

How does AI CRAFT Higher Education

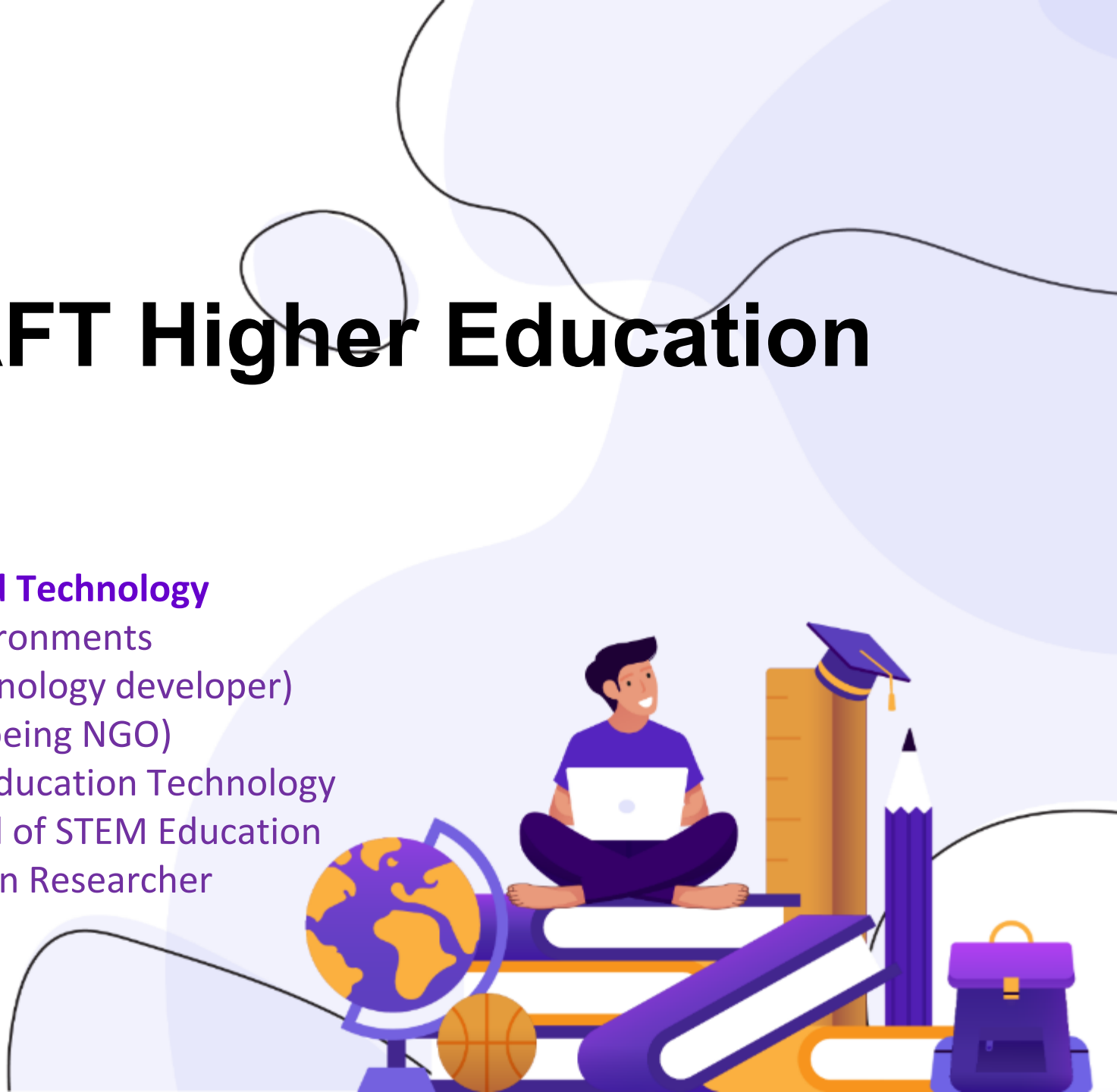
Thomas K. F. Chiu

Associate Professor in AI and STEM education

Program coordinator, BSc Learning Design and Technology

- Co-Editor-in-Chief Interactive Learning Environments
- Co-founder, Shallwetalk (an education technology developer)
- Advisor, Look up Hong Kong (a digital well being NGO)
- Associated Editor, Australasian Journal of Education Technology
- Associated Editor, The International Journal of STEM Education
- Associated Editor, The Asia-Pacific Education Researcher

