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 [7]. Therefore, it is preferable in these practicum courses to give a space for the use of technology such as Moodle. Mark proved that the use of Moodle in the classroom will sustain, enhance, and expand student's learning [12]. Kennedy has stated that the pre-service teacher is using Moodle to supply pupils with practical technology in order to give them confidence to become enthusiastically involved in the course learning requirements, interactive practises and their observed learners [10]. The improvement of e-learning has been a significant feature for both teaching & learning [16]. Recently, some universities have started the implementation of Moodle system in their curriculum. For example, a university in Australia got on a motivated three-year project to renew and digitalize the curriculum. Their aim was to replace Web CT by Moodle. In fact, Moodle is a prospect for any university to convert the traditional boring method of teaching to a more modernized independent and activated system. On the other hand, some faculty prefer to use interactive or e-learning as a tool to support the traditional way of teaching as an incentive factor in the teaching – learning process.

The Moodle web should be constructed in a way students would have access to use it easily; otherwise, they would be discouraged to use it [3]. Thus, the Moodle web required to be designed in an interesting appearance, simple to find the way, and contained currently relevant information. Unluckily, the comments from faculty and students about how it looks and how they believe towards Moodle exposed a pessimistic view about it, and a sense of fear towards the difficulty in using it to find issues was clarified. The designed front page of Moodle that comprised the full structure of the Moodle website is proven to be unusable. Furthermore, what was mixing this conflict was actually that the content course was observable to faculty and learners while it should not have been, because the course was either completed or was a course they did not require to carry out. , of course, emphasized the necessity of having a Moodle website that provided the faculty and students with the exact needs of each individual [3].

Moodle is a good system for gathering information, evaluation and feedback. All documentation generated by the student could be providing in digital format via the Intranet University Moodle service. Contents on the Forum could be answering in this context, simultaneously doing monitoring of those who have participated [8].

Faculty has found that Moodle is an enormous system to organize and distribute course requirements [13]. The use of Moodle to establish a learner-focused environment helps learners to increase their perceptive derived from their understandings and skills [3]. The comments, mainly from learners, exposed the significance of learning the course which is designed in a right manner. The Faculty has constructed each course so that it was simply visualized and clearly achieved, i.e. not too much heavy texts , consisted of many empty spaces and precise signs to point out key things such as tasks to be done or assessment tasks, so that it makes

it simple to be followed up. Other researchers have proven that a remarkable key aspect of student's satisfaction is that the use of interactive learning and independent learning can have an impact [5] [6].

Moreover, learning components could be done through Moodle. Originally the learning module could be tested by the use of Moodle 1.7.1. "Moodle 1.7.1 does not conform to the complete SCORM data model specification; consequently all courses will be run at an external location to the Moodle environment using the sample ADL RTE version 1.3.3." [9], so still the idea about using Moodle is somehow foggy and it should be developed more.

According to some scientists, online teaching is not only based on computers but also on stimulus knowledge and the novel organization of cyber-experience, as well as on high-quality teaching [14]. To explore this supplementary, this study aims to collect proofs of the associations between faculty, students, and the Moodle system used at Ahlia University as a case study. The purpose is to determine the significance of using Moodle at higher institutions, to understand faculty and students' awareness of using Moodle, and to evaluate the kind of supports required to the valuable digital release of based-learning courses. In fact, Systems like Moodle and WebCT are examples of platforms, which are developing to learning purposes [15]. As the faculty and students possessed a well-built milieu of knowledge and communication technologies and proficiency in e-learning, they got the opportunity to determine the scope along which Moodle might be used in the teaching/learning process to improve and develop student's learning.

Arrigo was creating the single MoULe system environment, whereas the learning activities were located, could be considered as alternative to classroom learning performance, so that building knowledge is a process carried on with both learning settings. He declared that the expanded space, which is described throughout a geo-conceptual plot, allows the renovation of a city tour into an existent educational knowledge. In addition, to accomplish this we needed to integrate the experience of the old Learning Management System: Moodle with the efficiency of implementing and managing mobile learning facilities [2]. So here, Moodle was very effective.

