

# Chapter 11

## Online Learning Engagement System (OLES) Design Framework for Postsecondary Online Learning Environments: A Synthesis on Affordances from Game-Based Learning, Social Media-Enabled Learning, and Open Learning

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### ABSTRACT

*Considering the increasing enrollment in online education programs among higher education institutions in the U.S., many researchers and educators have expressed their concerns on issues that may impact online learning engagement. With a low level of online learning engagement, learners are less likely to complete the coursework and the intended learning does not occur. In order to correct this learning issue, this chapter proposes the Online Learning Engagement System (OLES) design framework to explore potential solutions that can improve online learning engagement. The OLES design framework is grounded in multiple theoretical perspectives and situated in current learning technology applications (game-based, social media-based, and open learning). While the scope of this design framework is limited at a conceptual development stage, future research potential to continue this theory-building effort is promising.*

### INTRODUCTION

Online learning has become one of the mainstream operations in higher education institutions in recent years. With the significant growth rate of the online education market comes with much scrutiny on its

pedagogical efficacy and sustainability, although the technological advancement has created many new opportunities for educators to re-envision the potential of online learning.

Considering today's information and communication technology that can be integrated into online learning (e.g., game elements, social media, open educational resources, mobile devices,

DOI: 10.4018/978-1-4666-4249-2.ch011

cloud-based data repository), we can no longer consider online learning a passive, isolated, and inactive process. Instead, today's learning technology applications have enabled many types of learning experiences that are experiential, social, and collaborative. For example, digital game-based learning enables hands-on opportunities for learners to gain direct experiences; social media force learning to open up to a larger community of participants; and open/mobile learning both transcend all boundaries of traditional online learning. These technological affordances, however, also induce new concerns toward the intended online learning processes.

Among many concerns related to online learning outcomes, learning engagement in online learning environments remain under emphasized during the instructional design processes. While many online learning design models have focused on the learning processes and outcomes, how and to what extent the learning system is able to proactively engage learners and how learners choose to engage with the intended learning experiences are not adequately addressed during the design process. To make the situation worse is the reality that the development of online learning environments has shifted from single delivery modality (e.g., single medium, single platform) to multi-modality (e.g., multi-media, multi-platforms, multi-interfaces). These increased affordances for online learning have inevitably impacted how online learners perceive and manage their engagement with online learning environments. Current literature in dealing with these engagement challenges and their implications toward the design of online learning experiences with a holistic viewpoint, unfortunately, is scarce. To address this design deficiency, this chapter proposes a design framework for an Online Learning Engagement System (OLES) based on recent literature drawn from game-based learning, social media-based learning, and open learning. The common denominator of all these learning environments is that they are all capable of providing engaging

learning experiences ranging from extrinsically to intrinsically motivating on certain aspects of their learning processes. Their innate abilities, given their inherent technological features, to distract learners therefore are the targeted design components of the proposed OLES design framework.

The absence of a learning engagement system embedded in the online learning environment can lead to unknowingly providing excessive cognitive as well as affective stimuli to online learners. The result would be an either boring or distracting online learning environment that impedes the intended learning processes. To address this design issue, this chapter intends to meet the following objectives:

1. Review current literature on theory building and learning engagement in online learning and discuss challenges and opportunities facing online learning engagement issues.
2. Review current literature from immersive learning technology on gamification of learning, social media-enabled learning, and open learning to identify emerging factors impacting online learning engagement.
3. Propose the design framework for the Online Learning Engagement System (OLES) with a systematic design process and corresponding learner analytics.
4. Conclude the chapter by discussing the applicability and limitations of the proposed OLES design framework and future research.

## **BACKGROUND**

### **The Function and Scope of the Proposed OLES Framework**

The knowledge base for designing instructions is often advanced by new methods of design in order to achieve the state of best practice. In the series of instructional design theories and models edited by Reigeluth (1999) and Reigeluth and

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