AI-Assisted Online Learning Platform for Financially Disadvantaged Students

Dr Kevin YUNG Associate Head

EdUHK Online Learning Platform with GPT Chatbot benefits over 3,000 disadvantaged students

The online learning platform developed by The Education University of Hong Kong (EdUHK), in partnership with Principal Chan Free Tutorial World, adds a number of functions in its second phase, including a ChatGPT robot, a question and discussion area and video search. In the future, the online platform will benefit over 3,000 primary and secondary students from economically disadvantaged families.

The project provides a self-learning platform for disadvantaged students receiving free tutorial services and those on the waitlist to be allocated a volunteer tutor. The second phase of the platform leverages the use of Al. The newly added ChatGPT robot provides feedback to students with timely learning support and relevant explanations. Dr Kevin Yung, Associate Professor at the Department of Curriculum and Instruction of EdUHK, believes that AI is dominant and can be embraced in mainstream and "shadow" education (i.e. supplementary tutoring). He said, "the use of AI as a 'learning process' not only provides answers, but also covers explanations and thinking processes."

Contact Us:

Funded by Shang Shin Chun Tong Charitable Found Venture Global Limited and Hung Hom (Three Districts) Kai Fong Association and supported by Hong Kong Research Grants Council's Research Matching Grant Scheme, the trial of the second phase online platform started in August 2022. After 100 pairs of tutors and students provided their feedback and opinions, the platform is now fully open to tutors and students of the project, helping disadvantaged students get in touch with technology and learn online.

With over 5,000 teaching videos covering Chinese, English and Mathematics subjects from Primary 1 to Secondary 6 evels, the Project has reached around 19,000 views since its launch in September 2021

Al is unstoppable and can be complemented with mainstream and shadow education (supplementary tutori

ChatGPT



It is a real pleasure to witness the launch of the 1st issue of C&I Newsletter. We believe it is not only a showcase of our most recent achievements and updates but also an acknowledgement of C&I being an excellent department with a professional and dedicated team who always strives for making contributions for the benefits of both research and teaching in Hong Kong. The current issue addresses the most emergent contemporary issue and trend in education - The applications of digital technology and how they transform modern education. The sharing of the outcomes from internal and external funded projects conducted by four of our colleagues broadens our horizons by offering valuable insights in understanding particularly the role and positive impact of digital technology in curriculum, teaching and assessments. The dissemination of these new initiatives serves as a platform for all to 'Communicate' with and 'Inspire' each other, with the aim to 'Cultivate' and 'Ignite' one's potential and passions towards quality education, which are the core missions of the Department of C&I.

> Dr Teresa NG Assistant Professor of Teaching Editorial Chair





Introduction

We are excited to launch the inaugural issue of the C&I Newsletter. This Newsletter aims to transform the innovative research conducted by our C&I team into practical knowledge for the broader educational community, fostering an exchange of research. practices, and policies. Our first issue features articles spanning the four core areas of C&I: curriculum, teaching, assessment, and teacher education. Highlighting projects funded by esteemed internal and external sources, we address pressing contemporary educational issues, particularly the opportunities and challenges arising from the convergence of digital technology and education. We trust this publication will stimulate meaningful dialogue among educators in various sectors.

SSI

Inspiring Education Transformation

Dr Yang Lan (Joy)'s leadership in implementing the Assessments Reenergize Teaching (ART) approach has made a valuable impact on teaching and learning. Her work with the A+BLe assessment platform, utilized across diverse courses and 14 UGC-funded programs, showcases a learner-centered environment through technology-enhanced assessments. Dr Yang's own teaching reflects this approach, and she's actively shared the platform across EdUHK's departments and faculties.

From 2020 to 2022, at least 25 courses across a wide range of disciplines (e.g., Special education, Curriculum and Assessment, Chinese linguistics, Mathematics education,

Information Technology) across three faculties at EdUHK embraced technology-enhanced assessments through her innovative and constructive designs of the A+BLe assessment platform with Profs Lim Chirp Ping, Prof Yan Zi and other co-investigators.



Team-based E-Assessment (TEA) engaged 212 student teams,



Faculty of Education and Human Development 人類發展團際

Figure 1

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Dr Joy YANG Associate Head

while e-assessment tools provided self-directed assessment reports for over 1,000 students. Positive feedback from students indicates enhanced self-directed learning traits: ownership of learning, engagement, emotional well-being, collaboration, and effective learning- essential attributes for today's rapidly changing era.

Dr Yang's ART approach, is grounded in influential theories of learning, including formative assessment theory, the power of feedback, and self-directed learning. The ART approach reflects her commitment to promoting self-directed learning through innovative and evidence-based practices. The A+BLe assessment platform showcases her creative

integration of technology-enhanced formative assessment with Specific, Measurable, Achievable, Relevant, Technology-enhanced. and Sustainable (SMARTS) features to empower self-directed learners in a progressive and productive manner. The platform consists of a clearly-presented A+BLe teaching flow (see Figure 1), and e-assessment tools including Individual-based E-assessment



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(IEA), Team-based E-Assessment (TEA), Self- and Peer Assessments (SPA) which are user-friendly and provide easy-to-interpret learning analytical results.

