CENTER FOR LANGUAGE EDUCATION 語文教育中心

The Living Laboratory: Transition to Generative AI-based Teaching and Learning

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30 June 2023

香港科技大學 THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

Talk Outline

1. Context
2. Approach in our LC
3. GenAI and Assessment
4. Positive uses of AI
   in Teaching and Learning

Acknowledgement

All colleagues in my Centre, and in particular: the 43 Course Leaders who have allowed me to draw from their work for this presentation

Context

- EMI university in Hong Kong:
  - Science, Engineering, Business
- Every UG: 4 credit-bearing English + 1 Chinese
  - 7888 students this semester
  - 88 full time instructors
- 43 language courses this Spring
  - Eng/Chi for Specific/Academic Purposes
  - ‘Proficiency’ courses:
    - Beginner level: Spanish, Japanese, French, Chinese and Cantonese
    - Uni entry level: English, Chinese

Generative AI: Context

January 2023:

- Generative AI, though ChatGPT not readily available in HK
- CPD talk to introduce to instructors prior to semester start

February:

- University stance: embrace AI
  - LC view
    - Cautiously open to the challenge
    - Cannot readily prevent use

LC Approach

- This semester: Transition Period
- Summer: meaningful modification
- Next academic year: Embrace (i.e. maximise use)

- Must all be on the same page…

The Great Unknown

- We do not know….
- Opportunity to explore in this transition period

- Guided by
  - pedagogical principles
  - ethical commitment to ensure fairness

Feb/March
Statement of Principles

‘We embrace innovation and technology including generative AI. But we also recognise that we are in a transition period this semester. Our approach in the centre is to rely firmly on pedagogical principles, with an ethical commitment to ensure fairness.’

- All asked to upload on LMS site

Feb / early March
Minor Modification

- Changes to assignment tasks, task parameters or rubrics allowed, but only
  - At cross-course level
  - if clear, obvious what to change
  - If uncontroversially implement-able
- No change in rubric criteria, approach to assessment by instructors

Recognition of Distinct Aspects to GenAI

1. **a Source for Information**

What to do: All ideas that elsewhere need to be cited

How: Like you would Wikipedia

2. **a Tool**

What to do: Declaration of Use

So that we have options later IF NEEDED

= The Great Unknown

March/April Declaration of Use

(English version)

‘I understand that GenAI can be used as a tool but is not a substitute for doing my own work; and I acknowledge that any violation of academic honesty policies may result in disciplinary action, up to and including failing the assignment or the course. ’

By submitting this form, I confirm that I have read and agree with the above statements.

I hereby declare that I have (check one):

- NOT used any GenAI tools to complete this assignment.
- used GenAI tools to complete this assignment.

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Declaration: Intention

- We really don't know
- Open, honest
- A University-level, professional, intelligent, curious
- As educators, we provide guidance

Rationale for Declaration

- To allow the option of modification of marks at the end of the course
- Opportunity to maximise the situation: living laboratory
  - Allow students to use AI
  - Actively use AI in teaching
- Students encouraged to declare, to ‘be honest’
  - If you don’t declare, and found to have used later, a problem

Beyond Question of Assessment

Generative AI Special Interest Group

- Reading
- Exploration of available AI tools
- Survey of student perceptions and use
- Advice, tips, guidance
  - Bulletin and Sharing Sessions

Declaration and Assessment

- 31 (of 43) Courses: Declaration added to LMS
  - Note: halfway through semester
- 8 added manually in order to ask for additional information

- 2 UG
  - Too late in semester, 2 main assignments already in
  - individualised Final Year Project support, a ‘personalised’ approach
- 2 RPG
  - existing university integrity statement is sufficient
  - a speaking/pronunciation course

Recommended Approach to End-of-course Assessment

- Mark without looking at Declaration to begin with
- No Change in Rubric Criteria
- Do cross course analysis, decision-making in light of
  - Nature of the task
  - Declaration of Use information
- Active encouragement to change weighting in light of Gen AI

Use of Declaration Information

- Basis for open discussion with student if a sense that a student has not taken a principled approach to the work
- Allowed for emphasis on honesty and personal responsibility for learning
- Used alongside Turnitin report