Email: tchiu@cuhk.edu.hk



2024 QS 世界大學學科排名
QS World University Rankings by Subject 2024

#8

建築學
Architecture

#26

傳媒學
Communications & Media Studies

#28

醫學
Medicine

#28

現代語言學
Modern Languages

#29

社會學
Sociology

#31

地理學
Geography

#33

教育
Education

#33

語言學
Linguistics

#35

計算機科學與信息系統
Computer Science & Information Systems

#36

會計與金融學
Accounting & Finance

#36

人類學
Anthropology

#41

心理學
Psychology

#41

教育研究學科
Educational Subjects

#47

藝術與人文
Arts & Humanities

#47

哲學、語言與宗教研究
Theology, Philosophy & Religious Studies

#48

經濟與社會學
Economics & Economics

#48

生命科學及醫學
Life Sciences & Medicine

#49

法律
Law

#21-50

環境研究
Environment

QS 世界大學學科排名
QS World University Rankings by Subject 2024

QS 世界大學學科排名
QS World University Rankings by Subject 2024

THE World University Rankings by Subject 2025

11 CUHK subjects rank

Top 100 in the world

#11

Education Studies

#24

Medical & Health

#30

Computer Science

#47

Business & Economics

#55

Social Sciences

#56

Engineering

#59

Law

#61

Physical Sciences

#67

Psychology

#81

Life Sciences

#88

Arts & Humanities

2025-26 U.S. News & World Report Best Global Universities Rankings

#37

#1 in HK

U.S. News & World Report Best Global Universities Rankings

U.S. News & World Report Best Global Universities Rankings

Chiu, Thomas K.F.

Chinese University of Hong Kong, Hong Kong, Hong Kong • Scopus ID: 56435413000 • ID 0000-0003-2887-5477 ↗

Show all information

6,780 Citations by 4,936 documents 118 Documents 42 h-index

Edit profile ••• More

Documents (118) Impact Cited by (4,936) Preprints (3) Co-authors (358) Topics Awarded grants (0)



Chiu, Thomas K.F.

