



Centre for  
Information Technology  
in Education

# Empowering Communities Transforming Learning



# Centre for Information Technology in Education (CITE)

The Centre for Information Technology in Education (CITE) was established in June 1998. It is committed to excellence in research and development in the area of information technology (IT) and information management for quality education and to contribute to advancement in educational practice in Hong Kong and beyond through different knowledge transfer mechanisms.

In addition to research and development work, CITE provides technical support for several quality academic programmes coordinated by the Division of Information and Technology Studies of the Faculty of Education. These programmes are offered to teachers, educators and education-related professionals to meet their increasing needs and interests in furthering their studies and to equip them with the necessary academic and professional knowledge about IT in education.

As an important component of its knowledge transfer activities, CITE also organizes in-service professional/leadership development programmes and events for teachers and principals on various aspects of IT use in education. CITE also undertakes consultancy and contract research related to the educational use of IT as part of its commitment to serve the local and international community.

## Our Vision

The vision is that our research, development and knowledge transfer activities will empower professional, academic, student and lay communities to create and/or participate in education that benefits fully from the transformative use of IT in learning.

## Our Mission

CITE will endeavour:

- To stimulate and undertake research and development projects and to disseminate the research products and findings to the education and research communities both locally and internationally;
- To provide quality in-service teacher/principal education programs for the upgrading and retraining of school teachers/principals so that they will be capable of leveraging the educational potential of IT in their pedagogical practices and strategic school development plans;
- To establish links and partnerships locally and internationally to further strengthen our research, development and knowledge transfer capacities, and to enhance CITE's profile and image.

## Research and Development Foci

CITE engages in a range of research and development activities with the following foci:

- Design, implementation and evaluation of learning technologies, particularly technologies that support inquiry, social networking, collaboration and knowledge building;

- Design research on establishing and scaling up knowledge building teacher communities for sustained curriculum innovation;
- Investigate the implementation and good practices of IT use in schools and tertiary institutions, and to build models and theories of technology-supported pedagogical innovation and educational change, including professional and leadership development;
- Investigate the impacts that ICT use may have on students' learning outcomes and the factors that contribute to those impacts.

This booklet contains a brief description of the key research projects undertaken by CITE.

### **CITE Seminars and Symposia**

CITE organizes a seminar series by inviting overseas and local scholars, researchers and practitioners to talk about various topics related to technological, pedagogical or theoretical advances in learning technologies and learning theories, policies, practices and research methodologies on IT in education. An annual research symposium is also held with an aim to disseminate research findings from various CITE related research and development projects, share experience and advances in IT in education among researchers and educators, and to strengthen links between research and practice.

### **Contract Research and Consultancy**

CITE provides research and consultancy services on different aspects of IT development and use in education, including evaluation services and professional development programmes.

### **Facilities**

#### **Multimedia Classrooms**

- Designed to support various teaching approaches and classroom organization
- Equipped with notebook computers to allow maximum flexibility
- Integrated with Microteaching Studio facilities for use in research, development and training support

#### **Multimedia Production**

- CITE has the technical capacity to design and produce a range of media and learning resources.

### **Membership**

- Full member (members of staff or students within HKU)
- Associate member (all interested researchers, teachers or practitioners)

Membership is free of charge. Benefits include the receipt of regular updates of CITE news and invitations to CITE seminars and workshops, as well as discounts for CITE publications. If you are interested to become our member, please register at: <http://iln.cite.hku.hk/registration/>.

# 教育應用資訊科技發展研究中心

教育應用資訊科技發展研究中心自一九九八年六月成立以來，一直致力於資訊科技及資訊管理的研究與發展，追求卓越創新，以達致優質教育，並通過知識轉移，促進香港以至海外的教育發展。

本中心除進行研究及發展工作之外，同時亦為香港大學教育學院資訊科技教育部統籌的多項優質學術課程提供技術支援。這些課程切合教師、教育界人士及相關的教育專業人員的學習興趣及進修需要，亦就有關資訊科技教育在學術及專業知識方面作裝備，以滿足不斷提升的教育質素的需求。

中心擔當知識轉移的角色，重點工作是為老師及校長舉辦在職專業/領導發展課程及活動，內容涵蓋資訊科技於教育的多方面應用。此外本中心亦就資訊科技在教育上的應用提供諮詢服務，並接受委託研究，以服務香港及國際教育界。

## 我們的宗旨

透過研究、發展及知識轉移，給予教育專業人員、學者、學生及各界人士協作創新的空間，體驗資訊科技帶來的教育革新。

## 我們的使命

本中心致力：

- 開拓和推動與資訊科技有關的研究與發展項目，並向本地及海外的教研社群發表研究成果；
- 為在職老師及校長提供優質專業發展課程，讓他們能夠於教學及學校規劃發展上充份利用資訊科技；
- 聯繫本地及海外的機構，並建立合作伙伴關係，以加強中心在研究、發展及知識轉移的能力，從而提升中心的形象及國際知名度。

