

CDTL TEG TALKS 2017/1

Fostering scholarly investigations of teaching and learning to enhance education at NUS

20 Apr 2017 (Thurs) | 9.00am-1.00pm | CDTL Dewey Room

<p>9.00am - 9.20am</p> <p>Dr Wu Xi Vivien, Alice Lee Centre for Nursing Studies</p>	<p>Development of Holistic Clinical Assessment for Nursing students at Transition to Practice</p> <p>A major focus in nursing education is on the judgement of clinical performance, and it is a complex process due to the diverse nature of nursing practice. This research consists of five studies. In Study I, a systematic review was conducted to explore the current assessment practices and tools for nursing undergraduates. In Studies II, III and IV, a qualitative approach with focus group discussions was adopted to explore the views of final-year undergraduate nursing students, preceptors, clinical nurse leaders and academics on the clinical assessment. Based on the multiple perspectives, it therefore addresses concerns in clinical assessment. In Study V, a Holistic Clinical Assessment Tool (HCAT) was developed, for which a psychometric testing was conducted.</p> <p>The HCAT is meritorious in that it carries the potential to be used as a valid measure to evaluate clinical competency in nursing students, and provide specific and ongoing feedback to enhance the students' holistic clinical learning experience. The HCAT not only functions as a tool for self-reflection for the students, but also guides the preceptors in clinical teaching and assessment. In addition, the HCAT can be used for peer-assessment and feedback. It is imperative that the clinical and academic institutions establish various levels of ongoing support for both students and preceptors in the process of clinical assessment.</p>
<p>9.20am - 9.40am</p> <p>A/P Ti Lian Kah & Dr Lean Lyn Li, Department of Anaesthesia</p>	<p>In-task verses end-of-task feedback to increase procedural learning retention and personality testing in a cohort of medical students</p> <p>We performed a randomised study in medical education investigating the effectiveness of different methods of debrief feedback in teaching spinal anaesthesia to medical students. We found that end-task feedback improves both short-term and long-term procedural learning retention when compared to the more usual continuous in-task feedback technique. This has clear relevance in teaching of multi-step procedures for both undergraduate and postgraduate medicine.</p> <p>Although personality had no impact on feedback, medical students were more conscientious, agreeable, extroverted, and less neurotic than their non-medical peers. Certainly, possessing these personality traits is advantageous in the selection of future cohorts of medical students.</p>
<p>9.40am - 10.00am</p> <p>Dr Sonali Chonkar, Duke-NUS Medical School</p>	<p>Utilising Digital Media as an Intervention Tool in reducing the surface learning approach of medical students</p> <p>The study highlights the potential of digital media as an educational tool to help medical students reflect on their individual learning approaches and try to reduce the incidence of surface learning approach. A digital video entitled, "Be a better learner in medicine" was shown to 400 medical students on clinical attachment to the Obstetrics and Gynaecology (O&G) department of KK Women's and Children's Hospital (KKH) Singapore between March 2015 to January 2017. The video introduced the three predominant learning approaches (deep, strategic, surface) and also highlighted awareness of adopting deep learning approach and reducing reliance on surface learning within medical students. Approaches and Study Skills Inventory for Students (ASSIST) surveys were used to assess the effectiveness of this intervention.</p>

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<p>10.00am - 10.20am</p> <p>A/P Mehul Motani, Department of Electrical & Computer Engineering</p>	<p>Enhancing Student Learning in Communication Systems using Software Radio</p> <p>This project involves the development of a software radio testbed for enhancing student learning in a Communication Systems module. Often, introductory level communication systems are so abstract and mathematical that students struggle with understanding even basic ideas. Understanding basic communications systems at a deeper level requires going beyond the abstract mathematical equations in the system model. The system developed offers a hands-on capability in which students are able to see, manipulate, and experiment with the various signals in the communication system.</p>
<p>10.20am - 10.40am</p> <p>A/P Ong Soh Khim, Department of Mechanical Engineering</p>	<p>Integration of Augmented Reality and Finite Element Analysis for Augmented Learning</p> <p>Finite Element Analysis (FEA) has a wide range of applications to various engineering analysis and has been taught in almost every engineering faculty. However, in conventional teaching, students have to plough through tedious theories and learn some commercial FEA software which is designed for experts. Augmented Reality (AR) has been applied in the field of education due to its capability of creating an intuitive and immersive environment. This research project aims to enhance the learning effect with an FEA-AR integrated system. This system generates FEA data using the ANSYS software with an additional real-time solver, and visualizes the data using Visualization Toolkit (VTK) and Open Graphics Library (OpenGL). By integrating AR technologies, the FEA data are visualized and animated on physical structures, so that lecturers and students can observe the FEA results intuitively. In addition, this system provides intuitive interfaces for various operations, such as applying loads, exploring the FEA results and adding geometric models. A user study is conducted to assess whether the FEA-AR integrated system can enhance the learning effect.</p>
<p>10.40am - 11.00am</p>	<p>Tea Break</p>
<p>11.00am - 11.20am</p> <p>Dr Mark Brooke, Centre for English Language Communication</p>	<p>The Ideas & Exposition Modules at the Writing Unit of the National University of Singapore: Aspirations, Challenges and Solutions</p> <p>What is considered educational evidence of critical thinking, and how it links to actual academic writing, may sometimes be unclear to students (Szenes, Tilakaratna & Maton, 2015). This presentation draws on Maton's (2013) <i>Semantics</i>, particularly <i>semantic gravity</i> and explores the knowledge principles involved in the making of <i>semantic waves</i> and how these can inform our practice and translate into effective student writing of evidence-based arguments. Action research, from an Ideas and Exposition Module, will be used as the context for this presentation. However, it is probable that these knowledge principles are also relevant to academic writing in other disciplines.</p>

