

Supporting Field Experience in Teacher Education Course by using Cloud Services and Mobile Technology

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The Hong Kong Institute of Education
MIT Departmental Seminar 31 Oct 2013 (Thu) 12:30-1:30 pm

1

Abstract

Field experience (FE) is an essential component in a teacher education course. It encourages student teachers to innovate and reflect on their practice within a supportive environment. Besides, it also facilitates the creation of a learning community in which student teachers, supporting teachers and Institute supervisors can learn together and so mutually enhance their professional development. On the other hand, mobile technology and cloud services help to facilitate the creation of this kind of learning community in which student teachers can get support from their Institute supervisor and peers at anytime, anywhere and any place. Cloud services offer many possibilities to educators for its use, for example, communicating with students through social networking services. Meanwhile, Institute supervisors can make use of mobile devices (e.g. Apple iPad) to access cloud-based storage and services during the school visits. The digital forms of FE documents are also convenient for student teachers and Institute supervisors to build their own e-portfolio. This study aims to explore the potential of using mobile technology and cloud services to create a convenient and efficient environment to enhance student teachers' professional development in FE.

2

BACKGROUND

3

Field Experience in Teacher Education Course

- Field experience at the Hong Kong Institute of Education (HKIED) is viewed as a central aspect to our programmes.
- It encourages student teachers to innovate and reflect on their practice within a supportive environment as part of their professional development process.
- It also facilitates the creation of a learning community in which student teachers, supporting teachers and Institute supervisors can learn together and so mutually enhance their professional development.

4

Cloud services and mobile technology

- Mobile technology and cloud services help to facilitate the creation of this kind of learning community in which student teachers can get support from their Institute supervisor and peers at anytime, anywhere and any place.
- As the cost of tablet PCs becomes affordable for local educators, more and more people are aware of the great potential of these technologies in Education.

5

How can these technologies support the FE process

- Institute supervisors can make use of this type of mobile device to access cloud-based storage and services during the school visits.
- Professional dialogues will be flexibly in varied digital forms and no longer restricted to verbal comments during pre/post-lesson conferences and written feedback on the FE supervision forms.
- Besides the cloud-based communication channels, the FE supervision forms can be annotated with rich media and also links to Internet resources.

6

An Institute- wide TDG project

- An initiative funded by the Institute-wide Teaching Development Grants (TDG)
- Colleagues involved in this project from
 - five departments across three faculties,
 - the School Partnership and Field Experience Office (SPFEO) and
 - Centre for Learning, Teaching and Technology (LTTC)
- Project title:
 - Enhancing Student Teachers' Professional Development in Field Experience by Using Cloud Services and Mobile Technology

7

Project aims (1)

- To enhance student teachers' professional development in FE by adopting mobile technology and cloud services to create a convenient and efficient environment for both student teachers and Institute supervisors during block practice period
- To develop the competency of Institute supervisors in using mobile and cloud services in teaching and learning

8

Project aims (2)

- To enable student teachers and Institute supervisors to build their own e-portfolio for further sharing of their professional practices within and outside the Institute through the use of digital forms of FE documents such as TP supervision forms, FE portfolios, and reflective journals
- To align with one of the graduates' generic outcomes of reflective thinking

9

Project aims (3)

- To respond to the QAC recommendations on developing ICT infrastructure to support learning and enhance the assessment of final block practice in Field Experience at the Institute

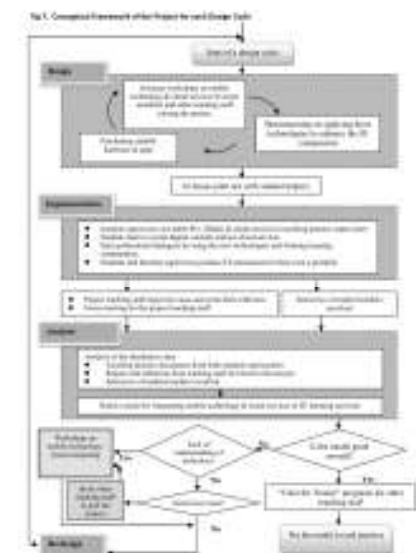
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RESEARCH METHODOLOGY

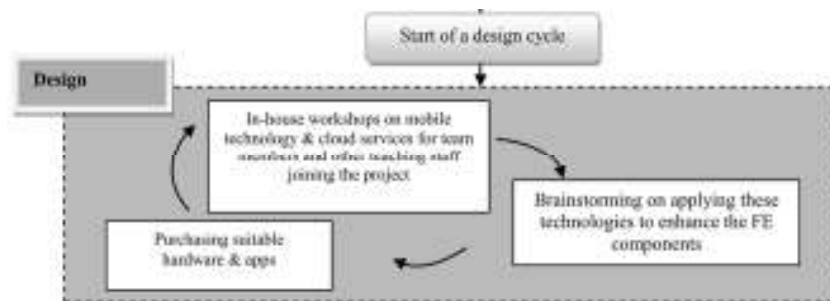
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Study design