Chinese University of Hong Kong

Rank: 1261

– Main Field: Social Sciences

– Sub Field: Education

– Rank in the SubField: 19.0

– H-index: 23, Hm-index: 13

Top 2% Listed Year(s): 2025, 2024, 2023, 2022

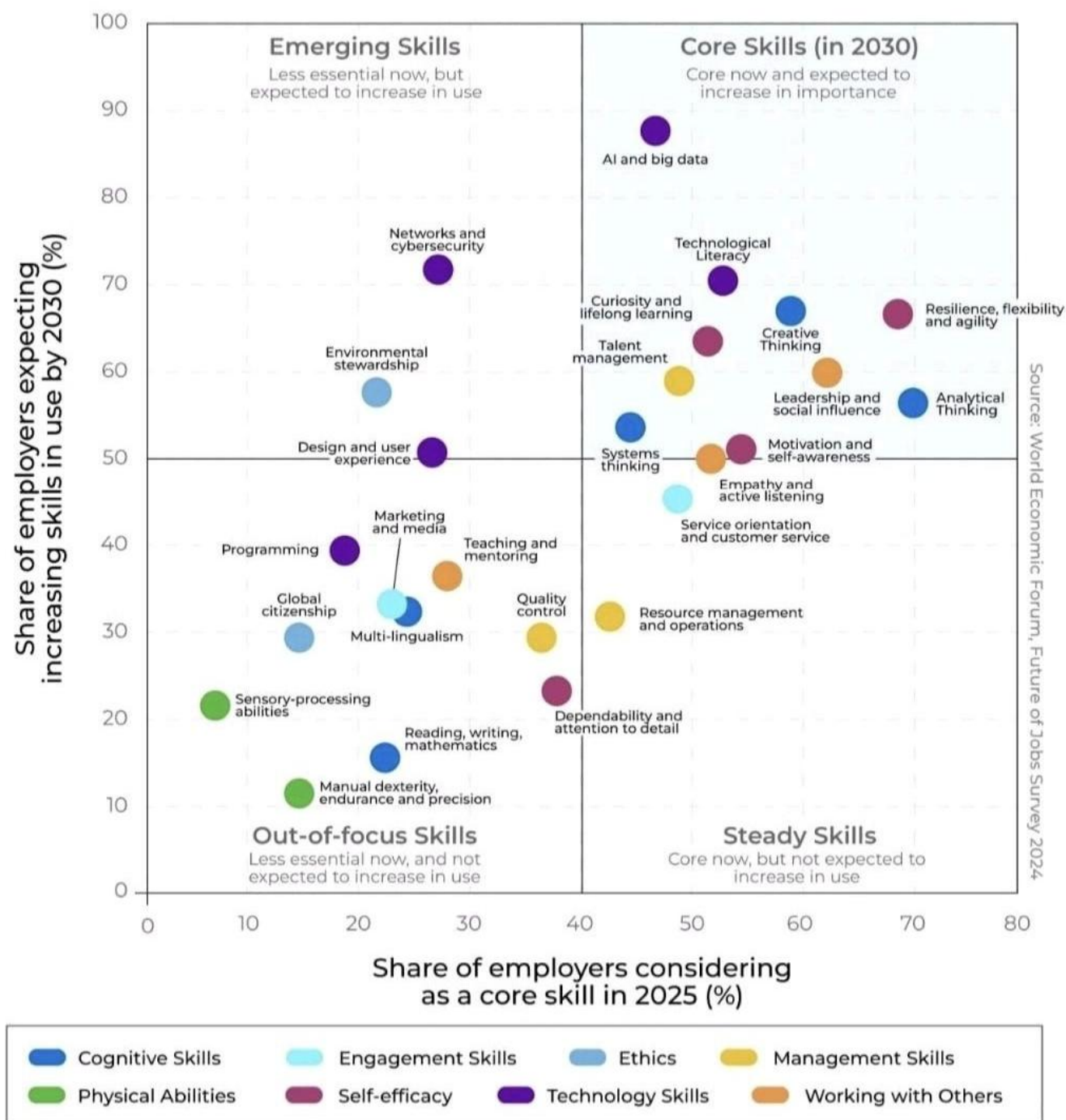
"Single Year" Data

TOP 2% SCIENTISTS

The data is verified and sourced from ELSEVIER and Stanford University's Top 2% Scientists list.

www.TopSciNet.com





What do industries and societies need?

More bad news for Gen Z grads: Even LinkedIn's CEO is saying the future of work won't belong to people with degrees anymore


Emma Burleigh

Thu, October 2, 2025 at 11:07 PM GMT+8

3 min read

 Add Yahoo on Google





MY STORY

How to measure the future core skills?

Problem solving skills

AI literacy / competency

Creativity

Interdisciplinary mindset

Ethical awareness

[Home](#) > [International Journal of STEM Education](#) > [Article](#)

A decade of research contributions and emerging trends in the *International Journal of STEM Education*

Editorial | [Open access](#) | Published: 19 February 2025

Volume 12, article number 12, (2025) [Cite this article](#)

[Download PDF](#) 

✓ You have full access to this [open access](#) article

[Thomas K. F. Chiu](#), [Yeping Li](#) , [Meixia Ding](#), [Jonas Hallström](#) & [Milo D. Koretsky](#)



[International Journal of STEM Education](#)

[Submit manuscript](#) →

 **Scienmag**
Science Magazine

Search...

