

## **Educational Social Networking Sites and Students' Academic Performance at Kuwait Higher Education**

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### **Abstract**

This research in progress aims to investigate the factors that influence students' academic performance by using educational Social Networking Sites (SNSs) in Kuwait. The updated DeLone and McLean IS model (2003) is utilized with an additional factor 'Student Emotional Engagement' found to be a significant variable in the relevant literature. This research has applied quantitative methods by distributing a survey to a sample of students who use educational SNSs in the Public Authority for Applied Education and Training (PAAET) colleges. Using Structural Equation Modelling, valuable results may be obtained to identify the most important factors that could influence students' academic performance using educational SNSs. The findings may provide useful insights for stakeholders including students and teachers on how to invest in the use of Information and Communication Technologies in the education sector, which may ultimately help in increasing the effectiveness of the use of educational SNSs for all targeted stakeholders.

**Keywords:** Student Academic Performance, Educational Social Networking Sites, Student Emotional Engagement, DeLone and McLean IS model (2003), Kuwait.

### **1. Introduction**

Social Networking Sites (SNSs) including Facebook, Myspace, and LinkedIn are considered one of the most popular and widely used types of social media applications [8]. SNSs define as “web-based services that allow individuals to construct a public or semi-public profile within a bounded system, articulate a list of other users with whom they share a connection, and view and traverse their list of connections and those made by others within the system” [8]. In the education context, Higher Education Institutions (HEIs) now recognize that SNSs have the potential to become a shared platform that encourages cooperation and engagement among educational stakeholders (such as students, teachers, and higher educational institutions) when used well and for purely educational purposes [4]. SNSs provide students with excellent educational opportunities to access course contents, recourses, and materials, interact with peers and teachers, and customize and build student communities [4]. This paper will focus on how using SNSs in education affects students' academic performance at the Public Authority for Applied Education and Training (PAAET) in Kuwait context. PAAET is a Public higher education institution and was established in Kuwait on 28 December 1982 by law number 63 [10]. Whereas PAAET seeks to develop the national technical manpower and meet the human resources needs of the country [10]. It mainly grants Diplomas although it also offers a few bachelor's degrees. Moreover, PAAET consists of 13 colleges and institutes and several general services and work centers [10].

## **2. Literature Review**

### **2.1 SNSs and Higher Education Institutions**

In the education sector, many scholars have claimed that SNSs which include Facebook, LinkedIn, and Edmodo can be used for educational purposes and are called educational SNSs [1], [4]. Educational SNSs refer to allowing teachers to construct online learning platforms and interact with their students for teaching and learning activities [4].

Recently, the integration of SNSs into the higher education environment, consisting mostly of young people as users, has become an integral component of the educational landscape [4]. According to [1], educational SNSs are aimed at building a digital educating setting, assisting association between learners, and increasing the experience of learning [1]. This is in line with what studies have mentioned in the literature that SNSs are considered one of the tools that support traditional education technologies (such as Learning Management Systems (LMS)). The flow of information in traditional technologies is highly focused- usually in one direction from the teacher to the student, and lacks the personal touch and networking capacity [3], [5].

### **2.2 SNSs and Collaborative Learning**

In the literature, it is often argued that SNSs are conceptually aligned with educational philosophies such as constructivism, where learning occurs when the students create new knowledge based on existing knowledge that they inherently possess [3]. Constructivism theory recognizes that learning is not passive and no longer an internal and individualistic activity, but it focuses on the learner in actively constructing meaning through collaboration between peers and teachers, which is known as collaborative learning [6]. Collaborative learning is one of the most important strategies in constructivism theory, and it is defined as a philosophy of learning that involves sharing knowledge, experiences, and authority, where students teach and learn from each other and develop a positive interdependence [6]. Numerous researchers in the higher education context acknowledge that SNSs give a place for collaborative learning. This allows students to do teamwork on assignments and convey collective understanding that may improve students' academic performance and learning [3].

In the context of this research, student academic performance is defined as the extent to which educational SNSs influence student performance based on knowledge acquisition, resource savings, and development of skills [1]. Student academic performance is considered to be the major criterion by which the effectiveness and success of any educational institution, the teacher's way of teaching, and the decisions made by decision-makers could be judged [2], [5]. This supports what [1] argued that measuring student academic performance is important in re-evaluating higher institution's position as a knowledge provider in the community and deploying new educational tools and pedagogical approaches (such as introducing Information and Communication Technologies (ICT) as new tools in the learning process) [1].

