WANBEL RESEARCH SYMPOSIUM 2026

Transforming Learning, Leadership and Wellbeing Across the Pacific

STRAND D **Digital Futures and Human Centred AI Ethics**

Digital futures and human-centred AI ethics

What research tells us about work, teaching, learning and assessment in higher education



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Koiari Park Campus · Pacific Adventist University

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TO BEGIN

“Technology is neither good nor bad; nor is it neutral.”

Melvin Kranzberg (1986), Technology and Culture, 27(3), p. 545

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1.

Digital technology and learning



In PNG, people want digital skills alongside literacy, numeracy and technical training

Training respondents identified as most useful for their work ambitions (up to three priorities each)



Digital skills sit alongside the practical and foundational skills people want for work.

PNG Business Coalition for Women (2024), PNG Labour Market Survey: Earnings, gender and ambitions, p. 69.

Putting a course online is one decision. Designing what students do is another.

PAU AND CURTIN · AUSTRALIA AWARDS PNG HIGHER EDUCATION PARTNERSHIPS

Decision	How it appeared in the PAU and Curtin work
Where will students access the unit?	Canvas was the delivery platform. The workshops began with the learners, outcomes and assessment before moving to the first Canvas page.
What will students do, and how will lecturers guide them?	GRACE guided topic design. Drawing on self-determination theory and attitudinal theory, the aim was to support student autonomy and competence while keeping the lecturer's guidance present in the materials and in remote delivery.
Where did AI contribute?	We worked with technical staff to develop AI projects and agents that helped authors produce consistent session materials within the GRACE framework.

Canvas holds the course. The design decides what students do in it.

PAU and Curtin University workshop materials (2026).

GRACE: one design rhythm for every topic in Canvas

G · GROUND	R · READINESS	A · AUTONOMY	C · COMPETENCY	E · EXPRESS
Each topic opens with meaning: a faith anchor and why it matters.	Students see the path and the value before they begin.	Students engage with the concept on their own terms first.	Structured content, scaffolded challenge and feedback.	Students synthesise and reflect, rather than receive a summary.

↻ **Repeated for each concept in the topic: autonomy before competency, every time**

Relatedness runs through every topic: discussions, lecturer presence in announcements, and students seeing each other.

Same shape, every topic. Students feel the consistency; lecturers feel the clarity.

PAU and Curtin workshop materials (2026).

Students decide whether to engage before they open the unit

The question students ask	What the research says	Where GRACE answers it
Can I do this?	Students engage when they believe success is possible (self-efficacy; Bandura).	Readiness shows the path; Competency scaffolds the challenge.
Is it worth it?	Students engage when they expect to succeed and see the value (expectancy-value; Eccles & Wigfield).	Ground and Readiness give a reason to begin.
Is this what we do here?	Students act in line with the norms the environment sets (social norms; Ajzen).	Relatedness: lecturer presence and peers visible.
Is this familiar enough?	Consistent routines lower the effort of engaging (habit; Neal).	The same shape in every topic.

When those conditions are met, engagement feels like autonomy, competence and relatedness (self-determination theory; Ryan & Deci, 2000). When all three are present, students engage from the inside; when one is missing, engagement becomes a performance. Educator support for autonomy goes with stronger motivation (Bureau et al., 2022), and teaching presence online with how much students perceive they learn (Caskurlu et al., 2020).

Attitudinal framework: Sims (2026), drawing on Bandura (1997), Eccles & Wigfield (2002), Ajzen (1991) and Neal et al. (2006). Ryan & Deci (2000); Bureau et al. (2022); Caskurlu et al. (2020).

People made online learning work

A PNG UNIVERSITY

Facilitators uploaded materials and printed them for students who couldn't get online. For some, the obstacle was having no email account to log in.

Sharma (2021), Commonwealth of Learning.

A SOLOMON ISLANDS UNIVERSITY

75.6%

of 357 students learned the platform from classmates. Only 2.5% had formal training.

Fafoekona et al. (2025), PIURN abstract.

ACROSS 26 STUDIES

r = .56

Feeling connected online went with satisfaction, and with perceived learning (r = .51).

Richardson et al. (2017), Computers in Human Behavior.

The platform held the course. Lecturers, classmates and connection made it work.

What changed when learning and assessment moved online

REPLACING CLASS TIME

Little change

Replacing 30% to 79% of class time with online learning made little average difference to attainment, across 21 comparisons.

Müller & Mildenberger (2021), Educational Research Review.

INTERACTIVE VIDEOS

Liked, rarely used

Students liked interactive videos, but few used the features and quiz scores barely differed.

Jacob & Centofanti (2024), J. Computing in Higher Education.

TYPED OR HANDWRITTEN EXAMS

Comparable

Writing scores were broadly comparable whether students typed or handwrote their answers.

Cambridge University Press & Assessment (2024).

The mode mattered less than what students actually did, and the conditions they did it under.

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2.

Generative AI and learning



AI is now built into the tools universities already use

CANVAS

Instructure partnered with OpenAI in 2025. IgniteAI features are built into Canvas, and lecturers can create AI-based assignments.

Instructure (2025)

MOODLE

Since version 4.5, Moodle can generate text and images and summarise course content. Placements are off until a site turns them on.

MoodleDocs, AI subsystem

MEETINGS & RECORDINGS

Zoom includes AI meeting summaries, transcription and smart recording with paid plans.

