Redesigning Assessment with Generative AI:

Game-Based Learning Assessment: Making Learning Engaging and Authentic

CASE SCENARIO 1:

Students of a business course are divided into teams to represent a start-up company in a virtual market. The goal is to maximize the company's market share and profitability within a specified period.

The game-based learning platform presents a dynamic, evolving market with changing consumer preferences, economic fluctuations, and competing firms as teams make strategic decisions such as pricing, marketing, and human resource management.

Students in the team are also assigned specific roles such as CEO, Marketing Head, or HR Manager. They must collaborate effectively and adapt their strategies based on the market feedback. The teacher serves as a consultant, providing insight and feedback, but not interfering in decision-making processes.

After the simulation ends, students must write a reflective report analysing their team's performance, and how they would approach the game differently based on their experience.

CASE SCENARIO 2:

In a health science course, a game-based learning platform presents students with virtual patients exhibiting various symptoms. Playing the role of doctors, students must diagnose the patients' conditions based on their symptoms and medical history, as each case is designed to simulate real-world clinical challenges, requiring the application of medical knowledge, critical thinking, and decision-making under pressure.

The game also incorporates interpersonal skills by prompting virtual interactions with patients and their families, where students must demonstrate empathy, clear communication, and ethical decision-making.

After each case, students write a reflective report discussing their diagnostic and treatment process, any mistakes or oversights they made, and how they handled the interpersonal aspects of patient care.

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Assessment Resources
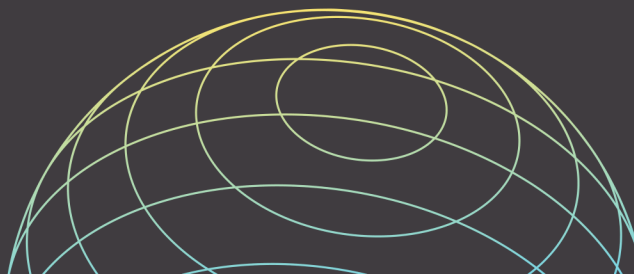
INTRODUCTION

This assessment strategy involves the use of educational games designed to gauge the knowledge, skills, and competencies of students. The games are structured to simulate real-world challenges, and students must navigate these scenarios using their knowledge, creativity, and problem-solving skills as they make strategic decisions and solve different problems, all of which can be tailored to align with the course's learning objectives.

RATIONALE

Traditional written assessments may not fully capture a student's ability to apply theoretical knowledge in real-world contexts. With game-based learning, assessments become dynamic and immersive, allowing for the evaluation of practical application skills in a controlled environment.

HOW DOES IT WORK?

Teachers design or select educational games that align with the learning objectives of the course. These games should challenge students to apply their knowledge and skills. Students' performance in the game and their decision-making processes are used as an indicator of their understanding and competency.

Assessment criteria can include:

- Understanding of Concepts: Demonstration of a thorough understanding of the concepts presented in the game.
- Decision-Making: Making of sound decisions that positively impact game performance, demonstrating critical thinking and problem-solving skills.
- Collaboration: In team-based games, students work effectively with teammates, contributing meaningfully to team strategy and decision-making.
- Communication Skills: Effective communication of strategies, decisions, and reflections, both verbally and in writing.
- Reflection: Demonstration of thoughtful and insightful understanding of game performance; able to identify strengths and weaknesses, and discuss lessons learned.

BENEFITS & CHALLENGES

Benefits

- Engages students and promotes active learning
- Provides immediate feedback to students
- Facilitates experiential learning and application of knowledge
- Can be adapted to suit various learning objectives and disciplines

Challenges

- Requires resources and expertise to design or select suitable games
- Risk of students focusing on winning the game rather than learning
- May not be suitable for all learning objectives or topics
- Technology and accessibility issues