CELEBRATING MEANINGFUL IMPACT

25 YEARS AND BEYOND

SMU
SINGAPORE MANAGEMENT UNIVERSITY

Emerging Library Leaders' Summer School for Asia-Pacific

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Agenda

- A brief history of SMU
- Responding to trends and challenges - examples
  - Sustainability
  - Hybrid learning
  - AI
- SMU's approach to the use of AI in assessments
- Group discussion and sharing
- Wrap-up: Continuing challenges in AI and education
- Q&A

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A brief history of SMU

The genesis of SMU

1997 — **International Academic Advisory Panel (IAAP)**

- noted **shortfall of ~7,000 graduates** required to address growth of knowledge-based and service economy
- recommended establishment of a third university in 1997

1998 — **The Singapore government announced the establishment of third university**

- focused on management education
- with governance structure and operating model that is different from NUS and NTU
- distinctive curriculum that develops broader skill sets
- partnership signed with the Wharton School

1999 — **Prof. Janice Bellace (Deputy Dean at Wharton) appointed President of SMU**

2000 — **SMU admitted its first cohort of 300 students in Aug 2000**

A brief history of SMU

The SMU difference

Founding identity

- Management-focused university that offers programmes in the allied disciplines of economics, social sciences, information systems, and law, much like London School of Economics and Political Science (LSE)
- Liberal arts education and pedagogical style

Curriculum & pedagogy	• Small class sizes • Interactive pedagogy (compulsory class participation) • Emphasis on group projects and presentations • Global exposure • Community service and internship
Admissions criteria	• Holistic assessment that goes beyond grades • In-person interview and writing test

The SMU UG Curriculum Structure – AY2019 onwards

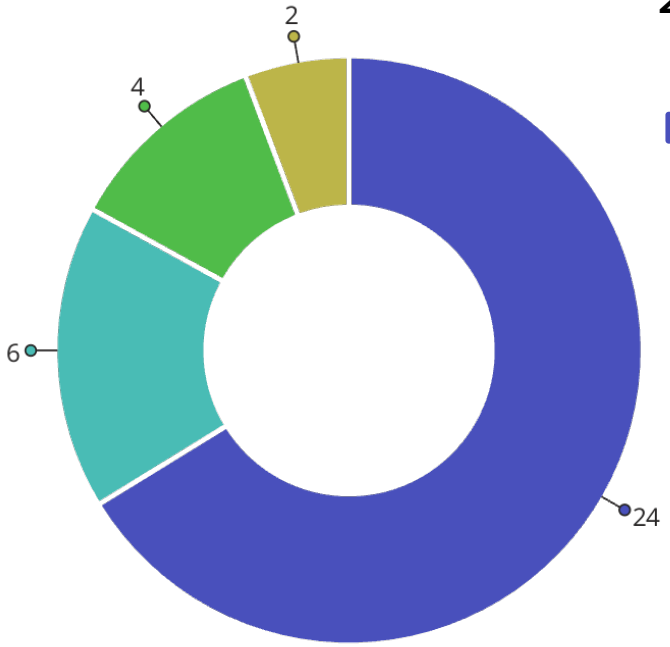
Core curriculum

12 out of 36 CUs (33%)

Civilisations
- Ethics And Social / Corporate Responsibility (1 CU)
- Big Questions (1 CU)
- Global Exposure

Communities
- Economics And Society (1 CU)
- Technology, Science And Society (1 CU)
- Cultures Of The Modern World (1 CU)
- Community Service (1 CU)

Capabilities
- Numeracy (1 CU)
- Modes Of Thinking (1 CU)
- Managing (2 CUs)
- Writing And Reasoning (1 CU)
- Internship (1 CU)



School curriculum

24 out of 36 CUs (67%)

Major and Free Electives

Responding to trends and challenges

Examples

Sustainability

- equipping students with the knowledge and skills needed to tackle sustainability challenges is a moral responsibility
- as economies and companies make the green transition, sustainability skills will be in demand

1 Foundational understanding

All students complete an online module on "*Sustainability and Sustainable Development*"