A research study found that in giving any known aspect of the learning management system where there was no clear winner, Moodle was to some extent favoured. Even though in the combined choice, 80% of learners have had a preference of using Moodle as a learning tool in comparison with traditional chalkboard." [18].

IV. ADVANTAGES AND DISADVANTAGES

Moodle has been getting a lot of attention from many Faculty and administrators. Unluckily, there exist very few disadvantages of using Moodle by administrative fellows and learners along which they have to be attentive of. Being aware of these issues may assist them compose an enlightened decision to use of the system or not.

A. Advantages

Moodle is an executive director that generates courses to be learned online, which will be expressed as a virtual lecture given in a classroom. Using such platform will absolutely make change when it is used in support with the teaching methodology used in a classroom, the area where the faculty should move. At this stage, we may perform pedagogical facilities and activities in the classroom environment which would otherwise be hard to realize.

An advantage that is held by using Moodle is that materials may be presented in entities arranged in order and prepared for discussion with learners along which it permits faculty to comprise surveys. Nowadays, it is a fact that Moodle systems established in classrooms are considered as a close island, confidential, as are our classrooms' environment. A few permit mentors' access and, every so often, we admit the existence of a colleague. However, it is not as much of having such case. Since we will not reside, we may state that the main gain of using Moodle is that it records all learner's work. Explicitly, the instructor recognizes the times when the learner has had access to a resource, how many times they participate in a query, and knowing both the faculty and the learner, where they could be observed, several times as needed, the status of their credentials. Furthermore, it is accessible for learners at any time and through any PC device.

Moodle as a software gives complete path and records information containing graphs and module specifications for every learner, constant updates and plug-in. In addition, it engages relocation and periodical activities of the learners. In fact, The Moodle system involves activity of courses that consists of Exams, debates, newsletters, Resources, Chats, appraisals, and Assignments. It involves variety of skills developed in multiple languages and trainings. And that activity details, of course, will bring an enormous assistance for both learners and faculty.

Moodle software proposes the option to faculty to identify their own extents and assessments which will be used in grading newsletters, debates and assignments. They may have access to these activities either through e-mails or debate locations or HTML text. So many options are proposed to faculty to select a design for his/her course based on the content's theme of the subject area. An interesting factor of using Moodle is that there is availability to Site management and course management. A user management is also available for distinct users with distinct tracking. Other advantages of this software are cost, security, and flexibility. It is available at low cost with high level of security and greater flexibility. It is easily reviewed and constant maintenance. Even though different viruses are surrounded by it, but different foundations, universities and colleges everywhere are using it as a stage to teach online courses. In fact, innovative procedure are implemented and many advantages combined with this system software has constructed it in a way that it has become broadly admired. It gives both students and faculty the ability of being customized to their needs.

B. Disadvantages

Although Moodle software add significant advantages to learning process and it is esteemed by some educational foundations, it has on the other hand some problems and complexities. This is normal due to the fact that any implementation of a new system may have some disadvantages.

The main serious disadvantage of using Moodle is that this system is not entirely extended to deal with huge schemes. But it can be practical for schools or colleges with small or even medium extent, the software may not run well with big schools or work as an efficient system to manner all classroom periods in an urban.

Moodle may not be the wisest choice. If students have more access to the Moodle platform, then the system may become very slow. Of course, this will be upsetting for learners while they are trying to do exams or assignments, or simply if they are trying to download the course content, requirements or materials. Another problem is that this website is exposed to shut down on any occasion and it blocks down preventing learners to get access to course content and materials. In fact, it is very hard to integrate with systems related to human resource department. There is deficient of incorporation with learners' management schemes. There is a complexity to run an allocated model of management through several institutions and departments or useless space in the user's border. More than lacking in entire expansion, the users of Moodle complain frequently about the technical hitches they practice with customizations. To carry out good customization, users ought to have remarkable Knowledge about programming and coding. In addition, the deficient of HR abilities is greatly observed negatively by users. Programs in this system are aimed to carry out the course materials and content in a way that it would be designed nicely if a human resources system was implemented to aid learners and faculty powerfully communicate with other leaders who supply guidance in learning.

