

AN INFRASTRUCTURE FOR HYBRID-LEARNING EXPERIENCE

at University of the Thai Chamber of Commerce

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Abstract

This paper describes UTCC Hybrid learning infrastructure, examines its implementation as a realization of a new instructional methodology for UTCC and discusses, as a case study, some initial findings from the learning outcomes of two general education courses that extensively exploited this new infrastructure. These two courses were taken by more than 8,000 students from 2008 to 2010. Results indicate that this Hybrid learning infrastructure may help to improve student learning outcomes in modern Higher education for the net generation^[1].

Hybrid Learning

At UTCC, the implementation of its Hybrid learning infrastructure in 2008 was, essentially, a realization of a new thinking in instructional methodology. UTCC Hybrid learning education delivers background knowledge - the “what” aspect of the courses - such as facts and figures through web-based courses and online assessments. These online resources are integrated with traditional classroom education which focuses on the “why” and “how” aspects such as implications, applications, open questions and recent developments of the subject. The main objectives of this methodological change are to improve learning experiences and outcomes and to achieve student-centred education by increasing interactions between students and instructors, and amongst the students themselves. (see [2])



UTCC Hybrid Learning Infrastructure

Infrastructure

UTCC hybrid learning has five major components:

- Self-Paced Learning
- Face-to-face Learning
- Online Collaborative Support
- Actively Responding Assessment
- Electronic Support System

Implementation

Self-Paced Learning

- offer online learning objects^[3] such as web-based courses with Learning Management System (LMS), e-books, online assignments and reference materials
- every student can work at his/her own pace to develop background knowledge and prepare themselves for classroom activities

Face-to-face Learning

- support face-to-face activities in the classroom with wireless internet access, computers, tablet PCs and a projector
- class meetings focus mainly on the “why” and “how” aspects of the courses such as implications, applications, open problems and recent developments of the subject
- encourage learning through asking questions, analysing raw and secondary data, sharing ideas, discussing and presenting findings and results

Online Collaborative Support

- facilitate group work and team projects using online collaboration tools delivered through Microsoft Live^[4] as a platform for collaboration
- an online document e.g. MS Word, Excel and PowerPoint can be edited simultaneously by students in a working group

Actively Responding Assessment

- an interactive electronic device, MyChoice Clicker^[5], is distributed to each student to help effectively assessing his understanding of the materials discussed
- engage students by applying MyChoice Clicker with a variety of best-practice assessment techniques such as those in [6]

Electronic Support System

- tablet PCs/laptops are provided - one to each student for accessing web-based contents, e-books and online assessments
- students learn to analyse socio-economics statistical data using the web-based Survey Documentation and Analysis (SDA) tool^[7] available at the University of Chicago-UTCC research centre

Highlights of UTCC Hybrid Learning Outcomes

We have found that UTCC Hybrid Learning has the potential to effectively improve learning outcomes and student learning satisfactions. Figure 1 indicates the increasing average examination results for two general education (GEN-ED) courses - SG001 Science, Technology and Environments and HG002 English for Communication. These courses were taken by more than 8,000 students over the year 2008-2010. Figure 2 presents the increasing student satisfaction rates of the two subjects.

