RGC Ref. No.: UGC/IIDS16/H02/15 (please insert ref. above)

#### RESEARCH GRANTS COUNCIL COMPETITIVE RESEARCH FUNDING SCHEMES FOR THE LOCAL SELF-FINANCING DEGREE SECTOR

### INTER-INSTITUTIONAL DEVELOPMENT SCHEME (IIDS)

#### **Completion Report**

(for completed projects only)

- Submission Deadlines: 1. The unspent balance, if applicable, and auditor's report: within six months of the approved project completion date.
  - 2. Completion report: within 12 months of the approved project completion date.

#### Part A: The Project and Investigator(s)

#### 1. Project Title

Mobile Learning: Innovative Research Topics and Applications

#### 2. Investigator(s) And Academic Department(s) / Unit(s) Involved

Research Team	Name / Post	Unit / Department / Institution
Principal Investigator	Professor LUI Kwok-fai/ Associate Dean	School of Science and Technology, The Open University of Hong Kong
Co-Investigator	Professor WANG Fu-lee / Vice-President	Caritas Institute of Higher Education
Co-Investigator	Dr NG Artie Wai-cheong / Deputy Director	School of Professional Education and Executive Development, The Hong Kong Polytechnic University
Co-Investigator	Dr All Oliver Tat-sheung / School of Science a	
Co-Investigator	Dr WONG Billy Tak-ming / Research Fellow	University Research Centre, The Open University of Hong Kong

#### 3. Project Duration

	Original	Revised	Date of RGC / Institution Approval (must be quoted)
Project Start Date	1 January 2016	No revision was made to the	N.A.
Project Completion Date	31 December 2016	project duration.	
Duration (in month)	12 months		
Deadline for Submission of Completion Report	31 December 2017		

#### Part B: The Final Report

#### 5. Collaboration With Other Self-Financing Degree-Awarding Institutions

Collaborating Self-Financing Institution	% of Participation	Distinctive Element(s) that the Institution is Responsible for the Project
The Open University of Hong Kong	90%	<ul> <li>Oversaw the overall project planning and ongoing development</li> <li>Proposed and liaised with speakers</li> <li>Hosted and managed the series of events</li> <li>Provided logistic support to speakers</li> <li>Developed webpages for promotion of the events</li> <li>Provided registration services</li> <li>Prepared reports</li> </ul>
Caritas Institute of Higher Education (CIHE)	5%	<ul> <li>Promoted the seminars/workshops and encouraged academics in CIHE to participate in them</li> <li>Made logistic arrangements for the venue of a seminar</li> </ul>
School of Professional Education and Executive Development (SPEED), The Hong Kong Polytechnic University	5%	Promoted the seminars/workshops and encouraged academics in SPEED to participate in them

### 6. Project Objectives

#### 6.1 Objectives as per original application

The aim of this project was to enhance local academics' capability in research on mobile learning. The objectives of this project were:

- 1. to identify the latest development and promising research directions in mobile learning;
- 2. to formulate relevant research questions which address the needs for mobile learning research in Hong Kong;
- 3. to apply related theories in mobile learning research;
- 4. to generate mobile learning research in specific disciplines; and
- 5. to build up a supportive research collaboration network on mobile learning with academics from diverse backgrounds.

#### 6.2 Revised objectives

No changes were made to the objectives.

#### 6.3 Realisation of the objectives

(Maximum 1 page; please state how and to what extent the project objectives have been achieved; give reasons for under-achievements and outline attempts to overcome problems, if any)

The seminars and workshops were designed and implemented according to the project objectives (see Section 6.1).

