

GenAI responsive assessment of Undergraduate Research

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SURE



Science Undergraduate Research Experience



Póstaer san
Oireachtas



GenAI is amazing...



These diseases were thought to be incurable. Now AI is unlocking new treatments

10 March 2026

Laurie Clarke

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The Guardian website header includes navigation links for News, Opinion, Sport, Culture, and Lifestyle, along with a menu icon and a location indicator 'Eur'. Below the header, a secondary navigation bar lists categories: World, UK, Climate crisis, Ukraine, Environment, Science, Global development, Football, Tech, Business, and Obituaries. The main content area features a news article with the sub-headline 'AI (artificial intelligence)' and the main headline 'AI outperforms doctors in Harvard trial of emergency triage diagnoses'. A sub-headline reads: 'Researchers say results mark a 'profound change in technology that will reshape medicine''. To the right of the article is a Patagonia advertisement featuring a person in outdoor gear.



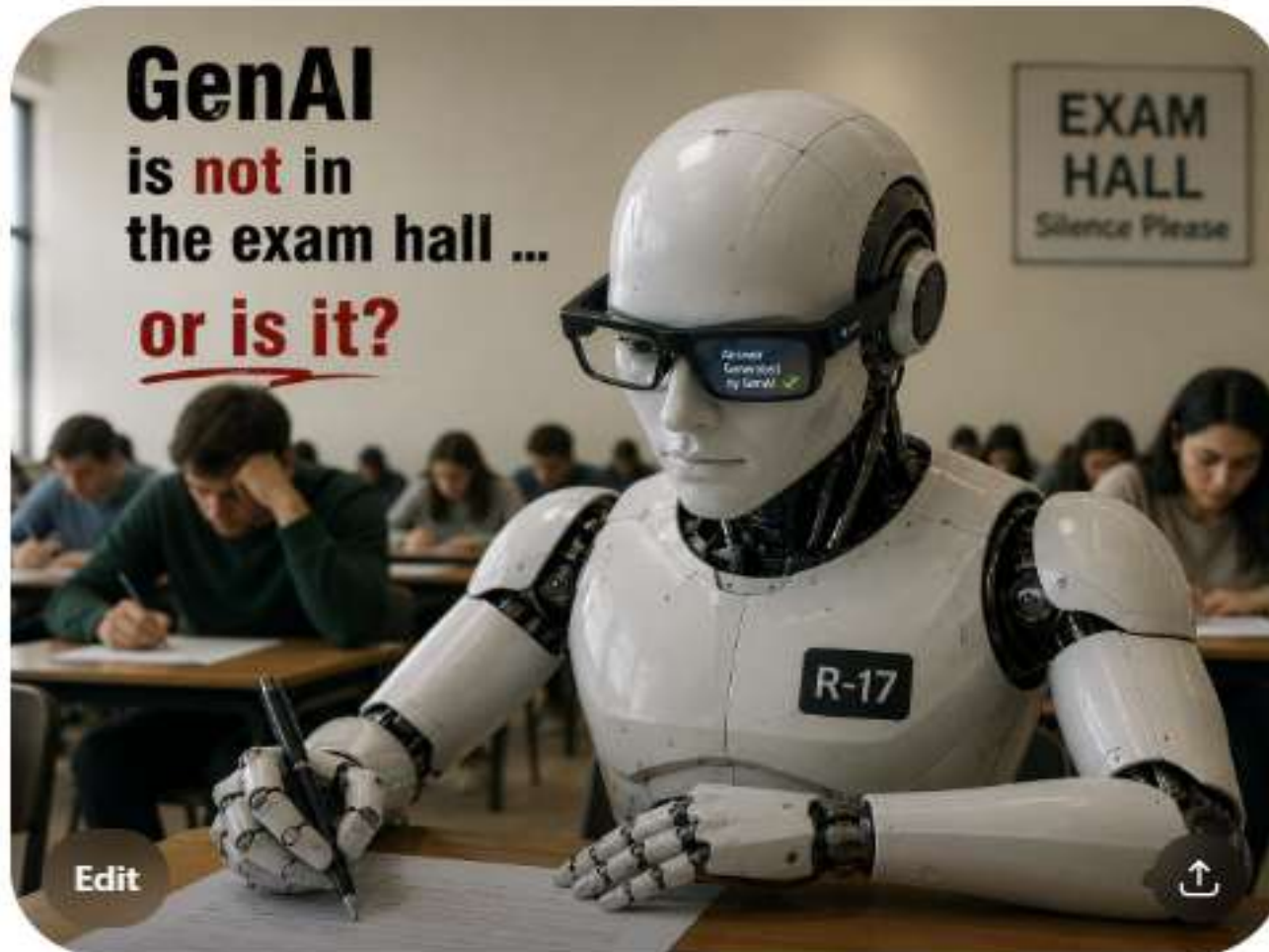
GenAI is problematic...in educational contexts