One more disadvantage is that the capability to make assessment of any subject area in Moodle is very restricted, and lots of gap concerns are existed. For example, some blocks on demonstrated pages do not permit managers to include some added contents.

Those are the major cons of using the Moodle system along which several criticize or observations are assigned, but there could be disadvantages with slighter significance.

V. RESEARCH DESIGN

In the Kingdom of Bahrain, Ahlia University decided to supply and implement the Moodle system in each department and College as an e-learning platform to develop the teaching – learning process in this university. In this study, we considered that as a case study. We involved in this research study a questionnaire that has collected opinion responses from both faculty and students. The study was done in November 2014 through 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 questionnaire consists of 30 queries which involved replies aligned with a Likert-scale. Table 1 described the number of faculty and students who had responded the questions.

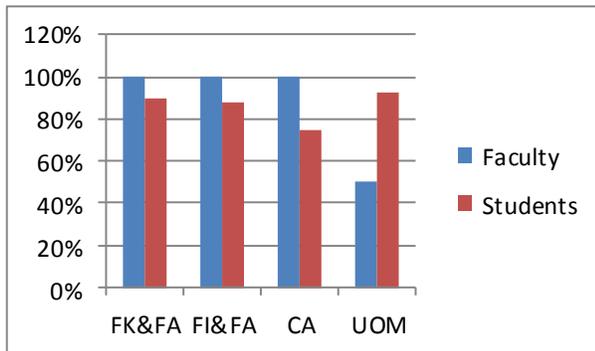
TABLE 1: FEEDBACK SURVEY

<i>Faculty</i>	<i>Two faculty completed the questionnaire (100%)</i>
<i>Students</i>	<i>67 out of the 84 students completed the questionnaire (80%)</i>

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 dealing with Moodle as a store for the course materials, activities and contents where students in their turn had to get access and receive and submit work to their concerned faculty either as a hardcopy or through email. Faculty were using an Excel breakdown sheet to keep up student assessments and grades. Students and faculty expressed a hesitated discouragement feeling towards the use of Moodle at the beginning due to technical problems from one side and due to the lack of understanding Moodle software by both Faculty and students. However, they reported that after two semesters they have started two realize the benefit of this system.

VI. FINDINGS

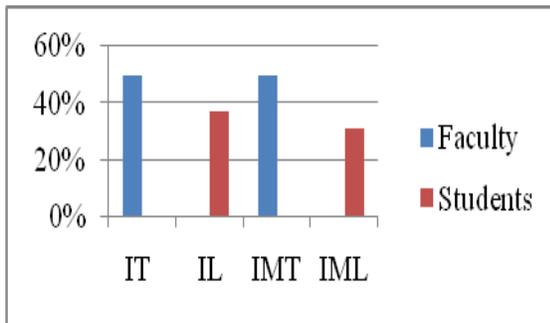
Results revealed that the two Faculty have had an essential Knowledge of Moodle (100%), and most of the students' respondents (90%) had a fundamental knowledge of Moodle (FK&FA). The two Faculty members had exerted an effort to entirely involve it into their teaching methodology or document(s) (100%), and 88% of students had exerted another effort to entirely involve it into their learning (FI&FA). These faculty had expressed self-confidence in their skill to use Moodle (100%), and the majority of students (75%) had shown significant confidence in their capability to use Moodle (CA). In terms of long-term adoption, 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 expectation, Ahlia University had without a doubt announced its dedication to extensive implementation of Moodle in all documents and programmes. Fig. 1 provides a summary of Faculty and students' replies to queries about their adoption of Moodle.