## 研究及發展重心

本中心的重點研究及發展項目如下：

- 設計、推行及評估學習科技，特別是有關於支援探究、社交網絡、協作及知識建構的科技；
- 設計研究項目，以了解如何建立及擴大教師社群，以支援知識建構，推動持續的課程改革；
- 探討資訊科技於中小學及大專院校教學上的應用及範例，藉以建立模型及理論，並用於研究應用資訊科技的新教學法及教育改革，包括專業及學校領導發展；
- 探討資訊通訊科技對學生學習成效的影響及其影響因素。

此小冊子包括本中心主要研究項目的資料簡介。

## 講座及專題研討會

本中心定期邀請海外及本地學者、研究人員及教育界人士，講述學習科技及教學理論的最新發展，並就教育政策及其實踐與研究方法作探討。中心並舉辦週年研討會，向外界發表中心各項研究與發展項目的成果，讓研究人員與教育工作者就應用教育資訊科技的經驗及最新發展進行討論，並加強教研雙方的聯繫。

## 委託研究及顧問服務

本中心就有關教育的資訊科技發展及應用方面的課題提供研究及顧問服務，包括評估服務及專業發展課程。

## 設施

### 多媒體教室

- 設計能配合不同教學模式及課堂組織
- 配備筆記簿型電腦，以增加教學安排自由度
- 設有微格教學錄像室設施，以支援研究、發展及培訓

### 多媒體製作室

- 本中心的科技設備及技術人員能設計及製作各種多媒體教材。

## 會籍

- 會員(香港大學之教職員或學生)
- 附屬會員(有興趣之研究人員、教師或其他與教育相關的工作人員)

會費全免。會員將定期收到本中心最新活動通訊，及參加中心舉辦的講座及工作坊的邀請。會員購買本中心出版的刊物亦可獲特別折扣優惠。任何人士如有興趣成為本中心會員，可於本中心網址 <http://iln.cite.hku.hk/registration/> 申請。

# Second International Information Technology in Education Study SITES 2006: Pedagogy and ICT Use

## Investigators

Prof. Nancy Law  
Dr. Allan Yuen  
Dr. Bob Fox

## Project duration

Oct 2004-Mar 2009

## Funding source

QEF, RGC, IEA

## Sponsor

Microsoft

## Email

sites@cite.hku.hk

## Website

<http://sites.cite.hku.hk>

SITES 2006, directed by the University of Twente (the Netherlands), the University of Hong Kong, and the IEA Data Processing and Research Centre (Germany), is an international comparative study of pedagogy and ICT-use in schools, focusing on how teaching and learning took place in mathematics and science classrooms and the role of ICT in them. CITE was funded by the International Association for the Evaluation of Educational Achievement (IEA) to lead the design, analysis and reporting of the study. Funding from the Research Grants Council (RGC) supported the development of the key indicators in the teacher survey. The Hong Kong Quality Education Fund (QEF) supported the costs of conducting the study in Hong Kong and Microsoft (HK) sponsored the international costs for Hong Kong's participation in the study.

## Aims & Objectives

- To provide internationally benchmarked indicators on the extent of IT integration in schools and its impact on pedagogy and students' learning outcomes in Hong Kong schools.
- To identify the most important strategic factors in bringing about the effective integration of IT in education in different countries, and provide such finding to policy-makers and school leadership for fine-tuning and improving the existing policy and implementation strategies at the system and school level in Hong Kong.
- To identify factors influencing students' ability to make use of IT in complex problem solving
- To disseminate the research findings in formats that would be most helpful to teachers, principals and policy-makers in the integration of IT in Hong Kong schools.

## Deliverables

Various forms of publications, including research reports, journal publications, books, etc. to disseminate the findings to different interested parties such as policy-makers, school leaders, teachers, teacher educators and researchers.



# Second International Information Technology in Education Study SITES Module 2: Innovative pedagogical practices using ICT

## Investigators

Prof. Nancy Law  
Dr. Allan Yuen  
Ms. Y. Lee  
Ms. Angela Chow

## Project duration

Sep 2000-Dec 2002

## Funding source

QEF

## Email

sites@cite.hku.hk

## Website

<http://sites.cite.hku.hk>

SITES Module 2 (SITES-M2) builds on SITES Module 1 (SITES-M1) and contributes to subsequent SITES modules. SITES-M2 is an international qualitative study of innovative pedagogical practices that use information and communication technology (IIPUTs). The study was conducted in 2000-2002.

## Aims & Objectives

- To identify and provide rich descriptions for innovative, technology-based pedagogical practices that are considered valuable by each country, which might be considered for large-scale implementation or adoption by schools in other countries.
- To provide information to national and local policy-makers who can use it to make decisions related to ICT and the role it might play in advancing their countries' educational goals and addressing educational needs and problems.
- To provide teachers and other practitioners with new ideas about how they can use ICT to improve classroom practices.
- To add to the body of research knowledge and theory about the contexts and factors within and across countries that contributes to the successful and sustained use of innovative technology-based pedagogical practices.
- To investigate the measurement quality of M1 indicators and contribute to the research design and instrumental of later SITES modules.

## Deliverables

An online database of 130 innovative pedagogical worldwide practices with an expandable database to allow public sharing.

