

KT Masters in Agricultural Innovation Support (MAIS) Project Summary 2025

1. Project Title

Generative AI – Rethinking Design of Assessments to Support UDL Approaches for Vocational Educators

2. Project Background

This project builds on previous Teagasc MAIS studies, such as those exploring online assessment implementation, learner engagement strategies, and accessibility in agricultural education. By integrating Artificial Intelligence (AI) into assessment design, this research extends previous findings and aligns with the digital education priorities outlined in Teagasc’s strategic ambitions.

This project explores how Generative AI can facilitate the development of assessment that align with Universal Design for Learning (UDL) principles, providing means of engagement, representation, and expression. AI-generated assessment can support vocational educators by automating content creation, generating individualised learning paths, and offering real-time feedback tailored to each learner’s needs. Additionally, policy guidelines such as the National Academic Integrity Network (NAIN) have underscored the importance of ethically integrating AI tools in education while ensuring academic integrity.

Given the rapid advancements in AI and its increasing presence in educational technologies, there is a need to examine how AI-driven assessments can enhance accessibility, engagement, and learning outcomes in vocational education. This project will address key gaps in assessment design, ensuring alignment with pedagogical frameworks and QQI statutory guidelines. This project aligns with Teagasc’s Education Strategy strategic ambitions to provide high quality education and training opportunities and accessible and inclusive opportunities for learners.

3. Project Aims and Objectives

Aim:

To reconceptualise assessment design through Generative AI to support Universal Design for Learning (UDL) in vocational education.

Objectives:

1. Evaluate existing AI assessment tools to determine their suitability for vocational education
2. Develop a framework for adapting AI-driven assessments to align with UDL principles
3. Pilot AI-driven assessments in a selected vocational course, measuring accessibility and learner engagement
4. Produce guidelines and training resources for vocational educators.

4. Suggestions for Methodology

The project will comprise of a mixed methods approach, incorporating both qualitative and quantitative research. This will involve:

1. Literature Review: Examine AI in UDL-aligned assessment practice
2. Needs Analysis: Conduct interviews/focus groups with vocational educators and learners
3. AI Tool Adaptation: Identify and modify existing AI-driven assessment tools
4. Pilot Testing: Implement AI assessments in one selected vocational course
5. Evaluation: Gather feedback through educator and learner reflections.