Educators' Roles in Creating Smart Learning Environments for Emiratis in Tertiary Education

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EXECUTIVE SUMMARY

Smart learning environments for the Emirati learners are defined as a combination of blended learning and experiential learning approaches to create joyful educational environments. The current case study is an investigation into what generation Y of Emirati learners in one of the largest tertiary educational institutions in the United Arab Emirates consider joyful learning. The case study was based on mixed method surveys of educators and students. The case study investigation resulted in four important recommendations for creating smart learning environments where context and situated learning are essential considerations for mindful teaching and learning.

INTRODUCTION

The recent rapid changes in higher education in the Gulf countries have resulted in educators re-examining the learning environments and the educators' roles in creating learning experiences that engage and cater for their specific type of learner. Learners in tertiary education in the Gulf are expected to be actively engaged in learning groups and have their education catered to their needs (Hatherley-Greene, 2014). The context would dictate the strategies that educators would apply to create an engaging and responsive learning environment. In this specific case study, the context is related to the Emirati learners who are non-native English language speakers studying in English at tertiary level and had had traditional exposure of learning through route memorization and basic understanding of concepts in core subject matter.

The smart learning environment (SLE) in this context is defined as the use of appropriate technology tools and application of suitable pedagogy within the specific context of learners. In such a learning environment, students havevaried access routes to learning that they can customize to meet their needs and help the learner up through the taxonomy of higher order thinking skills. It is an environment that gives learners more control over when and how often they interact with learning content, and as such would create both joyful and impactful learning experiences.

The emerging trends in educational technologies include a diversity of intelligent tools, automation, artificial intelligence (AI), virtual and augmented reality, and Internet of Things (IoT). We need to approach and adopt these technologies from a pedagogical angle rather than a technological mindset. In creating a smart learning environment, it isupto the educators to decide on the best tools to meet the learning needs, normally using the specified learning outcomes as a guide. The selection of such tools also includes the decision on the learning management system (LMS) to be used, and the selection of applications available in MS Office 365, such as mobile presentation tools: SWAY, Stream for videos, and collaborative spaces like One Drive. An essential part of the smart learning environment is the educators' use of collaborative online tools to offer opportunities for learners to generate knowledge. Social media applications are also an important resource for continuous connection with the students to create a holistic learning environment and effective communication using such tools as Remind App and WhatsApp.

There are many free programs that promote literacy for educators. NewselaandReadTheorycan be adapted to all levels to support writing and reading needs of the learners. In addition, there are a range of automation tools such as Automated Linguistic Analysis, Safe Assign, and Grammarly.; these tools help both the educatorand student secure instant feedback and timely support.

Artificial intelligencehas also become an important part of creating a smart learning environment. Tools using artificial intelligence include digital assistants, Google Home, and the use of robots like Alexa, Siri, Amazon Echo and so on. These tools encourage seamless integration of technology into learning without interruption, thus enabling artificial intelligence tools to be almost a natural part of the learning context. Students are not required to physically move to different environments to complete their learning tasks.Baciu, Opre, and Riley (2016) called for a need to adapt our teaching and thinking because of artificial intelligence and immersive technologies. These technologies are rapidly developing mainly in military and medical fields (Baciu, Opre, & Riley, 2016), but the education sectorneeds to catch up. The authors have stated that graduates are ill prepared for what highly technological companies are requiring. Augmented and virtual realities bring sound and visualization that today's learners are used to in their real-life communication. Available tools such as HP Reveal, Elements 4D, location-based games (ARIS), and virtual reality applications and videos bring context to classroom learning.

With the availability of all these tools, it is paramount for the educator to ensure that the used tools support learning rather than having these tools drive learning atthe expense of pedagogy. As such, the educator needs to be aware of their own changing roles and the teaching environment.In a comprehensive analysis of 741 scientific journals on mobile learning, Fombona, Pascual-Sevillano, and González-Videgaray (2017) concluded that the philosophy of teaching and learning should be reoriented based on the technology available and the clear penetration of immersive technologies in mobile learning (m-learning). Therefore, the educator's role shifts based on learners' needs, technology tools used, and the learning environment.

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