[HOME](#) [SCIENCE NEWS](#) [CONTACT US](#)

[Home](#) > [Science News](#) > [Technology and Engineering](#)

A Decade of Breakthroughs in STEM Education

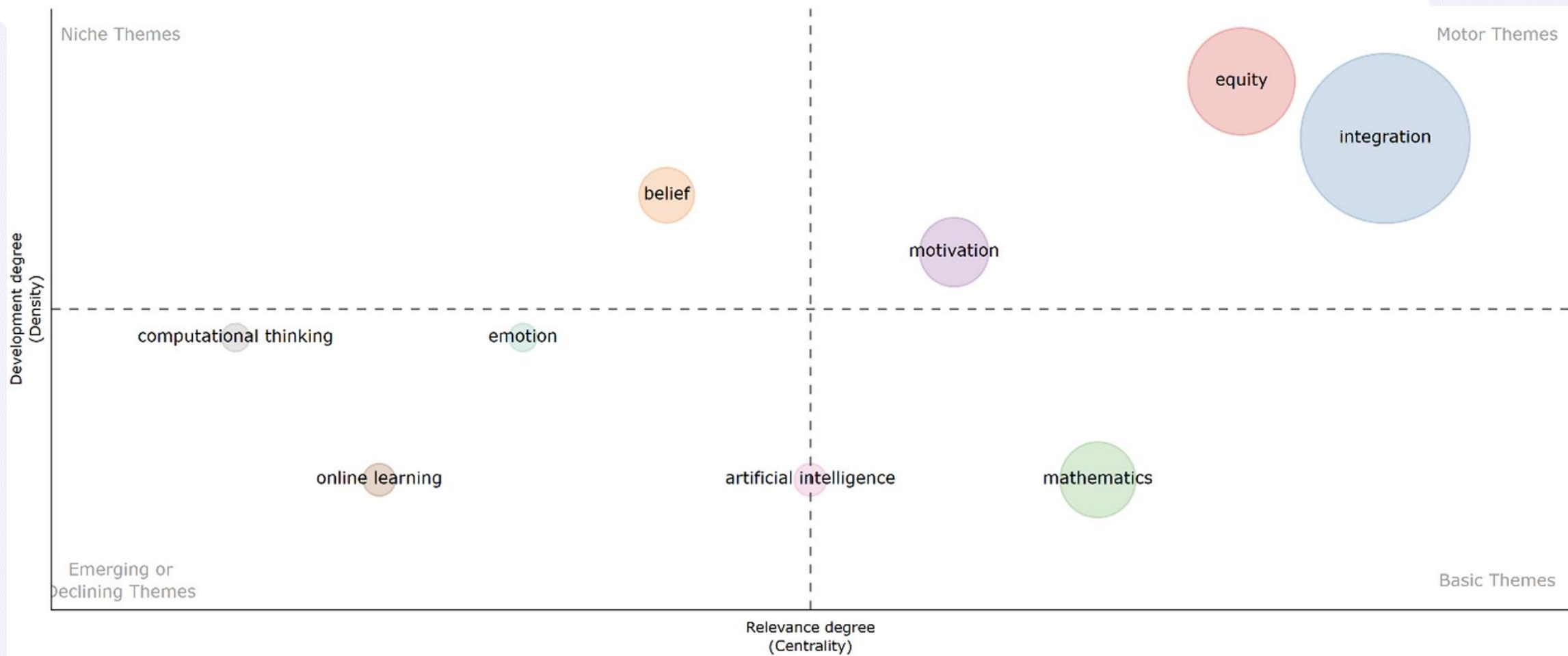
April 29, 2025 in [Technology and Engineering](#) Reading Time: 4 mins read

0



What does **literature** say?

