TEACHING AND LEARNING CASE STUDY	
Name of Institution/ Organisation	University College Dublin
Who led the initiative?	Project Co-leads: Orla Daly – TEL Manager, School of Nursing, Midwifery and Health Systems & Liam Fogarty TEL Manager, College of Social Sciences and Law .
Date and timeframe of the initiative	April 2023 – December 2024
What was the reach of the initiative?	Project is situated at university level with intended reach to both students and faculty.
Initiative Title	Are You AI Ready? Investigating AI Tools in Higher Education
Aims/ Objectives	**Project Aims:** ● Critical evaluation of the current use of high-profile AI applications (e.g., Grammarly, Perplexity, ChatGPT) in higher education, utilising the DigComp 2.2: The Digital Competence Framework for Citizens framework (Vuorikari et al., 2022). ● Findings will be used to co-design (in accordance with UDL principles) online 'AI Readiness' resources, which on completion will provide students and faculty with the necessary knowledge to make informed decisions regarding the integration of AI tools in higher education. ● Co-development of AI digital capabilities matrix with best-practice guidelines for contextualisation of the 'AI Readiness' resources across disciplines. **Project Objectives:** ● Co-design a critical evaluation framework to investigate faculty and student AI digital capabilities, from a digital competence perspective of knowledge, skills, and attitudes (Vuorikari et al., 2022). ● Collaboratively investigate AI tools for data collection and analysis, such as using ChatGPT for survey generation and anonymized data analysis. ● Co-design online resources using AI tools. ● Co-develop online resources including interactive learning materials; formative and summative assessments; and additional supporting resources. ● Pilot and implement resources to identify areas for improvement. ● Co-evaluate, revise, and refine based on feedback. ● Co-develop recommendations and disseminate findings
Rationale and Identified Needs	Since November 2022, the rapid adoption of AI tools in higher education has raised concerns about their impact on teaching, learning, and assessment. In response, an interdisciplinary team of faculty, staff, and students from two UCD Colleges launched a SATLE-funded project in April 2023 to address these challenges. The project aims at commencement were to:

	- Critically evaluate the use of high-profile AI tools (e.g., ChatGPT, Copilot) across three schools, guided by DigComp 2.2: The Digital Competence Framework for Citizens (Vuorikari et al., 2022). - Develop co-designed online 'AI Readiness' resources for both faculty and students, informed by evaluation findings. - Create an AI digital capabilities matrix to adapt the 'AI Readiness' resources across different disciplines in the university. 'AI Readiness' is defined by Luckin et al. (2022) as guiding students and faculty from limited awareness of AI to a clear understanding of its capabilities and limitations. Additionally, DigComp 2.2 emphasises developing knowledge, skills, and attitudes for engaging with AI systems, rather than focusing solely on technical expertise. **References:** Luckin, R., Cukurova, M., Kent, C., & Boulay, B. d. (2022). Empowering Educators to Be AI- ready. *Computers and Education Artificial Intelligence*. https://doi.org/10.1016/j.caeai.2022.100076 European Commission: Joint Research Centre, Vuorikari, R., Kluzer, S. and Punie, Y., *DigComp 2.2, The Digital Competence framework for citizens – With new examples of knowledge, skills and attitudes*, Publications Office of the European Union, 2022, https://data.europa.eu/doi/10.2760/115376
Frameworks, Policies, or Strategies Aligned **(internal, local or national)**	DigComp 2.2: The Digital Competence Framework for Citizens (Vuorikari et al., 2022)
Summary	**Are You AI Ready? Investigating AI Tools in Higher Education** The rapid adoption of AI tools in higher education since November 2022 has raised significant concerns about their impact on teaching, learning, and assessment. In response, an interdisciplinary team from two UCD Colleges initiated a SATLE-funded project in April 2023 with three primary objectives: 1. Critically evaluate AI tools (e.g., ChatGPT, Copilot) using DigComp 2.2: The Digital Competence Framework for Citizens (Vuorikari et al., 2022) 2. Develop 'AI Readiness' resources for faculty and students, based on project team evaluation of tools and focus group research 3. Create a GenAI digital capabilities matrix to adapt these resources across different disciplines Project Implementation and Methodology: The team first developed an AI Tool Evaluation Matrix to assess various AI tools. Following this process, the team subsequently narrowed focus to generative AI (GenAI) tools specifically. Between September and October 2023, six focus groups were conducted across three schools to gather faculty and student perspectives on GenAI integration in everyday practice. The data was qualitatively analysed using a three-step thematic networks framework, leading to the creation of two self-guided AI training resources. Findings – Students:

- **Structured AI Education and Training**: Institutions should provide comprehensive AI education to help students and educators understand its capabilities, limitations, and ethical use.
- **Ethical Guidelines for AI Use**: Develop policies to address concerns about plagiarism, unintentional academic misconduct and fairness in academic assessments.

