

# Challenges to E-learning Success: The Student Perspective

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## Abstract

This paper reports in-depth qualitative findings based upon direct comments from students' evaluation and perspectives of e-learning paradigm and tools. A focus group interviews with nine students were used at the main data collection tool. Findings indicate several challenges to e-learning success that include increasing awareness and understanding of e-learning, managing resistance to new learning methods, guaranteeing continuous availability of the e-learning system, focusing more on the role of educator and institute in influencing student positively to use e-learning, supporting clear e-learning use policies, and designing e-learning platforms that blends the rich aspects of social networking within its learning tools.

**Key words:** e-learning; technology awareness; collaborative interaction; social learning; social network.

## 1. Introduction

E-learning refers to "the use of Internet technologies to deliver a broad array of solutions that enhance knowledge and performance" [1]. In another broader view, e-learning is defined as the delivery of information for purposes of education or knowledge management via electronic media, such as the Internet, Intranets, Extranets, satellite broadcast, audio/video tapes, interactive TVs, and CD-ROMs [2].

The topic of e-learning is gaining much attention, especially because an increasing number of educational institutions including world-class universities have realized the importance of delivering education and training via the Internet and world-wide-web to improve the efficiency, cost and quality of learning [2-4]. There are various e-learning management systems available in the market today, such as WebCT, Blackboard, Moodle, Claroline, and Ilias (Mabed and Koehler, 2012; Paechter and Maier, 2010).

Although many e-learning systems have been launched around the world, prior research has shown that developing a successful e-learning environment is challenging [5, 6] and little is known about students experiences and preferences in e-learning [7, 8]. Prior studies indicated that instructors and students are still reluctant and do not always accept the Information and Communication Technologies (ICTs), including e-learning, as expected [5, 8-10]. In addition, a careful review of the literature reported that the implementation of e-learning systems in developing countries is lagging due to technological, cultural, political, and economic concerns [6, 10]. Moreover, although e-learning experience in developing countries is relatively not new, there is limited number of studies investigating issues related to e-learning. Successful understanding of e-learning requires an in-depth investigation of the issues as perceived by learners and providing recommendations to encourage

more active engagement from learners with these systems [9, 11-13].

Within only few years, e-learning has considerably grown in the higher education sector in Jordan. Among the institutions that have early adopted e-learning paradigm in Jordan is Princess Sumaya University for Technology (PSUT); a private non-profit university that was founded in 1991. PSUT is part of El-Hassan Science City, located in Amman, Jordan. At its early years, PSUT realized the value of using ICTs for learning, teaching, and knowledge development. Therefore, in 2003 the University implemented the Moodle e-learning platform. However, the e-learning capabilities of Moodle are not being fully utilized by PSUT students. This research aims to understand the reasons why students are reluctant to use e-learning and why some of them are dissatisfied with their e-learning experience.

The rest of this paper is organized as follows. Section II describes the research method applied for this paper, the main source of data, and how data was collected and analyzed. Section III reports the findings of data analysis and provides a discussion around these findings. The contributions and limitations of this study and directions for future research are discussed in Section IV.

## 2. Methodology

This research adopted a qualitative approach using mainly a focus group as its data collection tool. The focus group interviews approach was chosen over any other qualitative research method as it allows the opportunity to generate a “synergistic group effect” in which stimulation of ideas are greatly aided by participants’ feeling of spontaneity and security generated by their communication and interaction with other group members [14]. The resulting synergy allows each

participant to brainstorm collectively from other members of the focus group, thus allowing different perspectives and understandings from all participants and, at the same time, drawing a wide range of responses and exploration of the research question [15].

The members of the focus group chosen were from the population of interest who are undergraduate students in their penultimate or final year of their university degree from Princes Sumaya University for Technology, Jordan. Students were chosen from these two specific study years with the criterion of achieving the best possible group composition. The near-graduate students are expected to have enough experience and exposure to e-learning tools from their time at the university to richly interact, convey, and collectively rejoin during the focus group session.

Based on the recommendations of VanderStoep and Johnston [15] to bring together a group of six to ten people, a personal invitation was made to 15 distinguished students. Nine students accepted the invitation; 8 female students and one male student. See Table 1.

table 1: list of interviewees who participated in the focus group

Interviewee /Pseudonym		Program of study, Year
1	Student1	Communications Engineering, 5th.
2	Student2	Commuter Graphics and Animation, 3rd.
3	Student3	Business Administration, 4th.
4	Student4	Business Administration, 4th.
5	Student5	Management Information Systems, 4th.
6	Student6	Commuter Graphics and Animation, 4th.
7	Student7	Electronic Engineering, 4th.
8	Student8	Business Administration
9	Student9	Management Information Systems, 4th.