The Online Professional Development Packages  
(<http://sitesdatabase.cite.hku.hk>)



The Innovative Pedagogical Practice Database  
(<http://sitesdatabase.cite.hku.hk>)



# Second International Information Technology in Education Study

## SITES Module 1: School adoption of ICT in the curriculum

### Investigators

Prof. Nancy Law  
Dr. Allan Yuen  
Dr. W. W. Ki  
Dr. Sandy Li  
Ms. Y. Lee

### Project duration

Sep 1998-Aug 2000

### Funding source

Quality Education  
Fund

### Email

sites@cite.hku.hk

### Website

<http://sites.cite.hku.hk>

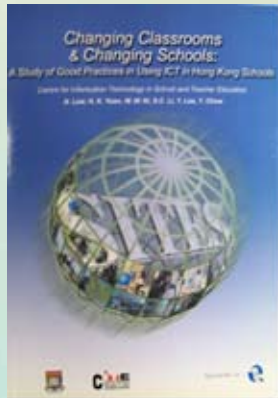
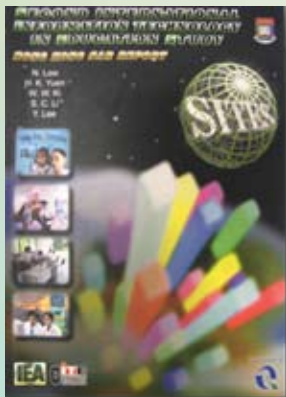
SITES Module 1 (SITES-M1) was an international comparative study designed to help countries estimate their positions, relative to other countries, in terms of their ICT-use in the education domain. In more specific, the study focused on an extent to which schools have adopted and implemented pedagogical practices considered important to education in the information society.

### Aims & Objectives

- To describe the conditions of ICT-related infrastructure, organization and management, qualifications of teaching staffs, and the place of ICT in the school curriculum
- To describe how ICT was used as the object of learning and as a tool
- To describe the developmental trends of ICT-use in schools from 1989 to 1998
- To establish baselines to help countries identify the strengths and weaknesses of their ICT-use in the education domain
- To analyze the reasons for different rates of ICT developments in education across the participating countries
- To provide recommendations regarding potential policy-options to policy-makers

### Deliverables

- An overall report of the findings from the SITES-M1 HK main study and international comparison
- A report on the changes of classrooms and schools in HK after employing ICT as a tool to assist teaching and learning
- A professional development package in which good practices of ICT-use in teaching and learning activities are demonstrated



# Information Literacy Performance Assessment (ILPA)

## Investigators

Prof. Nancy Law  
Dr. Allan Yuen  
Dr. Mark Shum  
Ms. Y. Lee

## Project duration

Jan 2006-Apr 2008

## Funding source

EDB, an international school

## Email

ilpa-info@cite.hku.hk

## Website

http://il.cite.hku.hk

There are two projects conducted by CITE in evaluating students' information literacy:

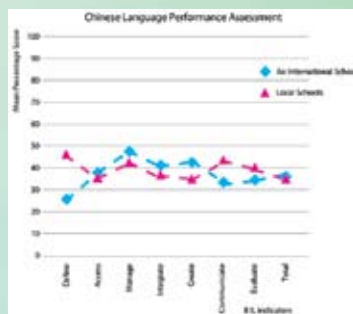
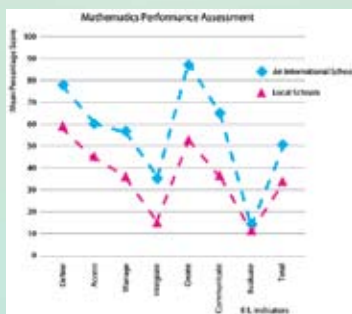
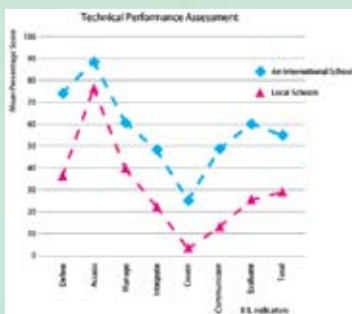
- Evaluation of the Effectiveness of the 'Empowering Learning and Teaching with Information Technology' Strategy (2004/2007) (ILPA) commissioned by the Education Bureau (EDB). The study duration was 1.5 years; and
- "Performance Assessment of students' information literacy in an international school" commissioned by an international school. The duration was 5 months.

## Aims & Objectives

ILPA in local schools	ILPA in an international school
To evaluate the impact of IT on empowering students' learning in Chinese and Mathematics at primary school level as well as Chinese and Science at secondary school level and in special schools; and	To assess students' information literacy in Chinese language and Mathematics at primary school level (P.5),
To conclude the overall effectiveness of the Strategy and to recommend the way forward for IT in Education (ITeD).	To evaluate the technical proficiency of students at primary school level (P.5)

## Deliverables

- Technical performance assessment for both primary (P.5) and secondary schools (S.2) levels
- Chinese language performance assessment for primary (P.5) and secondary schools (S.2) levels
- Mathematics performance assessment for primary schools (P.5) levels
- Science performance assessment for secondary schools (S.2) levels
- The research report presenting the key findings and recommendations can be downloaded at: <http://www.edb.gov.hk/index.aspx?langno=1&nodeID=6363>