Declaration of Use

4th year engineering course

- T01 68%
- T02 55%
- T03 53%
- T04 38%
- T05 55%
- T06 45%

3rd year science course

- T01 40%
- T02 38%
- T03 36%
- T04 31%
- T05 25%
- T06 5%
- T07 35%

all years Chinese course

- T01 60%
- T02 25%
- T03 30%
- T04 7%
- T05 29%
- T06 60%
- T07 60%
- T08 40%
- T09 55%

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Analysis of Declaration Data

Course 1: Business Case Analysis

- Summative Assessment: 2 presentations, 1 written recommendation report
- Focus: audience awareness, evidence based, understanding of the case and interpersonal relationships as basis for recommendations
- Findings in relation to those who declared use of AI on recommendation report:
  - average for Language criterion: 5.23% higher
  - overall average, all criteria: 4.31% higher

→ 0.96 mark higher

Declared Usage Rate: 22%
approx. 275 students

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Analysis of Declaration Data

Course 2: Business English

- Assessment: Business Pitch (spoken), Business Plan (written)
- Focus: persuasive strategies, development of ideas/'effectively relate ideas to each other'
- Findings in relation to those who declared use of AI:
  → 0.26 mark higher

Declared Usage Rate: 22%
approx 500 students

Course 3: Business English

- Relevant written assessment: email writing
- Focus: audience, context awareness in selection of language, content and organisation
  - writing task 1: → .68 mark higher
  - writing task 2: → .1 mark higher

Declared Usage Rate: 54%
52 students

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Modification of weighting

Course A

- language accuracy reduced
- coherence, argumentation increased

Course B

- coherence reduced
- effectiveness of multimodality increased

Course C

- grammar and organisation reduced
- ‘ideas that are clearly related and reinforced rather than just sequenced’

Modification of weighting

Course D

- Speaking task
  - increase focus on delivery
    - pronunciation and intonation
    - tone and style
    - audience awareness
  - less on accuracy and vocabulary choice

Other Modifications

- Writing tasks
  - Summative → formative
  - Mark → complete /incomplete

- Tasks → in-class and/or live tasks
  - speaking
  - beginner language classes

Added Requirements

- responses to Q&A formally marked in addition to presentation itself
- notes, photos, screenshots to support assignments
- demonstration of specific rhetorical devices that had been taught
- passage on motivation for choosing the topic
- reflection on use of AI, or why AI not used

‘Less affected’ Assessment Tasks

- New ideas
  e.g. identify a niche
- Relate to a very specific context
  e.g. invited to give a talk at X event in Dept Y

- Creativity, specificity, persuasiveness, appropriate style

Teacher Observation

Lower proficiency students

‘seemed to have asked GenAI to generate the entire text. Their writing was error-free but did not adopt an appropriate language style for the task.’

‘did not score higher than lower proficiency students who did not use GenAI, made language errors but produced a more persuasive and creative piece’.

Higher proficiency students

’the style was recognisably their own’

‘these students probably scored a little higher than they might have done but I feel the higher score is justified as the use of assistive tools (dictionaries, Grammerly, etc) is something we encourage and shows positive motivation’

Positive uses of AI in Teaching and Learning

- ‘GenAI became an important component which we used in class every week’
- Asking students to write a reflection on role of AI helped me understand student priorities in their own learning
- ChatGPT very helpful to generate ideas and then Grammarly useful to check vocab and grammar
- Students asked to compare human and GenAI produced texts (blog posts), ready samples of text for analysis and discussion

Plans going forward

- Single module (=lesson/unit) for basic training and use of AI tools in our Center
- Design tasks that recognise existence of AI
  1. Require use, for example
     - Generate texts in AI. Assignment: modify to fit different specific contexts (mainland v HK)
     - Assignment: i) use GenAI to get feedback on writing, ii) evaluate and make use of constructive feedback iii) reflect/document in learning portfolio
  2. AI-proof
     - Does it exist / Is it possible ?!?!?