FK&FA, FI&FA, CA and UOM are the constraints that describe the adoption of Faculty and students for Moodle

Fig.1 Adoption of Moodle

50% of faculty declared that Moodle had assisted them improve their teaching (IT); while 50% agreed that implementing Moodle in the teaching process had assisted them think deeply about their teaching process (IMT). On the other hand, a limit number of students' replies (37%) found that Moodle had assisted them improve their learning (IL); whereas 30% agreed that implementing Moodle in the learning process had assisted them think more profoundly regarding learning (IML). In perception, the last entry had not allowed respondents to meet the criteria not to think more profoundly as they have consciously come to a decision to avoid considering the function of Moodle like a chance to increase their reflection, or they have considered themselves deep intellectuals on a constant basis. Fig. 2 provides a summary of Faculty and students' responses to questions relating to their teaching and learning practice.

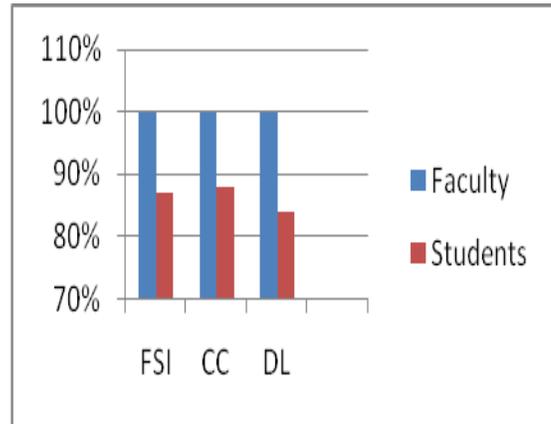


IT, IMT, IL, and IML are the constraints that describe the teaching and learning practice of Faculty and students for Moodle

Fig. 2 Teaching and Learning practice

Faculty and students believed that using Moodle system has improved the performance of the interaction between faculty and students. Both faculty agreed that using Moodle has improved the interaction between students and faculty in organizing faculty's papers (FSI) while 87% of the students believed in it. Moreover, Faculty and students insisted that Moodle has increased their connections and communications (CC) [Faculty (100%) and students (88%)]. In addition, there was an agreement among Faculty and students that Moodle

helped them with their distance learning (DL) [Faculty (100%) and students (84%)]. Fig. 3 provides a summary of Faculty and students' responses to questions relating to their interactions.



FSI, CC, and D L are the constraints that describe the interaction process between Faculty and students through Moodle

Fig. 3 Faculty-Students Interaction

Faculty and students believed that there are many benefits of using 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%)]; assists to keep the course in advance [Faculty (100%), students (82%)]; makes learning more flexible for students [Faculty (50%), students (76%)]. Those results are supported with Moodle's inactive aspects and mainly the capability to paste the notes of any lecture online. On the other hand, the interactive grow that come from using Moodle gains positive support by almost half of the respondents: To increase the interaction between faculty and students: Faculty (50%), students (48%)] and to increase the interaction between students themselves [Faculty (50%), students (52%)]. The entry which is related to teaching or learning experience was reflected among the feeblest advantages: Enhancing the efficiency of my instructing or learning entry [Faculty (50%), students (32%)]. This result indicates that most of respondents gave neutral idea related to the educational advantages of Moodle. A probable clarification was relating to the answers of respondents towards the entry "Helps to save the teacher time." whereas few respondents responded optimistically [Faculty (50%), students (31%)], it is the only entry who made an unenthusiastic reply with more than 50% of respondents.

The lowest ranking advantage associated with learning was : Helps to keep students motivated and on track [Faculty (50%), students (22%)]; which was intimately escorted by : Promotes more active learning [Faculty (50%), students (26%)] and increases student interaction with content : [Faculty (100%), students (41%)]. It is unidentified if these obtained results stand for the insights of respondents towards Moodle's prospective advantages of learning or if answers were provided in the milieu of recent limitations facing

efficient instructing by means of Moodle. But only one Faculty respondent's insight was that the Moodle system is considered to advance independent learning: Students are given more materials, are provided with better access to educational requirements, and this may guide to individual learning. Moreover, students will gain access to databases and various articles which is an important component for academia in the learning process.

