

II Project Information	
Project Title (in English) Development of Four Mobile Learning Modules to Enhance the Language Proficiency of Students	Project Title (in Chinese) 開發四個增進學生語文能力的流動學習課程
A. Project Summary	
<p>Proficiency in languages (English and Chinese) has long been a goal of university education. However, due to their study loads, students in many of our full-time programmes are not able to benefit from the wide spectrum of English and Chinese language enhancement courses on offer (there are over 20 of them). Therefore, apart from including language enhancement courses in our programmes as mandatory requirements, the University plans to provide such courses to students on a non-credit bearing basis. Many of the OUHK's language enhancement courses, particularly those in its distance learning programmes, contain abundant audio, video and text-based instructional content which allows flexible and efficient self-study. The provision of language enhancement courses can be expanded if some of our existing distance learning courses are transformed into modules offered on mobile devices such as the iPad, tablet PCs or even smartphones and the iPod, and made accessible to students freely for their own self-study.</p> <p>Why use mobile devices to deliver the modules? We believe Hong Kong is in a unique position to lead in the exploration of the challenges and opportunities afforded by mobile technologies due to the high penetration of Internet and wireless telephony services as well as the widespread ownership of the latest portable gadgets. Mobile technologies are already deeply integrated into all parts of our society and widely used in communication, business, personal management and entertainment. New initiatives have been piloted locally and elsewhere to apply emerging mobile technologies in a variety of educational settings and subjects. The research outcomes have demonstrated how advances in innovative technology can encourage participation, improve pedagogy and help transform concepts and processes in teaching and learning.</p> <p>Regular and ad hoc surveys of OUHK students also indicate very good potential in the deployment of mobile learning at the University. An awareness of their own needs and familiarity with mobile technology is already driving students' spontaneous exploitation of this technology in a number of ways – from Web searching, recording, storage and retrieval, to communicating and sharing using a rich array of media and formats.</p> <p>The recent launch of more powerful and integrated devices such as the iPad, smartphones and more advanced ebook readers has kindled a fresh wave of interest in and enthusiasm for exploring the capacity and more sophisticated functions of handheld devices for developing more mobile learning possibilities. The University wishes to spearhead the exploration of the challenges and opportunities that mobile technologies bring with a view to deploying these</p>	

technologies in a holistic, sustained and measurable manner rather than leaving them entirely to sporadic and contingent application.

The project team believes that the iPad (or 'slate' tablet PC) has advantages for effective learning, as mentioned in one review of the literature (Lam, Yau & Cheung, 2010). Furthermore, it is much lighter (0.68 kg for the iPad 1, and less than 0.50 kg for iPad2) and has a larger screen (10"), so content can be read reasonably comfortably. It allows efficient navigation using one or two fingers on a multi-touch screen, allowing the user to conveniently flick up or down on the screen to scroll through a webpage, double-tap a section on a page to enlarge or shrink it, pinch the screen to zoom in or out, and touch and hold a link to view a URL so that one knows before one goes. A handy thumbnail view shows all open pages in a grid, so one can quickly move between pages, and the device works in any orientation. A soft keyboard can be called in when one wants to type, so there is no need to attach a physical keyboard to the device (<http://www.apple.com/ipad/features/>); and it has Internet access capabilities (3G and Wi-Fi). There are many ready-made applications (apps) which can assist with more efficient information processing. The device is therefore very suitable for use by learners on the go: it allows access to content anytime, anywhere; it can enhance interaction between students and instructors; it can enrich student-centred learning; it appeals to technology savvy students because of the media rich environment; it supports differentiation of learning needs and personalized learning; it reduces cultural and communication barriers between faculty and students by using communication channels that students like; and it facilitates collaboration through synchronous and asynchronous communication (Corbeil & Valdes-Corbeil, 2007).

The use of apps for language learning has been increasing recently. Meurant (2010) indicated that the effect of using apps with an iPad is particularly evident in language education because of integrated multimedia and telecommunications features which are particularly applicable to language learning.