Flowchart for Incorporating AI into Assessments for Learning

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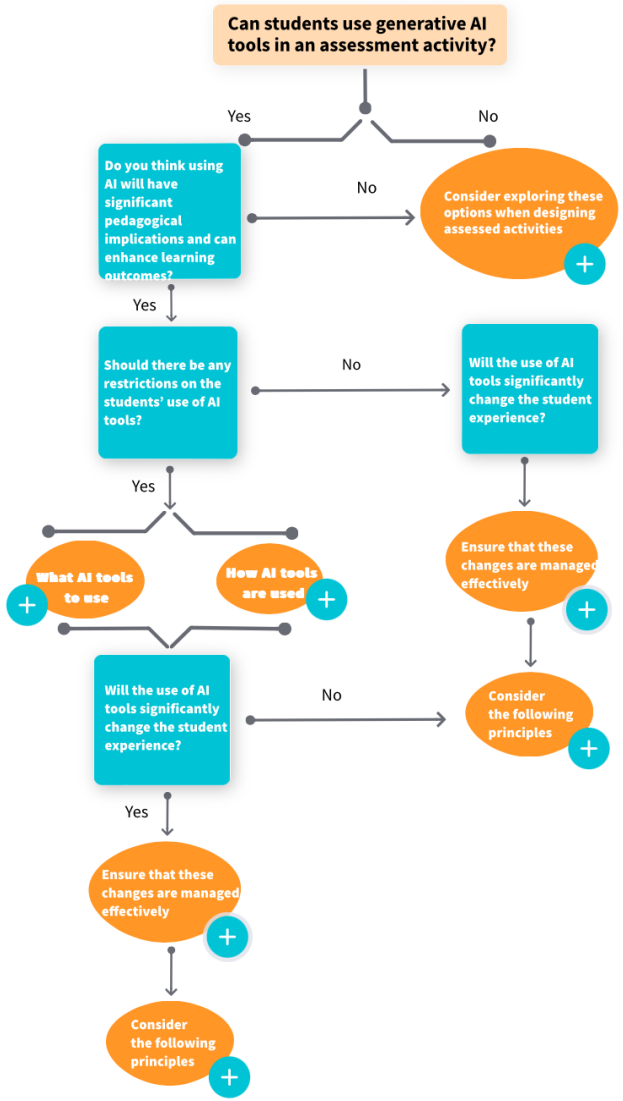
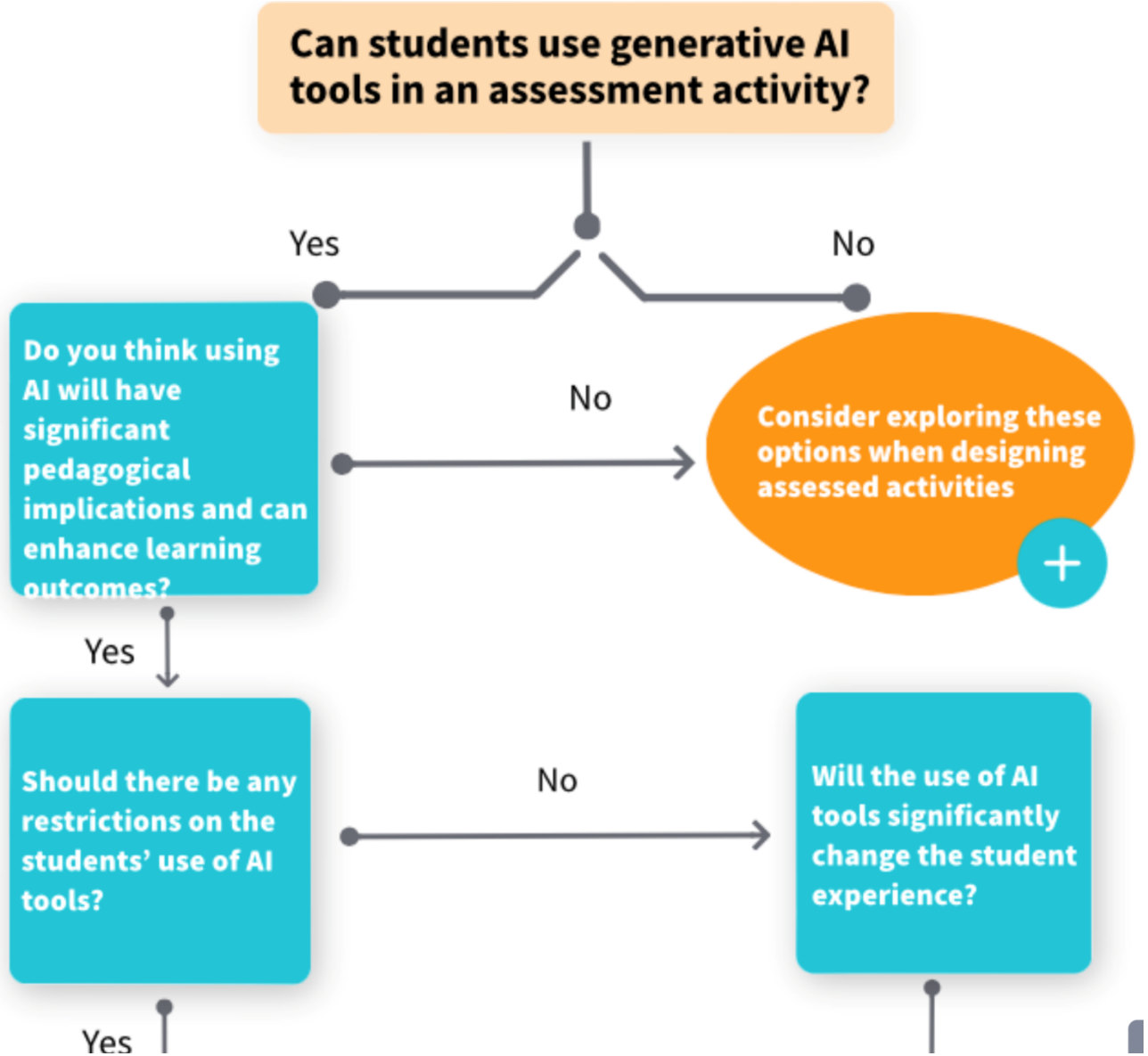
https://view.genial.ly/648b081ddc3de9001110c3ed