- The study is a design-based research study (DBR)
- Three design cycles are conducted in the study to produce sharable theories that have implications for practitioners and designers

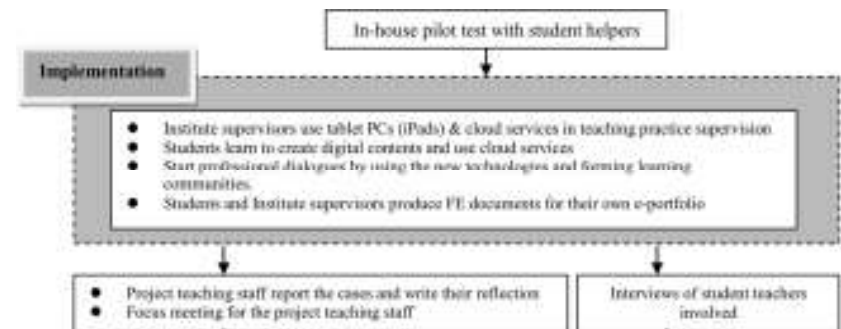


Design stage



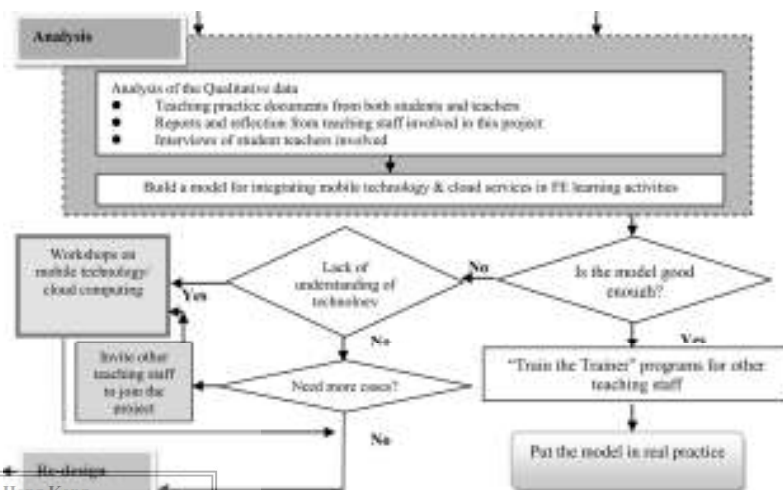
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Implementation stage



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Analysis stage



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Done by the Principal Researcher

PILOT CASE

16

Before the FE visits

The Researcher created a Facebook group and invited his students to join the group.



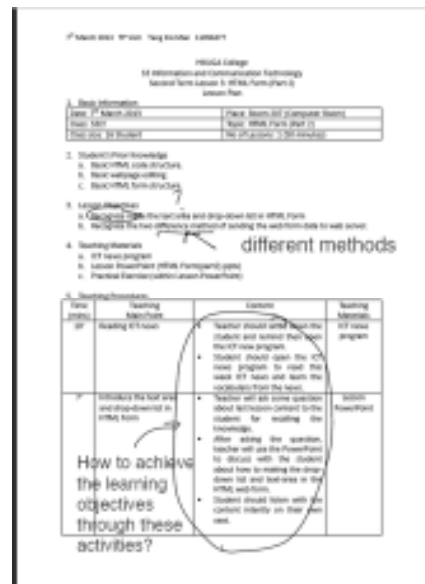
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- The Researcher created a Dropbox shared folder and invited his students to join the shared folder.
- His students shared documents such as lesson plans and teaching materials with Dropbox.



18

- The Researcher gave comments on the lessons by using PDF Expert. Then, he uploaded the annotated lesson plans back to Dropbox shared folder.



19

- Use Facebook as a communication channel
- Use Dropbox for resources sharing
- Use Mobile App (PDF Expert) for document annotating

20

During the FE visits

- The Resercher used Evernote to take notes.
- He wrote down his comments in Evernote.
- He also captured some photos in Evernote.



- After finished the lesson, the researcher discussed with his students with reference to the materials stored in the Dropbox shared folder.



After the FE visits

- Use Evernote for note-taking during class observation
- Use Dropbox as a resource bank

- The Researcher copied the observation record from Evernote and pasted it onto the FE supervision form.
- After completing the FE supervision form, he sent the student copy to the student teachers through email.



- Use PDF Expert to fill in FE supervision form
- Email the flattened Supervision Form to the student teacher.

25

The 1st FE Supervision (Dec 2012 – Jan 2013)

- Five project team members used the iPad and cloud services in teaching practice supervision.
- There were twenty-three relevant student teachers invited to join the project in total.
- The numbers were related to their allocated workload in FE supervision and their experience in using mobile technology.