Implementation of the seminars and workshops

**Topics**: The topics of the seminars and workshops were chosen to address the project objectives, as follows.

#### Seminars

- 1. Research Practices, Challenges and Future Directions of Mobile Learning
- 2. Theories of Mobile Learning and their Applications
- 3. Success Factors in Mobile Learning Research
- 4. Mobile Learning Research in Specific Disciplines
- 5. Research on Effective Practices of Mobile Learning

#### Workshops

- 1. Illustration of Applying Theories in Mobile Learning Research
- 2. Experience Sharing and Discussion on Mobile Learning Research
- 3. Demonstration of Mobile Learning Research in Specific Disciplines

(Full abstracts of the seminars and workshops are in Appendix II.)

**Speakers**: As reported in Section 6.6, the speakers for the seminars and workshops were all experts in the relevant areas.

**Participants**: There were over 300 participants in the seminars and workshops. They included academics, research staff and students from 14 institutions.

In addition, five seminars and two workshops were video-recorded with the speakers' permission. The videos and relevant event materials were made available and can be accessed on the project webpage at:

 $\frac{http://www.ouhk.edu.hk/wcsprd/Satellite?pagename=OUHK/tcSingPage\&c=C\_URC\&cid=1385179319368\&lang=eng}{5179319368\&lang=eng}$ 

Academics from other institutions and the general public may also freely access the videos.

**Evaluation:** Evaluations were conducted for all the seminars and workshops, which showed that the events were very well received by the participants. The participants showed a high satisfaction level in various aspects, including the relevance of content, usefulness for research, the quality of the materials, and the speakers' knowledge of the topics. Therefore, the seminars and workshops were highly effective in enriching the

knowledge and research skills in mobile learning of the participants. (Details of the evaluation results are in Appendix V.)

# 6.4 Summary of objectives addressed to date

Objectives	Addressed (please tick)	Percentage Achieved (please estimate)
To identify the latest development and promising research directions in mobile learning	✓	100%
2. To formulate relevant research questions which address the need for mobile learning research in Hong Kong	<b>✓</b>	100%
3. To apply related theories in mobile learning research	✓	100%
4. To generate mobile learning research in specific disciplines	<b>✓</b>	100%
5. To build up a supportive research collaboration network on mobile learning with academics from diverse backgrounds	<b>✓</b>	100%

# 6.5 Project progress

Original Implementation Schedule	Revised Implementation Schedule (Date of RGC's Approval)	<b>Updated Progress</b>
January 2016	No revision was made to this implementation schedule.	N.A
February 2016 • Seminar: Research Practices, Challenges and Future Directions of Mobile Learning	No revision was made to this implementation schedule.	N.A
<ul> <li>April 2016</li> <li>Seminar: Theories of Mobile Learning and their Applications</li> <li>Workshop: Illustration of Applying Theories in Mobile Learning</li> </ul>	No revision was made to this implementation schedule.	N.A
July 2016	No revision was made to this	N.A

<ul> <li>Seminar: Success Factors in Mobile Learning Research</li> <li>Workshop: Experience Sharing and Discussion on Mobile Learning Research</li> </ul>	implementation schedule.	
<ul> <li>August 2016</li> <li>Seminar: Mobile Learning Research in Specific Disciplines</li> <li>Workshop: Demonstration of Mobile</li> <li>Learning Research in Specific Disciplines</li> </ul>	No revision was made to this implementation schedule.	N.A.
November 2016  Compilation of final report	19 September 2016 (see Appendix I)	<ul> <li>(An additional seminar was given approval to be organized.)</li> <li>Seminar: Research on Effective Practices of Mobile Learning</li> </ul>
December 2016  Compilation of final report	No revision was made to this implementation schedule.	N.A.

# 6.6 Speaker(s)

Title / Name (Surname in Capital Letters)	Post / Institution	Title / Topic of Presentation / Course	Previous Research Links with Hong Kong Institutions (Nature and Date (Month / Year))
Prof. Mohamed ALLY	Professor, Centre for Distance Education, Athabasca University	Research Practices, Challenges and Future Directions of Mobile Learning	Organizing/Programme committee member:  • The Inaugural International Conference on Open and Flexible Education, Hong Kong, January 16–17, 2014.  • The 5th International m-libraries Conference, Hong Kong, May 27–30, 2014.  • The 28th Annual Conference of the Asian Association of Open Universities, Hong Kong, October 28–31, 2014.
Dr David PARSONS	National Postgraduate Director, The Mind Lab by Unitec. (former Associate	Theories of Mobile Learning and their Applications; Illustration of Applying Theories in	N.A.