# The Learning Communities Projects (LCP)

## Investigators

Prof. Nancy Law  
Dr. Allan Yuen  
Prof. Marlene  
Scardamalia (OISE)

## Project duration

Jun 2001-Aug 2004

## Funding source

UGC, RGC, QEF

## Email

[lcp@cite.hku.hk](mailto:lcp@cite.hku.hk)

## Website

<http://lcp.cite.hku.hk>

## Projects under this theme:

- Investigating the formation of knowledge-building communities with technology support, funded by the Research Grants Council (RGC)
- Hubs schools for establishing knowledge building communities, funded by the University Grants Committee (UGC)
- Building learning communities in primary schools through project work and knowledge construction, funded by the Quality Education Fund (QEF)

Between 2001-2004, CITE was funded by various funding bodies to undertake research on enhancing students' learning through knowledge building activities with the use of an Internet-based collaboration platform called Knowledge Forum® (KF) in primary and secondary schools.

The project entitled: "Building learning communities in primary schools through project works and knowledge construction" involved 6 EMI primary schools which focuses on implementing the knowledge building approach in the project-based science curriculum from 1 July 2001 to 31 Dec. 2002. CITE provided professional support for the project, formulated research directions, organized training workshops and carried out an overall evaluation of the project.

The RGC & UGC funded projects at the secondary level which aimed at supporting collaborative exploration and building of knowledge in conjunction with subject-based teaching in schools. KF was used as a knowledge building and learning support tool for students to discuss, synthesize and analyze information, and to further their exploration and understanding of specific topics in the school curriculum.

To summarize, these projects created lots of interests in both teachers and students, and has demonstrated that the theory of knowledge building and the platform Knowledge Forum® (KF) have led to successes in developing students' collaborative inquiry capacities.



# Establishing a scalable professional development network for knowledge building in schools (KBTN)

## Investigators

Prof. Nancy Law  
Dr. Allan Yuen  
Dr. Carol Chan

## Project duration

Aug 2004-Aug 2011

## Funding source

QEF, EDB

## Email

kbtn-info@cite.  
hku.hk

## Website

[http://kbtn.cite.  
hku.hk](http://kbtn.cite.hku.hk)

## Projects under this theme:

- Establishing a scalable network of knowledge building schools, funded by the Quality Education Fund (QEF)
- Professional development network for knowledge building in schools (KBTN), funded by the Education Bureau (EDB)
- School-Based Professional Support, University-School Support Programme (USSP), funded by the Education Bureau (EDB)

Since 2001, CITE have been working with teachers in designing knowledge building (KB) activities in classrooms of different backgrounds and KLAs. The need for teacher professional development and networking among KB teachers in different KLAs has grown exponentially over the years. The QEF-funded (2004-2006) and the EDB-funded (2006-2011) projects address the issues of scalability and sustainability of knowledge building among schools in Hong Kong through the establishment and strengthening of a knowledge building teachers and schools network.

In the QEF project, professional development events and resources like symposiums and workshops were organized to connect new and experienced KB teachers at the local level. At the international level, the teacher network has established connections with KB classrooms around the globe, so that teachers can share experiences with fellow KB teachers around the world, and HK students could participate in collaborative knowledge building activities in our global networks.

As the KBTN grows, it has gradually gained public recognition. In view of local KB teachers' efforts, the EDB has been funding the operation of the KBTN through its USSP schemes to implement KB-related curriculum and pedagogical innovations that align with the new senior secondary school reform goals. Since 2006, a team of expert knowledge-building teachers have been seconded to the project. Through co-designing and assisting interested teachers in the implementation of knowledge building in classrooms, more and more successful cases of teachers empowering teachers and models of best practice in knowledge-building have been established and disseminated by the seconded teachers working together with the research team from CITE HKU.



# Understanding conceptual, meta-conceptual, epistemological & cultural aspects of CSCL discourse through content analysis, data mining, and visualization techniques

**Investigator**  
Prof. Nancy Law

**Project duration**  
May 2005-Aug 2008

**Funding source**  
HKU Strategic  
Research Theme  
on IT & RGC

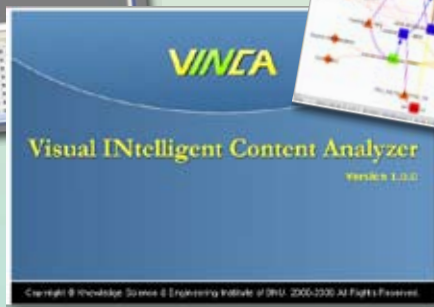
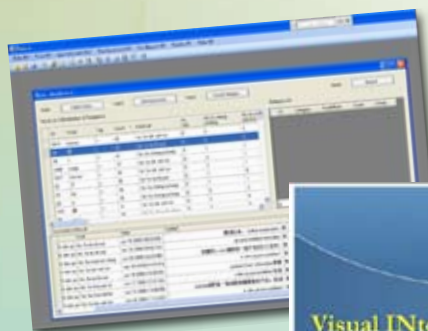
**Email**  
johnny@cite.hku.hk

## Projects under this theme:

- Content & interaction analysis of CSCL discourse data for assessing knowledge building outcomes, funded by the HKU Strategic Research Theme on Information Technology (HKU-SRT-IT)
- Supporting conceptual change in science through knowledge building, funded by the Research Grants Council (RGC)

Since 2001, CITE have been working with teachers in designing knowledge building (KB) activities in classrooms of different backgrounds and KLAS. The need for expedient analysis of these online discourses from a variety of theoretical perspectives has grown exponentially over the years. In 2005, a RGC supported project aiming at investigating conceptual change in science through knowledge building commenced. At about the same time, a project (supported by HKU-SRT-IT) using text and data-mining methodologies to explore models of student engagements and learning progress from discussion records in the Knowledge Forum® also started.

