


Chapter 2

Innovative Approaches to Revolutionize Student-Centered Learning in the 21st Century

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ABSTRACT

Student-Centered Learning (SCL) fosters autonomy, critical thinking, and engagement through active learning. This chapter explores innovative pedagogies like competency-based education, experiential learning, collaborative learning, and gamification, alongside emerging technologies such as artificial intelligence, virtual and augmented reality, and adaptive learning platforms. While these enhance learning experiences, challenges like teacher readiness, digital infrastructure gaps, and assessment limitations remain. Institutional support is crucial for sustaining SCL through resources and professional development. Shifting to competency-based and formative assessments, supported by data analytics, ensures personalized learning. Integrating SCL with technology creates inclusive, flexible learning environments that prepare students for 21st-century challenges.

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INTRODUCTION

Meeting diverse students' needs and supporting their academic success is not easy. Educators must endure paradigm shifts and innovation to deliver effective instruction and develop critical thinking, problem-solving, and collaborative skills among students (Salendab, 2023; Salendab & Dapitan, 2021). Nowadays, conventional teaching approaches, manifested by lectures, are frequently replaced by student-centered learning (SCL) to assist students in achieving better academic performance. SCL is a teaching approach that provides opportunities for students to actively participate in various classroom activities conducted by the teacher and learn effectively using digital tools (Hardiyanti et al., 2023; Khoury, 2022)

Teachers must revolutionize students' learning experiences using competency-based education, gamification, and experiential learning to raise their academic performance (Duterte, 2024; Mula-Falcon et al., 2022). Teachers can also incorporate artificial intelligence, virtual and augmented reality, and adaptive learning platforms to stimulate and captivate students' interest, making learning more interesting and enjoyable (Brightwood et al., 2024; Khaldi et al., 2023; Bajaj, 2024; Zulkhaeriyah et al., 2024). These resources can provide real-time feedback for classroom-based assessments.

However, incorporating SCL posed significant challenges for students and teachers (Borhan et al., 2020; Chaudhary, 2024). Some of these challenges compromise the effective use of SCL, such as using alternative assessment tools, teacher readiness, and access to digital infrastructure (Chang-Tik, 2022; Borhan et al., 2020; Chaudray, 2024) Teacher-made tests are inadequate in capturing the necessary competencies that the SCL offers. Innovative assessment models can provide a comprehensive assessment system like formative, project-based evaluation, and self and peer assessment (Nazim et al., 2024; Ma et al., 2023; Malik et al., 2024).

Looking into best practices, new trends, and the role of institutional support in creating a sustainable learning environment are crucial as the educational system works to implement student-centered learning. This chapter examines the principles, benefits, and challenges of implementing a student-centered learning approach. It also discusses how innovative pedagogies, technological integration, and efficient assessment frameworks facilitate the SCL's effectiveness. This chapter offers insightful information for educators, policymakers, and researchers looking to improve students' academic performance and engagement in the digital era by looking at the practical implementations of such innovative pedagogies.

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