7 June 2023: 07:00AM UTC

Authentic and online assessment in an AI enabled world

Joint with:

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Leading the development of assessment for learning in higher education

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AHE is an independent network focused on developing research-informed practice in assessment and feedback in HE.

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AHE: Leading Assessment for Learning in Higher Education

AHE Network Presentations

Chahna Gonsalves, King's College London, UK
On Chat-GPT and Multiple-Choice Assessment: Outsmarting the model

Margaret Bearman, Deakin University, Australia
Is authentic assessment preparing students for the digital world?

Each presentation 15mins + 5mins for quick questions
followed by plenary debate in the second half of the session

Please post comments and questions in the chat.

AHE: Leading Assessment for Learning in Higher Education

Speaker 1

Chahna Gonsalves (King's College London, UK)

On Chat-GPT and Multiple-Choice Assessment: Outsmarting the model

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On Chat-GPT and Multiple-Choice Assessment: Outsmarting the model

Dr Chahna Gonsalves

Context

KCL move from invigilated, in person exams.

Level-5 Brand management

- 108 students
- Mid term tests, 15% x2
- February & March 2023
- Teaching team of 1

Level-4 Principles of Marketing

- 600 students
- End point exam, 40% of module grade
- Teaching team of 2
- June 2023

Test banks

Downloadable Instructor Resources

Instructor Resources are available to aid your teaching and can be downloaded from the Instructor Resource Centre. You need to request access before you can download the resources or login with an existing account. Click the button on the right to get access or login.

Having trouble getting access? Contact us.

Test Bank for Principles of Marketing, Global Edition, 17/E

Kotler & Armstrong

ISBN-10: 1292220260 • ISBN-13: 9781292220260

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Principles of Marketing Global 17th Edition Kotler Test Bank

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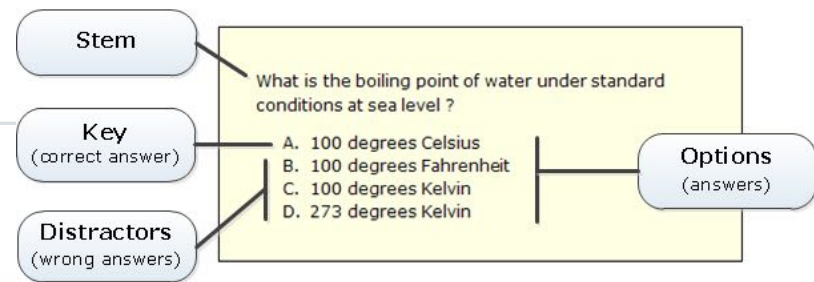
Principles of Marketing Global 17th Edition Kotler Test Bank

27 Apr 2019 — AACSB: Application of knowledge Skill: Concept Objective: LO 1.2: Explain the importance of understanding the marketplace and customers and ...

Best practice guidance

Stem

What is the boiling point of water under standard conditions at sea level ?

Key (correct answer)

A. 100 degrees Celsius
B. 100 degrees Fahrenheit
C. 100 degrees Kelvin
D. 273 degrees Kelvin

Options (answers)

Distractors (wrong answers)

Avoid	Good practice
In the stem: • Long / complex sentences • Trivial statements • Negatives and double-negatives • Ambiguity or indefinite terms, absolute statements, and broad generalization • Any clues to the answer **In the choices:** • Statements similar to the correct answer • Completely implausible responses • 'All of the above,' 'none of the above' • Overlapping responses (e.g., if 'A' is true)	**In the stem:** • Use your own words – not statements straight out of the textbook • Address single, clearly formulated problems **In the choices:** • Plausible and homogeneous distractors • True statements that do not answer the questions • Short options – and all same length if possible • Correct options evenly distributed over A, B, C, etc. • At least 3 alternatives

Eliciting higher order thinking with Bloom's Taxonomy

KNOWLEDGE

List | Define
Recall | Arrange
State | Order
Label | Repeat
Memorize
Name | Select
Record

COMPREHENSION

Translate
Paraphrase
Discuss | Report
Locate | Explain
Restate | Describe
Express | Identify
Generalize
Recognize | Classify
Summarize

APPLICATION

Operate | Apply
Use | Solve
Demonstrate
Prepare | Choose
Show | Sketch
Employ | Practice
Dramatize
Interpret
Illustrate
Produce
Schedule

ANALYSIS

Analyze | Question
Differentiate
Experiment
Examine | Test
Categorize
Distinguish
Calculate | Inspect
Contrast | Outline
Infer | Compare
Discriminate
Appraise | Criticize
Diagram | Debate
Inventory | Relate

SYNTHESIS

Create | Compose
Argue | Design
Plan | Support
Arrange | Collect
Revise
Formulate
Propose
Construct
Set up
Organize
Manage
Prepare
Assemble
Rearrange
Develop

EVALUATION

Rate | Evaluate
Assess | Judge
Value | Revise
Justify
Recommend
Conclude
Defend
Interpret
Predict
Estimate
Appraise
Compare
Score
Select
Choose
Measure

LOWER ORDER THINKING SKILLS   HIGHER ORDER THINKING SKILLS

ChatGPT

Knowledge

Which iPhone is right for you?

New	New	New	
iPhone 13 Pro	iPhone 13	iPhone SE	iPhone 12
The ultimate iPhone.	A total powerhouse.	Serious power. Serious value.	As amazing as ever.
From $999	From $699**	From $429	From $599**
Buy	Buy	Buy	Buy
Learn more >	Learn more >	Learn more >	Learn more >

This page of the Apple website shows the _____ of the various models of iPhone.

a. consumer orientations

b. pricing orientations

c. product positioning

d. selling orientations

Application

Duolingo - Learn Languages Free

Editors' Choice

Duolingo   Education

★ ★ ★ ★ ☆   10,238,795 👤

Everyone

Contains ads · Offers in-app purchases
⚠ You don't have any devices.