A number of computer tools and methodologies have been employed in investigating conceptual, meta-conceptual, epistemological & cultural aspects of students' engagements in KB discourses. The Visual Intelligent Content Analyzer (VINCA), is the computer analysis program jointly developed by CITE and Centre for Knowledge Science & Engineering Research, Beijing Normal University (CKSER) at Beijing Normal University to conduct data preparation, quantitative and qualitative analysis, as well as semi-automatic coding of online discourse. The team has also utilized data visualization tools such as the Knowledge Space Visualizer developed by OISE, to visualize hidden discourse relationships and interactions using graphical representations. Insights generated from these research studies have provided vital feedback for teachers to gain deeper understanding on students' engagement in learning activities, and the effectiveness of their KB pedagogy.



# Consultancy for Revamping the Teachers' IT Training Framework

## Investigators

Dr. Allan Yuen  
(HKU)  
Mr. S. W. Pun  
(CUHK)  
Dr. Sandy Li  
(HKBU)  
Dr. S. C. Kong  
(HKIED)

## Project duration

Apr 2006-Dec 2007

## Jointly organized by:

HKU, CUHK,  
HKBU, HKIED

## Funding source

Education Bureau

## Email

revamp@cite.  
hku.hk

The existing framework of teachers' Information Technology (IT) training in Hong Kong with training programmes at Basic (BIT), Upper Intermediate (UIT) and Advanced (AIT) Levels, was launched under the first Information Technology in Education (ITEd) Strategy (Information Technology for Learning in a New Era Five-Year Strategy 1998/99 to 2002/03). To take the development of ITEd forward, a Joint Consultation Service Team (JCST), HKU, CUHK, HKBU & HKIED, was commissioned by EMB in 2006 to make recommendations on revamping the existing teachers' IT training framework according to the second Information Technology in Education Strategy "Empowering Learning and Teaching with Information Technology"(2004-2007).



## Aims & Objectives

- Sustain teachers' professional development opportunities to advance teachers' Information Literacy (IL) and pedagogical integration of IT; and
- Develop models of teacher education that will foster the establishment of teacher learning communities that will in turn generate, refine, consolidate and disseminate emerging pedagogies and professional competencies.

## Expected Outcomes

### Short Term

- Provision of a structured and Information Literacy (IL)-led teacher professional development framework on the pedagogical integration of IT; and
- Advancement of teacher's Information Literacy (IL).

### Medium to Long Term

- Enhancement of teachers' competence in using Information Technology (IT) for curriculum and pedagogical innovations so as to facilitate, guide, administer and assess student learning in ways that align with the goals of the school curriculum;
- Establishment of learning communities of teachers for furtherance of the use of IT in education, refining, consolidating and disseminating emerging pedagogies and emerging professional competence; and
- Articulation of teachers' IT training in the Qualification Framework or certification of such training.



# T.H.E: Technology in Higher Education

## Investigators

Dr. Allan Yuen  
Dr. Bob Fox

## Project duration

Sep 2006-Mar 2009

## Funding source

RGC-CERG,  
Teaching  
Development Grant,  
University research  
fund

## Email

the@cite.hku.hk

## Website

<http://the.cite.hku.hk>

## Technology in Higher Education

- Building Communities of Good Practices in Using IT in the Curriculum
- Course Management Systems in Higher Education: A Lever for Educational Change
- Systemic ILN Integration into Faculty of Education Learning and Teaching Program

The current projects undertaken by THE Team examine how technology is used across campus at HKU to help in teaching and learning. The study aims to contribute to the effective use of technology in teaching and learning at HKU and especially in the context of the four-year undergraduate curriculum reform.

## Aims and Objectives

- Investigate good and innovative practices of using technology in the curriculum
- Examine aspects of adoption, usage, satisfaction, culture, and pedagogical effects arising from the use of course management systems, under four research foci of technology, pedagogy, implementation strategies, and institutional framework

## Deliverables/Expected Outcomes

- Conducted questionnaire and interviews on teacher and student experiences with course management systems and other technologies for teaching and learning
- Conducted course-level investigation on how course management systems are being used within and beyond classrooms
- Organized events for experience sharing and showcasing good practices of using IT to improve teaching in higher education



# Support for Internship and Final Year Projects for undergraduate students at The University of Hong Kong

## Principal investigator

Dr. Sam Chu

## Co-Investigators

Dr. Agnes Tiwari  
Dr. Francis Lee  
Prof. Nancy Law  
Dr. David Kennedy  
Dr. Alvin Kwan  
Mr. Peter Warning

Internships are important in preparing students for professional careers. They help students to refine skills through hands-on experience and gain new insights into their chosen field. It is therefore critical that internships are designed in an effective manner, allowing students to take utmost advantage of a new learning situation. The principal aim of this project is to enhance HKU undergraduate students' experiential learning in their internships and final year projects. In particular, it investigates the effectiveness of using IT in facilitating such learning activities. By identifying how student learning can be optimized, generic support can be built for all programs, while support can be tailored for the special needs of specific programs.