VII. SURVEY AT AUL

To make this study consistent, another survey is conducted at the Arts, Science & Technology University of Lebanon (AUL) to see the effect of Moodle on the student's performance. 75% of the Students answered the survey questionnaire completely (TA), 18.75% answered partially (PA), 6.25 % did not answer at all (NA), making the survey highly reliable. Fig.4 shows the number of respondents.

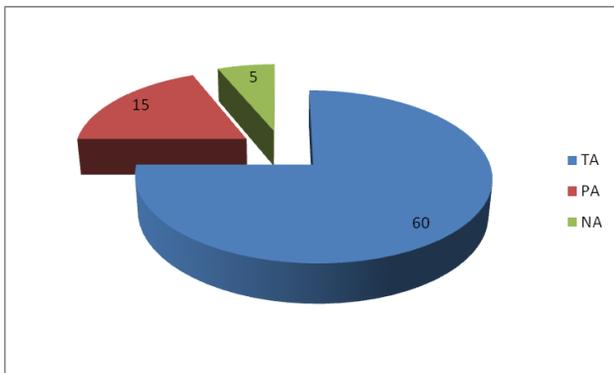


Fig. 4 Number of respondents

Students have been asked the following questions:

- 1- How often do you logon to Moodle? (LM)
- 2- Is it difficult for you to deal with Moodle? (DM)
- 3- Has Moodle supported you in learning new things? (NT)
- 4- Is Moodle a useful software tool helping you revise new subject areas you learnt in lessons? (UT)
- 5- Which subject was your favourite Moodle course in? (FM)
- 6- Why did you consider it as your favour course on Moodle? (WFM)
- 7- What you like and dislike about Moodle? (LDM)
- 8- State at least one thing you would like Moodle to do? (WM).

Fig. 5 shows that 90% of learners have access to Moodle for at least once a week with more than 5% once a day. It indicates that students underestimate slightly their use of Moodle.

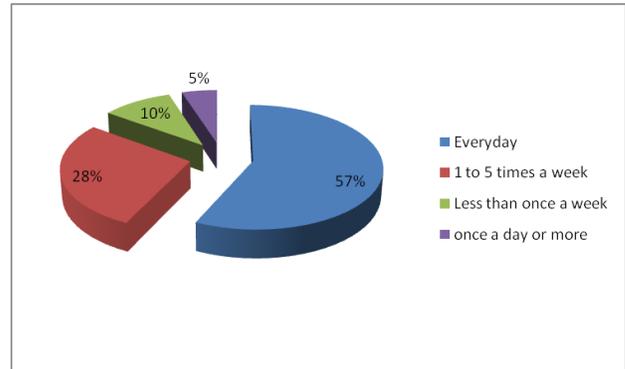


Fig. 5 LM results

Fig. 6 shows that 89% of the students do not face any difficulties in dealing with Moodle. It implies that a significant various number of students are okay with it.

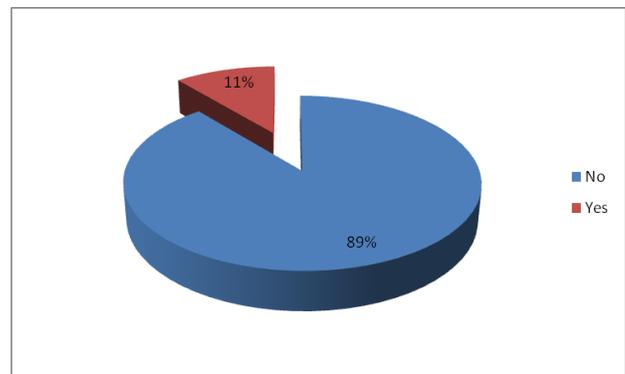


Fig. 6 DM results

Fig. 7 shows that 66% support students in learning innovative things although it is not easy to count the gains from using Moodle in learning. It is known that it assists, although we do not know to what extent. We all know it is hard to consider it as something that we were capable to count yet, but we were extremely concerned to realize whether students agree that the Moodle system is a valuable direct tool during a learning process. The obtained result shows that approximately 2/3 of learners believe that they may gain knowledge of new objects directly through Moodle which is an added value result.