Add to wishlist   Install

Spanish, French and 30 more languages free

The fastest way to learn a new language

Quick, fun bite-sized lessons that work

Spea hea lang
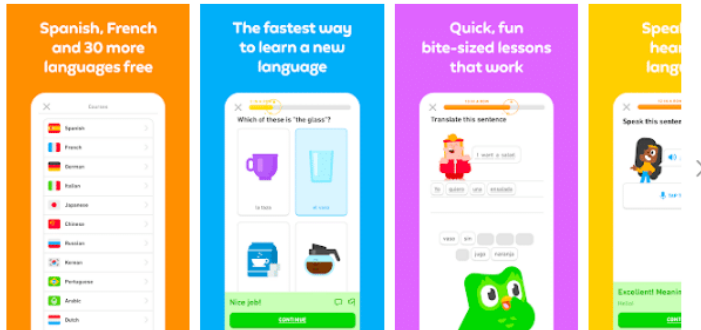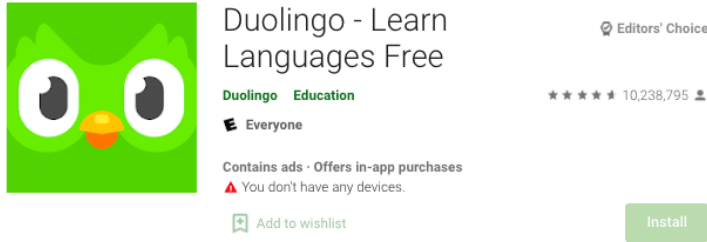
Learn a new language with the world's most-downloaded education app! Duolingo is the fun, free app for learning 35+ languages through quick, bite-sized lessons. Practice speaking, reading, listening, and writing to build your vocabulary and grammar skills.

According to Maslow's hierarchy of needs, which **two** levels of consumer priorities does learning a new language with Duolingo for the purpose of leisure travel address?

A: Physiological needs

B: Social needs

C: Ego needs

D: Self-actualisation

Application

The FIFA World Cup Qatar 2022™ mascot was La'eeb. La'eeb in Arabic means "a very skillful player". La'eeb believes in everyone and his motto is "Now is all".

La'eeb is uniquely designed in that La'eeb looks like an Arabic ghutrah, a headdress popular in most Arabic countries, that has eyes and lips and floats over the ground. As the marketing team claims, the FIFA mascot doesn't have a fixed anthropomorphic identity, and he can be whoever the audience wants him to be. This 'flexible identity' caused some confusion to FIFA's western audience.

Based only on this information, which 2 of Keller's 6 criteria for choosing brand elements does La'eeb fail to meet?

a. Likability and Meaningfulness
b. Meaningfulness and Transferability
c. Likeability and Adaptability
d. Meaningfulness and Protectability

Evaluation

74% of consumers claim they're more likely to purchase a product online if they've seen user-generated content (UGC) about it, including photos, videos and reviews (Bazaarvoice, 2022).

The brand manager for Hotel Chocolat wants to run a UCG campaign to increase brand awareness and maintain sales of a heart-shaped selection box between special calendar holidays. Which two options should they consider:

a. Require all contributors to use the key word "heart-shaped" so that customers a clear about the product featured in the campaign.

b. Highly target and optimize the content to ensure it reaches the right members of the target audience.

c. Create a hashtag Customers can use it in their captions and share it which can help with tracking.

d. Centre the campaign around a core creative idea like organic moments in which people show love.

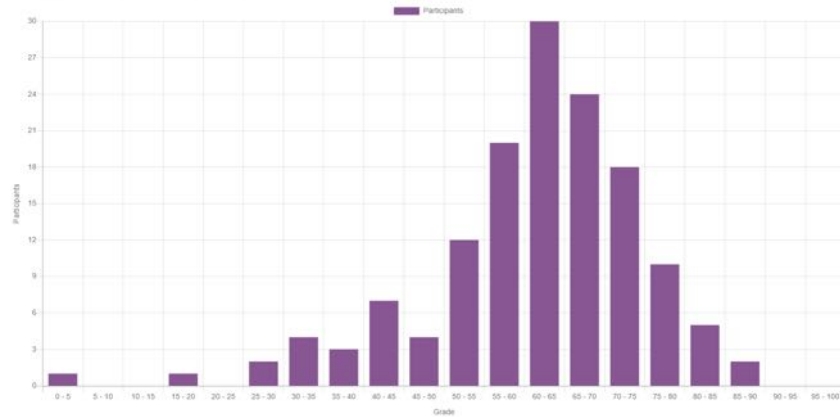# Images and hotspot questions
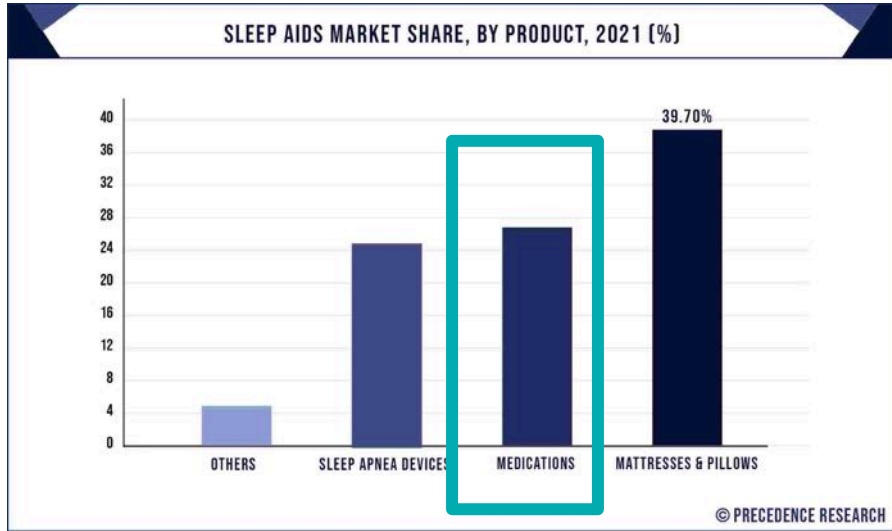
Scenario and branching questions

Based on the information the patient has revealed, which of the following questions should you ask next…

