

# Assessment Strategies in Empowering Self-Regulated Learning in Higher Education: A Systematic Review

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## **EXECUTIVE SUMMARY**

*Self-regulated learning (SRL) is essential to higher education. An increasing body of knowledge has attested to the significance of assessment activities in promoting SRL strategies. However, the influence of assessment practices on SRL in higher education is considered a neglected research area. Aimed to fill this gap, this paper presents a systematic review of six peer-reviewed articles focusing on the effective employment of assessment strategies to promote SRL. Five key features of the compelling interplay between assessment activities and SRL strategies were noted in the review: feedback-driven, discussion-focused, specific assessment designs that provide continuous SRL opportunities, and learning contexts that influence motivation and purpose, with educators' assessment competency as a pre-requisite for successful implementation.*

## **INTRODUCTION**

Many of the skills associated with self-regulated learning (SRL) were synonymous with the essential skills required in higher education (Liacuna & Mason, 2022; Steh & Saric, 2020). Goal setting, learning monitoring and ownership, constant reflection and evaluation are some of the skills critical in higher education context (Hawe, Dixon & Hamilton, 2021). A considerable research attention has been given to the role of specific assessment strategies in promoting SRL (Broadbent, Sharman, Panadero & Fuller-

Tyszkiewicz, 2021; Weldmeskel & Michael, 2016). A myriad of assessment methods, such as peer and self-assessments, reflective journals and process-based assessments (Fraile, Izquierdo, Iglesias & Zamorano-Sande, 2020; Hawe & Dixon, 2016; Weldmeskel & Michael, 2016) have been increasingly valued for their potentials in propelling SRL (Hawe & Dixon, 2016). Nevertheless, effective assessment practices in yielding SRL in higher education were still a neglected research focus (Bevitt, 2015).

Despite the promising link between classroom assessment strategies and SRL, existing literature has reported mixed findings. While assessment strategies have been found to positively influence students' capacity to regulate their learning (Hawe et al., 2021; Waluyo, 2018; Weldmeskel & Michael, 2016), some studies conveyed less than promising findings (Broadbent et al., 2016; Fraile et al., 2020; Simon, 2019). Hence, there is a need to understand salient features of assessment practices that could potentially lead to favourable impacts on SRL. Aiming to fill the gap in the existing literature, the critical focus of this paper is to explore assessment strategies and practices that promoted SRL. Drawing upon these discussions, a systematic review of influential and impactful formative and summative assessment tasks for promoting SRL is presented. The review involves six articles published between 2016 to 2022, with a specific focus on SRL practices in the context of higher education. The discussion on Methods details the scope, search procedures and criteria for inclusion of articles selected for the systematic review.

## **Definition**

Literature focused on SRL has addressed the term under its many aliases: independent learning, autonomous learning, self-organized or self-directed (Steh & Saric, 2020). Panadero and Alonso-Tapia (2013) emphasized the link between assessment practices and SRL in addressing self-regulation and self-assessment, and the understanding of these complex overlap would enrich one's view of the interaction. While assessment activities are integrated within instructional and pedagogical components, SRL is internal and involves cognitive and affective processes. Zimmerman (2008), however, regarded SRL as also encompassing behaviours, and the interaction between cognitive and affective domains, as stressed by Panadero and Alonso-Tapia (2013). He viewed SRL as complex interactions between metacognition, motivation and behaviors framed by beliefs and active regulation of one's learning process. As such, learners are able to regulate their mental capacity into academic-related skills such as goal setting, monitoring, controlling and coordinating all three domains of learning to ensure meaningful learning engagement and outcomes (Zimmerman, 2002).

Zimmerman (2008, 2013) clarified the concept as consisting of three cyclical phases: forethought, performance and self-reflection. Grounded in social cognitive theory, the model is regarded as one of the most comprehensive models describing SRL strategies and highly referred to in scientific literature (Panadero, 2017). Zimmerman also produced two other SRL models: the triadic analysis of self-regulation (Zimmerman, 1989); and a multi-level model of self-regulation (Zimmerman, 2002); each with a slightly different focus and orientation (Zimmerman, 2002). The phases in Zimmerman's cyclical phase model (2008, 2013) refer to the efforts undertaken prior to learning, during learning and upon completion of learning. Forethought involves efforts undertaken prior to learning. In order to initiate learning, learners engage in task analysis which includes goal-setting and strategic planning, in addition to having a sufficient dose of self-motivation. While learning is taking place or the performance phase, learners activate self-control and self-observation which are significant factors in ensuring learning success. In the former, appropriate learning methods and strategies are employed in enabling sustained focus at a given task; whilst the latter refers to self-regulation of learners' learning process. To complete the loop is

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