

Day 1 Breakout Session II (11.55am - 12.35pm)

Venue: SR 6.05

[103] Enhancing Engagement and Interaction in Online Asynchronous Learning

Author/s: Kim Sung Lee and Gaik Bee Lim

Abstract: Purpose: Ngee Ann Polytechnic, Singapore, has adopted the flipped learning approach, where live lectures had been converted to online asynchronous learning (OAL) materials, while tutorials take place in person to deepen and apply the learning. The shift is intended to nurture self-directed learners, and provide flexibility to learn at their own pace. However, students learn in isolation, which may result in reduced student motivation and engagement in learning. To address this, interactivity was introduced into the OAL materials, and the impact on learning and engagement was studied.

Methods: FeedbackFruits Interactive Document and Interactive Video tools were used in a Genomics & Proteomics module taken by final year students of the Diploma in Biomedical Science. Lecturer-generated questions were embedded into the lecture slides and videos. Students could ask questions by annotating the slides or at a timestamp in the video. The lecturer provided feedback and responded to the questions. After 5 weeks of OAL delivery using the interactive study materials, a survey was conducted to assess students' perceptions of their learning experience as well as usability and engagement in the module.

Results: 25 of 36 students responded to the survey. Students agreed or strongly agreed that the interactivity improved their learning in OAL (23/25), motivation to learn in the OAL (20/25), engagement with learning materials (24/25), sense of being a part of a learning community (18/25) and better enabled feedback (22/25). Students appreciated the ability to post questions at specific points within interactive documents for quick clarification of doubts, and view other students' questions. One key finding was that enabling anonymous posts provided students with a safe environment to ask questions. Comparison of mid-semester common test results between the fully implemented OAL semester and the preceding two semesters showed no significant difference in mark distribution, indicating that student performance in the flipped learning delivery was not compromised.

Conclusions and future directions: Although OAL is done as an individual activity, the use of the interactive features enabled and encouraged learner-lecturer interaction and peer learning through viewing other students' responses to lecturer's questions. One critical element was the lecturer's presence in providing consistent feedback and addressing students' queries. Future directions include providing sample answers to lecturer's questions for students to assess their own responses as well as encouraging learner-learner interactions.

[116] Learning through scenario in flipped learning context.

Author/s: Lee Tyng Leong

Abstract: Introduction: Traditional didactic teaching methods in pharmacology education poses challenges in learning extensive biomedical content with limited opportunities to discuss and apply theoretical knowledge in patient care. This study aimed to assess the effectiveness of using Scenario-Based Learning (SBL) in Flipped Learning (FL) context to address these issues.

Methods Participants. This study included 472 third-year Diploma in Nursing students from Ngee Ann Polytechnic taking the Integrated Nursing Science 3.1 module in April 2023 semester.

Procedures. The FL approach required students to do self-paced online asynchronous learning (OAL), including online videos, self-check quizzes and interactive online games to grasp foundational theoretical concepts before in-person learning (IPL) sessions. During IPL sessions, lecturers facilitated discussion of difficult concepts and application of the acquired knowledge through SBL, using real-life scenarios like medication errors and adverse drug events. Simple branching scenarios were developed using Nearpod, allowing live student participation in class and critical decision-making based on the provided scenarios. Nearpod enabled real-time tracking of student responses to facilitate in-depth discussions. Students were asked to explain their chosen nursing action and probed to consider various variables that could alter the outcomes. After the discussions, students reflected and shared their learning on Padlet.

Results and Discussions Of the 472 students, 370 (78.4%) completed an online survey to provide feedback. The results showed that more than 84% of the participants strongly agreed and agreed that SBL in FL context promoted active learning; improved critical thinking, raised awareness of medication errors and preventive strategies and prepared them for real-world scenarios. These provide preliminary support for the efficacy of the current design and integration of SBL in FL. The OAL is designed to foster active engagement through interactive learning activities. The SBL stimulates critical thinking, encourages applications and contextualizes learning in real-world clinical scenarios.

The lecturers found Nearpod and Padlet effective for facilitating productive in-person discussion. It was postulated that students who did not complete the OAL or could not grasp the concepts might struggle during the IPL sessions that demanded higher order thinking. Hence, it is crucial for the students to complete OAL to enable meaningful participation in IPL.