- **Balanced Integration of AI**: Ensure AI complements traditional teaching methods without diminishing the value of human-led education.

Findings – Faculty:

- **Familiarity and Confidence with AI**: Faculty indicated they had limited AI expertise, with low confidence in using AI for teaching, reflecting a need for increased awareness and training.
- **Ethical and Technical Challenges**: Concerns include plagiarism, overinflation of student abilities, and technical challenges due to AI's rapid evolution.
- **Benefits and Opportunities of AI**: AI offers potential to enhance learning, foster innovation, and improve efficiency and engagement in education, though its full potential is not widely understood.

Table 1: DigComp Competence Areas Mapped to Focus Group Findings

DigComp 2.2 Competence Areas	Identifying Misinformation	Avoiding Plagiarism	Evaluating AI Bias	Ethical Usage of AI Tools
Information and Data Literacy	✓	✓	✓	
Communication and Collaboration		✓		✓
Digital Content Creation		✓		
Safety	✓	✓		✓
Problem Solving	✓		✓	

Project Outcomes:

1. Development of a GenAI Capabilities Matrix (full details available 10th International Conference on Higher Education Advances (HEAd'24) - https://doi.org/10.4995/HEAd24.2024.17105

2. Creation of 'AI Readiness' resources:

- Self-directed modules for faculty and students in Brightspace (UCD's learning management system)

- Digital badges and certificate of completion available for completion of activities

- 400 students certified to date

3. Open Educational Resources (OER):

- Available through Pressbooks digital publishing platform

- Accessible in multiple formats

	• Can be freely adapted, repurposed, and republished			
	• Designed for broad impact across a range of disciplines and educational contexts			

Did you collaborate with internal and/or external stakeholders to deliver?	No				
	Team member's name	**School/Unit**	**Faculty**	**Staff**	**Student**
	Orla Daly	Nursing, Midwifery & Health Systems		X	
	Liam Fogarty	Education/ UCD College of Social Sciences and Law		X	
	Dylan McKeever	Education			X
	Tara Redmond	Nursing, Midwifery & Health Systems			X
	Theresa Schilling	School of Social Policy, Social Work and Social Justice			X
	Oskar Buksa	Philosophy and Statistics			X
	Andrew Woods	Education/UCD College of Social Sciences and Law		X	
	Assoc Prof Eileen Furlong	Nursing, Midwifery & Health Systems	X		
	Dr Rachel Farrell	Education	X		
	Dr Ernesto Vasquez Del Aguila	Social Policy, Social Work and Social Justice	X		
	Dr Sarah Morton	Social Policy, Social Work and Social Justice/UCD College of Social Sciences and Law	X		
Organisation and Planning	**WP1: (May 23 - October 23)**				
	• Project team 'Ways of Working' Agreement				
	• Recruitment of Project Admin				
	• Ethics application - Human Subjects Full Ethical Review (Students) Low Risk Ethical Review (Faculty)				
	• Formulate methodology for identifying AI tools for project				
	• Create AI Tool Evaluation Matrix for project team members				
	• Workshop evaluation of tools				
	• Literature review				

	● Data collection and analysis – student focus groups X 3 faculty focus groups X 3
	● Use findings to co-design generative AI (GenAI) capabilities matrix cross-referenced to Digi Comp 2.2 competences framework
	● Legal, technical and GDPR due diligence process to implement online publishing platform (Pressbooks) with LTI integration in university learning management system.
	Work Package 2 (November 23 – February 2024)
	● Content Development Process Map
	● Draft output of content for team review and feedback - Faculty Resource; Student resource
	● Pressbooks publication available as XML, EPUB 3, XHTML, HTMLBook, OpenDocument, and Common Cartridge for inclusion in Brightspace
	Work Package 3 (February 2024 – August 2024)
	● Co-design and implement module evaluation – embedded surveys in both resources
	● Pilot resources in university
	● Publish resources as OER online
	● Ongoing participation in shared learning events; local information sessions in Schools; present to College and School Teaching & Learning Committees
	● Use evaluations to adapt; update and improve as required
	● Conference presentation and paper at 10th International Conference on Higher Education Advances (HEAd'24) - https://doi.org/10.4995/HEAd24.2024.17105
	Work Package 4 (September 2024 – December 2024)
	● Ongoing participation in shared learning events; local information sessions in Schools; present to College, School Teaching & Learning Committees; University Education Committee
	● Create branded merchandise to promote resource for start of AUT Trimester 2024 – focus on raising resource awareness amongst students
	● I-HE2024 Conference faculty workshop 25/10/2024: https://i-he2024.exordo.com/programme/presentation/18
	● Final project report - produce findings and recommendations
What resources did you need?	SATLE Funding €35065