- **#8** out of 756 journals indexed in the category of “Education & Educational Research” of SSCI/ESCI
- **#2** of 85 journals indexed in the category of “Education, Scientific Disciplines” of SCIE



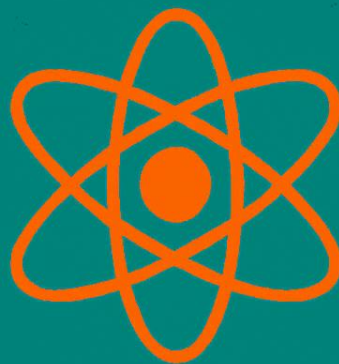
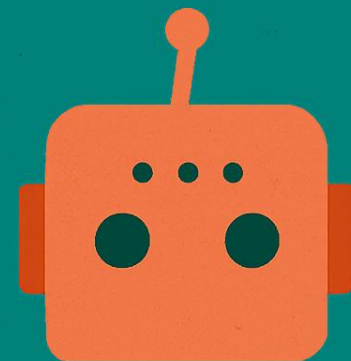
A Call to Action: Redesigning High Education

- **Our Responsibility:** Embedding These Core skills
- **Assessment:** Move beyond essays and exams to evaluate portfolios, in-class performances, and the originality of AI-augmented projects.
- **Pedagogy:** Shift from lecture-based instruction to project-based, maker-centered learning that requires human-AI collaboration.
- **Curriculum:** Weave these outcomes into every programs/courses, not just as separate courses.

The goal of education is no longer to fill a bucket, but to equip the traveler with a compass, a map, and a skilled guide for an uncharted journey.

Time to Act







The LDTE programme is pleased to receive some senior secondary school students on 21 November 2023, and have the LDTE Programme Co-ordinator to deliver a programme talk on the future education trend, future workforce in digital and STEM education, as well as programme features and admission requirements. A current LDTE student is also invited to share her learning experiences with the participating students.

◆ **CUHK launched innovative programme on STEM and digital learning to meet evolving market and academic demands** (*The Standard* 2024-10-04)

◆ **香港中文大學 學習設計與科技理學士學位課程 迎合創科發展大趨勢** (*Sing Tao Headline* 2024-10-04; *Sing Tao Daily* 2024-10-04)

A framework for empower education with AI



Automating teacher tasks with AI (**Be Careful**)

Automated MC scoring,
Automated essay scoring,
Automated solution providers
Leading cognitive disengagement

Replace



Enhancing teacher tasks with AI

Personalized reading recommendations
Making slides and videos
Minutes dropping
Hybrid assessment

Enhance



Empowering teachers with AI for challenging tasks

Instant multilingual support for ESL students
Assessing generic skills
Foster project based learning

Solve

Research?

Integration vs Innovation

Research?

Accurate vs Appropriate



Chinese Values

📊 Assessments

Warmup Propriety Filial Piety Righteousness Benevolence



Creativity

📊 Assessments

Warmup Fluency Flexibility Originality Elaboration



Problem Solving

📊 Assessments

Warmup Sensitivity Alternatives Consequences Means-End Causality



Features	Assessment approaches
<ul style="list-style-type: none">▪ Role play▪ Game-based▪ Stories▪ Support multiple languages (mixed language)▪ Audio (less cognitive load; for younger kid)▪ Scenarios dialogue analysis	<ul style="list-style-type: none">▪ Literature guide; date driven▪ Specific dimensions of skills or values▪ Dialogue analysis▪ At least 20+ assessment points for each story▪ Provide positive feedback to students▪ Provide teachers analyses▪ Relatively scoring

STEAM /Edtech development

Industry

Does Duolingo hire linguists?

