

Artificial Intelligence in Formative Assessments

Dr. Gertner Moryossef I. (PhD)

Hadassah Academic College, School of Management, Israel

Abstract:

Artificial intelligence (AI) and other technological tools play a significant role in online education and e-assessments for both theoretical and scientific courses. This study investigates the potential of these tools to enhance learning skills (LS) and the student learning experience (SLE) through the use of Intelligent Tutoring Systems (ITS), Automated Grading Tools, Chatbots, Virtual Assistants, and other innovations.

The research involved students enrolled in two distinct courses: 78 students in a Marketing Fundamentals course and 80 students in a Biotechnology course. Throughout their studies, students utilized AI tools for continuous formative assessment, personalized learning design, skill enhancement, and knowledge application.

Surveys were distributed to examine the relationship between the use of AI in various course types and students' learning achievements and satisfaction. A significant positive correlation was identified between SLE—particularly in terms of material comprehension—and the use of AI tools in formative assessments in both scientific and theoretical courses.

The findings suggest that the integration of artificial intelligence can enhance the student experience and improve perceived performance, usefulness, and understanding of the material. Furthermore, students who employed AI tools during assessments achieved higher grades in summative evaluations. This study underscores the potential of AI tools for learners and educational professionals to enrich teaching and learning experiences.

Keywords:

artificial Intelligence, formative assessment, student learning experience, scientific skills.