	Professor of	Mobile Learning	
	Information	Research	
	Technology,		
	Massey		
	University)		
Prof. John	Professor of	Success Factors	Academic Reviewer for Hong
TRAXLER	Mobile	in Mobile	Kong Research Council.
	Learning,	Learning	· ·
	Institute of	Research;	<u> </u>
	Education,	Experience	
	University of	Sharing and	
	Wolverhampton	Discussion on	
	•	Mobile Learning	
		Research	
Prof. Gwo-Jen	Chair Professor,	Mobile Learning	Programme committee member
HWANG	Graduate	Research in	of the 2nd International
	Institute of	Specific	Conference on Technology in
	Digital Learning	Disciplines;	Education, Hong Kong, July
	and Education,	Demonstration	2–4, 2015.
	National Taiwan	of Mobile	• Invited speaker at the 17th
	University of	Learning	International Conference on
	Science and	Research in	Computers in Education, Hong
	Technology	Specific	Kong, November 30–December
	Toomicrogy	Disciplines	4, 2009.
Prof. Hiroaki	Professor,	Research on	Conference chair of the
OGATA	Faulty of Arts	Effective	International Workshop on Mobile
OGATA	and Science,	Practices of	and Ubiquitous Learning
	Graduate School	Mobile Learning	environments, Hong Kong, August
	of Information	14100He Dearming	15–17, 2007.
	Science and		15 17, 2007.
	Electronic		
	Engineering,		
	Kyushu		
	University		

6.7 Please provide details of the activities organized, including the theme / objectives of the activities, targeted participants, attendance, analysis of participants, e.g. country of origin, research background, etc., evaluation forms of the activities and a summary of the participants' evaluation. Photos of the activities are preferred.

Please refer to the appendices, as follows:

Appendix	Description
II	Summary of the events
III	List of participants
IV	Samples of evaluation forms used in the events
V	Evaluation summary of the events
VI	Photos of the events

#### 7. Research-Related Outcome

# 7.1 Potential for development into research proposal and the proposed course of action (Maximum half a page)

The project served to enhance the capability of academics in conducting research on mobile learning. The seminars and workshops covered various topics related to mobile learning research, from its background and development to current research and applications of mobile learning, so that participants became more capable of conducting research independently and identifying potential research topics in mobile learning for their own disciplines.

As reflected in the evaluation feedback, participants felt they became more able to conduct research studies in mobile learning, as well as implement mobile learning in teaching and learning. A number of specific topics were also suggested by the participants for further discussion and training that should be arranged (see Section 7.3 for details).

#### 7.2 Research collaboration achieved

(Please give details on the achievement and its relevant impact)

The seminars and workshops attracted academics from various institutions who were interested in applying mobile learning and conducting research studies. Through these events, participants from a range of higher education institutions had opportunities to meet with each other for academic exchanges. In addition to overseas speakers, academics from local institutions were also invited to present their research studies on mobile learning. The participants were given opportunities to discuss research ideas with the speakers and challenges with real case studies. The project therefore facilitated collaboration and support in mobile learning among academics from a variety of institutions and disciplines.

Events in the project also facilitated collaboration between local academics and overseas experts. For example, through the seminar and workshop given by one of the speakers, Prof. Hwang Gwo-Jen, there was then further research discussions between Prof. Hwang and academics from the Open University of Hong Kong. The speaker was invited to serve as a Distinguished Professor of the University.

Any new development and/or challenging research topic(s) has / have been identified and any new initiative(s) for future research has / have been inspired.

