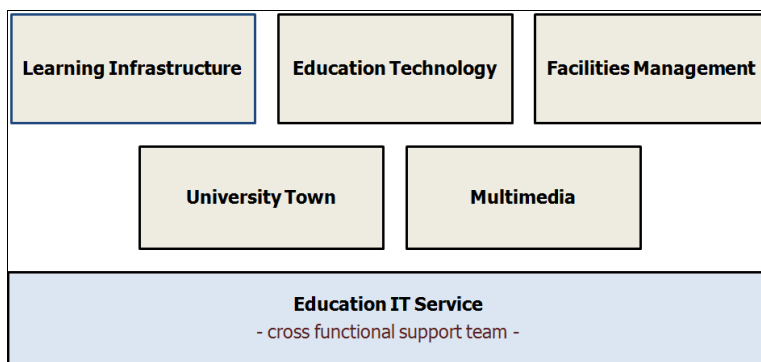


## NUS Technology Enhanced Learning Initiatives

### 2015

#### **CIT re-organized to support technology-enhanced learning initiatives**

A new Education IT unit formed. It consists of animators (2D and 3D), graphic designers and editors that can be 'seconded' to work on cross-functional projects across all teams. A dedicated video production team for iBLOCs (blended learning) and instructional videos was created out from the Multimedia team. CIT's Education Technology team was strengthened with 6 Educational Technologist.



#### **Campus-Wide e-Learning Week**

e-Learning Week from 9<sup>th</sup> to 13<sup>th</sup> of March 2015 was held campus-wide. All lectures, tutorials and seminars was conducted online. Over 65% of NUS faculty extensively used IVLE comprehensively for this e-learning week.

#### **CIT is the Project Lead in assisting faculty in developing iBLOCs, iMOOCs and MOOCs.**

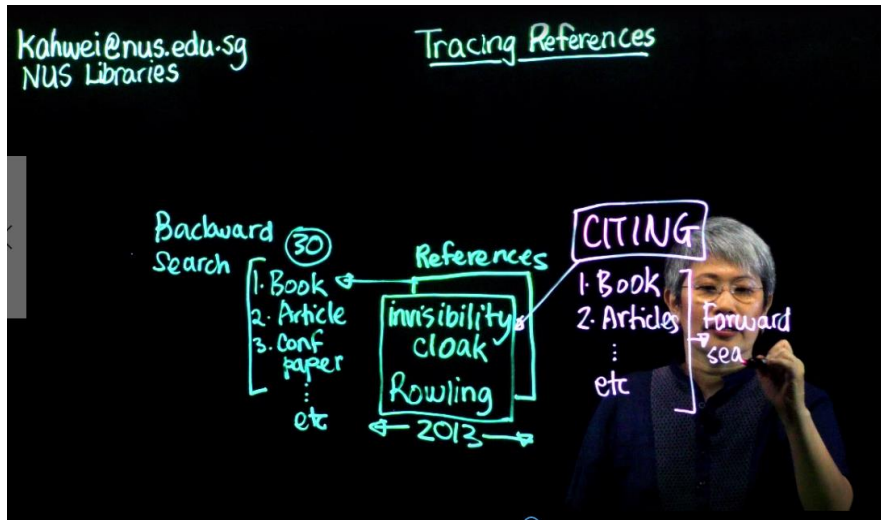
For each iBLOCs (internal blended learning online course), iMOOC and MOOC developed by faculty, CIT's Educational Technologist collaborates closely with CDTL's Instructional Designers to manage, support and implement these modules on time.

To date from 2013, CIT has collaborated with CDTL to launch 6 MOOCs (including 2 specialization MOOCs) and 70 iBLOCs. A campus-wide Quantitative Reasoning (QR) blended learning module was launched on schedule for Semester I 2015/2016. About 3,000 students are expected to take this QR module.

### 2015

#### **CIT has installed LightBoard to facilitate iBLOC recording for STEM topics**

'Lightboard' at Practice Room 1, Stephen Riady Centre, University Town. The Lightboard allows instructors to face the camera while also writing on a transparent (glass) surface. Viewers see an instructor facing them and writing in the proper way – similar to an instructor teaching a class. This setup allows instructors to illustrate lessons with a diagram or explain a formula without blocking the written content with their bodies and without turning their backs to their students. This technique is especially relevant to STEM topics.



## 2015

### New User Experience Interface for IVLE launched in July 2015.

This interface emphasis is on simplicity, consistency and design to support viewing on multiple devices. IVLE now incorporates Yammer for social media collaboration.

### CIT consolidated into one office

CIT has renovated its office at Computer Centre to incorporate its Multimedia Team from House 11. This will save CIT significant cost in managing separate offices and boost and reinforce CIT's organizational culture. Renovating will also incorporate upgrading University Town's recording booth and offices.

### CIT is ISO 9001:2008 certified

CIT is ISO 9001:2008 re-certified for another 3 years. The objective for this external audit completed in June 2015 is to ensure CIT's video production, conferencing, webcast lecture, courseware development and University Town audio-video services are certified for ISO's quality management framework and business continuity.