Now that the patient has explained xxx what could your suggests the patient does next…
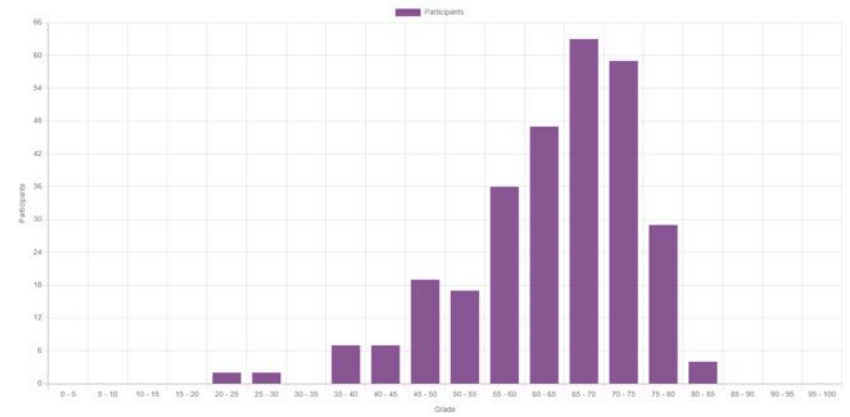
Principles of Marketing

Overall number of students achieving grade ranges

143 Students, non-business degrees.
Mean 60, Median 62, SD 14 (%).


Overall number of students achieving grade ranges

473 Students, Business degrees.
Mean 63, Median 65, SD 11 (%).

"I am writing to inform you that I have completed the final examination for the module. Simultaneously, I came across a question about the expansion of InPost in the United Kingdom, which, as a Polish student, brought a smile to my face."

Brand management
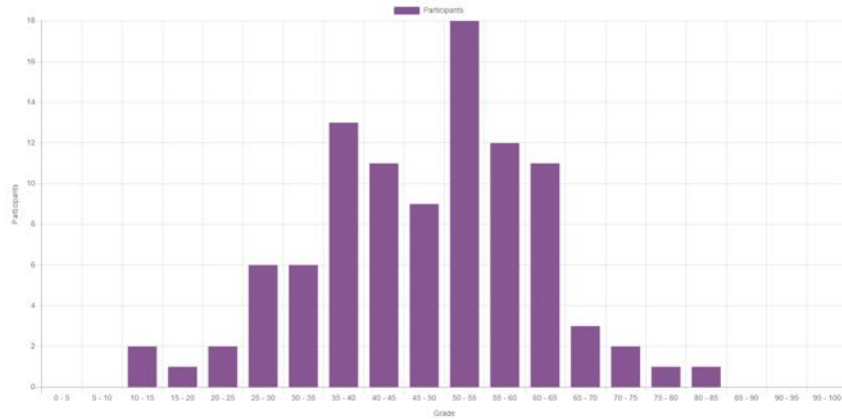
Test 1, 98 students
Mean 48, median 49, SD 14 (%)
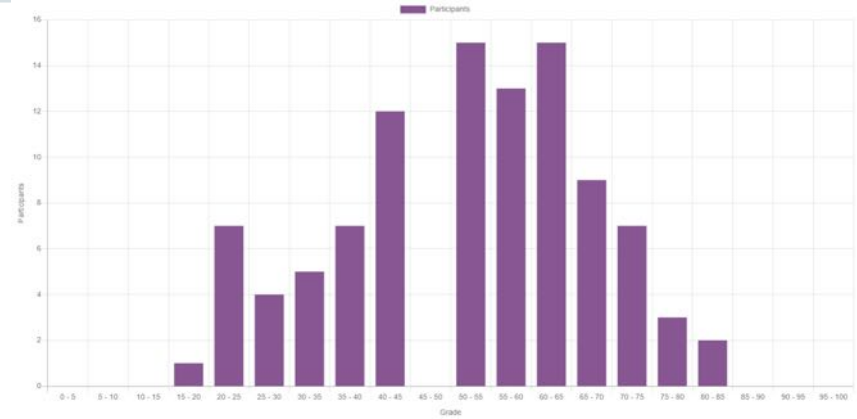
Test 2, 98 students,
Mean 52, median 50, SD 15 (%)

"The cases used in the tests were interesting, by reading the cases and using knowledge from the readings I was able to understand more."

Considerations

Accessibility & Inclusion
- Personal Assessment Arrangements
- Screen readers

Cognitive load

Timing

Number of responses

Value remains for testing, diagnosis,
learning data, etc.

Towards more authentic MCQ design.

Should we be trying to outsmart ChatGPT?

Thank you

Dr Chahna Gonsalves

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Chahna.gonsalves@kcl.ac.uk

Speaker 2

Margaret Bearman with Rola Ajjawi and Juuuson Nieminen (Deakin University, Australia)

Is authentic assessment preparing students for the digital world?