Conclusion: This presentation reflects on the efficacy of and challenges in the design and integration of SBL in FL context to enhance pharmacology education for nursing students and can potentially extend these to other theoretical modules to further enhance student learning.

Day 1 Breakout Session II (11.55am - 12.35pm)

Venue: [SR 6.06](#)

[95] Implications of Student Perceptions of Generative AI on Teaching and Learning: Educators' Reflections and Early Explorations

Author/s: Hui Leng Tan, Yew Kong Tan, Mary Irene Araullo Lupton, Melanie Morrisette, Pamela Loy-Siow, Patricia Kong and Preetam Rai

Abstract:

Introduction: The introduction of ChatGPT in November 2022 triggered mixed responses in the education sector with some educators calling for an outright ban to others who are advocating creative use of Generative AI (GenAI) for learning. Educators are concerned how GenAI may compromise learning and pose difficulty in authenticating students' works. But what about the students? How do they perceive GenAI and its impact on their learning? This study examines polytechnic students' perceptions on the use of GenAI tools for their learning. This aims to inform educators about students' knowledge, perceptions and uses of these tools and their impact on learning.

Methods Participants. A convenience sample of 137 students from both STEM (55%) and non-STEM (45%) schools responded to the anonymous online survey. Majority were 2nd year (45%), followed by 1st (39%) and 3rd (16%) year students. **Procedures.** A 12-item survey focused on types of GenAI used, frequency of use, and student's perceived usefulness of and concerns with GenAI usage. Students were also asked about the pros and cons of using GenAI and how they can leverage on it for learning. The researchers and/or their colleagues were approached to help to invite their students to participate in this survey.

Results: The survey found that 48.9% of students sometimes and 28.5% often used GenAI. The top three most frequently used tools are ChatGPT (85%), Bing (15%) and Bard (8%). Students generally perceived GenAI as effective for learning and providing good explanation. However, they were less assured about the accuracy and quality of the answers provided. Students found GenAI useful in generating preliminary ideas, supporting their learning and allowing them to learn independently. However, they were also concerned about plagiarism and how over-reliant on GenAI for quick answers can curtail their ability to "think" or be "creative" and impact the development of core workplace skills.

Conclusion & Recommendation: Despite the perceived usefulness of GenAI, students are cautious in the adoption of GenAI in their learning with concerns about plagiarism and being over-reliant on GenAI. With rapid advancement in the GenAI space, there is a need to monitor the potential changes in students' perception and usage of the tool for learning. This presentation discusses the potential implications of student perceptions on teaching and learning practices to effectively incorporate GenAI to strengthen student learning and engagement.

[130] Intro to Vocal Jazz for Classically Trained Singers: A Gamified 3-Day Workshop with Voice Pedagogy Students at the University of the Philippines College of Music

Author/s: Pharaway Lacdao

Abstract: I have created a "first-time-in-history" 3-day vocal jazz workshop for Music Education 105 (MuEd 105): Voice Pedagogy students at the University of the Philippines College of Music. As an instructional design intern in MuEd 105 (AY 2022-2023), I discovered a lack of content on vocal jazz.

UNESCO has been promoting jazz as a music of democracy, intercultural dialogue, inclusivity and creativity. American, Australian, European, and Canadian high schools and universities teach vocal jazz. By February 2023, I created and piloted an interactive e-workshop using iSpring Suite 8. A post-workshop survey showed strong student interest in vocal jazz, a multimedia-aided workshop and a masterclass with a practitioner. After the e-workshop, came the alpha and beta versions of a teacher-led 3-day workshop. Implementing Day 1 curricula, the May 2023 beta iteration resulted in a 90 - 95 percent confidence level of optimistic learner reaction to vocal jazz content, diverging from a Eurocentric, bel canto curriculum. Currently, the 3-day workshop is in its Version 2.0, with modifications from the beta version. Version 2.0 is now available for upcoming MuEd 105 (Voice Pedagogy) students. Days 2 and 3 are concretely designed based on beta iteration outcomes. Learner and teacher manuals, alongside multimedia instructional resources, have been developed following constructivist and experiential learning paradigms. Day 1, which runs for about 1.5 hours, is a synchronous Zoom-based lecture on Classical singing technique as regards Jazz singing. During Day 2, which technically runs for 5 school days, students independently research blues-oriented material bridging Jazz and Classical. Also, students foster socio-cognitive presence through an online community composed of vocal jazz educators and students from across the globe. Students comment on each other's vocal jazz recordings online in a socially interdependent manner. In Day 3's 4-hour in-person masterclass, students have a role model to provide overt adult guidance in singing jazz with appropriate blues and jazz music material. Throughout Days 1-3, vocal jazz performances with scores of 3.75 - 4 (satisfactory to competent), referencing rubrics based on Australian and American university jazz singing assessments, are required to earn badges that will allow transition from one day to the next. A gamified vocal jazz workshop makes instruction more interactive and dialogic following the Laurillard Conversational Framework. A television performance, which serves as a final reward to excellent workshop participants, redefines the MuEd 105 (Voice Pedagogy) landscape from being solely based on Zoom into a class with mind-extending, real-world learning and performance opportunities.