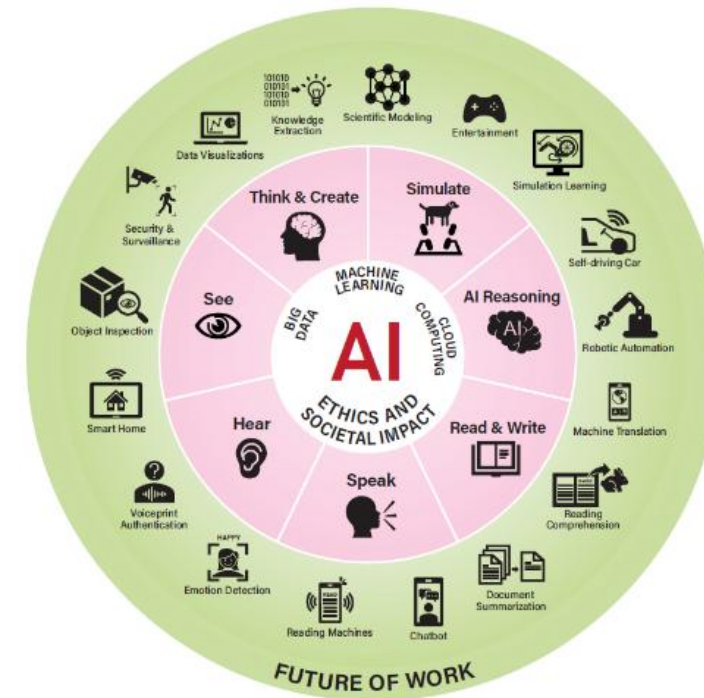
Yes, Duolingo hires Learning Designers who are language enthusiast and educator with a strong background in linguistics, languages, language typology, and language teaching.

School

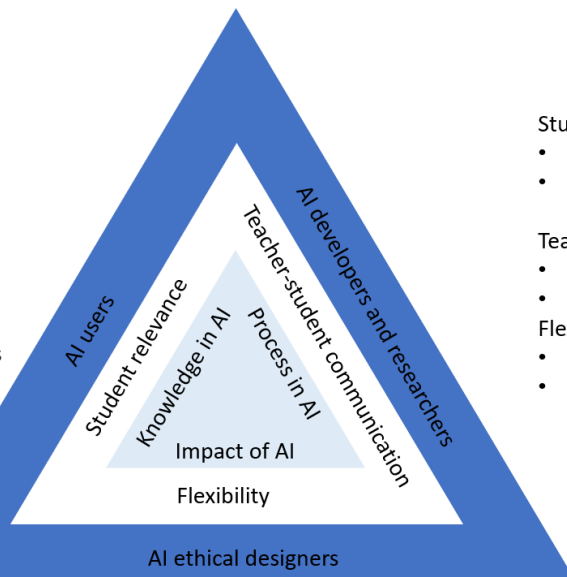
University

Challenges?

School and University Partnerships



- Knowledge in AI
- Definition
 - Development
- Process in AI
- Perception
 - Technical skills
- Impact of AI
- Social impact
 - AI ethics and human bias



- Student relevance
- Authenticity
 - Local understanding with a global perspective
- Teacher-student communication
- Consistent terminology
 - Graphical representation
- Flexibility
- School environment
 - Student need

In my university, all
students will take an AI
competency course in
2025-2026

Implicating on Institutional Policy

- **Strengthen Instructor Beliefs**
- **Professional Development**
- **Innovative & Holistic Teaching**
- **School, University, and Industry Partnerships**
- **Rethink Assessment Policies**
- **Promote Interdisciplinary Programs**

AI will CRAFT our Education

- **C**are: Human-centred education, e.g. empathy, Care about their learning and peers
- **R**einforcement learning: Personalized feedback; learning path; Self-regulated learning; start from young.
- **A**ssessment: Assessment approaches; Dimensions of assessment
- **F**uture skills and competencies: Soft, Core and research skills
- **T**ransdisciplinary learning: AI as an alternative intelligence, assisted technology, and advisory intelligence.

My questions for you

Will our graduates master AI, or be mastered by it?

Is education a bucket to fill, or a compass to equip?

Thank You

Thomas Chiu

Associate Professor

Department of Curriculum
and Instruction

The Chinese University of Hong Kong

Email: tchiu@cuhk.edu.hk