Incorporating AI in Learning Assessments: A Guided Pathway

This flowchart guides educators in integrating AI tools into assessment activities. It begins with a decision on AI usage, then splits into two routes: one explores the pedagogical impact and appropriate use of AI tools, while the other offers a range of traditional assessment techniques. The chart emphasizes ethical considerations, academic integrity, and equal tool access throughout.





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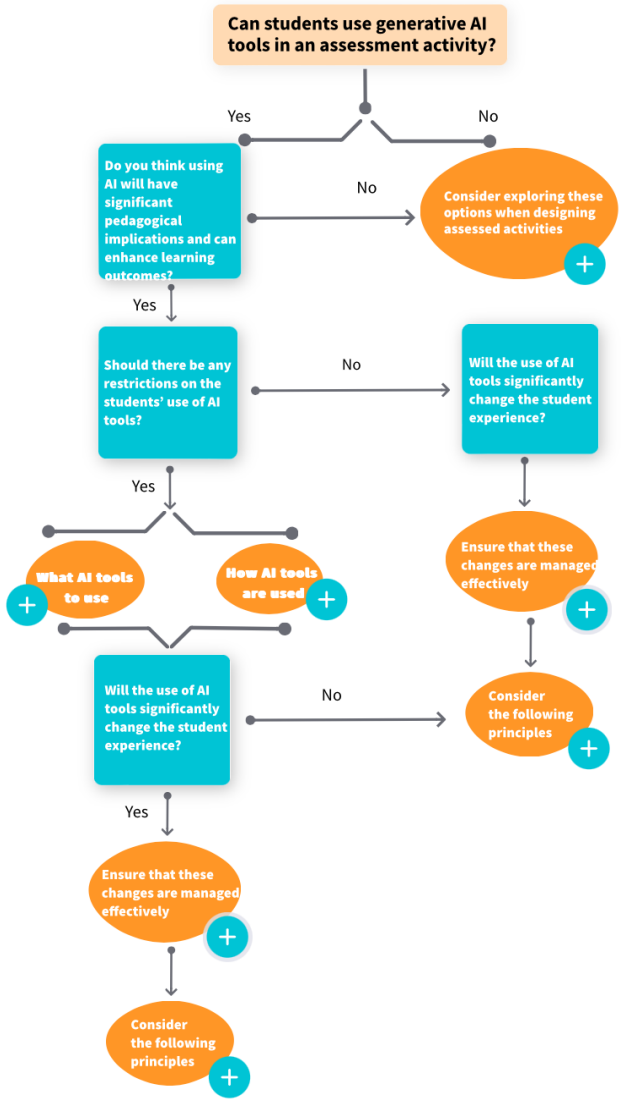