Whereas the ART approach was initially adopted in higher education, Dr Yang has extended its application to school education. For example, as co-PI, she has applied the ART approach to support inclusive assessments for evaluating the career development needs of special educational needs (SEN) school leavers in the teaching programme of the Youth Academy funded by the Jockey Club Charity Trust, contributing to an innovative assessment tool for assessing the career adaptability of school leavers with SEN. In 2021/2022, the team received the EdUHK President's Outstanding Knowledge Transfer Award. To enhance HK educators' professional development, Dr Yang also applied the ART approach to develop a self-assessment platform for a Professional Development Program course commissioned by the Education Bureau of Hong Kong.

- Innovative ART Approach: Dr Yang's ART method merges influential learning theories with the A+BLe platform's SMARTS features, advancing self-directed learning.
- User-Friendly Tools: The platform offers easily interpretable results through tools like Individual-based E-assessment (IEA), Team-based E-Assessment (TEA), and Self- and Peer Assessments (SPA).
- Collaborative Innovation: Together with esteemed colleagues, Dr Yang developed A+BLe, fostering collaborative assessments in 25 EdUHK courses, 14 UGC-funded programs.
- Enhanced Learning Traits: Positive student feedback showcases improved ownership of learning, engagement, well-being, collaboration, and learning.
- Extended Application: Dr Yang extends ART to school education, encouraging interested parties to contact her at yanglan@eduhk.hk for the access link to A+Ble system.

Primary School Teachers' E-assessment Practices, Intentions, and Influencing Factors in the New Normal: Implications for Developing E-assessment Policy

Dr ZHAN Ying

Associate Professor

E-Assessment

The educational landscape has undergone a significant transformation as a result of the pandemic, making the fusion of online and offline learning a prevailing trend. Nowhere is this shift more evident than in Hong Kong's primary schools, where this blended

approach has become the norm. Given the wealth of e-assessment experience that has been accumulated in response to this new normal, the present moment offers a valuable opportunity for researchers to delve into these practices and provide insights to policymakers. This project explores how primary school teachers conduct e-assessment during lockdowns, using the Theory of Planned Behavior. The study's methodology involves a comprehensive survey meticulously crafted from in-depth interviews with 48 teachers. Administered through Qualtrics, this survey reached a wide-ranging pool of 878 participants. The resulting data was subjected to a rigorous analytical process encompassing descriptive statistics, t-tests, ANOVA, and structural equation modeling, revealing noteworthy patterns and correlations.

Results indicate primary teachers prefer e-tests/exercises over other e-assessment methods. Their practices vary based on teaching stage, experience, and subject. Teachers' intentions of using specific e-assessment types and perceived control of them significantly influence their corresponding e-assessment practices. Attitudes matter for using e-tests/exercises and alternative e-assessment tasks, less for e-feedback. Subjective norms affect intentions for e-tests/exercises and e-feedback, but less for alternative e-assessment tasks.

The culmination of this project arrives at a set of eight policy recommendations that stand to enrich and invigorate the landscape of e-assessment in primary schools: encompassing 1) a learning-oriented e-assessment system,

- 2) infusion of alternative e-assessment strategies in daily teaching.
- 3) provision of targeted e-feedback training for teachers,
- 4) cultivation of e-assessment-focused learning communities,
- 5) initiatives to enhance the intention to embrace e-assessment,
- 6) bolstering e-assessment literacy,
- 7) heightening awareness about the merits of alternative assessment approaches, and
- 8) the adoption of a whole-school e-assessment approach.

WITH INNOVATIVE TEACHING GRANT 21-22 ALPD@ELP: From Professional Enquiry to Professional Learning to Education Leadership -Using Future Classrooms to visualize Action Learning Professional Development on the E-Learning Platform



Dr NG Cheuk Wing Margaret Senior Lecturer II

Through ALPD@ELP, student teachers become users and producers of knowledge about teaching, in communities of practice, which are constantly refreshed through processes of professional enquiry, with the roles as researchers, active decision-makers, competent implementers, reflective practitioners, and reform activists.

ADVOCATING PEDAGOGICAL INNOVATION IN FUTURE | CLASSROOMS@EDUHK:

- a) To empower student teachers to establish learning communities (subject-based) in redeveloping school-based assessment (SBA) plans and strategies within the Action Learning Cycle;
- b) To coach student teachers from making professional enquiry to later professional learning and finally developing educational leadership;
- c) To visualize student teachers' learning processes of reflecting critically on their FE practice of SBA implementation, resolving significant teaching and learning challenges, and identifying perceptual changes and skill competencies;
- d) To showcase the evidence of teacher empowerment, teacher education, and teacher professionalism with pre-/post-test evaluations and self-reflective reports.





Assessment



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