## 2015

### NUS offers new public relations programme through Coursera

NUS has introduced a new online specialisation programme in Public Relations for Digital Media. It is the University's latest massive open online course and first online specialisation programme of its kind to be offered through Coursera. The programme which is offered by the Department of Communications and New Media at the NUS Faculty of Arts and Social Sciences, will start from 15 September 2015. NUS will be introducing another new online MOOC on 28 September 2015 titled 'Superhero Entertainment', which will examine the social and cultural significance of superhero comic books and films. CIT is project managing and developing both courses. In total NUS has launched 4 MOOCs and 2 Specialisation MOOCs since 2014.

#### Public Relations for Digital Media Specialisation

- Launched Course in Sep 2015
- On-demand with auto-cohort feature
- Audit or Paid/Premium grading



#### Superhero Entertainments

- On-demand with auto-cohort feature (2015 & 2016)
- As at 3 May 2016 : > 5.4K enrolled from 124 countries

#### Write Like Mozart: An Introduction to Classical Music Composition

- 3 runs from 2014 to 2016; Session-based (2014 & 2015); on-demand/auto-cohort (2016)
- > 53K enrolled from 100 countries

#### Effective Communication in the Globalised Workplace

- Launched Course in Jan 2016
- On-demand with auto-cohort feature
- Audit or Paid/Premium grading

#### Reason & Persuasion: Thinking Through 3 Dialogues by Plato

- 3 runs from 2014 to 2016; session-based (2014 & 2015); on-demand/self-paced (2016)
- > 81K enrolled from 100 countries

#### Unpredictable? Randomness, Chance & Free Will

- Session-based; 1 run in 2014
- > 39K enrolled from 124 countries

## 2016

### CIT facilitates single-seating secure high-stakes e-exam at MD1 building.



MBBS Exam: 4<sup>th</sup> March 2016

The MD 1 building features a hall that can accommodate an entire cohort of medicine students. Another important aspect is CCE's implementation of a high-density wireless (HD Wi-Fi) network in the MD 1 exam hall. The HD Wi-Fi network enables a stable and high-bandwidth connection for each of the 300 or so students taking the exam.

At the same time, improvements in e-exam software (Examsoft) allowed students to use their own laptops. The Yong Loo Lin School of Medicine considered the single-seating e-exam pilot to be a success. Less than 1% of students experienced technical issues. Of these, none was insurmountable.

2016

### **Virtual Role-Play for Real-Life Skills**

CIT collaborated with Computer Centre and Department of Pharmacy to develop an innovative 3D multiplayer online virtual reality role-playing game to equip NUS Pharmacy students with practical skills for professional practice.

PI: Dr. Kevin Yap and Dr. Yap Kai Zhen from Dept. Pharmacy.

Computer Centre: Mr. John Yap Yin Gwee and CIT: Mr Uday Satyamohan Athreya

Set in a futuristic post-apocalyptic world, the online game requires students to take on the role of pharmacist avatars and interact with virtual patients while embarking on a mystery mission, such as saving the world from a plague that transforms humans to zombies. The game offers varying levels of difficulty and allows students to dictate their own fate through a "choose your own adventure" format in which virtual patients will react according to how the students respond.

By engaging in role play, the students gain a better understanding of their patients' medical conditions, after which they will undertake tasks applicable in real-life pharmacy practice. These tasks include processing prescriptions, prescribing over-the-counter treatments, developing a pharmaceutical care plan for the patient, as well as counselling patients.

### **Engineering Self-Recording Room**

A fifth self-recording room on campus was initiated at the Faculty of Engineering to support the University's technology-enhanced learning initiative. The Engineering self-recording room is located at Block EA-05-18E.

### **TeamUp – the new social messaging service from CIT.**

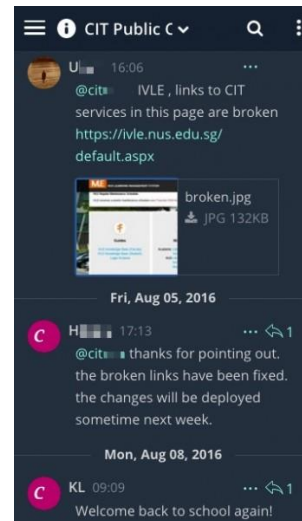
The Centre for Instructional Technology (CIT) has launched a social messaging service called TeamUp. TeamUp is a Slack alternative but used to support teaching and learning at NUS.

TeamUp allows you to create teams with whom you can chat, exchange links and files. This can be done via web, mobile or desktop apps.

Unlike other chat apps, you need not share your phone number to use it. Also, replies to messages can be threaded so that communication is kept in context.

In TeamUp, you can group chat with everyone in a team. For large teams, you can set up smaller, private groups. Like most messaging services, you can also direct message other members in your team.

The service is open to staff and students. TeamUp can be used for modules, projects or any other situation where group communication is needed.