26

No. of student teachers involved in the project in cycle 1

FE Supervisor	Programme	No. of student teachers involved in the project
A	BEd(P)	2
B	BEd(P)	3
C	BEd(P)	1
D	PGDE(P)	1
E	BSc MAIE	16
	Total	23

The Bsc MAIE students that were supervised by Supervisor A, were taking majors in IT and Mathematics. All of them were invited to join the project.

27

SEEK FOR IMPROVEMENT

28

During the FE visits

- A team member used Remark to take notes as it can be used offline.
- He also captured some audio clips and photos with the Remark app.



29

- He completed the FE supervision form according to the comments in Remark.

The screenshot shows a completed FE supervision form. It has a header with the title '教師專業發展計劃' and a table with multiple columns and rows. The table contains various categories and checkboxes, some of which are marked with checkmarks. At the bottom, there is a signature and the name 'Yan Yin Lung CCA'.

30

- Before the FE visits, another team member created a chat group with WhatsApp and invited her students to join the group.
- She then communicated with her students by using WhatsApp.



31

- For taking notes during class observation, she not only wrote down her comments in Evernote notes
- She also captured photos and recorded audio clips in an Evernote note.



32

- After the FE visits, she revised the Evernote notes with desktop PC and sent the revised notes her students by email.



33

- Finally, she guided her student teachers to compile FE e-portfolios with Mahara.
- All FE documents were re-organized and used as supporting evidence.



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During the FE visits

- Dr. Wong used iPad to capture some photos and recorded some videos in the lessons.



img_0023.mov

Done by Dr. Wong Tak Wah (Co-supervisor)

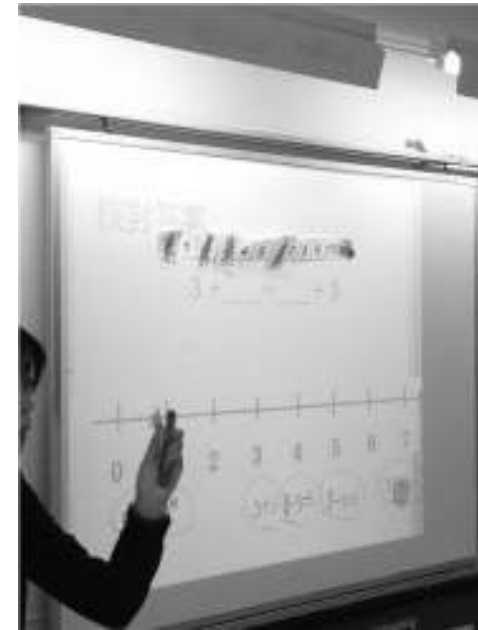
SEEK FOR IMPROVEMENT

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- He filled in the FE supervision form by PDF Expert and discussed with his student according to the FE supervision form and iPad.
- After completed the FE supervision form, he sent the student copy of the FE supervision form to his student through email.

47

Data analysis for each cycle

- Qualitative data are collected for analysis in each design cycle
- Qualitative data sources include:
 - Case reports and reflection of teaching staff joining the project
 - Interviews of student teachers involved
 - Teaching practice documents from teaching staff
 - Artifacts produced by student teachers involved in this project

48

Feedback from students and teachers

- In general, student teachers were willing to try the new technologies in teaching and learning.
- They could upload their work (e.g. teaching materials, lesson plans, etc.) on the cloud services (e.g. Dropbox) and shared the work with their supervisors. Their supervisors were able to read their materials and made comments through the cloud services.
- Student teachers could respond to the comments and made necessary modifications to their lesson plans.

49

Feedback from students and teachers

- As the cloud services provided a convenient environment for resources sharing among student teachers and their supervisors, both student teachers and the supervisors were able to upload and download the materials easily.
- After the teaching practice supervision, supervisors were required to fill in the FE supervision form and wrote the comments in the form. The digital forms of FE documents such as TP supervision forms were convenient for both student teachers and supervisors to build their own e-portfolio.

50

STILL ONGOING

Impact and deliverables – For the Institute

- Training materials for using mobile technology and cloud services in Field Experience are available
- Electronic FE documents such as FE supervision form have been prepared , which are tailored for writing comments with tablets like iPads and easily uploaded to cloud storage
- A group of staff are now equipped with sound knowledge in using mobile technology and cloud applications in teaching and learning

51

52

Impact and deliverables – For teaching staff involved

- Institute staff involved in the project are enriched with experience of applying new technologies in teaching and learning.
- FE documents and a certain amount of teaching materials will be available for building up their own electronic teaching portfolio
- These experiences provide a firm base for the Institute-wide e-portfolio system that are also cloud-based and can be updated at anytime, anywhere and at any place with mobile devices

53

Impact and deliverables – For student teachers involved

- A collection of artifacts in electronic form will be available. These include teaching materials, lesson plans, sample of school students' work etc
- Electronic FE documents that have recorded the professional dialogues with their FE supervisors are available
- The materials showing their professional development process in Field Experience can be used to build up their own electronic learning portfolio

54

Thank You
謝謝

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