- **Cognitive off loading**
- **Cognitive surrender**
- Irresponsible and unaware GenAI use **replaces rather than enhance learning**
- Students reiterate bias
- Students have no understanding of what anything actually means
- Lose ability to **synthesis information, make decisions, create, think critically, problem solve**
- Students don't have the inherent knowledge to recognise fact from fiction
- **Nobody knows what is true anymore**

But the most important reason you shouldn't outsource your learning to GenAI is



Make an image of a robot in an exam hall wearing smart glasses that says GenAI is not in the exam hall ... or is it?



Who is going to hire our graduates? And why?

Politics

AI boom threatens to cause 'significant upheaval' for Irish tech jobs

Micheál Martin's comments come as Meta cuts 10% of global staff, about 8,000 workers

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Markets Economy Analysis

AI adoption among Irish firms likely to lead to job losses - ESRI

Updated / Thursday, 9 Apr 2026 17:49



The joint report from the ESRI and Depa to the



By Brian O'Donovan
Work & Technology Correspondent

A study from the Economic and Social Research Institute (ESRI) has found that artificial intelligence (AI) adoption among Irish firms is likely to lead to job losses, concentrated among highly educated workers.

This reflects the strong exposure of high-skilled occupations to AI technologies.

According to the research, around 7% of current jobs could be displaced in the short-to-medium term.

Search

FORTUNE

Home Latest Fortune 500 Finance Tech Leadership Lifestyle Ranking

AI JOBS

Entry-level tech and finance workers in Ireland are losing their jobs thanks to AI. Could that be a warning sign for the U.S.?

By Jacqueline Munis
News Fellow

February 18, 2025, 4:29 PM ET



Undergraduate Research Fosters Key graduate attributes

- **Problem solving** – real world application of learning to solve current day challenges
- **Fact checking** – evidence based research, annotated bibliographies, cross referencing
- **Trouble shooting** – experimental design, set-up of novel experiments, controls
- **Data interpretation** (analysis, discussion and conclusion)
- **Critical thinking, information synthesis**
- **Dissemination** – logical display for impact and clarity (poster/presentations/thesis)
- **Learning through collaboration** and one-on-one supervision/mentorship
- **Transgenerational and Peer-to-Peer knowledge transfer!**



Photo credit: Maxwell photography. Minister James Lawless TD speaking with ATU student Conor Cleary

The Future of Metabolic Health: A Needle-Free Alternative for Blood Sugar Monitoring

Conor Cleary

Atlantic Technological University
Supervisor: Martin Bradley

"To highlight the impact of diabetes in Ireland and show how non-invasive blood sugar monitoring can help people understand their diet's effect on their bodies and take preventative action."

[Read more on SURE-J](#)



Póstaer san Oireachtas



Photo credit: Maxwell photography. Dr. Brian McCann ATU project supervisor awarding ATU student with PsO certificate

Assessing Demand and Simulating Feasibility for Commuter Rail in Lagging Regional Areas Case study: Sligo

Holly Briere-Edney

Atlantic Technological University
Supervisor: Dr Brian P. McCann

"Small, evidence-based rail improvements can deliver real solutions to aid economic growth and reduce climate emissions. Policymakers should act on clear public demand and proven technical feasibility instead of waiting for large-scale."