2 Majors

Sustainable Management major (School of Business)
Sustainable Societies major (School of Social Science)

3 Graduation requirement

All students take at least one course on sustainability to graduate

Responding to trends and challenges

Examples

Hybrid learning

- opportunity for self-paced learning and improved learning outcomes
- lifelong learning will increasingly involve online learning

1 Digital Readiness Initiative (for instructors)

All instructors deliver one synchronous online session in a year

2 Blended learning courses

1/3 of course delivered through digital formats

	Face-to-face	Blended
Instructor rating	6.28	6.35
Course rating	6.09	6.16

Blended courses have significantly higher ratings for "Instructor's clarity and understandability" and "Instructor's presentation and speaking skills"

3 MOOC

Free open online course on Climate Change available to anyone keen to learn about climate change

https://opencourses.smu.edu.sg/product?catalog=CIS-101-F-1

Responding to trends and challenges

Examples

AI

- as the world becomes increasingly reliant on AI, students need to learn about its benefits, its limitations, and its ethical use
- potential for improving learning outcomes if used appropriately

1 Foundational understanding

developed online module for students: "*Guide to Learning with AI*"

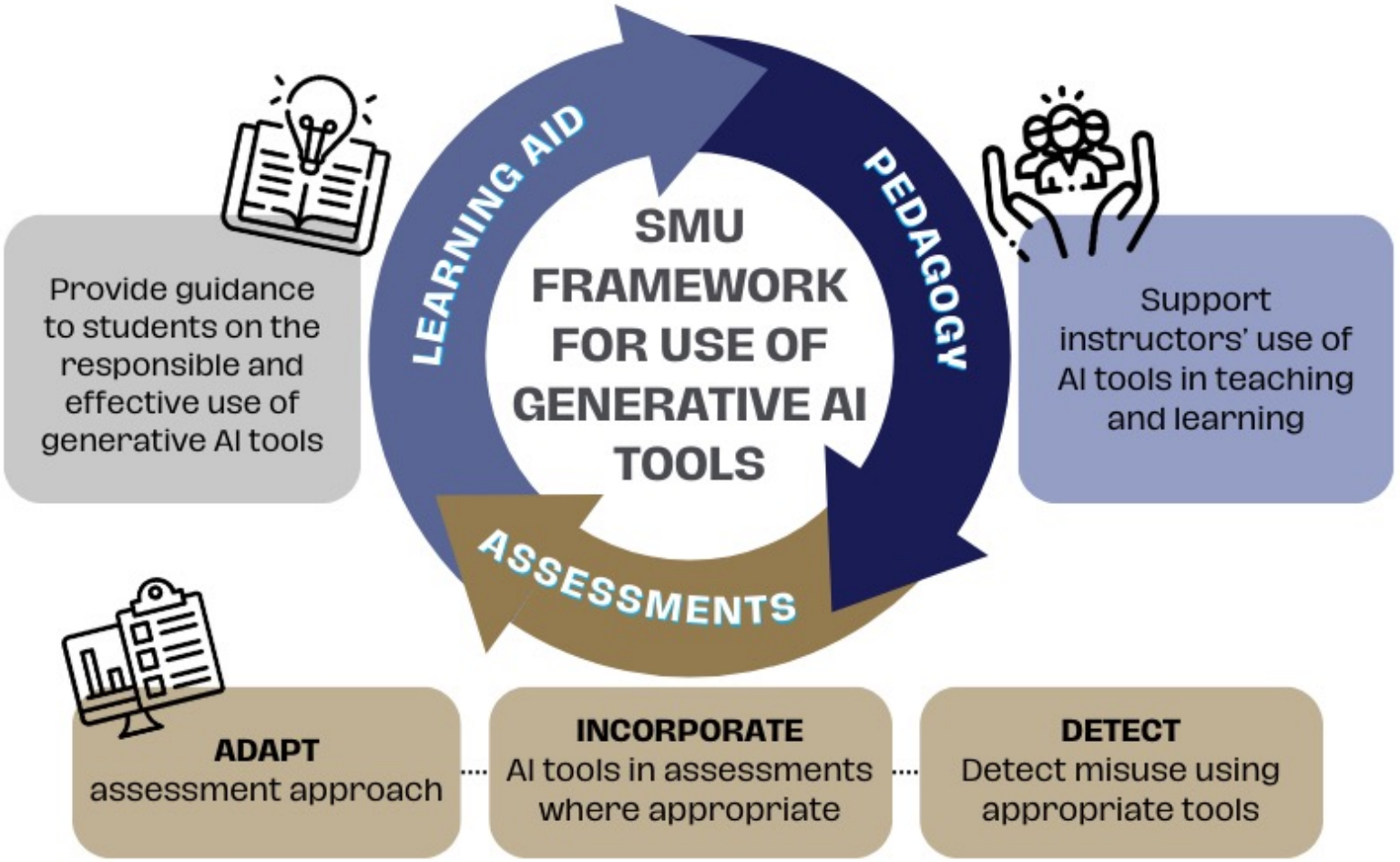
- Introduction to Responsible Use of AI
- Effective Use of AI Tools in Research
- Using AI Tools to Write Faster and Better
- Research with AI Tools: Introduction to Prompt Engineering
- Research with AI Tools: Assessing AI with SPEED
- Research with AI Tools: Limitations of AI Tools