Day 1 Breakout Session II (11.55am - 12.35pm)

Venue: SR 6.07

[128] Building Capacity and Cultivating a Culture for Authentic Assessment

Author/s: Lisa Law and Theresa Kwong

Abstract: The rapid shift towards virtual teaching and learning necessitates the exploration and adaptation of assessment practices to suit the digital landscape. With the aim of changing the traditional approach of heavily relying on summative assessments (e.g., face-to-face final examinations) to assess students' learning performance, this presentation focuses on approaches for building capacity and cultivating a culture that promotes authentic assessment in a leading liberal arts university in Hong Kong. Authentic assessment, characterized by its emphasis on the real-world application of knowledge and skills, plays a crucial role in engaging students and fostering deeper learning experiences. A Community of Practice (CoP) was established in July 2020 with a group of passionate teachers to explore new ways of evaluating students' performance. The initiative preceded the university's revision of the Assessment Policy, which was implemented the following year. To disseminate exemplary authentic assessment practices, a variety of staff development activities were organized, some of these practices were published on a renowned scholars' website (<https://sally-brown.net/kay-sambell-and-sally-brown-covid-19-assessment-collection/>), receiving over 2,100 downloads. Feedback collected from the participants in various sharing sessions indicated that over 1,100 individuals participated in the relevant continuing professional development (CPD) activities. The overall satisfaction with these events ranged from approximately 4.5 to 4.75 (out of 5), and the applicability of ideas gained ranged from 4.33 to 4.53 (out of 5). Over 2,000 people around the world have attended the workshop activities due to the practicality of adopting authentic assessment to enhance student learning. A survey of 239 students showed that 70% agreed that authentic assessment enabled them to apply their learning to real-life tasks. Exemplary cases collected from the CoP will be highlighted to demonstrate the diverse assessment methods such as project-based assessments, service learning, role-play, group debate, e-portfolio-assisted case studies, and collaborative activities, with the use of technology within online/hybrid learning environments for real-world applications. By attending this presentation, participants will take away tips on practical strategies to build faculty capacity for implementing authentic assessment in virtual teaching and learning as well as insights into creating meaningful and impactful assessments for preparing learners in this fast-moving digital world.

[173] Fostering educational innovations in the era of global digital futures with students as partner (SAP) - Agency of university students in the Asian Context

Author/s: Kevin Chan, Peter Lau and Anna Kwan

Abstract: Entailing attitudes, competences, and relational attributes pertaining to successful student-faculty collaboration, commonly referred to "student-as-partner" (SAP) ventures among educational professionals in the tertiary education sector, agency of university students (AUS) is considered an integral component in fostering successful student-faculty collaboration towards educational innovations education in the era of global digital futures.

Conceptualization of elements in students' agency provides avenue for designing effective SAP programs. The current study examines the extent to which an instrument for assessing agency of university students in Finland could be adapted for Asian students engaging in SAP ventures.

Methods

We conducted a confirmatory factor analysis with samples of university students in Hong Kong in 2022. Participants, who have prior experience in engaging SAP ventures in their respective universities, completed the Agency of University Students (AUS) Scale (Jääskelä, 2017) that identifies 10 dimensions pertaining to influence and foster student-faculty collaboration: Opportunities to make choices; Equal Treatment; Participation activity; Motivation / Interest & Utility Value; Self-Efficacy; Competence Beliefs; Teacher Support; Peer Support; Trust; Opportunities to influence.