[Read more on SURE-J](#)

Undergraduate Research (100% CA)

ITS NOT RESOURCED
PROPERLY

Process based assessment over time

Typically 10-15 ECTS

No final exam

Individual oral interviews

Individual poster/oral presentations

Case Study –
GenAI responsive
assessment of UR

Third year final year project module

10 ECTS, one semester

Approx 65 students per year

One-year co-ordinator

15-20 supervisors annually

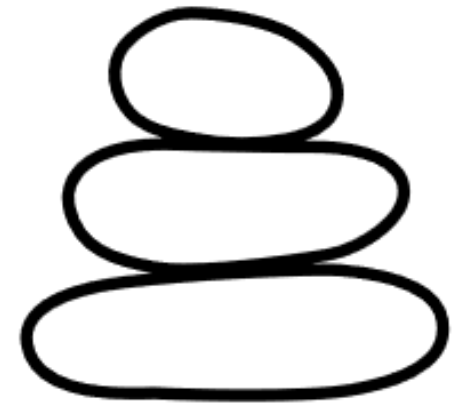
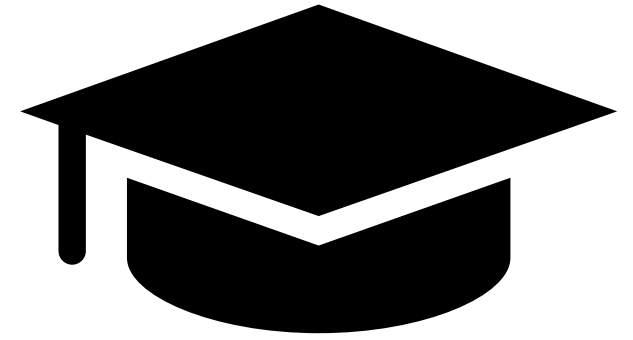
Second reader system implemented

UR as a capstone: Critical Programme Assessment Point

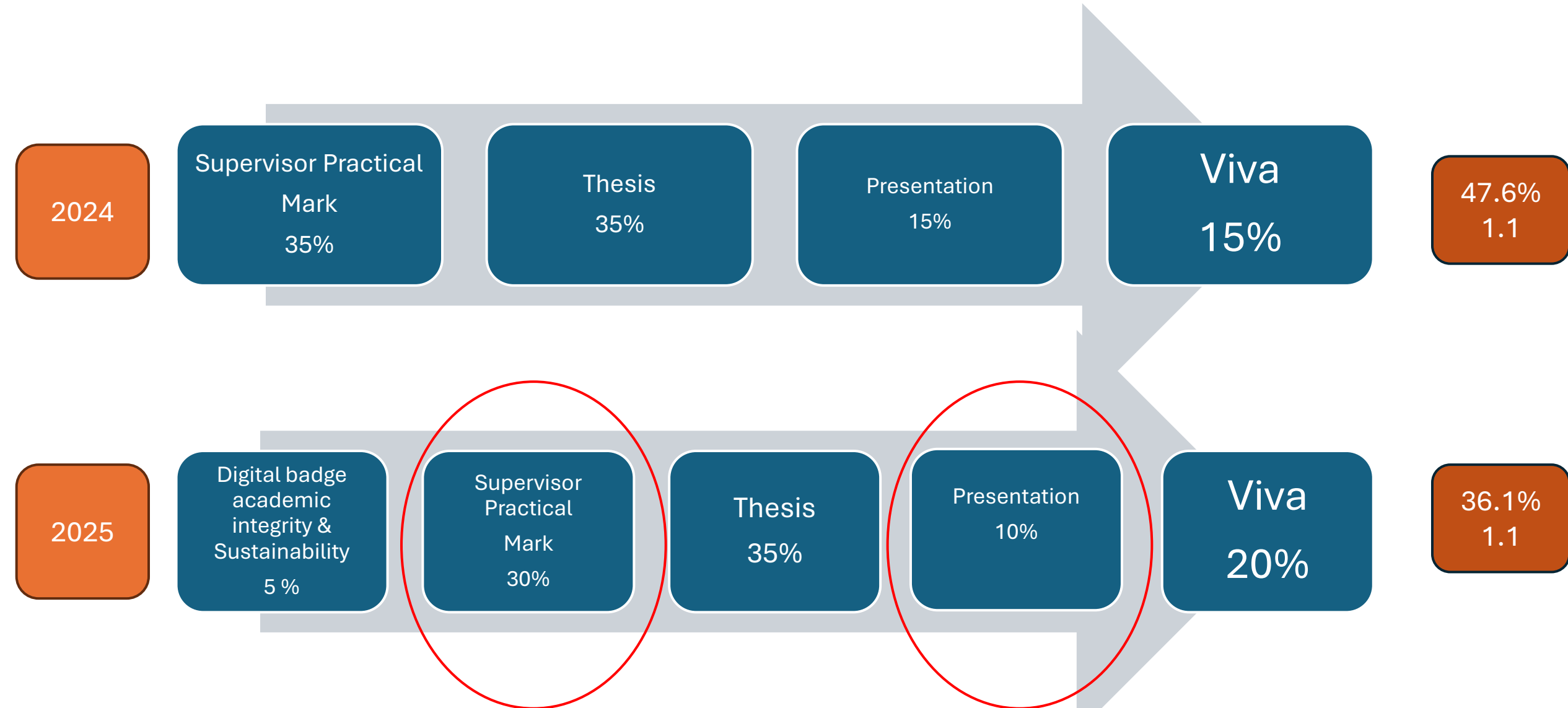
- Cap stone assessment tool for L8 and L7 awards in STEM
- Critical assessment tool: confirmation of Programme learning outcomes,
- Student produces original work, **quantifiable product**
- Rigorous assessment of student competencies and graduate attributes