**Project duration**  
Apr 2007-Mar 2009

The project will examine the following elements of internships and Final Year Project (FYP):

**Funding source**  
Teaching  
Development Grant

**Email**  
samchu@hkucc.  
hku.hk

**Website**  
<http://sifyp.cite.hku.hk/index.htm>

## Aims and Objectives

The project will examine the following elements of internships and Final Year Project (FYP):

- Preparation required by students prior to their internships
- Tasks assigned to students during their internships
- Project/research work undertaken by students for their FYP
- Support and scaffolding provided to students during internships
- Student reflection and analysis during and after internships
- Assessment criteria for these activities
- The use of IT in facilitating students' learning in internships/FYP

## Deliverables/Expected Outcomes

- Report on existing practices of the various kinds of internships/FYP in our university and in other local and overseas universities.
- Establish a software platform that supports blogging, wikis, ePortfolios and any other functions for the documentation of students' learning and for facilitating their collaborative work online.
- Report on the identification of students' preparation needed prior to internships/FYP.
- Report on the relationship between the students' knowledge and skills and the expected tasks of the organization.



# An investigation of 'digital natives' and 'digital immigrants', the technologies they use and purposes they are used for

## Principal investigator

Dr. David Kennedy The research involved a survey of first year students commencing their studies at The University of Hong Kong in all faculties, and their teachers in order to examine the concept of being a digital native.

## Co-Investigator

Dr. Bob Fox

## Project duration

Oct 2007-Dec 2008

## Funding source

University research fund

The research objectives, briefly, were to establish frameworks on how digital natives use technology for learning, establish the significance of the digital divide (if any) between academic staff and students; and provide insights to support and guide ongoing staff professional development and curriculum design.

# Investigating the use of mobile devices supported by a mobile server

## Principal Investigator

Dr. David Kennedy

## Co-Investigator

Dr. Doug Vogel,  
City University of  
Hong Kong

The project investigated the opportunities provided by mobile devices in combination with mobile servers to improve communication and collaboration of students involved in a variety of fields studies. The research used a mixed mode approach to generate qualitative and quantitative data about the manner in which students engaged using mobile technologies.

## Project duration

Jun 2007-May 2008

## Funding source

University research fund

## Email

dkennedy@hku.hk

## Website

<http://people.cite.hku.hk/dkennedy/mToken/index.html>



# Using learning objects to support outdoor education activities

## Principal investigator

Dr. Daniel Churchill

This research project involves the design and development of a set of learning objects and a study of their application within outdoor activities. The researcher follows a group of students to their field trip to explore how learning objects should be designed, and the impact of their use on students' learning.

## Project duration

Nov 2007-Oct 2008

## Funding source

University research fund

## Aims & Objectives

The project aims to develop a set of recommendations for the design and pedagogical application of a learning objects in outdoor educational activities.

## Deliverables

A set of recommendation and exemplary learning object design.

# Design of effective interactive learning objects for pocket PC delivery

## Principal investigator

Dr. Daniel Churchill

This project investigates the design of learning objects for applications via small screens of handheld technology (PDA). The key limitation of handheld technology for the delivery of learning objects is the small screen that is available for effective display. This project collects user responses to learning object design possibilities and provides a set of recommendations to guide improved utility and future research.

## Project duration

May 2005-Aug 2006

## Funding source

University research fund

## Aims & Objectives

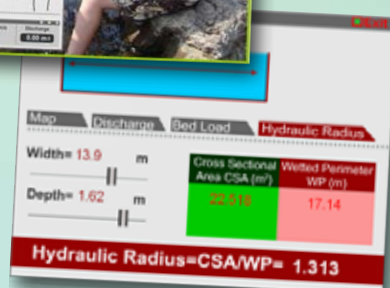
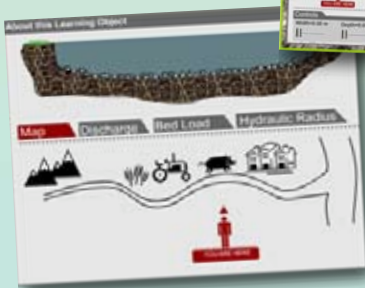
To develop a set of recommendations for effective design of learning objects for applications via handheld devices.

## Deliverables

A set of exemplary designs of learning objects.