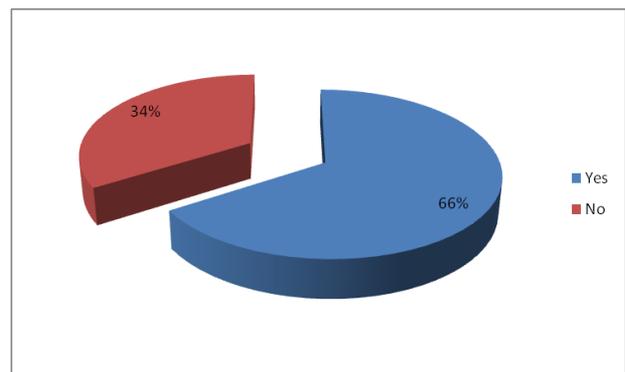


Fig. 7 NT results

Fig. 8 shows that 82% of the learners can use Moodle system as a means to revise new subject areas they learnt in lessons. It turns out that learners may visit again information that have been taught in a lecturing period, especially when this lesson is up to date, in order to revise it.

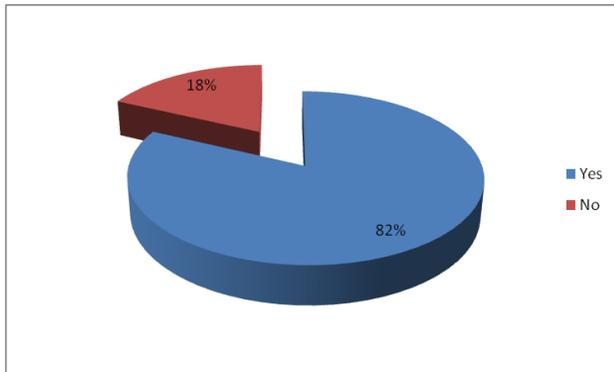


Fig. 8 UT results

The responses about which theme was their preferred Moodle course in, were foggy and was not displayed due to the subjectivity of this question. Similarly, students have vast variety of answers to describe their favourite course on Moodle due the subjectivity of this question, too. Students were obliged to write sentences. They prefer good resourced, mainly documented courses, clearly planned, labels used for divisions, and colourful lessons. In fact, we were waiting for more reveal of blogs and sharing tools, but this could be related to the fact that students see them certain.

LDM shows that few learners criticized that the pages of the actual course were not being arranged appropriately i.e. there are lack labels, missing of unit names, etc... In addition, I was mostly astonished when we got that students main complain was about the reliability. Many students criticized that some courses are often not updated regularly and do not echo all of the effort that exerted in lessons. In general, the remarks were encouraging and students assess Moodle as an enormous learning tool. The issue that actually astonished me was that several students' comments showed that students do not like 'staffing keys' and prefer to have access to view all courses on Moodle.

The main comments in WM refer to Homework. This does not mean that students' responds are ridiculous and anticipate the Moodle software to do their homework or assignments for them. In fact, they have a student database at their university, which contains a homework database, where faculty record homework and assignments at the assigning due date. Learners prefer to change the routine and see an integration of the two systems, or at least a better combination between the two. Students prefer to have many interactive games and a system for Chatting.

VIII. CONCLUSION

This case study on faculty and students' perception of using Moodle has revealed the importance of this use to support students while learning.