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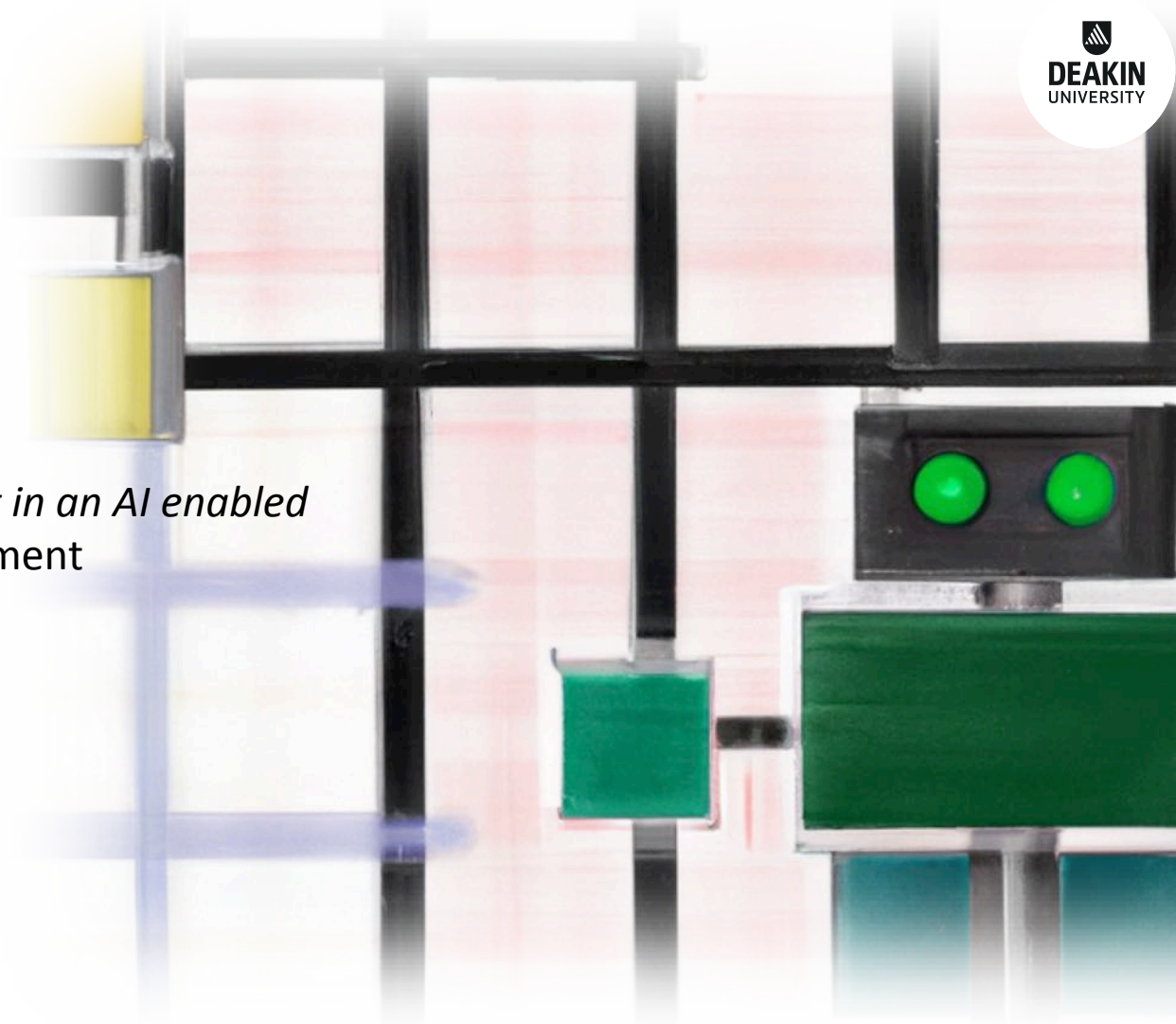SHAPING THE FUTURE OF TERTIARY EDUCATION

Is authentic assessment preparing students for a digital world?

Authentic and online assessment in an AI enabled world AHE/Transforming Assessment
7 June 2023

Professor Margaret Bearman
CRADLE, Deakin University
@margaret_bea

DALL-E prompt: robots making rubrics in the style of Mondrian impressionist

Acknowledgement of country

We acknowledge the Traditional Custodians of all the unceded lands, skies and waterways on which Deakin students and teachers come together. As we learn and teach through virtually and physically constructed places across time, we pay our deep respect to the Ancestors and Elders of Wadawurrung Country, Eastern Maar Country and Wurundjeri Country, as well as the Traditional Custodians of all the lands on which you may be learning and teaching, where education has taken place for many thousands of years.

My co-conspirators

Dr Juuso Nieminen (U Hong Kong)

Professor Rola Ajjawi (CRADLE)

When I say …
digital or AI-
enabled world
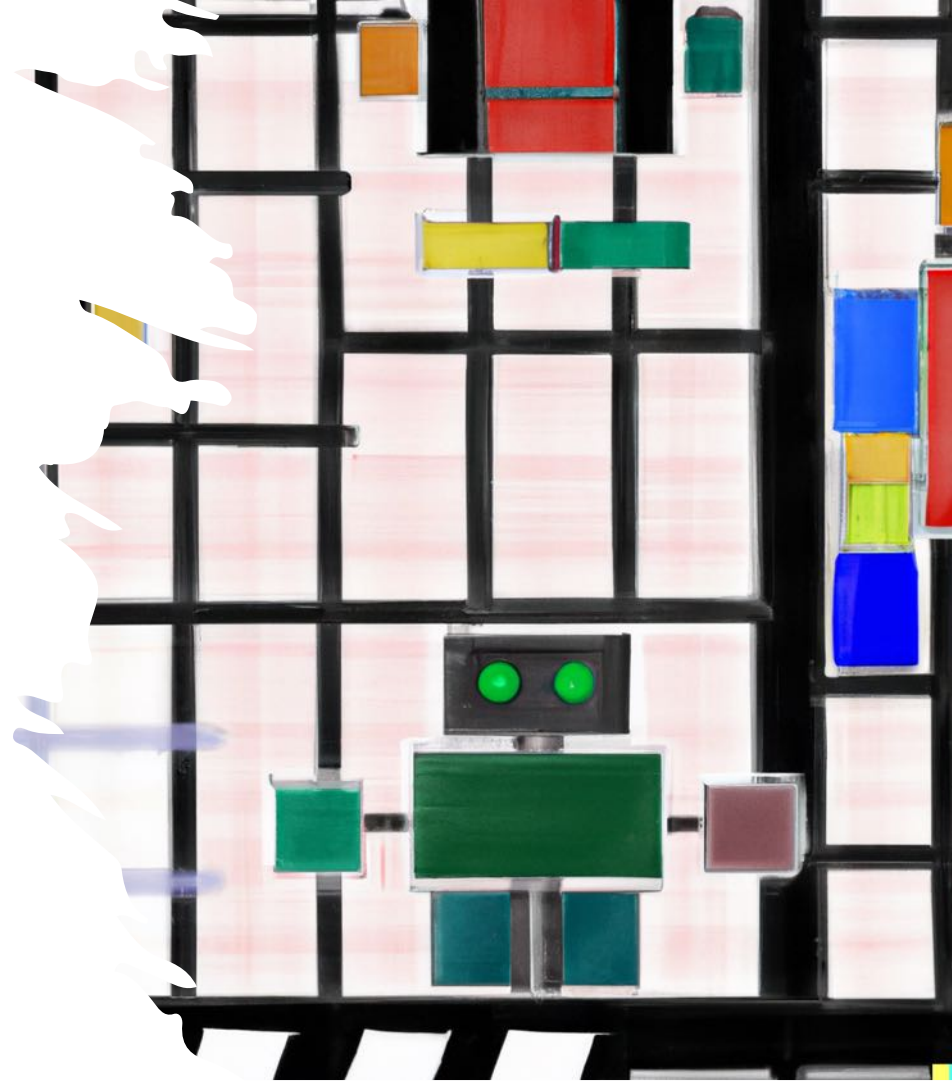
Living in a digital world

Digital technologies – often powered with data and artificial intelligence (AI) - have become entangled and constitutive with everyday life.

