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HEA Teaching and Learning Conference December 2025

Leading Change Together: Building the Future of Teaching and Learning in Higher Education

Inclusive Framework for AI learning at Third level

Institute of Art, Design + Technology Dún Laoghaire

Institution(s) and Partner Organisations Involved

Teaching and Learning Centre at IADT

Contributor(s)

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What level(s) of your institution does this work affect?

- Across multiple units/schools/faculties
- Across multiple institutions

Date and Timeframe

Ongoing

Alignment and Focus

Focus

- Education for Sustainable Development (ESD)
- Digital Transformation in the Tertiary Sector
- Best Practice in Upholding and Cultivating Academic Integrity

Frameworks, Policies, or Strategies Aligned

- Institutional T&L Strategy, ESD 2030, UDL Principles, EU Digital Education Action Plan

Discipline

- Agriculture Forestry, Fisheries and Veterinary
- Arts and Humanities
- Business, Administration and Law
- Education
- Engineering, Manufacturing and Construction
- Generic programmes and qualifications
- Health and Welfare
- Information and Communication Technologies
- Natural Sciences, Mathematics and Statistics
- Services
- Social Sciences, Journalism and Information
- Teaching and Learning

Impact, Lessons Learned and Future Directions

Impact and Evidence of Success

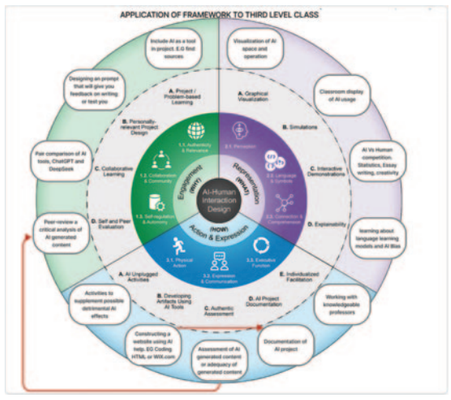
Feedback from 16 third level lecturing and support staff involved in teaching and learning has been very positive. They suggested that the framework be extended to cover different subject domains and disciples (art, film etc). 16 psychology students provided qualitative insights into the value of the framework. One student remarked that *"overall, AI served as a collaborative partner, useful for support in scaffolding a piece of work and for brainstorming and ideation but it is not a substitute for critical thinking or originality. Another student noticed that "while the AI tool fulfilled the task by identifying the key points, it's response lacked depth and detailed analysis. This highlights the limitation of relying solely on AI tools ".*

Future Plans and Sustainability

The effectiveness of applying this framework specifically to higher education contexts remains unexplored empirically. While the examples presented illustrate potential, they also highlight challenges: varying levels of technological proficiency among stakeholders, resource constraints, and potential resistance to pedagogical shifts. This underscores the importance of institutional support, faculty training, and careful alignment between technology integration and curriculum objectives. Future research should empirically validate the framework's practical impact within diverse higher education settings, clarifying the conditions necessary for its successful implementation, thus refining it to maximise its educational effectiveness.

Top Tips

- As third level students continue to diversify in ability, background, and learning preference, the need for flexible, inclusive pedagogical approaches is clear. Universal Design for Learning offers a proactive, environment-focused framework for addressing learner variability, while Artificial Intelligence emerges as a powerful enabler of personalised, education. AI technologies can systematically operationalise UDL principles.
- A particular strength of this Pathfinder inclusive framework for AI learning at third level lies in its structured yet flexible approach, enabling concrete, practical applications across multiple dimensions of instruction, representation, and student engagement.
- This Pathfinder AI inclusive framework encourages educators to thoughtfully integrate AI technology with pedagogical practice, addressing diverse learner.



Initiative Description

Aims and Objectives

- This research study aims to co-design a novel framework for inclusive AI learning design for neuro diverse students.
- The frameworks aims to guide lecturers in the design of inclusive AI instruction strategies (Gibellini et al., 2023).
- This framework will showcase examples of the application of AI in third level education for neuro diverse learners. In its practical application in third level institutions, it is important to contextualise the use of AI principles in specific domains.
- Lastly, the framework's objectives are to maximise it's practicality by providing sample pedagogies and illustrative examples.

Outline or Description

Song et al. (2024) built a framework for AI learning using the Universal Design Framework guidelines for K-12 level in the USA. Universal Design for Learning is a pedagogical framework that attempts to make learning inclusive for students. The CAST (2018) UDL framework is centered on targeting three key brain networks; the recognition, affective and strategic networks, the What, Why and How of learning respectively. The UDL framework in theory is widely applicable due to its nature, but its basis in K-12 research leaves its potential use outside that environment warranting further research By

combining research from all various studies and personal experience working in collaboration with 4th year psychology students, this Pathfinder case study created a third-level inclusive framework for AI integration in the classroom. Collaborating with 16 academics and 14 psychology students, the co-designed inclusive framework for AI learning, is an extension of the original from Song et al. (2024). It is a proof-of-concept framework under testing to see if it is compatible with third-level educational settings. Some tasks on the outer circle like Assessment of AI-generated content and Review of Said analysis and including AI tools in projects come from personal experience in a classroom. We, as lecturers encouraged our students to use and learn about AI through tasks assigned. Other tasks like identifying problems that AI could assist with learning about models and AI bias and AI human competition are inspired by other research discussed in this case study.

This Pathfinder inclusive framework demonstrates that engagement would be fostered through students embarking on personally relevant projects, choosing topics that resonate with their own experiences and selecting their preferred format of submission (e.g., chatbot dialogue, infographic, or video essay). AI-supported projects or problem-based learning tasks could encourage students to collaboratively analyse phenomena using large-scale datasets processed through AI analytics platforms. In addition, peer and self-evaluation could be enhanced through AI-assisted tools: for instance, feeding a rubric into an AI model to receive constructive feedback, or using AI to rephrase peer reviews with more empathetic, actionable language.

In terms of representation, lecturers could deploy AI-powered tools to present abstract concepts in more engaging, accessible formats. Core content could be transformed into animated visualisations, thereby enhancing clarity for visual learners. AI-powered simulations might allow students to interact with virtual behavioural experiments, manipulating variables and observing outcomes in real-time. AI powered interactive demonstrations could enable learners to explore real-world case studies. To support deeper comprehension, students could access an AI capable of providing layered, personalised explanations and just-in-time assistance when grappling with complex material (Kohnke & Zaugg, 2025).

When it comes to action and expression (the "how" of learning), students could showcase their knowledge using a range of modalities tailored to individual strengths and needs. For instance, those with dyslexia or dysgraphia may lean on tools like Grammarly, ChatGPT or Otter.ai to scaffold their writing and streamline the drafting process. Other students might opt to create artefacts with AI support.

To ensure equity and encourage responsible innovation, authentic assessments could allow students to submit classic deliverables i.e. essays, reports, or case studies, while integrating AI in a clearly documented manner. One marking criterion could assess the transparency and quality of AI engagement, prompting students to critically reflect on how AI contributed to their thinking and output. A student might, for example, use AI to structure their essay outline, summarise readings, or review arguments for clarity, always retaining final editorial control.

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