Has it been evaluated? How successful has it been?	See Evaluation Report
	Overall Usage Comparison
	The student guide significantly outperformed the faculty guide in engagement metrics between April 1st and November 11th, 2024. This suggests the student guide effectively meets its audience's needs, while the faculty guide may require optimisation to better serve its users. Both guides experienced traffic spikes coinciding with promotional campaigns and in-class events, providing insights for future engagement strategies.
	Popular Content
	The student guide's most visited page was "The Structure of a Good Prompt," attracting 4,540 total views and 3,920 unique visitors as of November 11, 2024. This high interest in practical, foundational content indicates students value clear, actionable guidance.
	For the faculty guide, usage centred on introductory materials, suggesting many first-time users seeking basic AI knowledge.
	Student Guide Survey Results
	Survey feedback for the student guide was predominantly positive:
	- Most users rated it as "Extremely Useful" or "Very Useful" - The ethical considerations section received "Very Effective" to "Extremely Effective" ratings - Users generally felt "Quite Prepared" to use GenAI tools after consulting the guide - Some respondents indicated a desire for additional examples and more detailed instruction to build full confidence in applying the concepts
Any future plans, including the sustainability of the initiative?	The online digital publishing platform Pressbooks is licenced until 31/12/2025. Both guides are available to UCD students and faculty as perpetual, self-directed modules in Brightspace, with the opportunity to certify continuing professional development through digital badging for completion of 4 individual sections, and a certificate of completion on receipt of all 4 digital badges.
Key Learning Points	**Differentiated Engagement Strategies for Faculty and Students**
	The project team observed a significant difference in engagement between the faculty and student guides. Student engagement was notably higher, suggesting the student guide's content is well-aligned with their needs, particularly in providing practical and foundational information on generative AI (GenAI), such as "The Structure of a Good Prompt". In contrast, faculty engagement was lower, with their interest focused mainly on introductory material. This indicates a need for more targeted faculty-specific initiatives, such as workshops or practical use cases that integrate GenAI into pedagogy, to foster greater faculty engagement.
	Value of Co-Design and Iterative Feedback
	Co-design and iterative feedback were central to the project. User insights gathered through ongoing evaluations, project team input, and embedded surveys were used to refine the GenAI readiness resources. Student feedback indicated the guide was useful but could benefit from more detailed examples and concise instructions in some sections. The iterative, co-design

	approach underscored the importance of continuously incorporating user and project team feedback to better align the resources with user needs.
	Effective Content Types: Foundational and Practical Information
	The analysis indicates that both students and faculty users are more engaged with foundational and practical content. For students, content providing clear, actionable guidance, such as creating effective prompts, earned the most engagement. Faculty were mostly drawn to introductory content, which may reflect a need for scaffolding GenAI learning before advancing to applied use. Enhancing the foundational sections and expanding them into more comprehensive modules, as suggested in the improvement recommendations, appears to be an effective approach for both user groups.
	Digital Competence Framework Alignment for Scalability
	Aligning the initiative with the DigComp 2.2 competences framework was crucial in shaping the project's digital capability aims. This framework ensures the resources address broad GenAI competence, not only by providing technical knowledge in accessible language but also by fostering a critical understanding of the ethical, social, and legal implications of GenAI. This strategic alignment ensures the project's resources are scalable and adaptable across different disciplines, contributing to more consistent GenAI literacy development across the institution.

Teaching and Learning Focus Areas (please tick all that apply)

Categories	Elements	Topics	Target Groups
Commit ☒	Leadership, Strategy & Governance ☐	Digital Transformation ☒	Students ☒
Coordinate ☐	Curriculum and Assessment ☒	Education for Sustainable Development ☐	Staff ☒
Consult ☒	Innovation in Teaching ☒	Academic Integrity ☒	Wider community ☐
Create ☒	Professional Development ☒	Inclusive and Equitable Teaching Practices ☐	Other ☐
Celebrate & Continue ☐	Research and Evaluation ☐	Innovations in Assessment and Feedback ☐	
		Student Engagement and Partnership ☒	

		Collaborative and Interdisciplinary Approaches ☒	
		Artificial Intelligence ☒	
		Other ☐	

Contact Details

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Links	Please add links to any relevant pages/ documents. Please attach any items not in a link format with your submission. Are You AI Ready? Investigating AI Tools in Higher Education – Student Guide Are You AI Ready? Investigating AI Tools in Higher Education – Faculty Guide AI Tool Evaluation Matrix Conference paper Faculty Workshop - Practical Application of GenAI Tools in Higher Education Pressbooks Analytics and Student Survey Data - Evaluation Report