Thus the digital is both a technology and a social practice

The term *the digital* "reflects the duality of the digital being both a technology and a social practice. The digital therefore also encompasses practices that are necessary for living with technology, such as for example teamwork and collaboration, that do not in and of themselves focus on using technology."

Bearman, Nieminen, Ajjawi (2023)

Artificial intelligence (AI) is a key part of 'the digital'

"Artificial intelligence" is a contentious term

Represented (until recently) in the higher educational literature mostly in mythic terms

Lots of debates over its definition.

Bearman, Ryan, & Ajjawi (2022)

Side note: defining AI within a digital world

We propose that an **AI interaction** is contextual

"...an **AI interaction** does not depend on how a technology is constructed, but on the relationship between the humans and the computational artefact, at a particular moment in time"

Bearman & Ajjawi (2023)

Thus AI interactions form much of what we do already in a digital world

For example, for me –

- the results from Google Scholar

- The output of DALL-E

- Some ChatGPT outputs

An integral part of the digital world

Higher education in the digital world

"Historically, computerisation has promoted a shift away from routine manual and cognitive tasks towards non-routine analytic and interactive tasks (Autor et al., 2003), suggesting that technologies such as AI could have real impact upon labour markets and thus higher education."

(Bearman, Ryan & Ajjawi 2023)

Authentic assessment in a digital world?
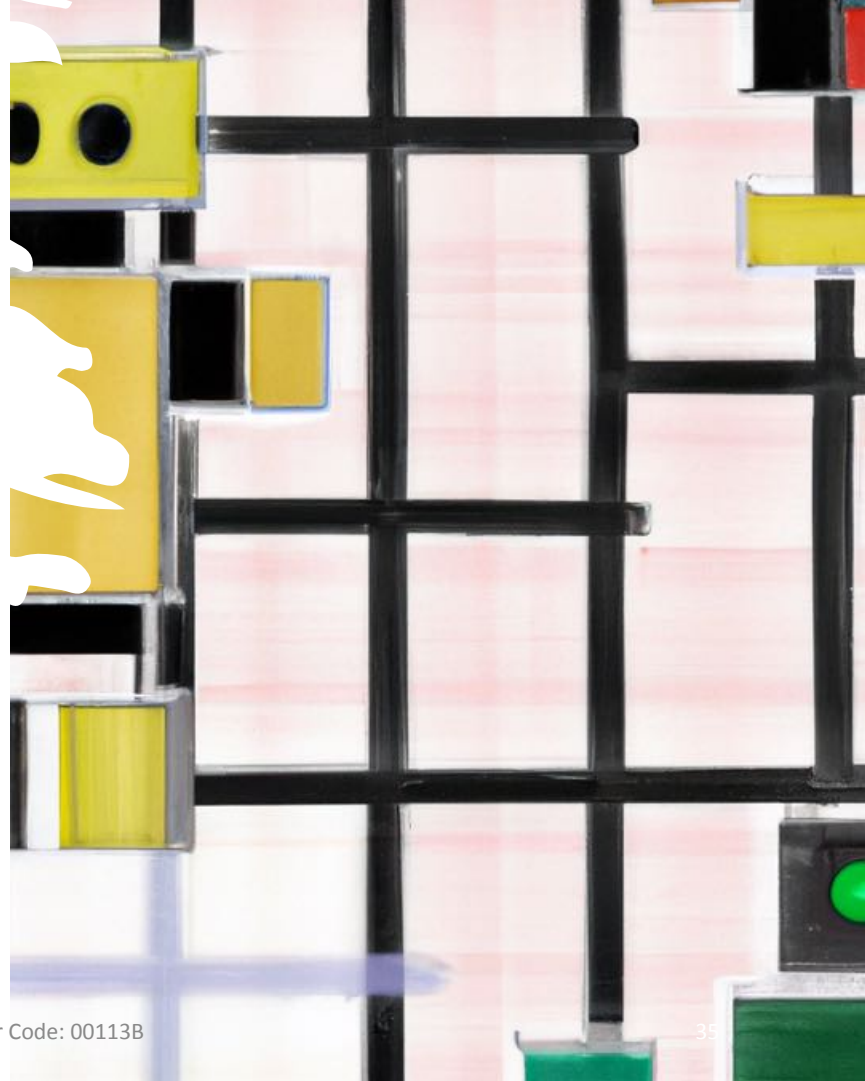
Common understanding of authentic assessment

Authentic assessment aims to develop "the same competencies, or combinations of knowledge, skills, and attitudes, that [students] need to apply in the criterion situation in professional life"
(Gulikers et al., 2004, p. 69)
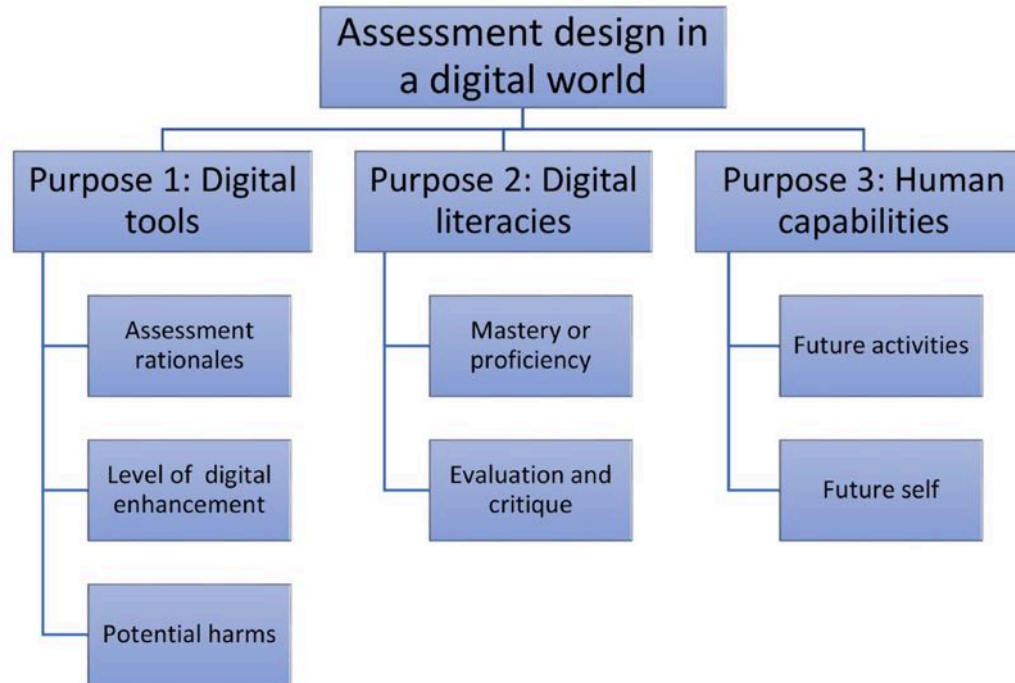
Authentic assessment and the digital

