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The Gamification for Elearning in Jordan Higher Education: Literature Review

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THE GAMIFICATION FOR ELEARNING IN JORDAN HIGHER EDUCATION : LITERATURE REVIEW

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ABSTRACT
Gamification is a concept in which game aspects in the environment aren't actually games. This topic is well-known in the educational community. Many colleges are beginning to transform the way students study by introducing game components and employing various learning technologies that incorporate game elements into the learning process. As a result, this essay will go into greater detail on gamification learning and the influence of gamification learning on Jordanian students. This paper reviewed the usage of gamification for higher education in Jordan and proposed a future solution for its problems and challenges.
Key words: Gamification, Learning, Jordan.

1. INTRODUCTION

Games have invaded every spheres of the real-world and they are changing our perceptions of various strategic decisions. Gamification is a mechanism of integrating gaming framework and dynamics to promote specific behaviors (Urh, Vukovic&Jereb, 2015). It has gained access to major domains of the real-world such as politics, marketing, fitness, and health. According to Hyrynsalmi, S. M., & Paloheimo, M. (2019) gamification is expected to join the elite club of the multi-billion dollar industry. One of a visionary researcher has envisioned that gamification is the future of the world in which everything will be gamified and which marks the start of a new age (Tulloch, R., & Randell-Moon, 2018). .

The current use of gamification is limited to the business environment to promote a product or service. For instance, people are lured to earn rewards in the form of badges and discounts by visiting an online shop or any mobile phone application, i.e. FourSquare. Likewise, gaming experts have designed games to positively impact the lifestyle and improve the living standards, i.e. Chore Wars. One another potential benefit of gamification is to encourage people to participate in energy conservation activities, i.e. Google Powermeter which helps the people to reduce energy consumption (Vdov, K. (2020). It is noteworthy that the gamification mechanism has a huge potential that exceeds the current dynamics of promoting a healthy lifestyle and improving marketing strategies. Gamification techniques facilitate developing critical problem-solving skills which are the need of the modern world . Games are designed in a way to identify the personal qualities and build upon those qualities to uncover the hidden creativity and resilience of the users. Besides that, it was also found that gamification motivates users to find solutions to real-world problems. In the current case of educational institutions, students lack the motivation to engage in learning activities. Therefore, gamification can be utilized as a ray of hope. One of the studies reported that in America schools have a significantly higher dropout rate due to low motivation among students and each year around 1.2 million students dropout from schools.

2. Gamification of Education

Educational institutes already have a game-like mechanism of rewards and penalties. In the educational institutes, students are awarded points for successful completion of their assignments and penalized for poor performance. Students are also promoted to the next class at the end of final academic evaluation just like the level up system of games. However, these elements of game-like mechanisms do not fulfill the ultimate gaming experience required in the digital learning environment. The current educational environment does not provide enough incentives for students to actively engage in learning activities (Furdu, Tomozei&Kose, 2017).

The default learning environment in educational institutes breeds cheating, helplessness, disengagement and ultimately dropouts. Contrarily, more than 28 million people play Farmville (Xie, L., 2018). Likewise seven million actively participate in World of Warcraft game for many hours (Margitay-Becht, A., 2016). These statistics reveal the greater engagement of people around the world in gaming as compared to a traditional learning environment. Besides that, most of the students have reported classroom-based activities as dull and boring which lacks the core elements of gaming (Yong, 2017). Thus, the lack of appropriate gamified mechanism results in poor engagement of students in traditional learning activities.

It is critical to understand the circumstances under which gamification mechanisms encourage learning behavior in the students. One of the researchers presented a Rules, Play and Culture framework to provide the details of the gamification mechanism (Huotari&Hamari, 2017). According to this framework, the school's rules must be formulated in a way that engages students both at an emotional and social level. However, the traditional learning environment has formal rules which cause emotional disengagement of students (Bracco, 2015). The gamification mechanism is expected to modify the formal rules and improve the emotional experience as well as the social positioning of students in the educational institutes.