The focus group discussion lasted for about 65 minutes. The session was audio recorded but only after all participants approved the recording. Note taking was also used to capture non-verbal signals. The discussion was continuously moderated around the research question to ensure coverage of only key areas that is closely related or relevant to the study. The transcribed audio data was aggregated with the moderators' notes and the joined content was qualitatively analyzed through looking for concepts in the responses and categorizing these concepts into themes. The emerging themes were then examined based on their intensity, depth, and specificity with the research question, with additional emphasis given to comments that were repeated or refuted by several students within the course of discussion [16].

### **3. Discussion of the findings**

This section covers the extracted themes that were derived from the analyses of data; each theme converses an issue related to e-learning and reflects the perspectives of students regarding e-learning and their experience using e-learning tools.

#### **3.1 Lack of awareness about the usefulness of e-learning**

The awareness of student about the availability of e-learning tools is considered a significant success factor for such tools [6]. Understanding the level of student awareness is essential since the expected benefits of introducing e-learning in student's institute, such as enhancing the quality of teaching [6] and gains in efficiency, effectiveness, and cost savings [2], cannot be fully realized if students do not understand or lack the needed understanding about the benefits of e-learning tools in their institution [6, 17, 18]. Therefore, creating technology awareness

is highly needed as a requirement for building and promoting effective e-learning systems in education sector.

Lack of awareness about e-learning tools is a common problem among students in developing countries [19, 20]. Indeed, in this study the first interesting fact to know from our participants was their lack of awareness about e-learning tools. For example, student1 stated: "About "e-learning", I do not actually have much knowledge about its tools." This lack of knowledge in e-learning tools can be explained as a lack of awareness about the usefulness of these tools; Student1 reflected "I now there is a link for e-learning on our University's website, but I did not care about it and I did not try to explore it since I believe it will not be useful to me." But, this lack of interest can be explained based on the fact that there was no formal training or introduction for students about these tools from the University when they first enrolled, "there was no orientation what so ever for such kind of e-learning tools" (Student1).

#### **3.2 Unclear understanding of what e-learning is**

There is also the issue of defining what constitute e-learning and what technology can be exploited as an e-learning tool to the benefit of student. Student1 stated "I do not have a clear understanding of what e-learning is. I am an engineering student and each one of my lecturers uses his or her own webpage to upload on it subject related material. Does this fit under e-learning? What if students wish to discuss an issue, does interactive discussions fit also under e-learning?" Student7 also concurred what her colleague said: "we, the engineering students do not use the University's e-learning website much and we usually download subject material from the personal webpage of the lecturer." Student1 maintained that 'e-learning' as a concept should "comprise any tool

that could be used to learn via the web". He continued "the webpage of the lecturer or the website of the university, whichever has sample questions, subject related material, or marks of the subject, can be classified as an e-learning tool". Student1 was then very precise in shaping the notion of e-learning as "any webpage is an e-learning tool if it provides useful material to student."

### **3.3 Resistance to use e-learning from lecturers**

Prior research on e-learning indicated that culture is one of the critical success factors for implementing e-learning systems [1, 17, 21, 22]. The deployment of an e-learning system leads to drastic changes in education practice [23]. As a result, resistance to change from the old traditional ways of delivering content to the new e-learning paradigm of content delivery always emerges as one of the most noticeable barriers facing the successful utilization of e-learning tools [17, 24]. In this research, one of the points that have emerged from our analysis is lecturers' resistance to change their traditional ways of teaching and to start using e-learning. Student 4 confirmed this point by stating: "some lecturers prefer the old ways of teaching based on face-to-face meetings, and they do not prefer the use of contemporary technologies, such as the technologies of e-learning." Student1 affirmed what his colleagues said: "some of our lecturers are so traditional in that they only use the whiteboard to convey material." Another point that has been raised is that some lecturers do not actually know how to use e-learning tools and, accordingly, students do not use these tools. Student7 explained: "one of our lecturers does not know how to use e-learning or other forms of modern technology. He prefers always to use the traditional head projector to deliver his lecture notes.

Nothing else. Therefore, no need to use e-learning."