Participants who attended one or more events suggested the following topics for further activities:

- 1. Apps application in class
- 2. Availability of mobile learning development tools
- 3. Challenges in making students become active learners
- 4. Communication with students during their clinical practicum
- 5. Ethics in mobile learning, course design and content for a global learning community
- 6. Examples of mobile learning that relate to the prenatal theories
- 7. How to create interactive activities for mobile learning
- 8. How to design interactive teaching materials for mobile learning efficiently and effectively

- 9. How to develop teaching materials that are suitable for both face-to-face and mobile learning
- 10. How to encourage students' use of e-learning materials
- 11. How to engage students in mobile learning
- 12. How to establish standards for mobile learning within organizations/institutions and others in the community
- 13. Illustration of a successfully designed course which adopts mobile learning
- 14. Interactivity for mobile learning
- 15. Methodology/mobile learning design
- 16. Mobile learning analytics
- 17. Mobile learning in the workplace
- 18. Practicality of implementation in view of the challenges to be faced now and down the line
- 19. Profile of mobile learning teachers
- 20. Skills for the 21st century learners/workers
- 21. The means and ways of mobile learning
- 22. Use of mobile devices by older adults
- 23. Use of mobile learning in museums
- 24. Use of mobile phones to facilitate learning, both inside and outside the classroom

#### 8. The Layman's Summary

(Describe in layman's language the nature, significance and value of the research activities, in no more than 200 words)

In this project, five seminars and three workshops were organized for enhancing the knowledge and skills in mobile learning research of academics in local institutions. For each seminar, an expert was invited to speak on a specific topic related to mobile learning, including research practices, challenges and future directions in mobile learning; theories of mobile learning and their applications; success factors in mobile learning research; mobile learning research in specific disciplines; and research on effective practices of mobile learning. Three seminars were followed by a workshop that helped the participants to apply what they had learned in the seminars. The events were jointly organized by the Open University of Hong Kong, Caritas Institute of Higher Education and the School of Professional Education and Executive Development, The Hong Kong Polytechnic University. The events were open to academics and students in the tertiary sector in Hong Kong and the general public, and attracted over 300 attendees from 14 institutions. The evaluation showed that the events were successful in assisting academics to enhance their relevant research skills in mobile learning, and apply them in research, teaching and learning in the local self-financing degree sector, as well as facilitating research collaboration among participants and speakers.

#### Part C: Research Output

# 9. Recognized Conference(s) Paper(s) Related To This Project Was / Were Delivered (As Applicable)

(Please attach a copy of each conference abstract)

Month / Year / Place	Title	Conference Name	Submitted to RGC (indicate the year ending of the relevant progress report)	Attached to this Report (Yes or No)	Acknowledged the Support of RGC (Yes or No)
N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

#### 10. Research Personnel Trained (As Applicable)

Please refer to Appendix III for the names and institutions of the participants in events.

#### 11. Other Impact (As Applicable)

(e.g. prizes, collaboration with other research institutions, technology transfer, etc.)

Through the events, local academics were able to meet with experts in mobile learning from various regions, including Taiwan, Australia, Canada and the United Kingdom, which stimulated research collaboration among them. For example, an invited speaker, Prof. Hwang Gwo-Jen, was later appointed as a Distinguished Professor for the Institute for Research in Open and Innovative Education at the Open University of Hong Kong. Meetings with Prof. Hwang were held and academics from the Open University of Hong Kong were able to discuss with Prof. Hwang topics on mobile and ubiquitous learning, technology-enhanced learning, and learning analytics. More academic events such as seminars, lectures and consultations have been scheduled for Prof. Hwang to deliver in 2017.

#### 12. Public Access Of Completion Report

(Please specify the information, if any, that cannot be provided for public access and give the reasons.)

Information that Cannot Be Provided for Public Access	Reasons	
N.A.	N.A.	