# The Effect of SPOC Hybrid Model on Deep Learning Effectiveness: A Systematic Literature Review

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*The hybrid model of SPOC (Small Private Online Course) may have an impact on the effectiveness of deep learning. Nevertheless, few studies have validated the relationship between SPOC and deep learning effectiveness. This systematic review focuses on exploring the impact of the blended model of SPOC on deep learning effectiveness. The article delves into the three major SPOC categories in deep learning and the effects of deep learning in SPOC mode. In addition, the article explores various factors that influence the effectiveness of SPOC on deep learning. To accomplish this, an exhaustive review of the relevant literature was conducted to reveal potential connections and interactions between the SPOC blended model and deep learning effectiveness. This study provides educators and researchers with insights on how to more effectively combine SPOC and deep learning to optimize teaching and learning experiences.*

*Keyword: education, deep learning, SPOC model, MOOC teaching, effectiveness, impact*

## INTRODUCTION

Deep learning originated in psychology (Perrotta & Selwyn, 2020). Marton et al. first introduced the concept of deep learning in 1976 in the article Qualitative Differences in Learning: I-Outcome and Process. In the late 1970s, the concept of deep learning was formally established and introduced into the field of education (Gasparett et al. the field of education (Gasparett et al., 2018). With the rise of artificial intelligence, deep learning became an essential model for machine learning (Aggarwal et al., 2022). As a result, the field of education is paying more and more attention to the study of deep learning (Khan & Yairi, 2018).

In 2005, the Association for Educational Communications Technology (AEC&T) redefined "educational technology." "Educational technology is the study of facilitating learning performance by creating, using, and managing appropriate technology and learning resources." The "learning" in this definition is deep learning, where "students relate existing ideas to prior knowledge and reflect on their original understanding." Shallow learning is "memorizing facts, processing material as unrelated pieces of