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E-learning prospect on improving academic performance in Omani Universities

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E-learning prospect on improving academic performance in Omani Universities

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Abstract. This paper will discuss the impact of E-Learning prospect on the improvement of learner academic performance of Oman universities. The study explains the needs to expand working on E-Learning models and continue use of face to face traditional educational process. The real problem faced education is a need for several applications and technologies to improve their outputs and improve on teacher-student prospect. This paper aims to present an expanded review of different E-learning models to evaluate the prospect of their academic performance. The method of this paper divided into two phases. In the first phase, including the analysis of different technologies and most used tools affected in the educational process to measure the acceptance of learning outcomes. The Second phase, show the testing and validation of learner prospect of E-Learning to enhance the learning process and improve the academic performance.

1. Introduction

Within terms of learning and teaching, the word "E-Learning" has many other names of use like "online learning", "blended learning", or "distance of learning" [1]. In real term the E-Learning meaning in this paper highly related to the technology enhancement learning design [2, 3]. Within the recent huge number of internet users and the large need for using technologies in education in Oman, the indeed needs to use E-Learning models in educational process [4]. This way of learning carried the teachers to use conventional education strategies. One of these strategies, the learning process connected with maximum numbers of students who like to use mobile in learning for the facility of using and speeding of getting results [1, 10]. Another strategy is to use the official model of learning as Moodle, MOOC, or UCOM for student learning and assessment [4]. During the evolution of technology, and the variety of tools offered, there are different requirements for IT development because of the need to develop software, for better assessment way and prospect on academic performance [4, 5]. E-Learning is the type of learning mixed between face-to-face contacting and online learning to reduce classroom time problem, increase the availability of electronic materials with evidence and improve education processes [6]. The adoption of E-learning, to multi-activities of loading course requirements of material, assignments, guidelines, peer moderation and assessment results, etc. all these facilities increased in huge expanding with few last years[6, 7].

The overall use of existing E-learning models could illustrate the level of student's grades and skills, even though, the way of course content material handled by expert teachers in E-Learning with student interactivity that provides effective learning skills freely without being committed to a specific space and time [4, 8, 9]. These requirements need to be well observed and respected within the academy regulations [2].

There are many qualifications offered in Oman higher educations including (diploma, higher diploma, bachelor, master, and Ph.D.). The generalized use of E-Learning in academic programs with academic majors could improve the online evaluation of their improvements in academic and knowledge skills. All these academic programs and management issues are required to develop the relationship between face to face in education and the technology development in the learning process. These called type of blended learning that work for managing requirements and results using (LMS) in addition to an E-Learning model like UCOM, MOOC, or Moodle to increase the faculty performance through facilities of declaration attached, announcements to sections, evaluate and assessment techniques, open access of electronic material etc. [4, 6, 11]. The assistance applications that help in E-Learning process could be linked with Google drive forms and Google classroom, with another application like video programs, office assignments. The continuous use of learning needs a lot of skill acquisition and enhancement of using perfect technology and the one that usually interests of users. This need become important for professional work and tangible outcomes. What is the best solution for traditional slow systems with a lot of hard timing, far away location, and careers to recurring their need to develop new skills? E-Learning or use blended learning technology to prospect improve the academic performance in significant values [12].
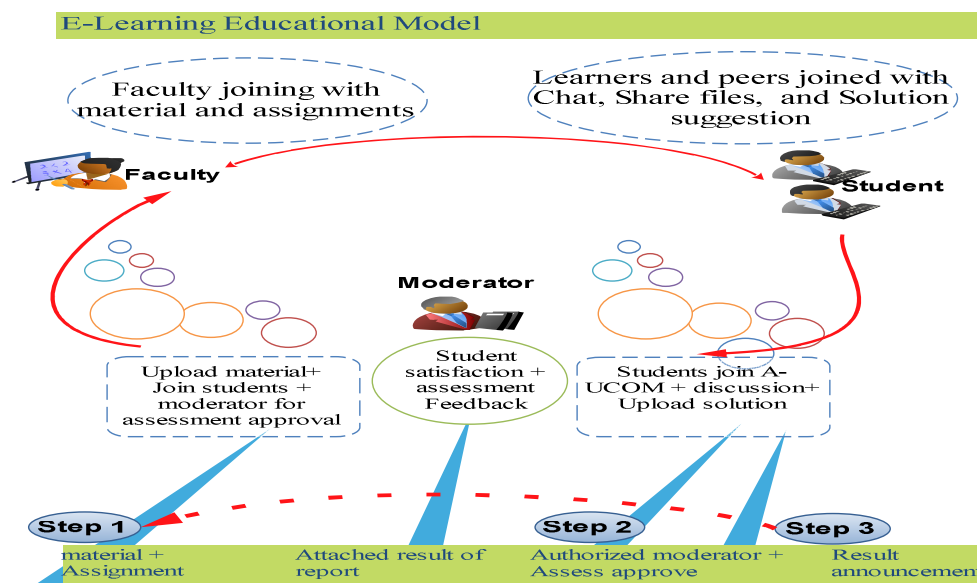
2. Methodology