The unique advantages of mobile learning include:

1. extending education beyond the classroom;
2. delivering teaching and learning activities on demand;
3. fostering communication and collaboration;
4. conducting assessment and evaluation on site; and
5. providing real-time access to performance knowledge and learning support.

The OUHK is the only university in Hong Kong which is well positioned to try out a project like the one proposed because its distance learning course materials are already digitized and it has an online learning platform for delivering all its courses. Students are now able to carry out all their learning activities online (e.g., tutorials, assignment submission, receipt of marked assignments, receipt of feedback from tutors, synchronous or asynchronous online discussion

forums, course fee payment and graduation application, etc.), if they so choose. This project is a first step for the OUHK to move in the direction of mobile learning.

The project proposes that four self-study courses on language enhancement, based on existing distance learning course materials, be developed in a form suitable for mobile learning for full-time students, particularly new students of the OUHK. The four proposed courses for development are:

1. English for Effective Communication
2. English Communication for Managers
3. Use of Chinese [中國語文運用]
4. Use of Putonghua [普通話運用].

Target beneficiaries of this project are the University's full-time students, who are estimated to number over 5,000 in 2011. When some units of the courses are offered to the public, we expect that students of other post-secondary institutions in Hong Kong will also benefit. Aside from the budget sought for this project, which is \$1,575,000, the OUHK will contribute its own resources in the development and implementation of the courses. It will also undertake to maintain the courses in future for its students and for the public.

As an institution which places high value on the innovative and effective use of emerging technologies in learning, and one which has already developed a rich repository of learning materials, the OUHK possesses the unique expertise for implementing this project and ensuring its success.

References:

J.R. Corbeil & M.E. Valdes-Corbeil (2007) Are You Ready for Mobile Learning?, *Educase Quarterly*, November 2007, pp. 51–58.

J. Lam, J. Yau & K.S. Cheung (2010) A Review of Mobile Learning in the Mobile Age, *Hybrid Learning: Lecture Notes in Computer Science*, Vol. 6248, pp. 306–315.

Meurant, R. (2010) iPad tablet computing to foster Korean EFL digital literacy, *International Journal of u- and e-Service, Science and Technology*, 3(4), pp. 49–62.

B. Project Objectives

Many of the OUHK's language enhancement courses, particularly those in its distance learning programmes, contain abundant audio, video and text-based instructional content which allows flexible and efficient self-study. The provision of language enhancement courses can be expanded if some of our existing distance learning courses are transformed into modules offered on mobile devices such as the iPad, tablet PCs or even smartphones and the iPod, and made accessible to students freely for their own self-study.

The project proposes that four self-study modules, based on existing distance learning course materials, be developed in a form for mobile learning for full-time students, particularly new students of the OUHK. Some content from the existing courses will be selected for reference but a lot will be replaced with newly developed content. Small chunks of learning units will be created and students will be guided to build a framework for their learning. A situational and functional approach to language learning will be adopted for the modules – through a variety of situations and scenarios, students will learn how to write, rephrase and use vocabulary, and to enhance their reading, listening and speaking skills.

This project aims to develop four mobile learning modules for students' language enhancement. The four proposed courses for development are: English for Effective Communication, English Communication for Managers, Use of Chinese [中國語文運用] and Use of Putonghua [普通話運用].

Specific project objectives are:

1. To adapt the OUHK's existing course materials, and to develop new materials from scratch, for the development of four language enhancement module, so that students can study anywhere and anytime they wish.
2. To develop simple user guides for students' easy study of the modules.
3. To provide an assessment mechanism for the modules so that students' progress can be logged and reported.
4. To assess the learning effectiveness of the courses so that the modules can be improved after they have been offered for a year.
5. To offer some of the modules to the public, especially students of other universities in Hong Kong.

The following table provides details of the needs identified for language enhancement

courses for students and how the project aims to address these needs.