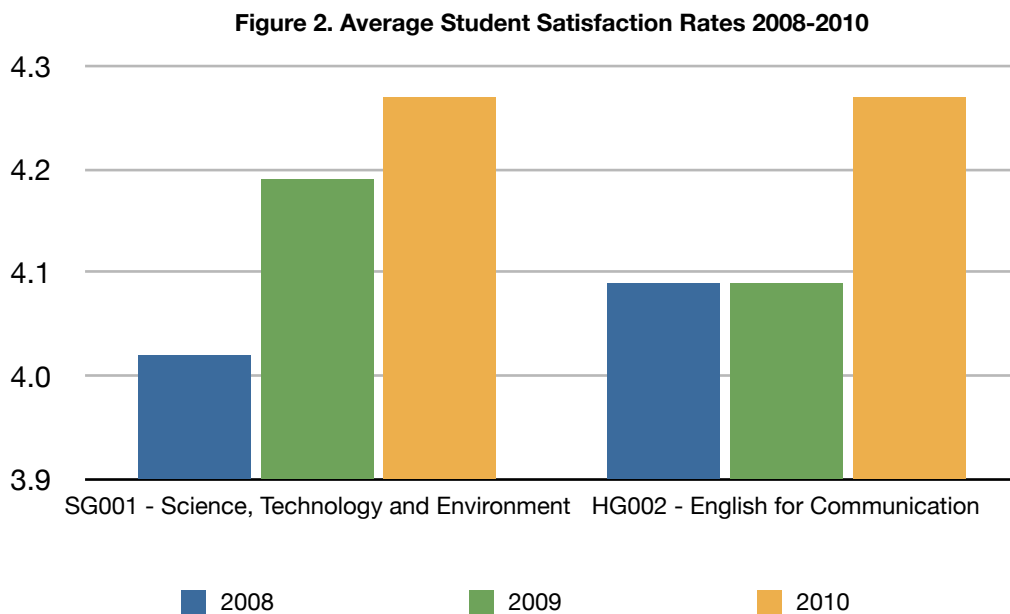
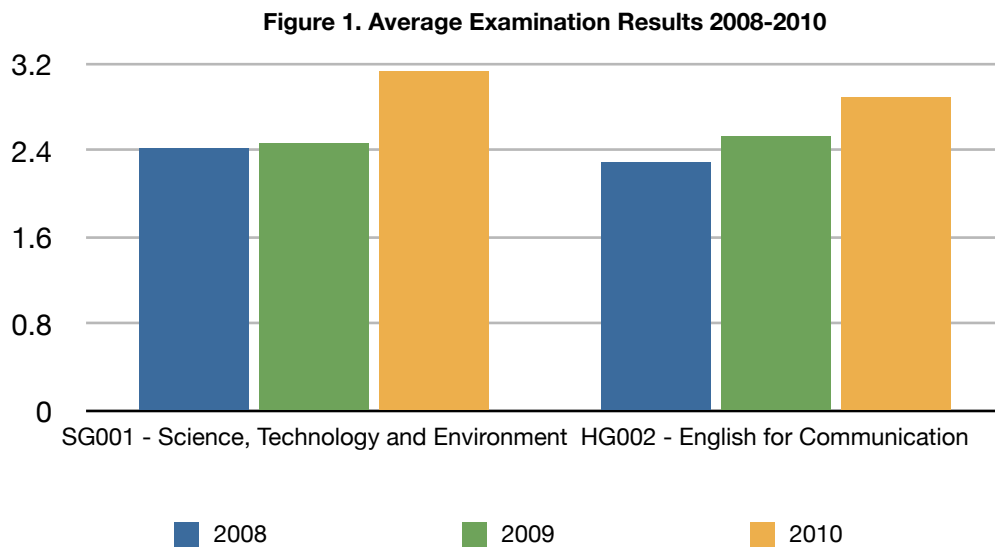


Figure 3 and 4 show success rates for students achieving A, B or C comparing with those of the students achieving D from 2008 to 2010. For the two courses, Hybrid learning appears to provide students with a far-reaching effect on learning success rates.