Results & Discussion

Descriptives: A total of 231 respondents from universities in Hong Kong were included in this data analysis. Majority of the respondents were female (62%) and undergraduate students (70%). Graduate student respondents consistently reported significantly higher ratings on all AUS dimensions. Gender difference on AUS dimension was observed on the Peer Support dimension only, with female student respondents reporting significantly higher ratings

Model Fit: Confirmatory Factor Analysis (CFA): The 10-dimension AUS model indicated poor fit across all indices ($\chi^2(64, N = 231) = 4272.41, p < 0.001, CFI = 0.672, SRMR = 0.376, RMSEA = 0.093$).

Response bias to negatively worded items in the Asian context: All negatively worded items requiring reversal for data analysis, with exceptions on three items corresponding to the Teacher Support dimension (AUS_037 / AUS_038 / AUS_039), revealed low factor loadings at 0.6 or lower, suggesting poor fit with corresponding AUS dimensions. Future replication of AUS in the Asian context should consider rewriting negative items into positive equivalent, or removing all negative items.

Dimensions related to autonomy in the Asian context: In general, respondents reported lower ratings on two AUS dimensions in opportunities to make choice and equal treatment. In contrast, higher ratings were observed on items related to AUS dimensions including teacher support, trust, and opportunities to influence. Further research is required to test whether paternalistic culture in Asian higher education sector could be attributed for such observations.

Conclusion

Evidence from the current study suggested the need for cultural adaptation in the Asian context towards promoting education innovations for global futures with student-faculty partnerships. Agency of University Students in the Asian context calls for heightened attention and effort on facilitating relationship building, trust, and facilitating conditions towards successful partnership over students' autonomy dimensions. Measurements without negatively worded items would alleviate response biases among Asian students in future assessment of students' agency.

Day 1 Breakout Session II (11.55am - 12.35pm)

Venue: [SR 6.08](#)

[164] Classification of Student by Visual analysis of MOOCs learning data

Author/s: Yi-Chuan Lee and Dar-Yeong Ju

Abstract: Massive Open Online Courses (MOOCs) have changed many aspects of higher education since its debut. Low course completion rates remain an important issue of MOOCs during these years. Therefore, it is important to find appropriate indicators to classify MOOC students' pass or failure. The process of finding indicators should be a simple and efficient one to provide MOOCs course managers with sufficient time to provide appropriate tutoring to students who may fail the course. The advantage of the data visual analysis method is that we can simultaneously observe the impact of multiple learning behaviors data on learning performance. This study uses such methods to find out the relationship between various learning data and learning performance. Next, combine the data that highly correlated with learning performance to formulate more efficient indicators. This study analyzed three different MOOCs and found that different courses have different effective indicators.

Initially, we thought that higher-scoring learning behaviors, such as quizzes or assignment submissions, should be better predictors of whether students passed the course. However, we have found that some learning behaviors, even if they are not included in the graded items or take low part in grading, can serve as good indicators of passing the course. For example, downloading a learning file, which not being a part of the grading, is a good indicator of passing-course in one of the MOOCs we analyzed. Conversely, combined both low downloading rate of study files and low video playback times are very effective indicators of students who failed in the course.

In another course, we found that participation in discussion of issues in the course's online forum was a good indicator, although it only accounted for a small percentage of the score.

According to this study, it was found that different courses have different appropriate indicators. We believe this is because each course has different course design, grading items, and grading ratios. Based on this, we deduced that each course should have appropriate indicators, and this part deserves further research.

Conclusion This study provides a simple and effective analysis process that can be applied to various MOOCs during the course to obtain appropriate indicators to predict the likely fail course learner and implement multiple types of tutoring.

[171] What have adult oral presentations got to do with VR-augmented feedback environments?