Details of needs identified	How the project aims to address the needs
Enhancement of English for communication	Provision of two mobile learning modules (English for Effective Communication (70 hours) and English Communication for Managers (70 hours))
Enhancement in the use of Chinese	Provision of one mobile learning module (Use of Chinese) (70 hours)
Enhancement in the use of Putonghua	Provision of one mobile learning module (Use of Putonghua) (70 hours)
Self-assessment of language enhancement	Provision of assessment tests, and online marking of the tests for the learning modules
Assessment of the effectiveness of the modules	A report on the enhancement of students' language proficiency from studying the modules
Language enhancement for students of post-secondary institutions in Hong Kong	Free offer to download selected parts of the modules via iTunes by the public, especially students of post-secondary institutions

C. Outcomes and Deliverables of Project

The outcome of this project is the provision of four mobile learning modules for the enhancement of English and Chinese language proficiency to all (over 5,000) full-time students of the OUHK to satisfy their need for flexible and self-paced learning. These modules will be downloadable from the 'OUHK on iTunesU' platform or the OUHK's own Online Learning Environment to students' individual mobile devices such as iPad, iPod and iPhone.

The ease of use of these mobile devices can be seen in the video attached to the application, also accessible at <http://learn.ouhk.edu.hk/~etpmsp/etp/temp/ipad.wvx>. Students will be able to access these courses in any place, at any time they prefer. They will be able to make use of very short durations of free time even when they are on the move, such as while waiting for and travelling on buses and trains, for ubiquitous learning.

The expected deliverables of this project include:

1. Four language enhancement modules (English for Effective Communication, English Communication for Managers, Use of Chinese [中國語文運用] and Use of Putonghua [普通話運用]) consisting of a total of 280 study hours, which students can study anywhere, anytime using mobile devices
- 2 A set of simple user guides for studying the modules.
- 3 An assessment mechanism for the modules so that students' progress and achievements can be logged and reported.
- 4 A report on the learning effectiveness of the modules, with respect to the pedagogical outcome and student satisfaction, so that the modules can be improved after they have been offered for a year.
- 5 Posting of some of the modules on a website so that members of the public, especially students of other universities in Hong Kong, can download and study them.

The potential beneficiaries are estimated to be over 5,000 OUHK students each year. This number will easily double when some of the modules are made open for access by members of the public.

Detailed descriptions of the modules are as follows:

English for Effective Communication 1

This is a Year 1 undergraduate module which emphasizes both understanding of the English language as a system for communication and the development of skills to apply this understanding in practical contexts. These two components are integrated in both teaching and assessment through practise and use in simulated study, work and social contexts. The estimated study time is 70 hours.

English Communication for Managers I

This is a Year 2 undergraduate module for students who wish to improve their ability to communicate effectively in English when performing managerial functions in an international business environment. The course aims to enhance students' skills in communicating with a broad range of business audiences. The minimum exit English competency requirement for this course has been pitched at the level equivalent to band 6.5 in the International English Language Testing System (IELTS). The estimated study time is 70 hours.

Use of Chinese

Through in-depth exploration of the Chinese language, this Year 1 undergraduate module will improve students' listening and speaking skills in Cantonese, and their ability in reading and writing formal Chinese, in order to deal with the needs in their study, work and daily life. The estimated study time is 70 hours. [中國語文運用(二)通過深入探討語文知識，進一步改善學生聽說標準廣州話、讀寫規範現代漢語書面語的能力，藉以應付學習、工作及生活上的需要。學科內容包括聽、說、讀、寫接收技能與表達技能，通過系統化的綜述和訓練，讓學生全面認識中國語文，強化實際的運用能力。]

