

## Chapter 2

# Developing a Framework to Evaluate the Mediating Role of Self-Regulated Learning (SRL) Strategies in Blended Learning Courses

**Chee Leong Lim**

 <https://orcid.org/0000-0001-6785-9280>

*Taylor's University, Malaysia*

**Habibah Ab Jalil**

*Universiti Putra Malaysia, Malaysia*

**Aini Marina Ma'rof**

*University Putra Malaysia, Malaysia*

**Wan Zuhainis Saad**

*University Putra Malaysia, Malaysia*

### ABSTRACT

*Challenges students face in the online component of blended learning, especially in the areas related to self-regulation challenges, have deferred them in achieving their learning goals. Besides, improper utilization of online peer learning strategy has also been identified as an inherent problem related to self-regulation challenges in the blended learning environment. Therefore, this study adopted Zimmerman's perspective of SRL which draws from social cognitive theory and Bandura's self-efficacy theory to determine the influence of self-regulated learning (SRL) strategies and peer learning on students' learning satisfaction and academic achievement. This study proposes an integrated and actionable framework covering a variety of constructs, including SRL, peer learning, learning satisfaction, and academic achievement in the context of blended learning. In addition, it also provides insights for universities as to where future efforts need to be directed, especially in the areas related to the improvement of the facilities and infrastructure for blended learning implementation.*

DOI: 10.4018/978-1-7998-6445-5.ch002

## **INTRODUCTION**

Educational technology is a combination of the processes and tools in addressing educational needs and problems, with an emphasis on applying the most current and related technologies and tools (Roblyer, 2003). It also refers to the growing range of human-engineered products and processes, purposefully employed within educational contexts towards the ultimate goals of promoting and enhancing student learning (Subramony, D. P., 2008). In Malaysia, the uses of educational technology have been receiving get a strong push from the nation since 2011 with the aims to make the learning process more effective and to change the whole learning model in this century (Azmin, Amran, & Rusli, 2015).

The use of educational technology is beneficial for learning as supported by a recent meta-analysis by Steenbergen-Hu & Cooper, 2014. Educational technology provides certain features which offer potential benefits for blended learning practise, and Reigeluth (2017) has proposed three reasons why educational technology can be beneficial, from teachers, students motivation and learning flexibility perspectives. For teachers, it facilitates personalized learning through effective administration and organization in the lesson delivery. Moreover, it enhances students' motivation due to immersive and authentic task environments through simplified information retrieval. Thirdly, educational technology is capable in providing an infinite number of supportive tutorials and exercises for learners whenever they need help. It could also allow students to have multiple attempts to the practices and scaffold them in their learning journey. Likewise, Reinhold et al. (2020) also argued that low-achieving students benefit from the interactive and adaptive scaffolds features in educational technology.

Perceptions of blended learning have been shifting in its favour over the past several years. Blended learning continues to gain popularity in Higher Education Institutions (HEIs) because of its flexibility and ability to customize according to diverse students' learning needs (Allen and Seaman, 2016; Cui, Lockee and Meng, 2013). Blended learning is defined as ICT-enabled learning which integrates and harnesses the strength of both online and face-to-face modes of delivery (Krause, 2008). It is also commonly referred as the combination of face-to-face and online instruction with a reduction in class-time (Porter et al., 2014).

## **Blended Learning in Higher Education**

The study of blended learning is crucial in the context of educational technology because blended learning approach is widely regarded as “the new normal” in higher education (Dziuban, Graham, Moskal, Norberg, & Sicilia, 2018) that combines the benefits afforded by both face-to-face and online learning components. Moreover, according to the study by Chen et al. (2020), blended learning had received a significantly increased amount of attention, particularly in collaborative and social learning among peers. However, this approach of combining online with face-to-face instructional components have raised concerns over the years according to Rasheed, Kamsin and Abdullah (2020). Therefore, educational research needs to focus on assessing students' ability in self-regulated learning and peer learning as the adoption of blended learning is related to students' capability to learn on one own and applying social skills in their learning process (Osman and Hamzah, 2017).

Blended learning plays a crucial role in promoting quality education and accelerates progress to achieve Sustainable Development Goal 4 (SDG4), which is also known as Education 2030. By incorporating new pedagogical possibilities of blended learning, the quality of higher education could be improved with increased access and flexibility for learners, especially hard-to-reach learners (Wang, 2018). Due to the

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