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<p>11.20am - 11.40am</p> <p>Dr Walter Patrick Wade, Centre for English Language Communication</p>	<p>Integrating Critical Thinking, Communication Skills, and Content Instruction in the Classroom: Lessons from the TEG</p> <p>At present, there are two major approaches to critical thinking (CT) instruction: the stand-alone approach, wherein CT skills form the substance of the course, and the integrated approach, wherein CT competencies are taught alongside disciplinary or content knowledge. Among other questions, this TEG project investigated the benefits of content-integrated approaches and sought out best practices for delivering these benefits in the writing and communication classroom. This talk highlights two lessons for teachers: first, I will share new assessment rubrics appropriate for measuring CT gains in student writing; and second, the value of classroom debate activities for developing students' CT skills.</p>
<p>11.40am - 12.00noon</p> <p>Ms Lee Kit Mun & Ms Sarah Chong, Centre for English Language Communication</p>	<p>Evaluating the impact of a communication skills module on computing students' speaking and writing skills</p> <p>Software Engineering (SE) educators are generally aware that their undergraduates need to develop strong communication skills. Rather than simply making these students take communication courses taught by another department, the recent trend has been towards integrating communication skills instruction within the technical courses. An effort in this direction is the 'twinning' of an SE module for computing students with a communication one. This study seeks to examine the impact of such a module on students' attitudes, self-perceptions of proficiency, and performance in writing and speaking tasks. The data collected include survey results, assignment scores, as well as informal interview notes.</p>
<p>12.00noon - 12.20pm</p> <p>Dr Liu Mei Hui, Department of Chemistry & A/P Damith C Rajapakse, Department of Computer Science</p>	<p>An Online tool for collaborative creation and use of formative rubrics</p> <p>The benefits of using rubrics collaboratively created by student and teacher presents an opportunity to communicate and clarify expectations. Here, we show that students found rubrics to be useful in understanding the requirements of the assignment. Also, when rubrics were co-created, there was a further improvement in understanding of assignment expectations as measured by improvements in assignment scores. As rubrics use can be hampered by the logistics involved in monitoring and dissemination of feedback, we integrated the use of rubrics in TEAMMATES for peer feedback and focused on enhancing the functionality and downstream management of feedback through TEAMMATES.</p>
<p>12.20pm - 12.40pm</p> <p>Dr Kevin Yap, Department of Pharmacy</p>	<p>Developing and using Online Mobile Patient Health Record Apps for teaching and learning of Pharmaceutical Care among Pharmacy students</p> <p>Formal electronic health record (EHR)-related training is lacking in the curricula of many pharmacy schools, thus resulting in a lack of skills base in pharmacy graduates. These newly-practicing pharmacists may encounter difficulties in using EHRs to obtain relevant patient health information (PHI) to manage their patients well, which in turn can predispose patients to other medical errors and drug-related problems. Mobile apps provide a learner-centered environment to train students on EHRs and extraction of relevant PHI to solve clinical cases. The "Mobile Interactive Pharmacy Education Enhancement Resource" (miPEER) mobile web-app, containing a mock-EHR feature, was developed for this purpose. This talk will discuss how mobile apps, such as miPEER, can potentially be used to train new generations of digitally competent pharmacists to improve the quality of pharmaceutical care in clinical practices.</p>

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Dr Lilian Wong,
Department of
Pharmacy

Interprofessional Education for Health Care Profession Students in the National University of Singapore

Interprofessional education (IPE) is a process when students from two or more professional programmes that are involved in healthcare learn about, from and with each other education worldwide.

As Singapore moves towards a more integrated health care system, collaborations amongst the healthcare professionals would become an essential practice to strengthen the health system in enabling each profession to improve its practice to complement that of others. It is even more important in the healthcare settings to demonstrate the integrated collaborative approach to improve the quality of care and outcomes for patients, families and communities.

Despite of the optimistic outcomes of IPE, a successful IPE can be difficult to accomplish. There are various barriers impeding the IPE beyond a uni-professional curricula, frequently reported obstacles include: educational requirements, administrative differences between disciplines, and unclear roles and responsibilities of educators. In addition, the potential for IPE depends, to some extent, on the attitudes, readiness and professional identity of healthcare students to learn together.

IPE acts as a bridge to promote integration and learning among pre-licensure students. IPE was introduced into the curriculum and enrichment activities for students in pharmacy, nursing, medicine, social work and dentistry in the National University of Singapore (NUS) in the year 2011 in hope of transforming the students into collaborative practice-ready healthcare professionals.

The aim of this study were to assess student's attitudes, perception and readiness towards interprofesional learning, and professional identification in NUS before and after first year IPE programme; to measure the changes the students' attitudes, perception and readiness towards IPE.

1.00pm - 2.00pm

Lunch Reception