Use of Putonghua

This Year 1 undergraduate module makes reference to the principles of language learning and is specifically catered for people of Hong Kong. It uses a communicative and gradual approach in learning the language. Each unit of study focuses on a different topic of interest to students, and includes listening, speaking, use of phonetics, reciting and cross-referencing between Cantonese and Putonghua. Each learning activity is independent of the others, but all are inter-related. The estimated study time is 70 hours. [普通話運用(二)本科教材和各個單元都依據語言學習原理及香港人學習普通話的特點而編訂，是按交際話題、縱向發展的單元組合。不同單元則以不同的話題為核心，採用綜合形式組合各個學習項目。各單元的學習項目包括聆聽、說話、拼音、朗讀練習和粵普對照練習。各個學習項目既有獨立的學習重點，又互有關連，互相支援。聆聽和說話技巧方面，本科通過話題與真實生活有關的聆聽和說話練習，讓學生提高使用流利而標準的普通話進行交際的能力；拼音練習可鞏固普通話語音系統的認識，逐步提高正音能力和說話時的音準水平；朗讀練習方面，通過朗讀詞語、句子和篇章的漸進式練習，學生可掌握連貫語流的能力，使說話時語調更恰當、語速更自然；粵普對照項目提供語音、詞匯和口語表達方式的對照練習，加深對普通話表達方式的認識，使聽得更仔細，說得更流暢。]

D. Implementation Details

This project will create four mobile learning modules for the enhancement of English and Chinese. The development of the modules will be done through (1) the construction of an eBook in app format for mobile devices; (2) the development of language enhancement content, video lectures/talks, multimedia components and interactive learning activities; and (3) the creation of collaborative tools for independent and interactive learning to promote language enhancement. These are described in more detail below:

(1) Development of an eBook in app format for the mobile learning modules

The mobile learning modules will be developed in an eBook in app format for use on mobile devices. In addition, functionalities will need to be added to the mobile learning modules to allow independent and interactive learning. These functionalities include note-taking, highlighting, bookmarking, looking up words in dictionaries, online discussion, and sharing and collaboration among users.

(2) Development of language enhancement content, video lectures/talks, multimedia components and interactive learning activities

The basic learning content can be adapted from the OUHK's existing courses. The OUHK has a large range of quality academic course materials for enhancing English, Chinese and Putonghua. Most of these existing courses are print-based rather than Web-based. Instructional design work is needed to adapt units from these print courses into standalone multimedia study modules for mobile learning. New content will have to be added, and in some cases we have to replace existing material (e.g. assigned readings and textbook content) for which copyright has been obtained only for use in print format. Redevelopment of some of the materials will be needed to avoid infringement of copyright.

Besides textual content, multimedia components such as video and audio clips need to be added to stimulate interest, to provide case examples and for practical applications. Video lectures by OUHK professors on the study unit topics will also be included to enhance language learning. Interactive activities (e.g. quizzes, fill-in-the-blank exercises and multiple-choice questions) will be provided for self-assessment, with immediate feedback and suggested answers.

(3) Creation of collaborative learning tools

Learning is best facilitated through interaction among learners. With the assistance of discussion forums and event calendars, tutor feedback can be supported to assist learners in constructing their own learning. Learners will be able to contribute information, comments, ideas and suggestions, and share knowledge and experiences via the University's Online Learning Environment (OLE) over the Internet using a mobile device. Tutors' comments and markings will be displayed on the OLE and synchronized with the eBook for learners to check. A set of simple user guides for studying the modules will be provided.

Evaluation of the mobile learning modules

An assessment mechanism for the modules will be developed so that students' progress and achievements can be logged and reported.

After the modules and the assessment mechanism are developed, the mobile learning modules will be offered to students. The duration of study will be about four months.

An evaluation survey on the modules will be carried out after the modules are used for the first time. A report on the learning effectiveness of the modules, with respect to the pedagogical outcome and students' satisfaction, will be written so that the modules can be improved.

Offering some units of the modules to the public

Selected units of the modules will be posted on the OUHK website for members of the public (particularly students at other post-secondary institutions in Hong Kong) to download and study when and where they like.