Any authentic engagement should therefore make reference to the digital

- as part of professional workplaces
- as part of global citizenship

Little attention has been paid to the digital in authentic assessment

- Ashford-Rowe et al's framework (2014): no mention of the digital
- Villarroel et al's framework (2018): no mention of the digital
- Sokhanvar et al's review of employability skills (2021): no mention of the digital

Analytical framework: assessment design in a digital world (Bearman, Nieminen & Ajjawi, 2022)

Our study

Critical scoping review:
How has the digital been designed into authentic assessment?

An analysis of 55 studies on authentic assessment in higher education that had a central role of the digital in assessment design (1993-2021)
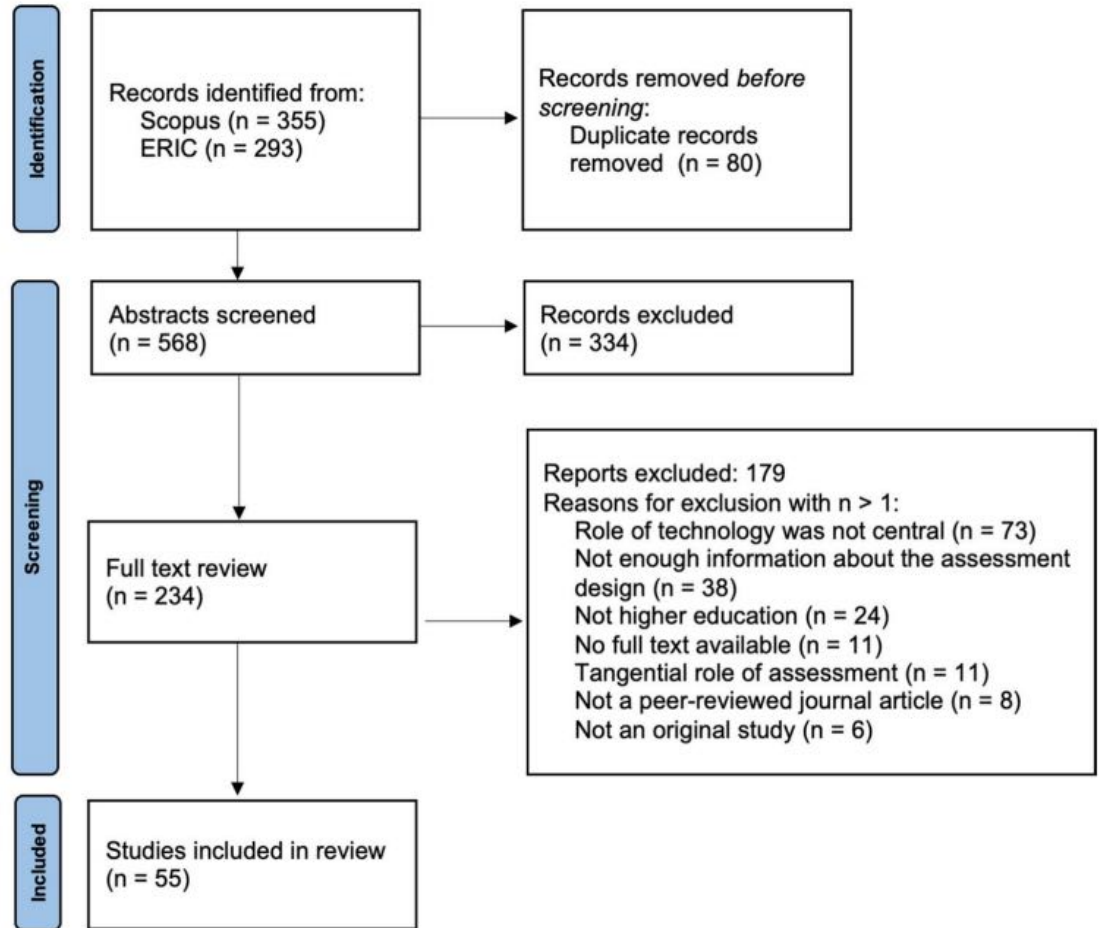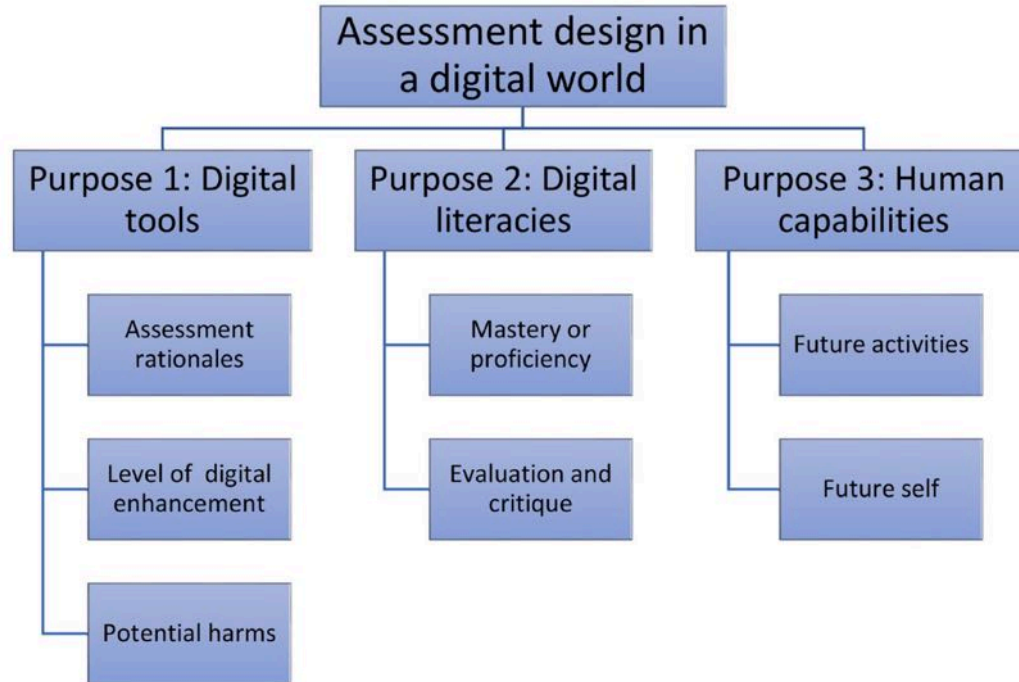
(Nieminen et al., 2022)

