



Meeting of the International Society for the Learning Sciences, 2022:
Engaging Learning Scientists in Policy Challenges: AI and the Future of Learning

Intro...

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Personalised feedback at scale: (reflective) academic writing

Automated
feedback on
academic writing
available 24/7 to all
students via
AcaWriter

Reflective Report Feedback Resources

- ✓ ■ Initial thoughts and feelings about a significant experience.
- ✓ ● The challenge of new surprising or unfamiliar ideas, problems or learning experiences.
- ✓ **Deeper reflection, personally applied.**
- ✓ ► How new knowledge can lead to a change
- ✓ Expressions indicating belief, learning, or knowledge.
- ✓ *Expressions indicating self critique*
- ✓ *Words associated with strong feelings*
- ✓ ⚡ Sentence too long, might disengage the reader. Try breaking it into smaller sentences

outcomes for the patient. ► **Thus, this experience taught me that in future, *I must* take a patient-centred approach. ■●► *I must* spend time addressing the patients concerns and demonstrate excellent communication with them so they can fully understand their clinical picture and history.** This relates to Domain 2: Communication and Collaboration, Standard 4: Apply Interpersonal Communication Skills to Address Problems, which is a standard in the National Competency Standards Framework for Pharmacists in Australia (2016). The incident has taught me to use a whole range of communication techniques when counselling a patient. It gave me the opportunity to practice this sort of behaviour in my subsequent weeks of clinical placement. ● **It has strongly encouraged me to shift my perspective to one that focuses more on patient-centred care.** ■ I personally think that this is crucial in ensuring that a patient's health objectives are met. This standard I have obtained is important for any practising pharmacist.

Personalised feedback at scale: building belonging and coaching better study habits

Use of the OnTask adaptive messaging platform to personalise communications to students based on their activity

Hi {{ GivenName }}

Here are a few comments to help you prepare the next lecture:

Genes and Proteins Activity

{% if Video1_Active %} Good work with the video in this activity. Why do you think it would be very good contains some important bits about the role of proteins and the way the genes are interpreted.{% endif %}

{% if Question1_Active %} Good work with the questions. See if you can think of your own questions to sure you understand the relationship between genes and proteins.{% endif %}

{% if Correct1_LOW %} See if you are able to answer all of the questions in the activity correctly in one

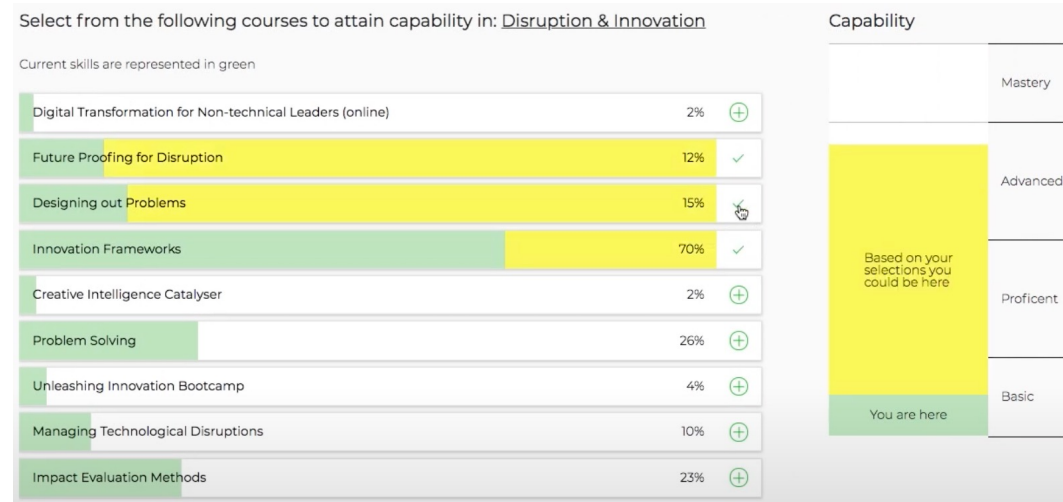
Stem Cells

{% if Video2_Active %} Good work with the video. Can you see some potential usage of stem cells to tr structure?{% endif %}