E. Implementation Schedule <i>(Please extend this table if necessary.)</i>		
Estimated start date of project:		September 2011
Action <i>(please indicate key milestones)</i>	Timeframe	Cashflow Requirement
<u>Phase 1: Sept 2011 – Feb 2012</u>		
1. Initiate the project and set up Course Teams	Sept 2011–Nov 2011	\$506,000
2. Develop the Blueprint (with indication of multimedia components) for four courses	Nov 2011	
3. Develop and transform the module content <i>(to be continued in the second phase)</i>	Jan 2012–May 2012	
4. Design and transform the learning activities (i.e. multiple-choice, short questions and exercises) <i>(to be continued in the second phase)</i>	Jan 2012–May 2012	
5. Develop the programming codes for the eBook app	Dec 2011–Feb 2012	
<u>Phase 2: Mar 2012 – August 2012</u>		
6. Develop a prototype mobile learning module in simulated eBook in app format	Mar 2012–May 2012	\$295,000
7. Develop multimedia components (flash animation, graphics) for four courses <i>(to be continued in the third phase)</i>	Jun 2012–Oct 2012	
8. Produce the audio-visual clips for four courses <i>(to be continued in the third phase)</i>	Jun 2012–Oct 2012	
9. Develop collaborative tools for interactive learning	May 2012–Jun 2012	
10. Develop the features/functionality (i.e. checking answers, learning progress) for independent learning for mobile learning modules	Jun 2012–Aug 2012	
<u>Phase 3: Sept 2012 – Feb 2013</u>		
11. Develop the download facilities for mobile devices	Sept 2012–Oct 2012	\$416,000
12. Develop the features/functionality for collaborative tools used for the OLE platform	Nov 2012–Dec 2012	
13. Develop the interface for mobile learning modules to synchronize with other learning platforms (i.e., MOODLE, Blackboard)	Dec 2012–Feb 2013	
14. Provide User Acceptance Test	Jan 2013–Feb 2013	
<u>Phase 4: Mar 2013 – Aug 2013</u>		
15. Provide training manual and session for users	Mar 2013	\$358,000
16. Launch the eBook app.	Apr 2013	
17. Conduct the evaluation to collect student outcomes and learning experiences	Apr 2013–Aug 2013	

Estimated completion date of project:

August 2013

F. Project Budget			
Projected Expenditure <i>(Please provide detailed breakdown under each item)</i>	Amount in HK\$		
	Year 1	Year 2	Total
a. Manpower (part-time) Research assistant		126,000	126,000
- Manpower (part-time) - Course developers / academic advisors (evaluation of pedagogical outcomes) - Video producer/script-writers - Multimedia designers	120,000 60,000 250,000	120,000 60,000 250,000	240,000 120,000 500,000
b. Service (contract out service) Course developers/academic advisors	160,000	160,000	320,000
c. Equipment/Facilities - Video recording software - AV editing tool - iPad devices	50,000 100,000 8,000	- - -	50,000 100,000 8,000
d. General Expenses - Transportation - Reference books	5,000 5,000	5,000 5,000	10,000 10,000
e. Others - Auditor's fee - Copyright license - Translation - Contingencies	- 10,000 5,000 28,000	5,000 10,000 5,000 28,000	5,000 20,000 10,000 56,000
Total Expenditure :	\$801,000	\$774,000	\$1,575,000
Sources of Funding			
a.	Amount of grant sought under this application: <u>HK\$1,575,000</u>		
b.	Other sources of funding: The OUHK will provide resources to support the implementation of the modules for its students, and to maintain the courses in future.		

G. Monitoring and Self-evaluation Mechanism

The project will be steered by a project group comprising the key development personnel (see below) for the relevant subjects. Regular progress monitoring will be conducted to ensure the project progresses smoothly, is implemented within budget and is delivered on time. Progress reports will be prepared every month internally and every six months externally.