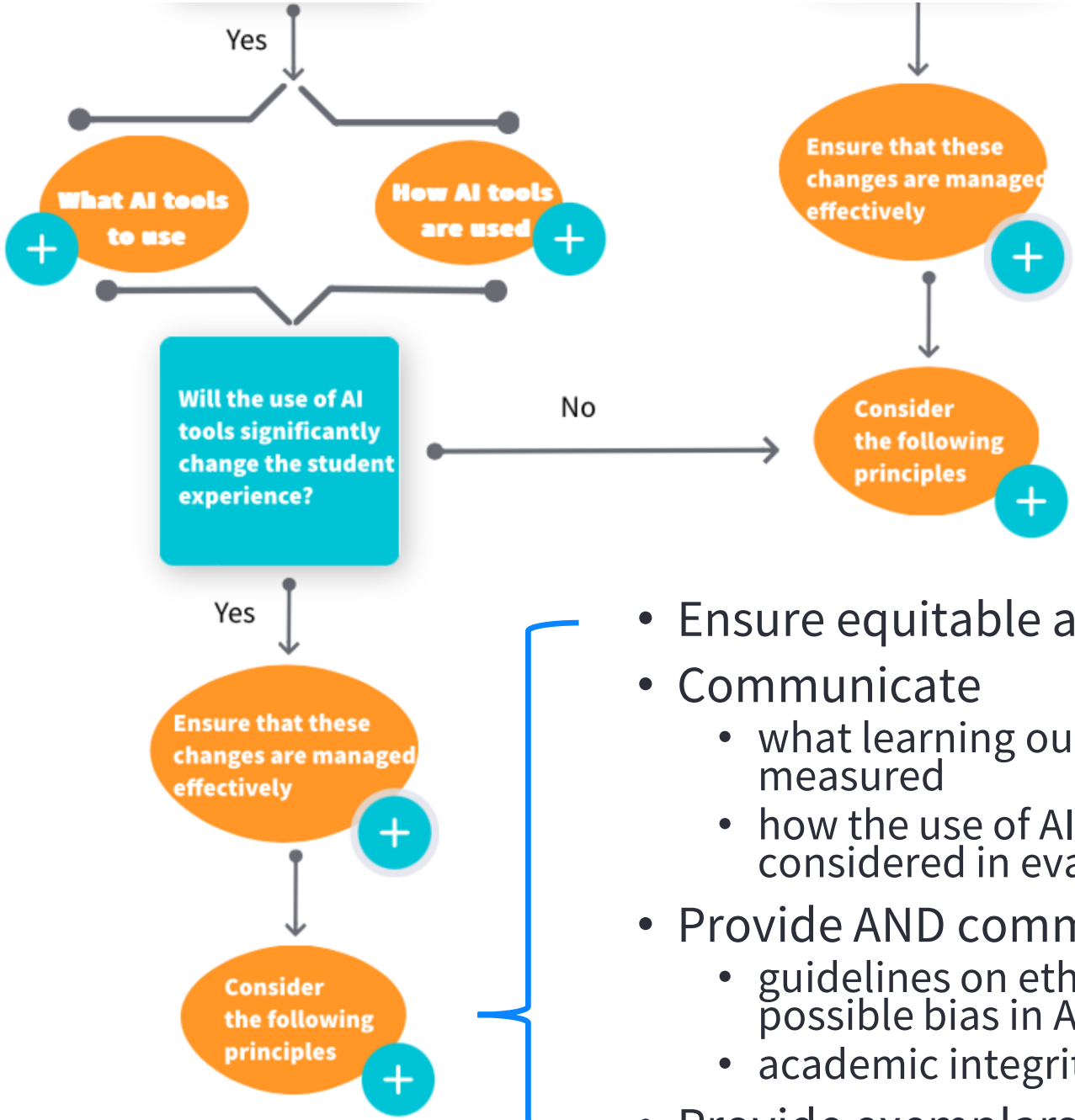

- Ensure equitable access to tools
- Communicate
  - what learning outcome will be measured
  - how the use of AI tools will be considered in evaluation
- Provide AND communicate
  - guidelines on ethical implications and possible bias in AI tools
  - academic integrity policies
- Provide exemplars

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Thanks. Any questions?

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