Author/s: Choon Lang Quek, Seng Chee Tan and Kenneth Lim

Abstract: An individual's communication competence is an asset to the workplace. However, training individuals to be competent speakers requires intensive work, the training thus far having been done through human assessors relying on video recordings of oral presentations to provide feedback. With advances in Virtual Reality (VR), a more objective self-directed approach, in the form of a VR-augmented feedback environment for developing trainees' oral presentation skills, could be adopted. In mimicking a real and interactive classroom environment by providing a virtual audience, and generating immediate and data-based feedback for presenters on their oral presentation, the approach overcomes the difficulty of synchronously analysing the trainees' eye contact, gesture, and verbal fluency due to the video recordings being restricted by the limited

angles of capture. Additionally, there is consistency in the extent of feedback provided and with reference to a common standard. This study sought to compare the effectiveness of VR-augmented feedback with that of human feedback through a randomised control trial research design. The 128 adult participants invited were randomly assigned to two groups: one with the immersive VR-augmented feedback environment using an Oculus headset (VR group), and the other without the same environment but with human experts' feedback (non-VR group). Overall, the VR group showed a marked improvement in fluency and clarity of speech ($p < .001$) compared to the non-VR group. The improvement in the VR group ($p < .001$) was also comparatively larger than that in the non-VR group ($p < .001$) with regard to eye contact. The results of the study suggest a new way of learning in the workplace, namely, the use of VR-augmented feedback to improve oral presentation skills. Support for its adoption could be facilitated through the writing of further research articles to demonstrate the effectiveness of the VR-augmented feedback environment. Simple and accessible guides could also be developed to allow easy transition towards the use of VR. For successful utilisation of the said environment, learners have to meet baseline requirements, such as the ability to operate the Oculus headset. An ethical consideration is the analysis of personal data, such as a learner's face and body, in the feedback generated for the learner. Regulations must be set up to protect the learner's privacy, such as restricting access to the data and results from other employees.

Day 1 Breakout Session II – Award Nominee Presentations (11.55am - 12.35pm)

Venue: SR 6.12

Community Outreach Award

Author/s: Jestyn Koh & Rebecca Boon

Abstract: DigiLABS is an online “tech-for-good” programme that upskill youths and working professionals in Asia to prepare them for the digital economy. The programme connects Singaporeans and overseas communities virtually to accelerate digital inclusion through skills exchange and ideation of innovative digital solutions that address global social issues.

Project Objectives

Upskill and equip participants to meet the demands of a digital economy.

Provide opportunities for participants to ideate, develop and validate their solution for market adoption.

Build a network of Digital Champions in the region who are digitally savvy and effective in using technology for social impact.

Community Outreach Award

Author/s: Peter Ng

Abstract: This project leverages Virtual Reality, Chatbots, and Computer Vision to revolutionize vocational training for mentally/emotionally challenged children. Moving beyond traditional multiple-choice tests, it provides immersive, hands-on learning experiences. Trainees simulate real-world tasks like customer service and product identification through mixed-reality environments and intelligent conversational agents. These interactive modules offer instant feedback, helping to build practical skills and boost confidence. Designed for customization, the initiative addresses each individual's unique learning needs, aiding their reintegration into society.

Day 1 Breakout Session II – Award Nominee Presentations (11.55am - 12.35pm)

Venue: SR 6.13

Community Outreach Award

Author/s: Christian Rey Rimando

Abstract: The Magkagnay project is a service-learning activity as a result of partnership between the Physical Therapy faculty and 3rd year students of the University of Santo Tomas (UST), and community members of the Municipality of Binangonan, Rizal (CBR Binangonan), and organization Parent Advocates for Visually Impaired Children (PAVIC). Magkagnay, which means “connected” in Filipino, utilised both online and onsite collaborative approaches to carry out the project from conception, implementation, up to evaluation. This project was done to provide rehabilitation services to pediatric clients, promote proper hygiene practices, and good health overall for children and their parents and guardians.

Community Outreach Award

Author/s: Wu Wa Chan

Abstract: “Connecting the Elderly with the Internet -- e-Sports” is a service-learning course for Hong Kong Baptist University students to facilitate elderlies approaching e-Sports. From Jan 2020, ~100 elderlies (60-80 years old) joined five rounds program. The program objectives are, 1. enable elderlies to learn and enjoy a 2D, 3vs3 mobile e-Sports game, Brawl Star, 2. enhance elderlies’ digital literacy, and 3. promote intergenerational connections. University and secondary school students were equipped with the understanding of e-Sports and the necessary skills to design, plan, and carry out I. five lessons face-to-face e-Sports experience program and II. an e-Sports tournament to celebrate elderlies’ achievements.