2.1. E-Learning model design
In recent years, the need for E-learning techniques in the academic programs of Universities was proposed. The educational process in higher levels has faced different types of problems in the recent, leading to learners missing the ability to understand and collect huge material from different resources that need basic knowledge of technologies and searching steps. Therefore, the use of E-Learning model can reduce these problems and improve their experience in technology use and enhance their skills and performances in significant results. The E-Learning model of UCOM in this study [6], use waterfall sequence in analysis steps, as shown in Figure 1. Which starting with an analysis of all previous models and their main factors effects on using technologies in teaching. Then develop the mechanism of mix use and the link between multi-type and use of applications in the same course material discussion and assignments between the factors of teachers, students, and course contents moderator. The last step is the cycling during the whole course is worked with evaluation report to assess and re-design the changing in material based on evaluation feedback and understanding level. These three steps used to ensure that all the major factors (members) are accessed in the right way to prevent the error of misunderstanding or course dropping by the students.

2.2. Participant Information
The full description of the E-Learning model for each step between the three-member cycles describes the sequence of learning procedure. The active model applied in Buraimi university college-Oman. BUC. This study based on the University Communication Model (UCOM) model published by Tawafak, et al, (2018) as adapted model [6]. The participants of this study were the Universities that activated (UCOM) as a means of E-Learning in addition to using Google classroom as the complementary stage. The total number of participant (n=53), survey samples collected from Information Technolgy department at BUC. See table 1.

Figure 1. E-Learning model methodology progress

Table 1. Demographic information of BUC participants

Characteristic	Type	BUC	Percent
Gender	Female	34	64%
	Male	19	36%
Degree	Bachelor	17	32%
	Diploma	36	68%
Age	18-22	15	62%
	Above 23	21	68%
Knowledge skills	High	19	36%
	Normal	24	45%
	Low	10	19%

2.3. Methodology acceptance

The data were collected from two types of sections, morning and evening sections. The questionnaire includes geographic information about the participants and College in the first stage. In the second stage, there are 11 question items affected on improving academic performance in Oman universities using E-Learning process. See table 1 and table 2.

In this model, a survey used to evaluate the E-Learning prospect in improving the academic performance of students in universities. Therefore, the results of question analysis tested by SPSS program. This statistical program used Likert scale method, 1 for strongly agree to 5 for strongly disagree to measure many points like mean, std deviation and variance for each item tested as shown in table 3. In addition, the program identifies the reliability and validity of the questionnaire. Therefore, the reliability factor defined in Cronbach's alpha result that measured in this survey (0.961), which is highly accepted whenever it's greater than 0.76% [13].

Table 2. Survey items of improving academic performance [6]

No	Construct items
Q1	I anticipate good grades in courses with E-Learning is mixed used in a course.
Q2	I anticipate better grades in classes using E-Learning heavily compared to where they are not used at all.
Q3	E-Learning model efficiently allows faculty-student collaboration.
Q4	E-Learning model is trusted by faculty to improve learning outcomes.
Q5	It is worth to recommend E-Learning for other learners.
Q6	I'm interested to use the E-Learning in the future.
Q7	I have learned a lot with E-Learning model.
Q8	I intend to utilize E-Learning for various purposes such as self-development.
Q9	I intend to use E-Learning frequently even after graduation.
Q10	I had sufficient chance to interact with other learners using E-Learning model
Q11	E-Learning model is a very enjoying experience.

Table 3. Mean, Std, and Variance statistical analysis for BUC

No.	Mean	Std. Deviation	Variance	No.	Mean	Std. Deviation	Variance
Q1	1.8125	0.6927	0.48	Q7	1.6563	0.54532	0.297
Q2	1.75	0.508	0.258	Q8	1.7813	0.6592	0.434
Q3	2	0.67202	0.452	Q9	1.875	1.186	0.242
Q4	1.75	0.62217	0.387	Q10	1.7093	0.6578	0.414
Q5	1.9688	0.73985	0.547	Q11	1.3613	0.7292	0.534
Q6	2	0.71842	0.516				

3. Results and Discussion

The results of table 3, approve the usability of E-Learning to increase active communication between factors and support teachers with guidelines of soft copies and student feedback intention after use to measure the improvement of academic performance [2, 6, 10]. In the study of [12], they used smartboard as techniques to enhance learning but not to improve the academic performance. In addition, the researchers of [9], they compared between traditional and E-Learning only in programming course as limited study, while in this paper it's for different courses and many items tested. The E-Learning prospect better in this paper than the factors examined in [8], with specific goal of enhancement. At the end this paper comes out with E-Learning models compaired deeply with improving academic performance factor as the main objective of learving achievements.

4. Conclusions

This paper presents the prospect of improving the academic performance in Oman universities. This kind of E-Learning model support the university outcomes with significant improvement of academic performance and to be matched with the benchmarked requirement. This model measured the academic performance of the students from the type learning process used in the university and the way of assessment in a cycle of three factors (teacher, moderator, and student) for professional purposes, explaining the suitable learning process based on the understanding and satisfactory feedbacks. The SPSS program showed high reliability and validity of the examined survey.

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