Changing assessment style necessitated by Gen AI :

- Increased reliance on original research product/output
- Increased reliance on **in person Viva's** – need to standardise & increase transparency
- decreased reliance on thesis introduction and literature review sections
- increased reliance on abstract, results, critical discussion and referencing



Y3 (65 students) – Project module – 10 ECTS 2024 Vs 2025



Viva grade tallies best with student overall GPA (exam halls?)

So what did we do in 2026?



We introduced a mid-way lab based audit (In addition to the end of project viva)



Permitted GenAI use in specific parts of the thesis with clear guidelines



Enforced the completion of online training in ethical & responsible GenAI use

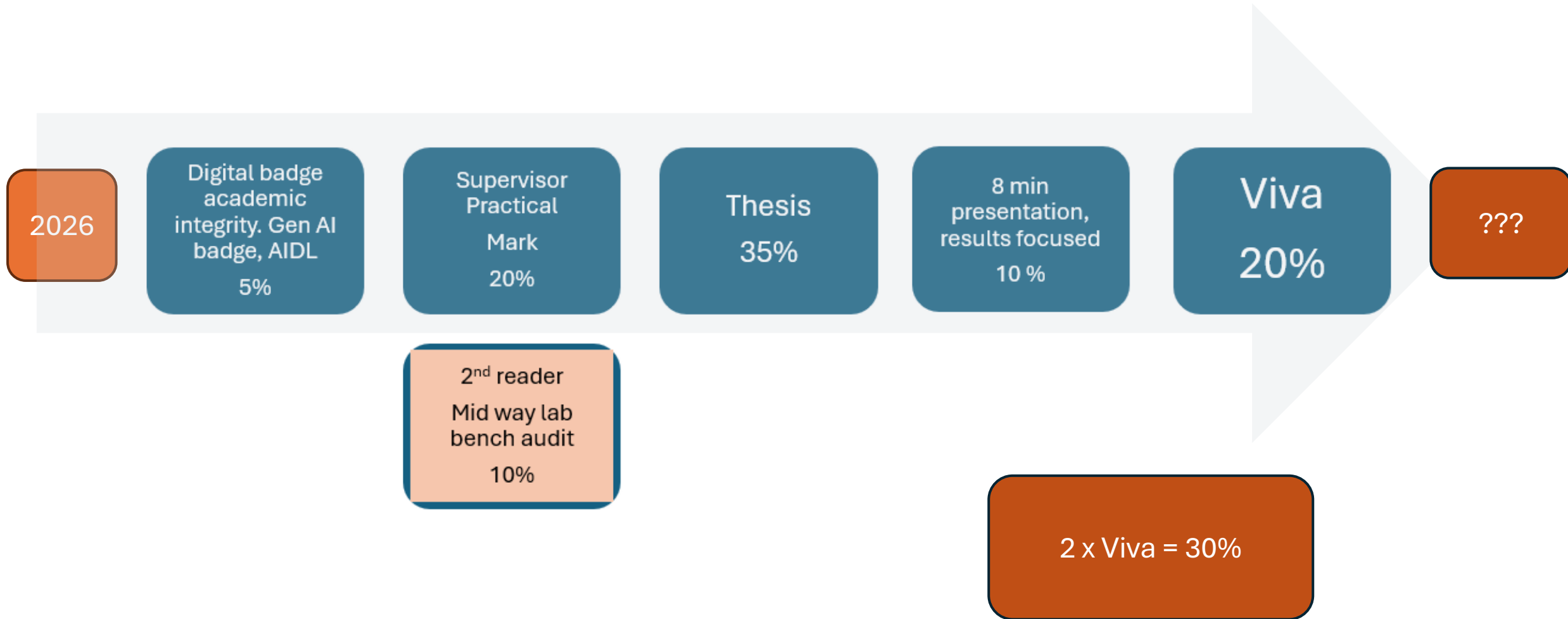


Dedicated training session on GenAI ref (students had to include links to full prompt stories)



Altered thesis weightings .

2026 Assessment breakdown final year project module (10 ECTS)



Managing the Thesis – overview of evolving weightings

(draft submission/feedback + second reader system remain essential)

Thesis components (overall 35%)	2024	2026 (gen AI allowed parts indicated and referenced)	
Presentation/format	5	5	
Aims and Objectives	5	5	
Abstract	0	10	
Introduction	20	10	Ref GenAI use permitted
Materials and Methods	15	10	Ref GenAI use permitted
Results	15	25	
Discussion & conclusions	20	20 (must include citations)	
Referencing	10	10 (include annotated bibliography 6 key ref)	
Readability, clarity, flow and impact	5	5	5

Mid-Way Lab bench audit

10% , Week 5 of term, week 3 of testing

55 students , 14 lecturers

Assigned second readers conduct 10-15 min audit

Students asked to email assigned second reader with availabilities to make appointment in the lab over two week period

No contact, no assessment (responsibility on the student)

Week 3 of 6 lab testing weeks (day 6/12)

Questions centered around **What, why and How?**

Marking rubric on Moodle for grade upload

Grades released to student's week 5

Advantages - Low stakes Viva practice, in term feedback from independent second reader

Lab Bench Audit - Did it work?