## Email

dchurch@hkucc.  
hku.hk



# Development of an Interactive Platform for the Consolidation and Dissemination of Good Practices in Schools through the Internet

## Investigators

Prof. Nancy Law  
Dr. Allan Yuen

## Project duration

Jan 2005-Oct 2007

## Funding source

Education Bureau

## Email

goodpractices-info@  
cite.hku.hk

## Website

<http://goodpractices.cite.hku.hk>

The Centre for Information Technology in Education (CITE) of the University of Hong Kong was commissioned by the Education and Manpower Bureau to undertake the development of an interactive platform for the consolidation and dissemination of good practices in schools through the Internet. The project includes two phases.

## The aims of phase one were to

- Create an innovation community database, which is a sharing system for teachers to explore and reflect on their own pedagogical uses of IT with peers and other interested education professionals
- Support ten schools to use the platform for collecting and disseminating good practices in their schools as a pilot project

## The aims of phase two were to support further and more effective use of the good practices interactive platform through:

- Providing professional development support for a group of seconded teachers and research assistants on effective uses of ICT for curriculum and pedagogical innovation, leading and supporting pedagogical change in schools and action research;
- Facilitating the development of a network of mutually supportive schools that are actively engaged in the co-construction of action-oriented school-based development initiatives in generating IT-supported learning and teaching practices via the good practices learning platform;
- Reporting on and disseminating the experience gained by the collaborating teachers and schools in the project.

「具成效的資訊科技教育案例」互動平台  
"Good Practices on IT in Education" Interactive Platform English | 繁體

Centre for Information Technology in Education



# Worldwide Innovative Schools Program — National Evaluation Partner Project

## Investigator

Prof. Nancy Law

## Project duration

Dec 2007-Aug 2009

## Funding source

Microsoft

## Email

isp-info@cite.hku.hk

CITE has been commissioned by Microsoft as an evaluation partner for the Microsoft Innovative Schools Program (ISP) in Hong Kong. This project is an international project. There are 12 countries (including Brazil, Canada, Chile, Finland, France, Germany, Hong Kong, Ireland, Mexico, Qatar, Sweden and UK) participating in this project. SRI International is coordinating the evaluation project at the international level.

This is a two year project. By adopting a case study approach, the evaluation project hopes to find answers for the following three key research questions:

- Do schools participating in the Innovative Schools Program increase their provision of 21st century learning opportunities for their students?
- Does the provision of 21st century learning opportunities occur without sacrifice to student performance on more traditional measures of achievement?
- What role does technology play in changing classroom practices?

Fung Kai No. 2 Primary School was selected from Hong Kong to participate in the Worldwide ISP program. Through this project, the school aims to use technology in the following particular aspects:

## Aspects

Teaching and learning

Assessment for learning

Administrative management

## Aims & Objectives

To develop a school-based curriculum to cater for student diversity

To construct a data bank for personalized assessment

To develop a new system to reduce teachers' workload



# Course Design and Piloting of “e-Leadership” Training for School Principals

## Investigators

Prof. Nancy Law  
Dr. Allan Yuen  
Dr. K. C. Wong

## Project duration

Jan 2005-Dec 2005

## Funding source

Education Bureau

## Email

eleadership-info@  
cite.hku.hk

## Website

<http://eleadership.cite.hku.hk/pilot/>

The Centre for Information Technology in Education (CITE) and The Centre for Educational Leadership (CEL), University of Hong Kong were commissioned by the Education and Manpower Bureau in December 2004 on the Provision of Consultancy and Training Service: Course Design and Piloting of “e-Leadership” Training for School Principals. This program is designed to support school principals in building knowledge, skills and understanding of on the potential impact of ICT in supporting learning and teaching and the key issues. The course took an action learning orientation. Principals were required to develop strategic school development plans for integrating ICT use in their schools for the next academic year and beyond.

## Aims & Objectives

- To help school heads and their associates to understand the ways in which IT can be used to support curriculum and pedagogical innovations that are consistent with the direction promoted by the Curriculum Reform;
- To help school heads and their associates to understand the different dimensions of a school policy and strategy (including IT infrastructure, curriculum goals for IT use, staffing policy, staff appraisal and reward policy) that will affect the implementation of IT in the school curriculum;
- To introduce different models of leadership in promoting IT-supported curriculum innovation and to examine issues of school context in relation to policy and change strategies;
- To provide a structure and mechanism that will encourage and support schools in establishing their own visions, goals and strategies as well as leadership teams for IT development in schools.

### Face to Face Workshops



### Online Learning



Brainstorm

Hot Seat



# Evaluating and Enhancing the Impact of the E-leadership Programme

## Investigators

Prof. Nancy Law  
Dr. Allan Yuen

## Project duration

Jun 2005-Dec 2006

## Funding source

Education Bureau

## Sponsor

Microsoft

## Email

eleadership-info@  
cite.hku.hk

## Website

<http://elep.cite.hku.hk/casestories>

The Centre for Information Technology in Education (CITE), University of Hong Kong has been commissioned by the Education and Manpower Bureau to conduct a research and development project titled 'Evaluating and enhancing the impact of the e-leadership program' (e-leadership enhancement project, eLEP for short) in June 2005. This project is a follow up project to the e-leadership development program conducted by CITE.