### **2.3 SNSs Usage and Student Academic Performance**

Many scholars in literature argue that there are face-to-face communication difficulties between students and teachers [4], [6]. These difficulties may be because of the high number of students admitted to universities, the increase in the number of students per classroom, and the limited teacher presence on campus because of the excessive workload for him/her [3], [5]. Scholars mentioned that these difficulties could affect the level of students' academic performance in higher education [3], [5]. Thus, it was found that the use of SNSs in higher education is one of the solutions to face-to-face communication barriers between teachers and students [4], [6]. In the Kuwait context, HEIs are interested in enhancing the learning process generally by encouraging the use of ICT tools to improve communication between students and teachers and improve students' academic performance [2], [10].

Some studies have stated that using SNSs in higher education significantly contribute to students' academic performance. For example, [5]'s study, which investigated Chinese

medical students' knowledge and learning performance through using SNSs, revealed that SNSs have enabled students to work together, interact with peers and teachers, and acquire the latest knowledge, which can foster students' academic performance [5]. In Kuwait, a study conducted by [2] at Kuwait University mentioned that the use of SNSs have an impact on both students and teachers in terms of communication with each other [2]. Students perceived that the use of SNSs facilitated interaction with peers and teachers and enabled them to participate more frequently in learning activities inside and outside of the classroom. Moreover, [2] stated that SNSs have the power to provide new learning experiences, which may improve students' academic performance.

On the other hand [9] found SNSs distraction problematic, with a large sample analysis finding that multitasking, especially interactive technologies such as those available through Facebook and messaging while studying, to be negatively related to performance [9]. Also, the study mentioned that the use of SNSs replaces study time, leading to lower performance.

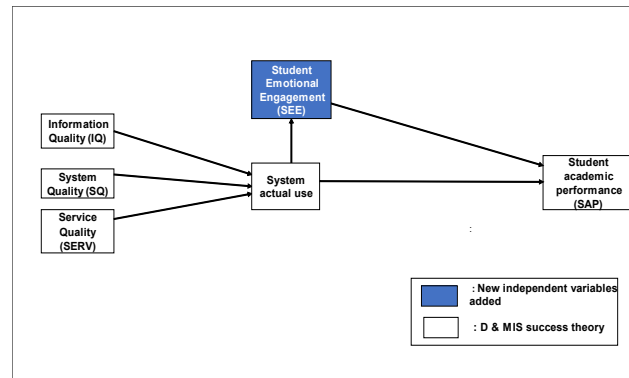
Despite the acceptance of SNSs in HEIs as a platform where students connect with their peers and teachers, there is limited evidence on the use of SNSs in education and their effect on students' academic performance [1], [4]. Where numerous studies have examined various factors such as socioeconomic background, classroom environment, gender differences, family education background, teaching and learning styles, etc., which can impact students' academic performance [1], [9]. However, there are few studies available that specifically consider the influence of the use of educational SNSs on students' academic performance [1], [3]. Although there are studies focusing on the use of SNSs in education and their impact on student academic performance in developed countries (such as the U.S. and UK), studies that examined the issue in developing countries in general and Kuwait, in particular, remain scarce [2]. Therefore, to fill the gap in the literature, this research aims to investigate the factors that could influence students' academic performance while utilizing education SNSs at PAAET in Kuwait. The research question guiding this study is: What are the factors that could affect students' academic performance through using educational SNSs?

### 3. Theoretical Framework

The updated Delone and Mclean Information System success model (2003) (D&M IS model) is one of the models that has been widely used- partially or totally- to assess the success of various types of information systems such as e-commerce, e-government, and e-learning [4]. D&M IS model consists of six interrelated dimensions of IS success. Where a system can be evaluated in terms of information quality (up-to-date, relevant, and accurate), system quality (easy to use and flexible), and service quality (timeliness and responsiveness). These characteristics affect the subsequent actual use (in terms of frequency and duration) and user satisfaction (in terms of overall satisfaction) independently [7]. As a result of using the system, certain net benefits (renamed to students' academic performance) will be achieved [7]. D&M IS model has an advantage over other IS theories and models as it is widely used to examine the system and information design attributes and their relationship to the use of technologies [4]. This supports Delone and Mclean statement that the D&M IS model can be applied to mandatory and voluntary systems [7]. Therefore, D&M IS model is considered to be the most suitable model regarding explaining the factors that may influence students' academic performance to use ICT tools in education from students' perspective.