Zoom (2025)

INTERACTIVE CONTENT

General AI tools now build interactive web activities, such as quizzes, simulations and worked examples, from a plain-language request, ready to place in a course page.

Students and lecturers will meet AI inside the platforms they already use, often before anyone has designed how it should be used.

PNG students already use AI and want clearer guidance

72%

used AI at least weekly

42% daily, a further 30% weekly

74%

wanted clearer guidance

and communication from their university about AI use

77 undergraduate and postgraduate students in one school at a PNG university. They used AI to find information, summarise readings and develop ideas.

John & Bizhan (2026), Devpolicy Blog, preliminary survey.

At work, AI helped on some tasks and misled people on others

PROFESSIONAL WRITING

40% less time

453 professionals with ChatGPT finished writing tasks in 40% less time, with 18% higher quality. Lower performers gained most.

Noy & Zhang (2023), Science.

CONSULTING TASKS

−19 points

758 consultants with GPT-4 did more tasks, faster and better. On a task outside AI's strengths, they were 19 percentage points less likely to be right.

Dell'Acqua et al. (2026), Organization Science.

Graduates need enough expertise in their field to know when the AI is wrong.

FROM WORK TO LEARNING

“Experts often assume that the same tools they use to perform tasks efficiently will be equally useful for novices.”

Jared Cooney Horvath (2025), The Digital Delusion

A tool that helps an expert work faster is not automatically a tool that helps a student learn.

SECONDARY STUDENTS · TWO EXPERIMENTS

When AI did the work, learning was lost later

MATHEMATICS

+48%, then −17%

Unrestricted AI lifted practice scores by 48%. Once it was removed, students scored 17% lower than those who never had it. A hint-only tutor designed with teachers largely avoided the loss.

Bastani et al. (2025), PNAS.

READING

Less retained

Three days later, students who studied with AI alone retained less than those who used notes, or notes with AI. Yet they preferred the AI.

Kreijkes et al. (2026), Computers & Education.

What students could do with help, and what they could do later, were different things.

UNIVERSITY STUDENTS · TWO STUDIES

When educators designed the AI, it supported learning

PHYSICS TUTOR

4.5 vs 3.5

A tutor built by the course's instructors more than doubled learning gains over an active-learning class, in less time (49 vs 60 minutes).

Kestin et al. (2025), Scientific Reports.

WRITING FEEDBACK

As good as a tutor

Over six weeks, GPT-4 feedback supported 48 students' writing as well as a human tutor's. The authors recommend blending both.

Escalante, Pack & Barrett (2023), IJETHE.

Unlike a generic chatbot, these tools were built around the course's own teaching.

Pre-service teachers needed subject knowledge and judgement to use AI well

SPOTTING AI ERRORS

Pre-service maths teachers recognised weak, teacher-centred teaching in ChatGPT's lesson, but sometimes accepted a wrong mathematical solution as another method.

Gurl, Markinson & Artzt (2025).

JUDGING AI FEEDBACK · OUR STUDY

20 of 27

kept, adapted or rejected the Lesson Planning Coach's advice. Planning confidence rose more than the comparison group (d = 0.86).

Sims, Vernholz & Treagust (2026).

Catching the error needed subject knowledge. Deciding what to keep was part of learning the profession.

AI models answered questions about PNG events less accurately in Tok Pisin than in English

10 of 16

country comparisons showed an average accuracy difference below 3%

- Models answered factual questions about regional events in English, then in translation.
- Tok Pisin and Amharic showed the two largest drops.

For a lecturer preparing material about a PNG event, the language of the question changed how reliably the models answered.

Almeida et al. (2025), TiEBe, Table 1 and Figure 5.

ASSESSMENT

What a mark can no longer tell us on its own

A PNG UNIVERSITY

1.97 → 2.46

Average GPA rose over three years as students reported using AI to develop ideas and complete assessments. The records cannot say what caused the rise.

Bogalin et al. (2025), IBSU Journal of Business and Research.

A UK UNIVERSITY

94%

of AI-written take-home exam answers went undetected, and on average they scored higher than real students' answers.

Scarfe et al. (2024), PLOS ONE.

A strong submission and an independent demonstration support different claims about a graduate.

Where the evidence stands

DIGITAL TECHNOLOGY

- Decades of research, including meta-analyses.
- Moving online made little average difference to results.
- People, connection and design consistently mattered more than the platform.
- Pacific studies show lecturers and classmates making access work.

GENERATIVE AI

- A few years of research, since late 2022.
- Mostly short-term studies, and mostly outside the Pacific.
- Gains when tools were designed for learning; losses when AI did the work.
- The tools change faster than the studies are published.

Students are already using AI. The research, especially in PNG and the Pacific, is still catching up.

What made the difference in the research

Digital learning	People, connection and the design of what students did mattered more than the platform.
AI at work	AI raised speed and quality on tasks it handles well, and misled people on tasks it does not.
AI in learning	Designed tutoring and feedback supported learning. Unrestricted help and AI alone weakened what students could do later.
Assessment	A strong submission and an independent demonstration support different claims about a graduate.

“Technology is neither good nor bad; nor is it neutral.” Kranzberg (1986)



The panel

Where do these findings fit your experience, where does the picture differ, and what would be worth investigating together?