## Aims & Objectives

- To conduct a longitudinal follow up evaluation to find out whether school heads of the e-leadership pilot training have actually implemented their plans in their schools after the pilot training;
- To find out the kinds of difficulties the school heads encountered;
- To find out whether the pilot training course has been successful in stimulating changes that have real impact on the schools after the course completion; and
- To provide support to schools for the implementation of their strategic plans.

## Deliverables

Detailed implementation strategies, experience and the resulting impacts collected from the case study schools were written as "stories" that could be used as professional development resource materials on strategic leadership available in the followings website: <http://elep.cite.hku.hk/CaseStories>.



# Integrating Knowledge Management into Business Process Improvement with Collaborative Agent Support

## Principal investigator

Dr. Minhong Wang

## Co-Investigators

Prof. Douglas Vogel  
(CityU),  
Prof. Jiming Liu  
(University of  
Windsor)

## Project duration

Jan 2008-Dec 2009

## Funding source

RGC-CERG

## Email

magwang@hkucc.  
hku.hk

Business process management (BPM) is increasingly being recognized as an important factor in business success. However, traditional approaches to BPM are often inadequate for internally and externally dynamic and interactive business environments, due to their predefined rigid process schemas and lack of real-time decision and coordination capabilities. In today's globalized competitive environment, business activities are highly dynamic and interrelated. Numerous interactions take place between business entities, most of which are impossible to predefine using traditional techniques.

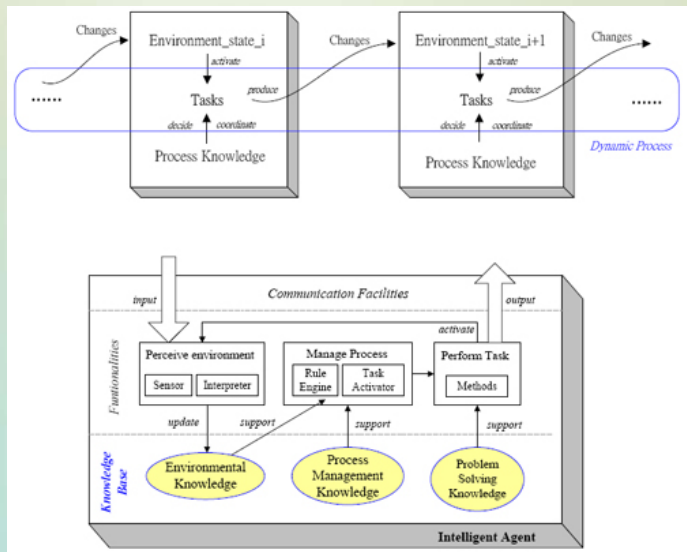
This study proposes a conceptualization and evaluation of BPM utilizing knowledge assets and adaptive mechanisms to respond to complex requirements. Knowledge-based decision and coordination capabilities are added to the BPM system with intelligent agent support. Business activities are delegated to a number of collaborative agents, each equipped with specific knowledge to manage its process through continuous awareness of situations and real-time decision and coordination of activities.

## Aims and Objectives

- To introduce different models of leadership in promoting IT-supported curriculum innovation and to examine issues of school context in relation to policy and change strategies;
- To provide a structure and mechanism that will encourage and support schools in establishing their own visions, goals and strategies as well as leadership teams for IT development in schools.

## Deliverables

A process decision and coordination mechanism will be established by using intelligent agents. Relevant knowledge-level infrastructure will be constructed for real-time decision and coordination of processes. A prototype system will be implemented and evaluated using simulation and experiments.



# Information, Technology and Educational Change (ITEC)

## Chief Editor

Dr. Bob Fox

## Email

[itec@cite.hku.hk](mailto:itec@cite.hku.hk)

## Website

<http://itec.cite.hku.hk>

Information, Technology and Educational Change (ITEC) has blind-refereed and non-refereed sections. Submissions can be made in English or in Chinese in either refereed or non-refereed sections. Contributions for the blind-refereed section generally should be between 2,000 and 4,000 words in length. Shorter reviews and commentaries will also be accepted. Contributions to the non-refereed section can be any length. Authors are requested to use language that is meaningful to an international audience and where appropriate to explain technical terms and avoid jargon. Accepted articles and reviews will be published in PDF and HTML formats. Prior to submission authors should read the ITEC "Notes for Contributors" section. Authors should elect to submit their work to either the refereed or non-refereed section. In either case, articles and reports should be sent to the Editor by e-mail ([editor@cite.hku.hk](mailto:editor@cite.hku.hk)) in the first instance.

## Aims & Objectives

Information, Technology and Educational Change (ITEC) e-journal aims to strengthen links between research and practice in education through IT and to stimulate discussion, reflection and change in Hong Kong and the region.

ITEC should be of interest to teachers at all levels, school principals, IT coordinators, tertiary sector staff and students, school administrators, librarians, educational publishers, software developers, staff involved in IT training in business settings, government officers and other professionals involved in the area.

The e-journal encourages cross-disciplinary topics related to applied research in practice and evaluating outcomes. Articles are welcomed on education and innovation through technology integration.





Tel: (852) 2241 5325 / 2857 8540  
Fax: (852) 2517 7194  
Email: [cite@hkucc.hku.hk](mailto:cite@hkucc.hku.hk)  
Website: <http://www.cite.hku.hk>