According to [1] and [4], expanding the D&M IS model by adding additional factors provides a better understanding of the context in which educational SNSs are used, and which may influence students' academic performance. Thus, student emotional engagement was integrated into the D&M IS model to provide a theoretical contribution to the research. The evidence in the literature indicates that student engagement is one of the most important predictors of student academic outcomes and development [4], [6]. Student emotional engagement is defined in this study as students' emotional reactions through their use of educational SNSs. It is measured in terms of students' relationships,

attitudes, and interests to their peers, teachers, and study [6]. The engagement is centered on interactions between the person and the environment to ensure social and intellectual connections between a group of students and the class in order to change student awareness and engagement. Therefore, a number of research studies that have looked at the experience of utilizing SNSs in education revealed that they lead to excellent learning outcomes and engagement [3,4]. One of the best aspects of SNSs applications is their influence on the emotional engagement components of the learning environment, as well as their impact on students' academic performance. Figure 1 shows the proposed research model.



**Fig. 1.** Proposed research model.

The following is a set of hypotheses that will be tested in this study:

H1: Information quality has a positive influence on myU application use.

H2: System quality has a positive influence on myU application use.

H3: Service quality has a positive influence on myU application use.

H4: myU application use has a positive influence on student emotional engagement.

H5: myU application has a positive influence on Student Academic performance.

H6: Student emotional engagement has a positive influence on student academic performance.

#### 4. Research Methodology

The total target population of the research is students who use educational SNS (such myU application such myU application which is one of the most popular social networking applications used in Kuwait) in PAAET colleges, which is 23,380 students as users. According to [11], if the total target population is more than 10,000, the minimum sample size to reach is 370 [11]. Therefore, it can be said that the sample size in this study is 370, but the number of participants is expected to be more than that.

The data will be collected by applying the survey method (structured questionnaire). The questionnaire will be distributed online to participants via Survey Monkey to students who use myU application. To reach them, teachers who use myU application will be contacted (by sending a direct message to them via the application itself (myU application)) to inform their students about the questionnaire and their volunteer participation in it. After that, the questionnaire will be sent to teachers, and they, in turn, will send it to their students for their participation.

The questionnaire instruments are adapted from [7] and related previous studies that are based on the D&M IS model framework. The development of instruments was carefully made to reflect the nature of the study. Hence, the questionnaire was created and included 34 items for this study. The items will be measured using the five-point Likert Scale (5 = 'Strongly Agree' and 1 = 'Strongly Disagree'). Moreover, because the respondents are Arabic speakers, the questionnaire needs to be precisely translated from English to Arabic, therefore, a back-translation was performed. The data collected from the survey questionnaire will be analyzed and tested by using Structural Equation Modeling (SEM) - to fit the proposed models by testing the hypothesized relationships-, Statistical Package for the Social Sciences (SPSS), and SmartPLS software.

## 5. Conclusion and Next Steps

With the emergence of ICT, the teaching and learning processes have witnessed a paradigm shift. In HEIs, it is seen that an efficient use of SNSs can bring results for both the teachers and students. SNSs help individuals to share and grasp information in various formats in a very short span of time. This research in progress sets out to examine the factors that could influence students' academic performance in educational SNSs at PAEET in the context of Kuwait. The integration of student emotional engagement with the D&M IS model is adopted to reach the research purpose. The next step aims to reach more than the minimum stipulated sample size and analyze the data collected. The findings of this research may provide crucial information for educational stakeholders, including students, teachers, and higher education institutions, and assist them in knowing an effective way to make constructive input in education in general. Moreover, this research depicts the way to utilize SNSs effectively to enhance the academic performance of students in higher education in Kuwait. This research's examination may also give insight to all targeted stakeholders regarding maximizing the educational quality and utilizing the SNSs to benefit all in the education sector. Regarding future research, it could be extensive by distributing the questionnaire to other higher education institutions in Kuwait or could apply the model to other countries' education institutions to know what results will be reached.

## Acknowledgments

The authors would like to acknowledge all the participants have managed and implemented the study. Its contents are solely the responsibility of the authors and do not necessarily represent any official views.

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