Figure 3. Success Rates for SG001 Science, Technology and Environment 2008-2010

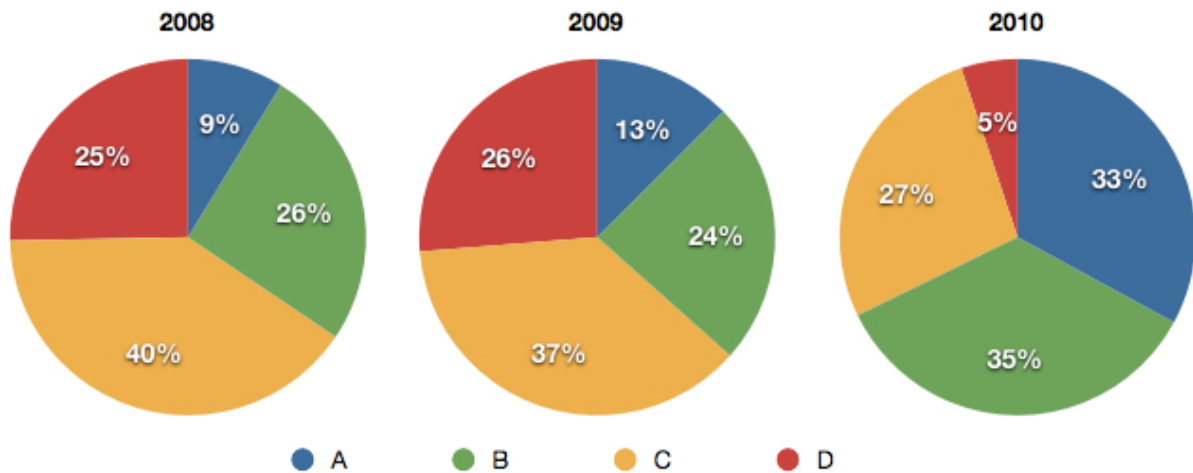
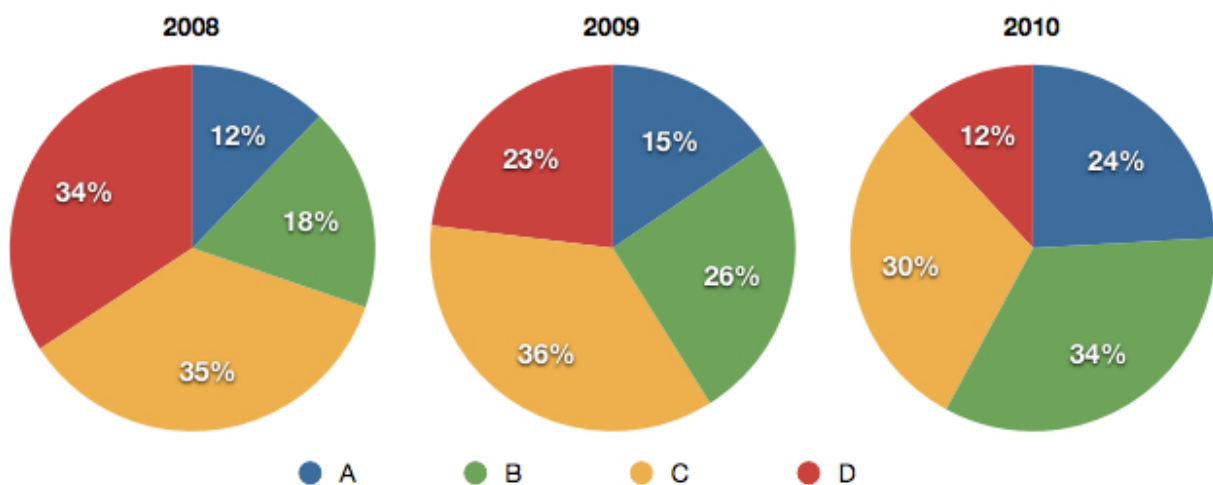


Figure 4. Success Rates for HG002 English for Communication from 2008-2010



What's next for UTCC

These initial findings have shown that Hybrid learning offers potential for a technological transformation of instructional methodology within UTCC. In 2011, UTCC is expanding its Hybrid learning to all general education courses. Two key support mechanisms i.e. (1) faculty development programs focusing on instructional techniques and course redesign and (2) online-material development assistances are being provided for the instructors. In addition to this, students are also assisted with help-desk and online support to attain learning success.

University of the Thai Chamber of Commerce

The University of the Thai Chamber of Commerce (UTCC) is a private non-profit higher education institution founded by the Thai Chamber of Commerce in 1940. The university offers degrees in Business Administration, Accounting, Economics, Humanities, Science and Technology, Communication Arts, Engineering and Law. Currently, UTCC enrolls 19,472 undergraduate and 1,710 graduate students.

About the authors

At University of the Thai Chamber of Commerce, Panuchart Boonyakiat is Director, the University of Chicago-UTCC research centre and Porames Songsangterm is Vice President, Information and Communication Technology,

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