2 SMU Framework for Use of Gen AI Tools

articulates the university's stand on the use of gen AI for teaching and learning

3 DRIVE approach to investigating unauthorized use

provides a protocol for ascertaining if unauthorized use has occurred



SMU's position

The University recognises the benefits of generative AI tools and is committed to integrating generative AI tools into education, while safeguarding academic integrity and rigour. At the same time, the University aims to teach students to use these tools responsibly and effectively.

SMU's approach to the use of AI in assessments

Adapt

Make AI inaccessible or unhelpful

Incorporate

Permit AI use in some contexts

Detect

Prohibit AI use

Instructors redesign assessments

- take-home → in-class
- open-book → lockdown browser condition
- application of concepts to contexts that are current or to very specific contexts that AI does not have information or data on
- examine process/intermediate output in addition to final output

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Prohibit submission of content generated by AI

Task force assessed effectiveness of AI detectors

- tested Turnitin, GPTZero, Originality.ai
- ran human-generated and AI-generated content through detectors
- examined **false positive** and **false negative** rates

Findings

- low false positive rates for human-generated content
- high false negative rates for AI-generated content that have been paraphrased using AI tools
- rapid advances in AI technology and proliferation of tools makes detection a game of "whack a mole"

DRIVE

DETECT Unauthorised Use

- Use Turnitin AI Detector on eLearn to detect AI-generated text in student assignments
- Assignments flagged as AI-generated to be further checked using a second AI detector tool with assistance from the eLearn team
- Verify references and look for telltale signs of AI-generated output, such as lack of depth, lack of variety in words and sentence structure, and outdated information

REVIEW Student Submissions

- Compare student's submission with output generated by a tool such as ChatGPT
- Discuss evidence with the Course Coordinator (if there is one)

INFORM student about status

- Inform student promptly and in private.
- Student to be given opportunity to respond

VERIFY Student Submission using Other Sources

- Verify using other sources of evidence, such as evidence of prior work leading to final submission, including notes, research material, and early drafts
- Assess student's knowledge and understanding by asking them clarifying questions and getting them to explain the content in assessment

ESCALATE via existing Academic Integrity channels

- Report confirmed cases of unauthorised use of AI tools to the relevant Associate Dean/Deputy Dean

SMU's approach to the use of AI in assessments

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Instructors inform students of uses for which AI is permitted

Use cases:	Permit	Permit with disclosure	Prohibit
Ideation			
Draft outline			
Information/literature search			
Summarise documents			
Create first draft			
Editing for clarity and flow			
Feedback on work			

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Important to consider the AI hallucinations and the impact of cognitive offloading

Cognitive Offloading:

- occurs when one delegates cognitive tasks to external aids, reducing engagement in deep, reflective thinking
- emerging literature demonstrating negative impact on:
  - critical thinking
  - creative thinking
  - metacognitive skills
  - memory
  - performance on exam

Evidence of negative impact on cognitive skills

Gerlich, M. (2025)

AI Tools in Society: Impacts on Cognitive Offloading and the Future of Critical Thinking. *Societies*, 15(1), 6

- **negative correlation between frequency of AI use and critical thinking ability**
- effect mediated by delegation of cognitive tasks to AI tools
- younger participants were more dependent on AI tools and had lower critical thinking scores

Niloy, A. C., Akter, S., Sultana, N., Sultana, J., & Rahman, S. I. U. (2024)

Is Chatgpt a menace for creative writing ability? An experiment. *Journal of computer assisted learning*, 40(2), 919-930.

- **negative impact of AI chatbot use on creative writing abilities** (focusing on originality, content presentation, accuracy, and elaboration)

Evidence of negative impact on cognitive skills

Zhai, C., Wibowo, S. & Li, L.D. (2024)

The effects of over-reliance on AI dialogue systems on students' cognitive abilities: a systematic review. *Smart Learning Environment,* 11(28).

- Meta analysis of 14 papers
- although AI tools aid decision-making and improve efficiency, but lead to **reduced critical and analytical thinking skills**

Abbas, M., Jam, F.A. & Khan, T.I. (2024)

Is it harmful or helpful? Examining the causes and consequences of generative AI usage among university students. *International Journal of Educational Technology in Higher Education*, 21(10).

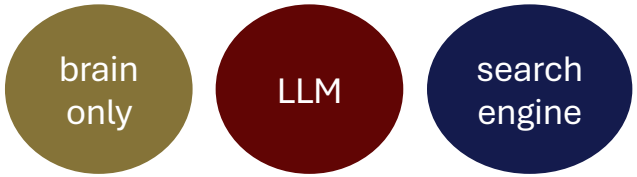
- ***use of ChatGPT* increased tendencies for procrastination, decreased memory and academic performance**

Evidence of negative impact on cognitive skills

Kosmyna, N., Hauptmann, E., Yuan, Y.T., Situ, J., Liao, X.H., Beresnitzky, A.V., Braunstein, I. and Maes, P. (2025)

Your Brain on ChatGPT: Accumulation of Cognitive Debt when Using an AI Assistant for Essay Writing Task. *arXiv preprint arXiv:2506.08872*

Sessions 1-3: 3 groups of participants



participants used brain only, LLM, or search engine in essay writing task

Session 4: 2 groups of participants

- *LLM group switch to brain only in essay writing*
- *brain only switched to LLM*

Measures	brain activity (using EEG), recall	
Results	• lowest neural activity in LLM group • lowest self-reported ownership of essay and ability to quote own work in LLM group	• LLM-to-brain showed lower neural connectivity • Brain-to-LLM showed higher recall

Discussion questions

1. In what types of use cases should the use of AI be allowed? What principle should guide that decision? How do you police prohibited use?

Use cases:	Permit	Permit with disclosure	Prohibit
Ideation			
Draft outline			
Information/literature search			
Summarise documents			
Create first draft			
Editing for clarity and flow			
Feedback on work			

2. What about cognitive offloading and skills atrophy? How can we design courses and curriculum to avoid the detrimental effects of AI use?

Discussion questions

3. How can libraries help students navigate a world where AI hallucinates and the spread of misinformation is accelerated by technology?

4. What essential competencies must the graduates of today have and how can the library help to nurture those competencies?

Continuing challenges in AI and education

1. Use of AI tools by instructors
   - Should AI tools be used to:
     - generate teaching content?
     - generate assessment questions?
     - provide feedback to students?
     - grade assessments?

   - Will over-reliance on AI for these tasks render human educators obsolete?
   - Will over-reliance on AI lead to perceptions of unfairness on the part of students?
     "If my prof can use it, then why can't I?"

2. Gap in AI knowledge and proficiency between faculty and students
3. Imbuing in students values that will guide them in using AI responsibly

THANK YOU!