Formative evaluation will be performed regularly (roughly every six months) throughout the implementation. The evaluation will aim to monitor the project progress and to collect feedback from the target students, stakeholders and project group members. Feedback collected will be used to validate the project and ensure that the aim and objectives of the project are being achieved. In each evaluation process, identification of issues and subsequent revision will be carried out to fine-tune the project.

Formative evaluation will be performed during the process of designing and developing the mobile modules. In order to carry out formative evaluation, the following evaluation methodologies will be used:

- Monitoring the project closely and preparing progress reports;
- Keeping logs of students' progress and achievement.

Summative evaluation will be performed at the closing stage of project implementation. The following indicators will be used to measure learning effectiveness:

- Indicators to measure student satisfaction, with respect to flexible and self-paced learning;
- Indicators to measure learning effectiveness, with respect to pedagogical outcomes.

Subject experts and external advisors will be invited to take part in the evaluation process to give comments and advice for improvement.

H. Management Support and Key Personnel Involved

The project is fully supported by the management of the OUHK. The University will allocate manpower and resources in addition to those requested in the budget.

The key personnel involved include:

Principal Investigators

Dr. K.S. Yuen, Head of Education Technology & Publishing, OUHK

Dr. Simon K.S. Cheung, Head of Information Technology, OUHK

Project Team Members

Mr. S.W. Lee, Registrar, OUHK

Dr. K.C. Li, Acting Director, Centre for Research in Distance & Adult Learning, OUHK

Dr. Eva Tsang, Senior Course Designer, Education Technology & Publishing Unit, OUHK

Dr Peter Storey, Associate Professor, School of Education and Languages, OUHK.

External Advisors

Dr. Angela S.P. Ho, Director, Educational Development Centre, PolyU

Dr Robert M Fox, Associate Professor, Faculty of Education, University of Hong Kong

I. Special Justifications if the Grant Sought Exceeds \$2 million

III Other information

1 Project sustainability

After project completion, the deliverables, which are basically the mobile learning modules, will be maintained and supported by the University's Educational Technology and Publishing Unit. There is a long-term need for the University to provide the modules to its students.

2 Preparatory work done

The OUHK is a pioneer in using mobile devices such as personal data assistants (PDAs) as authentic mobile learning tools. In 2003, the University started using the PDA as a practical tool in a nursing programme for students to receive course information, reference notes, clinical records and performance competency assessments during their practicum.

Last year, an OUHK internal interest group (which included the two Principal Investigators and three Project Team members) was formed to investigate the feasibility of adopting mobile learning at the University. The group believed that the breakthrough in mobile devices had come when the second generation tablet devices appeared on the market in early 2010. These devices essentially possess all the advantages and conditions necessary for mobile learning. This encouraged the Principal Investigators to initiate this project.

3 Past experience in organizing projects of similar or relevant nature and achievements

The OUHK values the appropriate use of information and communication technologies to support learning. The University has, since its inception, adopted technology in all aspects of its operation, and is an active explorer of new and emerging technologies with the goal of enhancing learning.

From 1997 to 2002, the OUHK successfully implemented two IT-related initiatives with notable success, namely, the Centre of Excellence project and the IT Development Plan, with grants from the government of \$50M and \$20M respectively. Through these two projects, the OUHK established an online learning platform which supports all the University's 400+ distance learning courses. Our 14,000 distance learning students are now studying with the aid of online multimedia and audio-visual materials, having ubiquitous access to and support from tutors, Course Coordinators and the administration through electronic text, and access to books and journals in our E-Library. In 2007, the University received a Government grant of \$62.8M for a Centre for Innovation project to cover the development of infrastructure,

innovative teaching and learning tools, an intelligent counseling system and e-learning courses. Most of the tasks are near completion. In 2009, the OUHK received QEGS grants for two projects to enhance teaching and learning at the University.

The Principal Investigators possess extensive experience in organizing and managing projects. We are familiar with the QEGS and have experience in getting support from the scheme in organizing similar projects.