{% if Question2_Active %} Good work with the questions. Can you come up with some additional candi review the material one more time. You need to become fluent in this topic.{% endif %}

Personalised feedback at scale: professional skills

Skills Analytics reports
for **students** on
course selection
to **educators** on
curriculum design
to **employers** on
workforce design



Giving voice through Deliberative Democracy

Extended student/staff consultation on the ethics of Analytics/AI in UTS EdTech



6.3 Bias/Fairness

Principle: UTS should aim to reduce bias involved in AAI-EdTech programs, and maintain the fairness in their development, use, and application of these tools.

Rationale: Bias: The application of AAI-EdTech programs may incur a level of bias as it is modelled against the majority of the population. It needs to be developed, maintained and reviewed to ensure nuances and inferences are...

Fairness: The use of AAI-EdTech programs need inevitable biases in tech to Aboriginal, CALD, minor groups/individuals

Examples

Students

- AAI-EdTech that discriminates against and environment.
- An example of where there might be in exam proctoring, which could be in and equity as separate yet interconnected

Educators

- Overseas students, with English as a second usage of platforms. Their engagement might be very tech savvy. Or, cultural platform is flagging issues: how does learning from different cultural backgrounds
- Educators are provided with training pi biases that may be present in these AAI-EdTech systems)

University

- UTS reviews the biases and fairness c panel made up of minority groups (incl throughout the university community, addresses any biases in that system, of EdTech system

6.4 Equity and Access

Principle: UTS should aim to ensure that AI-Edutech programs promote social justice and are equitable and accessible. This includes ensuring equitable access to information and technology that is delivered in language and formats that reflect the diverse needs of the UTS community and equitable access and input to the review of AI-Edutech systems

Rationale: Technology should promote social justice, affirmative action and positive discrimination (rather than merely preventing inequities). Access encompasses both access to information and access to technology in the fields of technology is not solely limited to just the hardware processes around using them. It needs to reflect the people with disability, disadvantages, Indigenous A diversities. AI-EduTech programs need to be consistent ensure social justice (that they are equitable and accessible be ensured and championed across the full life-cycle implementation and throughout the full period of use necessary to identify when programs are no longer occurs and these services need to be taken out of c

Examples

Students

- Ensuring that anything one consents to is understood and engage with easily (links to
- Students are provided with training program the use of hardware and/or software that un required to use in their studies

Educators

- Overseas students, with English as a second of platforms. Their engagement may be less very tech savvy. Or, cultural dimensions, su issues, how does an educator implement it f cultural backgrounds, disabilities and disadv
- Equity and access applies just as much to e be provided with training programs to ensure systems and the best practices for how to in in a way that most benefits their students

University

- An accessibility panel, including students, fa accesses the technology prior to procureme design of technology).
- UTS reviews the accessibility of existing AA

6.6 Human Authority

Principle: UTS commits to preserving human autonomy, agency and decision-making harnessing the opportunities presented by AAI-EdTech

Rationale: AAI-EdTech presents many opportunities and affordances in the education. These are likely to grow in both number and complexity in the future. AAI-EdTech h free educators from repetitive tasks so they can have more meaningful interactions and each other. For students, it has potential to personalise the learning experience formative and self-regulated learning opportunities. However, human educators bring personal dimension to the education process that cannot be fully replicated by AI or by an algorithm. AAI-EdTech should therefore be a tool or an assistant to students; but should not replace human decision-making. AAI-EdTech systems should be designed safeguards that allow human input, interventions and challenges to outcomes at app

Examples

Students

- AAI-EdTech systems that allow self-pacing / self-regulated preparation for it (examples?)
- AAI-EdTech tools (eg, AcaWriter, dashboards) that help students improve it
- Formative not summative use of these tools
- Student right to opt-out (Q: technical feasibility?)
- Ensuring that the students maintain the majority of responsibility over their o (instead of leaving it all up to AAI-EdTech)
- Students may have a learning disability that a human educator can customise

University

- A student can be rest assured that the information collected by an AAI-EdTech a human that understands the unique challenges the student faces. For exa may have a learning disability that a human educator can customise learning
- Maintaining the choice to be able to opt for a face-to-face or direct to tutor or choosing AAI-EdTech feedback or assistance.