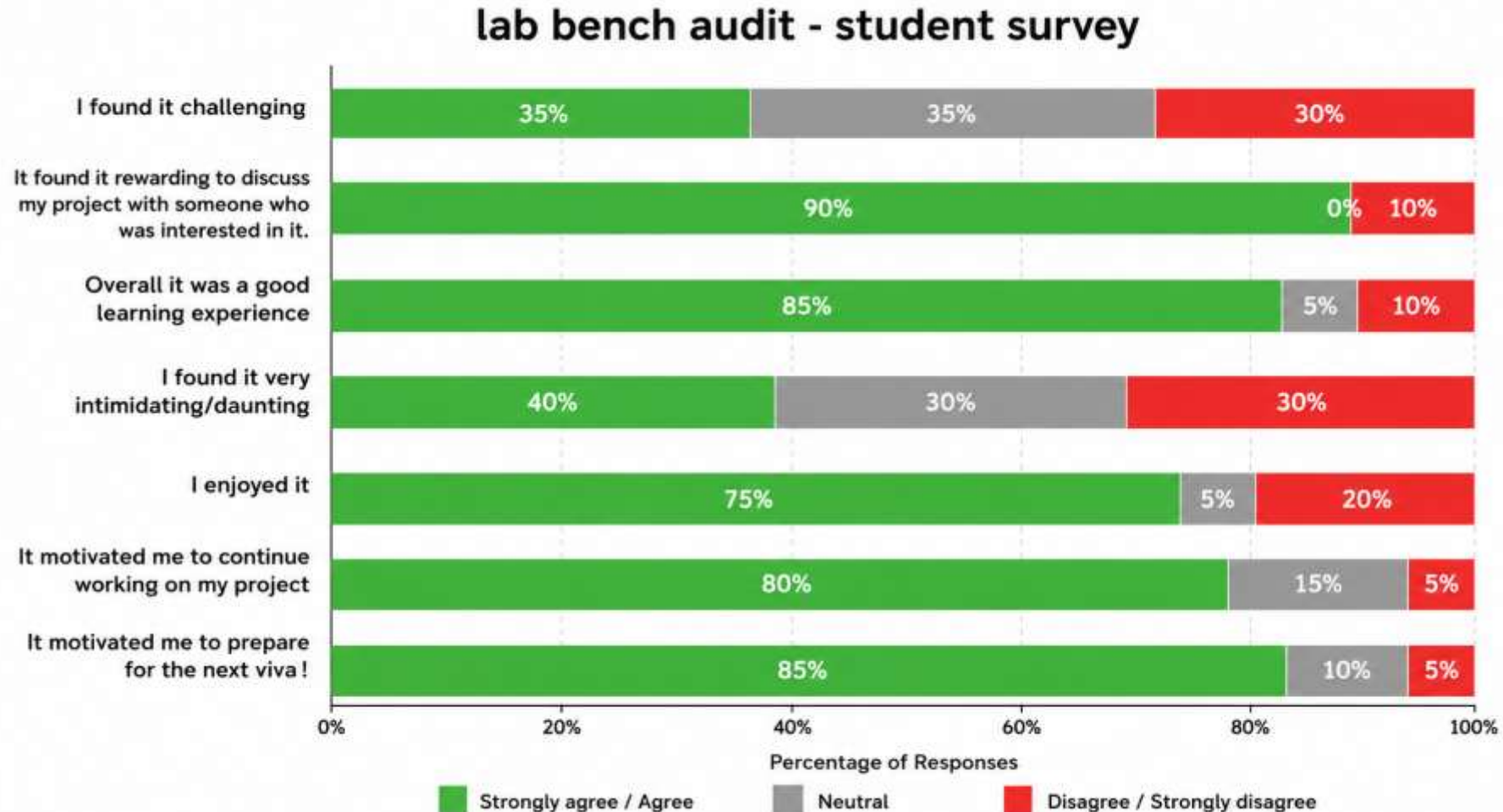
Staff – yes

Good planning –
(academic staff provided 1 hour
training session start of term,
detailed assessment brief outlining
assessment objectives (why), instant
grading rubric (how) and sample
questions (what); staff emailed
reminders

Students – yes (no bail outs, no
complaints...)

Grades – good spread, fair
representation of actual ability

Student feedback: 20/55 students responded



2027 adaptations under consideration

- Increase the GenAI training at the beginning of the year
- “A workshop on how to use GenAI tools in addition to learning about how inaccurate and bias they might be”
- **Find timetable time for this...**
- Keep grading breakdown the same
- Increase practical testing time
- **Find timetable time to do this**
- Increase lab bench audit to 15% (35% overall viva)
- Put in dedicated lecture on presentation guidelines (**timetable time?**)
- Class presentations (**timetable time?**)

We need graduates who can talk back to the AI!

Building a Research Infused Curriculum



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graph TD; A[Building a Research Infused Curriculum] --> B[Capitalise on research and subject matter expertise of our academic staff]; B --> C[Increased timetable time for undergraduate research]; C --> D[Multipurpose project labs and dedicated resources]; D --> E[Create a postgraduate pipeline];
```

Capitalise on research and subject matter expertise of our academic staff

Increased timetable time for undergraduate research

Multipurpose project labs and dedicated resources

Create a postgraduate pipeline



Póstaeir san Oireachtas

30 undergraduate research students from 14 HEI united under the PsO theme
Research for Change



Póstaeir san Oireachtas 2025

Showcasing excellence in undergraduate research from 14 Higher Education Institutes across the island of Ireland



Photo credit: Maxwell photography. Conor Cleary explaining his research to the Irish Minister for Further and Higher Education, Research, Innovation and Science James Lawless, TD, at PsO 2025



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EVENT DATE:
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