**2016**

**New Student Feedback System.**

CDTL launches new student feedback system called Blue Explorance that is integrated to IVLE via LTI.

**Designing blended learning environments that engage students.**

CDTL and CIT conducted a course to NUS faculty on how to teach, actively engage students in a blended learning format. The course itself was conducted in a blended learning mode and by the end of the course, participants will develop a unit of a module and present a prototype on 10<sup>th</sup> November 2016. Next session is scheduled to be conducted in July 2017.

**6<sup>th</sup> APRU Education and Research Technology Forum 2016.**

Computer Centre and CIT is co-hosted and co-organised the 6<sup>th</sup> APRU Education and Research Technology Forum 2016 that was held on the 17<sup>th</sup> and 18<sup>th</sup> of November 2016 at the Education Resource Centre, University Town. More information on the conference is at <http://nus.edu.sg/apru>. About 50 participants from various APRU universities participated in this forum.



**Courseware and Special iBLOCs Developed in 2016**

- Gamification Courseware for IEM1201S (Masculinities on Film)  
With Tan Yuen Ling Lynette (CELC) to gamify certain aspects of her module IEM1201S.
- Vascular Plants in Virtual Reality  
With Prof. Hugh T.W. Tan from the Dept. of Biological Sciences to create a wiki site on Vascular Plants. This wiki site contains the shapes and structures of 24 plants digitized in 3D images. Student can view the plants parts through 360 degrees for each representative species for each of the nine vascular plants in the plant kingdom. It will help student better appreciate plant structures.

## 2016

### • QPillar iBLOC Modules

<http://www.nus.edu.sg/registrar/general-education/important-information-for-students.html>

#### ○ GER1000 Quantitative Reasoning

This module aims to equip undergraduates with basic reasoning skills on using data to address real world issues. What are some potential complications to keep in mind as we plan what data to collect and how to use them to address our particular issue? When two things are related (e.g. smoking and cancer), how can we tell whether the relationship is causal (e.g. smoking causes cancer)? How can we use data to do projection and scenario planning? Can quantitative reasoning help us deal with uncertainty or elucidate complex relationships? These and other questions will be discussed using real world examples. About 3,000 freshmen take this module every semester.

#### ○ GEQ1000 Asking Question

There are many ways to ask questions, and many kinds of questions that different disciplines investigate. For a start, this module introduces six dominant modes of questioning from the perspective of computational thinking, design thinking, engineering, philosophy, science, and social sciences. These six perspectives serve as a starting point to introduce all undergraduate students to different modes of questioning across these disciplines, and provide an initial exposure to how scholars from these disciplines pursue specific lines of questioning of everyday issues. About 3,000 freshmen take this module every semester.

### **IT Strategic Plan for Teaching and Learning: 2017 – 2019**

CIT in collaboration with NUS Provost Office and NUS' Technology Enhanced Task Force has crafted the IT Strategy Plan for Teaching and Learning. This plan is part Computer Centre' campus-wide IT Strategic Plan for 2017 - 2019. The main initiatives in this plan for Teaching and Learning are:-

#### Proposed Initiatives

- Transforming NUS' learning management system to an open and extensible learning platform.
- Support an eco-system to allow faculty to explore, innovate and take risk in developing new education applications that can yield good learning outcomes.
- Digital assessments for authentic assessments and individualized feedback.
- Create opportunities for social collaboration and peer learning among students and between students and faculty.
- Encourage initiatives that support in-class engagement, discussion and feedback.
- Facilitate educational repositories development to support educational research, learning analytics and curated re-usable content.

### **Office 365 for NUS Staff**

Following on the footsteps of Office 365 for students, Computer Centre has now officially launched Office 365 for all NUS staff. CIT is supporting Office 365 for teaching and learning - Microsoft Sway, OfficeMix, Video and OneNote.

Computer Centre Initiative

## 2017

### **Learning to Learn Better**

CIT is collaborating to ALSET, CELC to develop an online module for NUS students on the topic 'Learning to Learn Better' scheduled to be launched in August 2017.

### **e-Assessments re-branded to Digital Assessments**

To reflect CIT's mission in advocating the use of technology for both formative and summative assessments to bring about real world benefits to all parties. Digital Assessments using ExamSoft for NUS is now hosted on servers located in Singapore, giving everyone much faster access to ExamSoft from Singapore. In 2016/2017 Semester I, 5,000 students did digital assessment vs. 2,000 in 2015/2016 Semester I.

2017

**EDUCAUSE ECAR Student Technology Preference Survey 2017.**

<https://library.educause.edu/resources/2016/6/2016-students-and-technology-research-study>

CIT will be participating in ECAR's 2017 Student Technology Preference Survey. The survey will give an indication of NUS student's orientation towards technology, the number and type of devices they own and the extent they use these devices in their academic work. It will also give an indication of students experiences of NUS wireless network and learning environment.

The survey is scheduled to run from 1<sup>st</sup> February 2017 to 15<sup>th</sup> April 2017.