### **3.4 Resistance to change traditional learning methods by students**

Similar to lecturers, students are also resistant to changing their traditional way of acquiring information. Consistent with several previous studies, such as a study by Fujuan et al. [22], several participants in this study expressed their current negative attitudes toward e-learning. For example Student7 stated: "Honestly, I like the traditional old way of studying. I like to hold the subject papers within my hands. I can add my own explanations on the paper and easily annotate important parts; something I cannot do with my digital notes obtained through e-learning." Student8 agreed with her colleague: "I prefer hardcopies of lecture notes over digital form. You can move freely while reading your papers. Hardcopies are much easier to read from." Resistance to change the culture of doing things by students emerged as a true barrier to actively adopt e-learning. Indeed, Student3 explained: "a part-time lecturer asked us [students] to start using e-learning. The lecturer asked us more than one time to submit our assignments through the e-learning website of the University, but students insisted on handing in assignments to the lecturer in person."

### **3.5 Non-continuous availability of the e-learning website**

Quality dimensions of the e-learning system, such as availability, accessibility, and reliability have been found to have significant effects on the level of satisfaction of such systems [5, 6, 8, 25]. Consistently, in this study, participants also revealed that one of the issues with e-learning at their University is the non-continuous availability of the website through which material is acquired. A

successful e-learning system requires a commitment and an action from the administration of the educational institution to ensure that the e-learning website is trouble-free, can be accessed at any time, and its material is always available when accessed in order to relieve students' concerns about the quality of its e-learning system. These concerns have been explicitly expressed as Student2 stated: "one time I had an exam. I tried to download the exam's material through e-learning but the link was not available." Student4 confirmed her colleague's concerns by saying: "this is true. If e-learning is not available then we would lose so much."

### **3.6 Role of the institute in determining student's use of e-learning tools**

To facilitate e-learning, the administration of educational institutes should encourage and support e-learning usage both among lecturers and students. This can be carried out by continuously provisioning and maintaining the e-learning system, uploading up-to date and learning content, offering more functions through the e-learning services, establishing user-friendly interfaces, increasing technology awareness, and providing continuous training to learners and lecturers [6]. Studnet3 affirmed this by saying: "my sister is currently studying in another university in Jordan. Her university prepared well-equipped classrooms that record lectures in audio. These lectures are made available to students via e-learning at the same day. You do not need to go to the university to attend the lecture. Even absence and attendance are done electronically. All of it is done through e-learning." An interesting intervention from Student1, in which he raised the issue of not being able to distinguish between 'e-learning' and 'distance learning', Student3 explained that e-learning is a set of tools that you would use to pro-

vide subject related material, such as homework, discussion, or additional readings, while distance learning is a form of remote education that is not necessarily delivered via the web, but it can be delivered, for example, over the telephone. Student4 confirmed the role of the university in support e-learning: "if e-learning is not available then we would lose so much, especially if the university does not support it continuously."

Another important point is the need to have technical people who are dedicated to support and maintain the e-learning system and answer students' needs in such a system. Student1 was adamant about this issue: "the university should have someone who looks over e-learning, including upload requests from lecturers, thus encourage students to always find up-to-date material."

### **3.7 Role of the lecturer in determining the student's use of e-learning**

Lecturer plays a pivotal role in determining the success or failure of the e-learning system [5]. Students are influenced by their lecturer and his or her use of technology [19]. If a lecturer chooses to conduct part or all of teaching tasks through the e-learning system, students would have no choice but to use the system [5]. Student2 raised the issue of the lecture role in determining student's use of e-learning by saying: "'e-learning' is essential to my studies. All lecturers require us [the students] to use it [e-learning website] since we can find sample questions, lecture notes, and much other useful stuff on it. Honestly, it helps me a lot." Student3 who is a business student concurred with what Studnet2 said about the role of the lecturer in determining the use of e-learning within the university's curriculums: "There were some visiting lecturers who talked about their intentions to use e-learning tools, but they had never used them, so neither had we." Student1 reaf-

firmed that it is the lecturer who would mostly influence his or her student to use e-learning: “some of our lecturers travel a lot. They as a result use Skype, YouTube, or discussion groups on Facebook to communicate and interact with us [the students].” Student5 totally agreed: “the use of e-learning depends entirely on lecturers.”