Research summaries/white papers for policy consultations



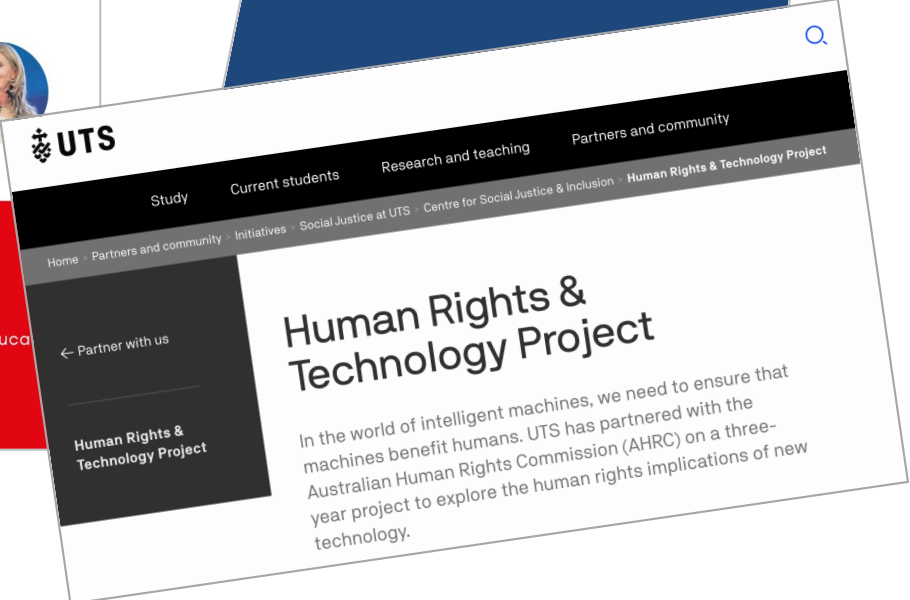
ajppg **appg**
All Party Parliamentary Group on Artificial Intelligence

EVIDENCE MEETING
DESIGNING FAIR AND ROBUST AI-BASED ASSESSMENTS SYSTEMS
MONDAY 19 OCTOBER 2020 5:30 PM LONDON TIME - GLOBAL WEBINAR

BIG INNOVATION CENTRE

EVIDENCE GIVERS FROM LEFT TO RIGHT + CoChairs

- **Simon Buckingham Shum**, Professor of Learning Informatics, University of Technology Sydney
- **Victoria Sinel**, Teens in AI, AI ambassador
- **Cori Crider**, Co-Founder, Foxglove
- **Laurence Moroney**, Lead AI Advocate, Google USA
- **Priya Lakhani O.B.E.**, Founder & CEO, CENTURY TECH, Intelligent Learning, Artificial Intelligence in Education
- **Janice Gobert**, Professor of Learning Sciences & Educational Psychology, Rutgers University
- **Co-Chairs:** Lord Clement-Jones CBE and Stephen Metcalfe MP, UK Parliament
- **APPG Secretariat:** Professor Birgitte Andersen, Big Innovation Centre



UTS

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Human Rights & Technology Project

← Partner with us

Human Rights & Technology Project

In the world of intelligent machines, we need to ensure that machines benefit humans. UTS has partnered with the Australian Human Rights Commission (AHRC) on a three-year project to explore the human rights implications of new technology.

<https://simon.buckinghamshum.net/2020/12/evidence-fair-robust-ai-assessment>

<https://www.uts.edu.au/partners-and-community/initiatives/social-justice-uts/centre-social-justice-inclusion/partnerships/human-rights-technology-project>

<https://melbourne-cshe.unimelb.edu.au/research/research-programs/technology-enhanced-learning-in-higher-education/the-ethical-use-of-learning-analytics>

We need
to talk
about...