The findings describe successful implementation of Moodle software as a system's fulfilment stage, along which it was regarded as an excellent attainment by considering this running system more efficient than the active load of lecturing. Moreover, creating a digital teaching and learning surroundings may stimulate learners and produce an attractive and inspiring learning experience where they would have the benefit of its providing with facilities students find it simple to use. Having these supports, it was generally respected that Moodle system had started to provide learners with additional suppleness more than only learning. To attain this, courses that are posted on Moodle platform has to be planned properly, designed attractively, easy to be followed, adaptable, generated with resources and activities where learners are able to access it at any moment and from any place. It is essential that Faculty need to increase the use of their course in Moodle during a classroom period as learners may prospectively lose confidence and interest so that they feel it hold-up their understanding and learning. Even though learners have the ability to be quickly adapted with the Moodle system, the use of some designed courses' materials with their activities and their finishing status to fit students' learning may have a negative effect on the learner's practice. At the time the Moodle system is implemented and used in a proper way, learners will be supported with a "one stop shop" i.e. they will be able to access at any time and faculty can follow the progress of each learner, can classify simply learners at risk, and can have enough time to interact with learners during a classroom period. But this present study has exposed significant possibility for Moodle system to manipulate the teaching methodologies and strategies from one side, and the design of the curriculum through a deep intensity on the other side. Hence, this supply will engage a move in mind-sets away from looking at the Moodle software as a dried tool, on the way to be the border of modernism in the process of teaching and learning. Nevertheless, to meet with the literature nearby the use of e-learning in education [14], respondents of the present appraisal testified that their commitment to Moodle system was absolutely limited by the deficiency in time. Faculty from their sides expressed anxiety towards the added pressure that comes not only from teaching but also from posting files and documents on Moodle platform, and this directed their power towards the use of Moodle as a converter tool in their teaching methodology which will be remained limited. Thus, this pressure recommended parallel involvement of both strategies, academics and distance learning, in a transitional lecture as they struggle to come across the most suitable combination for predictable and interactive resources in the learning process.

The results obtained through AUL turned out that it is advisable for students to continue in dealing with the Moodle system as they found it helpful and valuable in their learning process, and it is preferable for them to deal with it frequently since they found that up- to - date courses on Moodle platform were more useful than any traditional way of updating courses. On the other hand, faculty should organize

their courses, adding labels and colourful codes, and they may add few images, which make the course more attractive to students.

IX. RECOMMENDATIONS

The use of Moodle system is preferable to be based on the situation of the university. For example, If the university is small or medium in size then it has the ability to be provided with an IT team of expert programmers who will face a very few number of difficulties in implementing and running the Moodle system rather than those bigger universities who lack programming's proficiency. We hope that the difficulties of using the Moodle system which are recognized in this study will assist decision makers to take their decisions by avoiding them while using Moodle, and also making them aware of recognizing if there is really a need to use it.

Moodle system has the capability to be produced in a way that it can be performed thoroughly, at tiny practice stages or ranging positively up to so many users. The aspects engaged in content are approximately similar to any initiated database software driving scheme. When attempting to optimize the server, try to concentrate on the aspects, which will compose the main disparity towards users. For instance, suppose that there are comparatively many users browsing rather than accessing to the database, then it is better in this case to search for advancing the web server performance, or before imitating any optimization, it is recommended to get for the system you are trying to develop a baseline standard factors.

Moreover, Moodle which is designed in obvious partition of functional layers permits a powerfully scales that are able to be setup. Huge websites usually split the web server and database into separate servers, while for minor installations there is naturally no need for this separation.

In fact, it is not impossible to load-balance the installation of a Moodle system, for instance, while using several web servers. The split web servers have to inquire the same database and refer to the same document or to the areas where folders are stored, whereas the division of the application layers is entirely sufficient to compose this sort of gathering possible. Likewise, the database can be initiated as a group of servers, which is in fact not a simple task, and there should be a seeking for expert's support, such as it is gotten from a Moodle Partner.

Finally, it is recommending for faculty to use multiple-choice questions, but follow it up with a thoughtful or discursive task relating to the knowledge it is testing. It is also preferable to use peer review but give opportunities for students to reply to the peers' feedback, have an online journal for students to combining curriculum with own interests, and have a space for an inline (meta-contextual) dialogue between tutor and students. Moreover, it advised faculty to begin debate discussions and respond to students posts. Ask for personal accounts and avoid questions, which have yes/no answers, or are which are right or wrong. Lastly, yet importantly, it is recommending composing Moodle as an effective tool or an addictive interface by having useful

information, contributions from peers and additions to their site obvious from the site front page through an updates stream. Make it feel a dynamic, individual online room for student learning, which do not need from students to drill down into courses to see what has changed or been contributed by peers.

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