### **3.8 Lack of use policy or use guidelines adversely impact the usefulness of e-learning**

One of the participants raised the need for strict guidelines surrounding the e-learning system, for example, to determine when new material should be uploaded to the e-learning website. Student7 gave an example from her own personal experience: “I had an exam one time. The lecturer did not upload relevant exam material, not until 2am. Who would stay awake until 2am? The lecturer even included one question from that material into the exam.” Student1 concurred: “Exactly. We need to change the culture of how things are done and how people work around e-learning. We should have guidelines that organize e-learning uploads.”

### **3.9 Type of subject determines the use of e-learning**

In a study conducted by Al-Harbi[25], students were found different in their intentions to use e-learning based on their faculty. Similarly, there was this idea from some of our participants that e-learning is not suitable for all subjects to the same degree. Student4 stressed on the fact that the program of study is a key factor in determining the need to use or not to use e-learning. She explained: “We, business students do not actually need it [e-learning]. I have heard that students who study Animation use e-learning tools very often.” However, Student5 was ca-

tegorical in her assessment and did not agree with Student4. Student5 said: “E-learning tools are for all content. Each program can utilize these tools and the tools have a lot of functions, but we as users do not know how to fully utilize these functions.”

### **3.10 Social-networks provide more practical platforms for e-learning than those of the formal e-learning systems**

An important phase in the learning process is the collaborative interaction between learners and educators. A learning system should provide user-friendly tools for students to easily collaborate and interact with others [26]. A user-friendly interactive learning environment can positively enhance a student’s attitude toward using e-learning tools [27]. In recent years, Web2.0 technologies that emphasize the social aspects of the Internet as a channel for communication, collaboration, and interaction have grown rapidly in the learning sector [28, 29]. In a study by Gao[30], an exploration of how students learnt collaboratively through a Web2.0 social annotation tool found that the majority of these students held positive attitudes toward their learning experience more than the students who did not use Web2.0.

In our study, student4 raised the issue of using social network methods (e.g. Facebook) for e-learning instead of the formal e-learning tools provided by the educational institute, mainly because of the rich functions for collaboration and interaction in such networks. She confirmed the fact several lectures do actually use social networks in e-learning by stating: “several lecturers use Facebook or Google+ to upload their material on them. This also enables each lecturer to start a discussion with his or her group members using the options that are provided by Facebook.” Student4 also pointed out the

fact that students today use smartphones, tablets, phablets, and notebooks to stay connected with each other and with their lecturers through social networks: “several lectures exploit Facebook functions to notify students about last-minute updates. Because students are always online they would know about these updates almost instantly.” Student8 directed our attention to the fact that e-learning provided by her university are actually rich in functions, such as group discussions and notification system, in a way that are similar to the functions provided by the social networks, but these functions are unfortunately either inactive or not used properly.

In another related point, several students argued that the proper design of the e-learning website or e-learning tools will be a strong reason to encourage students to come back and use the website again. For instance, Student2 argued: “We [students] like to use Facebook to communicate with each other or with our lecturer instead of using the formal e-learning link provided by the university. This is because Facebook is more ‘neat’.” A similar sentiment was echoed by Student9: “On Facebook you can raise a discussion between students and with their lecturer...Facebook is much easier and faster; you can get a notification through Facebook anytime and anywhere; on your mobile, on the go.” The position of Student7 on the comparison between the design of formal e-learning tools and social networking websites was quite straightforward: “Now there are new functions in Facebook. You can see who has viewed your post, at what time, and how many people viewed it. This would help a lecturer, for example, to determine that his or her students did actually get the intended updates or notifications regarding the subject.”

Some of the participants also recommended reengineering the interfaces of e-learning tools or websites to match those

of the most well-known social networking websites, such as Facebook or Google+. Student2 clearly stated: “we need something that is much more like Facebook.” Student3 also confirmed “if the University [PSUT] provided e-learning experience that is similar to Facebook, or Facebook-based e-learning system, then I would use it for sure.”

#### 4. Conclusion

Despite the obvious benefits of e-learning, its use by learners is not growing as expected. The success of e-learning in educational institutes is substantially dependent on adeptly addressing key challenges. In-depth qualitative findings that were presented in this paper based upon the evaluation and perspectives of undergraduate students to e-learning paradigm and tools reported several of these challenges. These include: awareness about the benefits of e-learning, resistance from students and educators to using e-learning methods, and technical challenges. Considering the importance of the design issues in e-learning systems, particular emphasis was given from participants to accommodate the innovative design trends of social networks into e-learning systems in a way that continuously attracts student to use and interact with such systems. Future research involves conducting a large-scale study that aims to understand the barriers and drivers of e-learning in developing countries from a multi-stakeholder perspective.

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