C^3

We need
to talk
about...

Confidence

Constructs

Context



Confidence



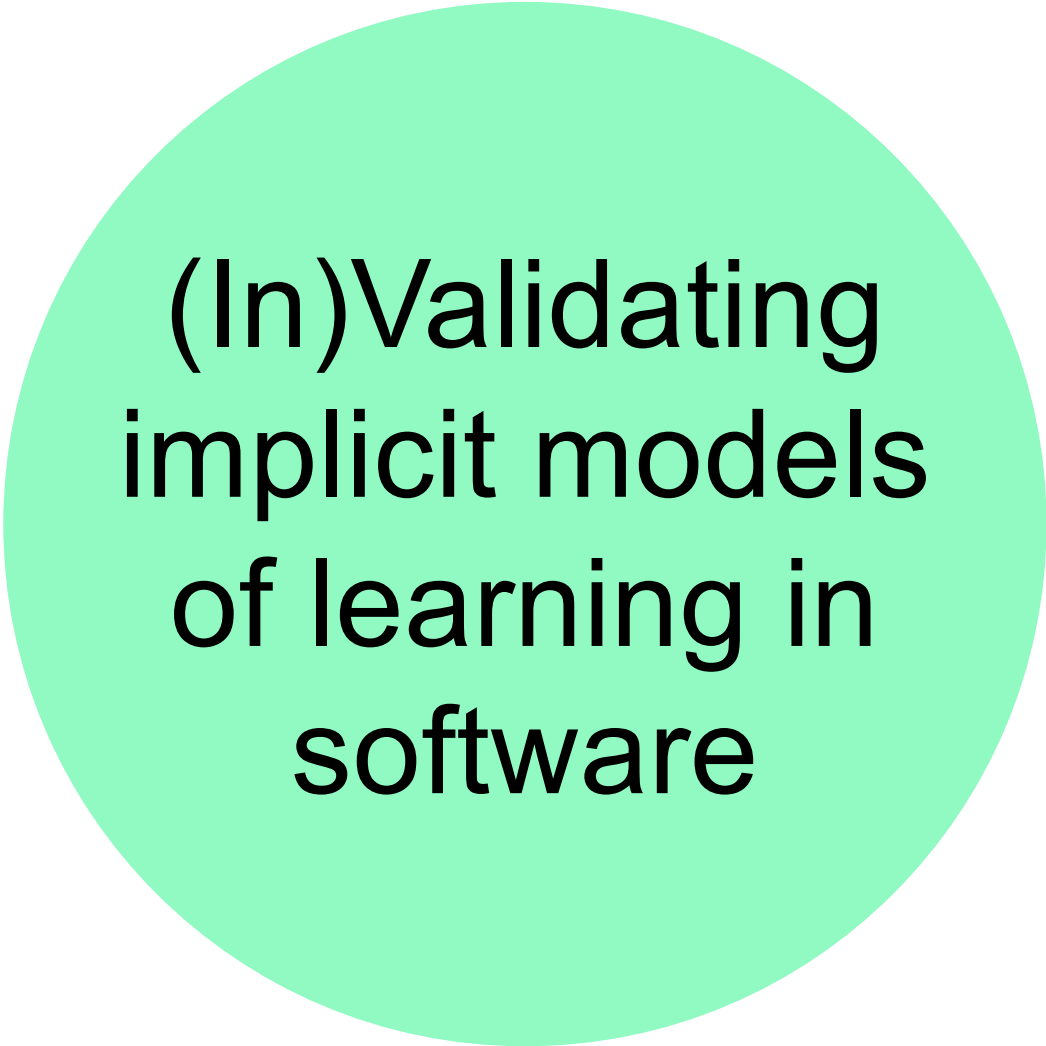
Trustworthy...

...analytics/AI

...assessment




Constructs



**(In)Validating
implicit models
of learning in
software**



Context



AIED takes social
and material form in
specific contexts:
immerse ourselves



C³



Confronting our
Catastrophic
Context



the
planet's
dying