Figure 1. The PRISMA diagram.

Analytical framework: assessment design in a digital world (Bearman, Nieminen & Ajjawi, 2022)

FINDINGS

Purpose 1: digital tools for better authentic assessment (52/55 studies)

Assessment purposes:

- Credentialing (27)
- Development (21)
- Sustainability (18)

Level of digital transformation:

- Enhancement (18)
- Transformation: the digital redefined assessment (34)

Example:

E-portfolios as a way to transform pen-and-paper assessment into a multimodal experience (sustainability, transformation)
(e.g., Bradley 2014; Lewis and Gerbic 2012; Yang, Tai, and Lim 2015)

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Purpose 2: developing and credentialing digital literacies (29/55 studies)

Digital literacies as a learning objective

Mastery

- Authentic, real-world practices

Evaluation or critique

- Critical digital literacies: resistance toward digital assessment design?

- No studies explicitly took this approach

Examples:

- Google Drive and Dropbox (Harver, Zuber, and Bastian 2019)

- Website design tools (Hastie and Sinelnikov 2007)

- Video editing and production skills (Scott and Unsworth 2018; Willmott 2015)

- Portable document file (PDF) skills (Brown 2002)

- Digital presentation skills (Chan 2011)

- Text lay-out skills (e.g., LaTeX) (Nurmikko-Fuller and Hart 2020; Mallet 2008)

Purpose 3: developing and credentialing human capabilities for a digital world (8/55 studies)

Future activities

Focus on those human characteristics that machines could not succeed with

These assessment designs did not always directly engage with the digital, but developed unique human capabilities in the digital world

Example: Tay and Allen's (2011) public magazine task in media studies

- Technology enabled assessment to move away "from a knowledge-object orientation towards process-driven approaches – not what to know, but how to know" (154)

- Co-authorship through the digital space, digital peer feedback

Purpose 3: developing and credentialing human capabilities for a digital world (8/55 studies)

Sense of the self

Exploring and developing students' digital identities in the world beyond the university

Constructing students' online persona through networked digital platforms and practices

Example: Sargent and Lynch's (2021) digital video narratives in physical education

- Importance of emotions, embodiment and vulnerability in digitally-mediated assessment design.

- "Video narratives allowed the students in this study to be 'vulnerable', 'expressive' and the embodied connections encouraged psychological emotions as an affective process." (p. 8)

# New identified purpose: fostering communality (1/55 studies)

Collaboration has been commonly named as an element of authentic assessment (e.g., Gulikers et al. 2004)

This purpose reaches further by shifting the focus from what the individual does to actively participating with wider communities and the society through the digital.

Thompson's (2009) statistics task

- Students were working together with disability organisations to collect and analyse real-life data to enhance the life quality of these communities (e.g. supporting independent living of blind adolescents)