Gamification mechanism depends on the rules, emotions and social roles. In this way, when a student completes a book reading on the digital learning portal, a badge of “Reader” appears on the portal. Successful completion of the assignment earns the badge “On target” (Delello, Hawley, McWhorter, Gipson & Deal, 2018). Similarly, many more badges are assigned to the students who actively engage in learning activities on digital learning portals. In this way, students develop an improved understanding of school-based activities. According to a study, such as a mechanism that motivates the students to actively participate in digital learning activities as well as it helps in improving the self-concept of learners (Delello et al., 2018).

Educational institutes around the world implement these gamification principles at different scales. Some of the instructors apply these principles for their own classes, however, some apply at a broader scale on all classes to improve the learning experience of students. One of the studies has shown that a professor at Rensselaer Polytechnic Institute has replaced the traditional grading system with experience points for homework assignments. In this way, the professor encourages the students to gain maximum experience points by timely submission of their assignments. One another study has reported that in some educational institutes game designers work in collaboration with teachers to develop a digital learning system on the principles of the game element to encourage active participation of students.

3. GAMIFICATION MECHANISM

Successfully integration depends on the audience. The researcher identified five critical steps that are important to successfully integrate gamification mechanism in the learning environment (Alsawaier, 2018). It is imperative for educators to determine the students who are participating in the digital learning environment. In this step, the educators develop a comprehensive curricular framework for integrating gamification mechanisms. The next step in this process is clearly defining the learning objectives. In this step, the educators tap on the

main objectives which they want to accomplish. Furthermore, the pain points which hinder the active participation of students in the learning environment are also identified as eliminated. When all these points are identified and learning objectives are defined the instructor arranges the gaming sequence to enable maximum encouragement of the students. In the last two-step, the instructors identify the resources, gaming mechanism, which can be successfully implemented to enable the active learning of the students. Finally, the gaming mechanism is implemented and students are monitored for their active participation (Alsawaier, 2018).

4. Management and Handling Issues in Digital Learning System in Jordanian HE

In the conventional learning environment, the instructor designed courses for face-to-face interaction. In the digital learning system, the instructors' design special content to ensure a high level of engagement. It has been argued that the assessments in digital learning systems need modification to ensure effective evaluation of the students. However, there are various challenges to efficient management and handling of digital learning systems. Some of the potential challenges reported in the literature include the following:

4.1 Challenges to Students

Students are the major stakeholders in the digital learning systems and therefore students require a minimum skill set to effectively utilize the hardware and software to access information. It has been reported that students lack experience in using digital learning technology and the majority of the students lack the essential skills to succeed in the digital learning environment. One of the studies has reported the lack of technical skills among the students to effectively operate the digital learning portals. Moreover, there are some bandwidth issues between the instructors and the students. It is imperative the instructors consider the skill set of students while designing the web pages or course multimedia contents. Furthermore, students face difficulty in comprehending the complex language of the course on the digital learning system. According to a study, in the digital learning systems, students are their own coach and they learn independently which means if the students face any difficulty while accessing or comprehending the information on digital learning systems, they are most likely going to leave the system. Besides that, some students also have limited interest in using digital learning systems as compared to that of regular face-to-face systems(Altemueller, L., & Lindquist, C. 2017). Therefore, the instructors need to adequately design the digital learning system so that they can handle the course appropriately and meet the learning needs of the students.