- This work was conducted closely *with* the community, not *for* them

Analytical framework: assessment design in a digital world (Nieminen, Bearman & Ajjawi, 2022)
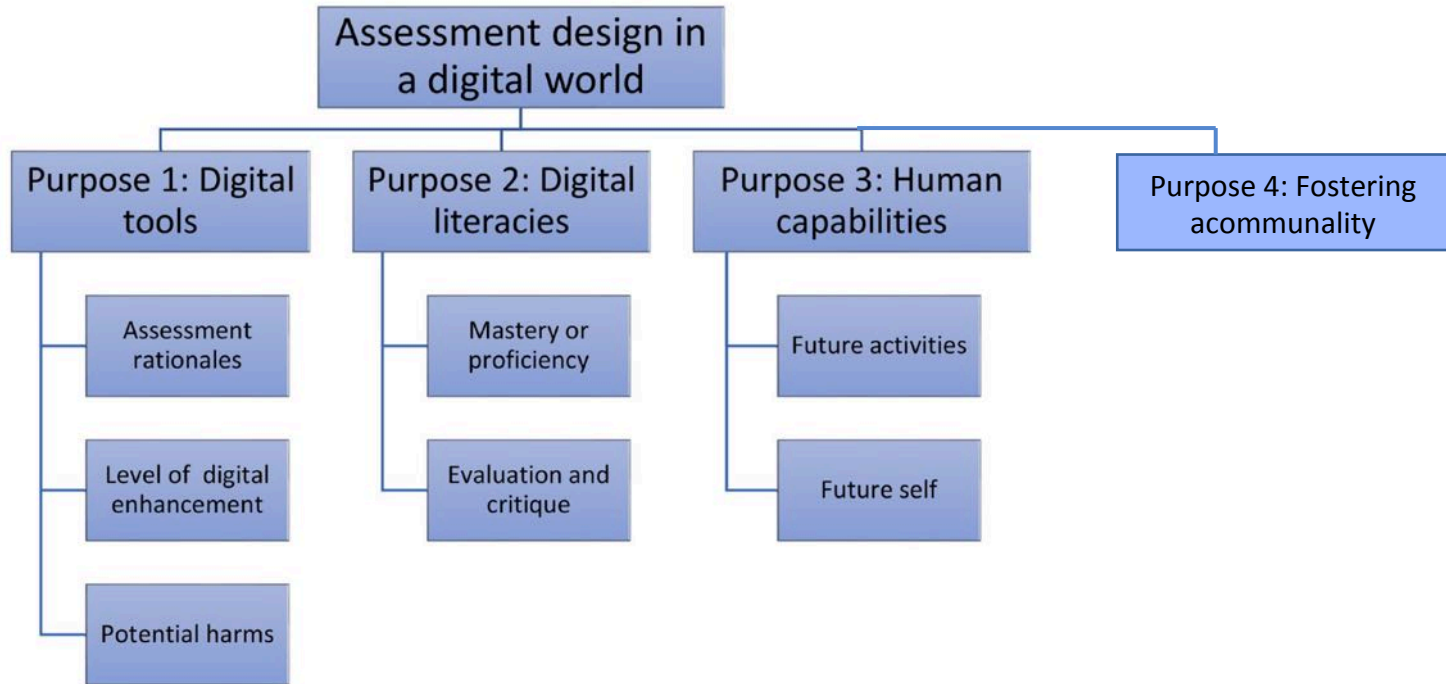
Conclusions
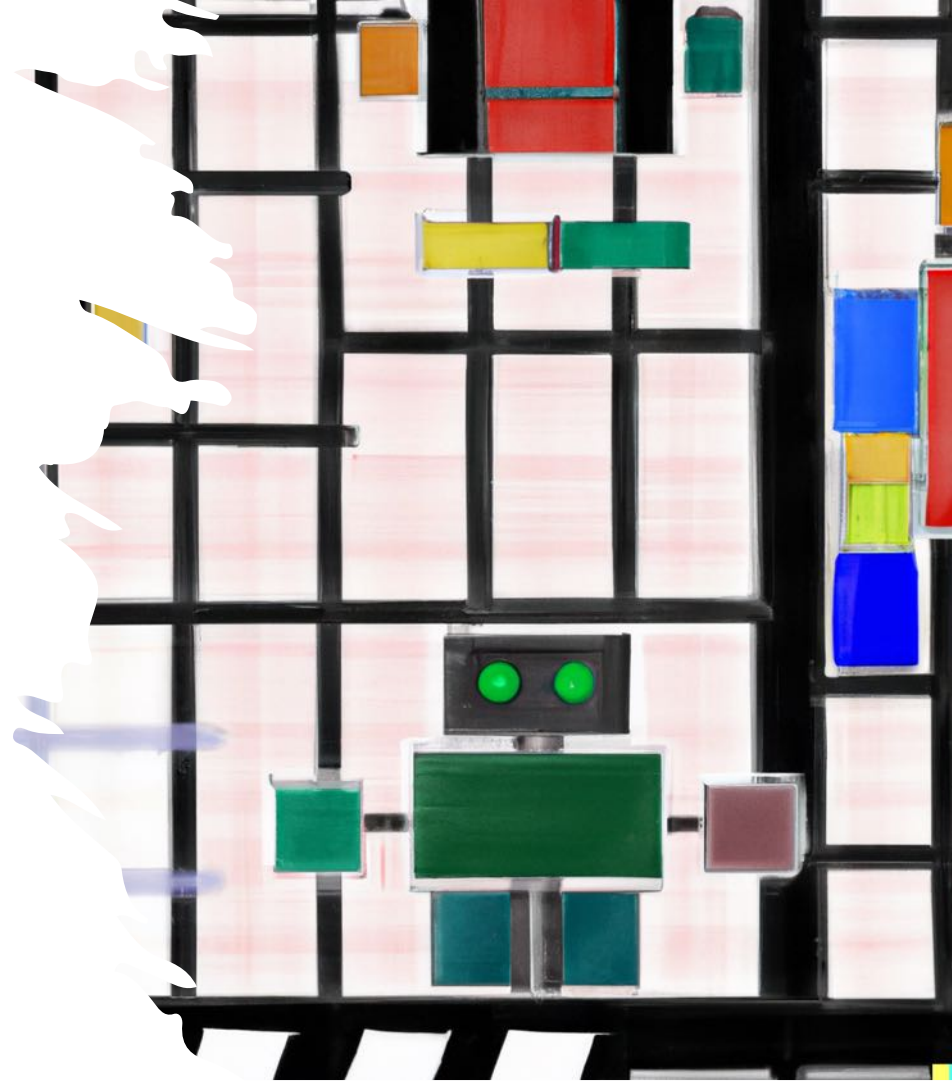
Toward more meaningful ways of designing the digital into authentic assessment

Closer attention is needed for the digital – including genAI - in authentic assessment design

- Our review offers analytical tools for this

Beyond digital task design

- The digital is more than just a tool, or a mode of delivery – we need to set learning outcomes

Authentic assessment needs to meaningfully engage with all the four purposes

- Orienting students to society (McArthur 2022) and to the digital world

Designing assessment in a digital world: an organising framework

Margaret Bearman, Juuso Henrik Nieminen & Rola Ajjawi

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Designing the digital in authentic assessment: is it fit for purpose?

Juuso Henrik Nieminen, Margaret Bearman & Rola Ajjawi

Check for
updates

Discourses of artificial intelligence in higher education: a critical literature review

Margaret Bearman[1] ID · Juliana Ryan[2] · Rola Ajjawi[1]

Abstract

Artificial intelligence (AI) holds significant implications for higher education; however, references to AI in the literature are often vague and open to debate. In order to under-

British Journal of Educational Technology

⊞BERA

Learning to work with the black box: Pedagogy for a world with artificial intelligence

Margaret Bearman ⓘD | Rola Ajjawi ⓘD

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and Digital Learning (CRADLE), Deakin
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Margaret Bearman, Centre for Research
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(CRADLE), Deakin University, Tower 2,

Abstract

Artificial intelligence (AI) is increasingly integrating into our society. University education needs to maintain its relevance in an AI-mediated world, but the higher education sector is only beginning to engage deeply with the implications of AI within society

Thank you!

Margaret Bearman

margaret.bearman@deakin.edu.au

@margaret_bea

Transforming Assessment
Webinar Series

Webinar Session feedback

With thanks from your hosts

Professor Geoff Crisp,
Deputy Vice-Chancellor & Vice-President Academic
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Dr Mathew Hillier,
Macquarie University
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Recording available
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Next session – 5 July 2023

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