4.2 Challenges to Instructors

The instructors are the main stakeholders in the digital learning systems. One of the major challenges for instructors is to design an appropriate digital learning course to ensure maximum engagement of students (Haidar & Al-Salman, 2020). Designing an effective digital learning course is often time consuming and hectic process. Moreover, the instructors also need to formulate realistic assessments in the digital learning courses to ensure a positive learning experience. One of the studies has reported that the instructors find it difficult to monitor the digital assessments and thus the students have more opportunities to cheat in digital systems as compared to the face-to-face learning environment. Therefore, instructors need to have a contingency plan to overcome these issues and ensure the best learning environment. Besides that, one another challenge to the instructors is the lack of sufficient knowledge and training to deal with the digital learning systems. (Almaiah, Al-Khasawneh & Althunibat, 2020). The instructors are ill-equipped to manage the courses on digital learning system as well as some of the instructors are less receptive to this system. Therefore, the effective management of the digital learning system depends on addressing the challenges to instructors.

4.3 Challenges to Institutions

Institutions are looking at novel ways to improve the learning experience of the students. Digital learning systems are integrated into the higher education institutions to improve the learning outcome among the students. However, the integration of digital learning systems has created financial and strategic issues. It has been reported that the higher education institutions lack adequate funds to integrate proper hardware, provide training and ensure technical support (Asuman & Clement, 2018). There is a significant financial challenge that has hindered the successful integration of digital learning systems. Besides that, academic staff is also reluctant to accept the digital learning systems. The teachers are more affiliated with face-to-face traditional classrooms. Such issues have raised challenges to institutions. Therefore, it is imperative that institutions take the necessary steps to overcome these challenges and successfully implement digital learning systems (Alkhawaja, M. I., & Abd Halim, M. S. B., 2019).

The contemporary classrooms are equipped with digital learning technologies to improve the learning process. Around the world, higher education institutes have successfully integrated digital learning technologies to harness the innovative and critical skills of the learners. The digital learning technologies in the form of tablets, mobile phones, the internet, computers, and laptops offer a deep ocean of information to the students. There is a number of theories that explained the learning environment, the traditional theories include cognitivism, behaviorism, and constructivism (Janelli, M., 2018). However, these theories only explained the learning process in a traditional learning environment. These theories are limited in their scope to explain the mechanism of a digital learning environment. Therefore, new theories were explored such as connectivism, a community of inquiry and an integrated multimodal model. All these theories explain the digital learning technologies and the digital environment in which learning is carried out (Picciano, A. G. (2017). The digital learning theories examined the learning environment and the activities which engage the learner with the digital learning environment. These theories provide the basic framework to successfully integrate digital learning environment. Digital learning technology provides a medium for effective collaboration, sharing of information and generating new ideas based on critical thinking. In the traditional learning environment, students are isolated and do not collaborate as effectively as they can in the digital learning environment. In the digital learning environment, learners are active and participate in all the learning activities. However, in developing countries, the integration of digital learning technologies has not accomplished the intended objectives.

4. CONCLUSION

The literature review has revealed that the current status of digital learning technologies in Jordanian Universities is not catering the modern needs. The teachers and students only utilize the system to upload files and assignments rather than using it to search for new information and interact with their peers. These issues have marred the initiative of introducing Learning Management Systems in Jordan.

The literature has explored the potential impact of digital learning technology on educational institutes. It was found that digital learning technology can substantially improve the engagement of students, self-efficacy and active participation in the learning activities. One of the studies observed an increase in the academic performance of students after the successful implementation of blended learning models and the integration of social media applications in educational institutes. Likewise, another study reported the success of blended learning models in middle schools. These reports revealed that students are able to access scientific data which has a positive impact on the learning activities.

The literature revealed various dimensions of digital learning technologies. However, it is imperative to consider the long-lasting objectives of digital learning technologies. The current

study will build on the notion that digital learning technology will improve the engagement of both the students and teachers with the curriculum. Active engagement will open new horizons for the students to learn and apply their learned knowledge to real-world problems. In this way, the full potential of digital learning technologies can be unleashed and students will develop life-long skills to resolve various socio-economic problems of the world. These skills will also accomplish the goals of Jordanian higher education to foster students with the requisite modern skills to improve the economic status of the country through innovative solutions.

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