

Communities of Practice for Teaching Supervision – Enhancing
student teachers’ professional development in Field Experience by
using cloud services and mobile technology

教學視導實踐社群講：座在學校體驗期間透過雲端服務及流動科技提升實習老師的專業發展

Dr LAI, Yiu Chi 黎耀志 [MIT] yiuchi@ied.edu.hk

Dr WONG, Tak Wah 黃德華 [MIT] tw Wong@ied.edu.hk

Dr LEE, Kwok Yeung Barry 李國揚 [ECE] blee@ied.edu.hk

Mr. NG Wing Shui 吳永水 [MIT] ngws@ied.edu.hk

Mr. Yuen Tze Leung Raymond 袁子良 [CCA] tlyuen@ied.edu.hk

1

BACKGROUND

2

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.

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.

3

4

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.

5

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

6

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

7

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

8

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

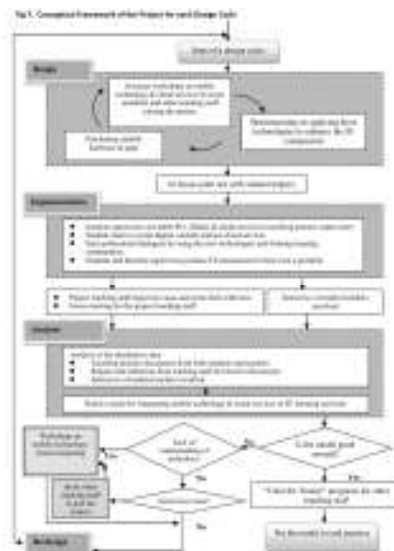
9

RESEARCH METHODOLOGY

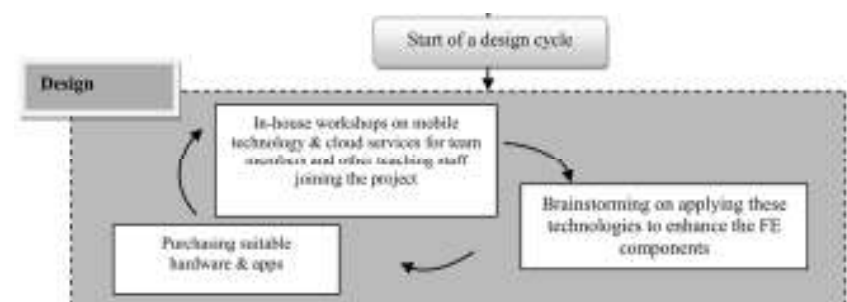
10

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

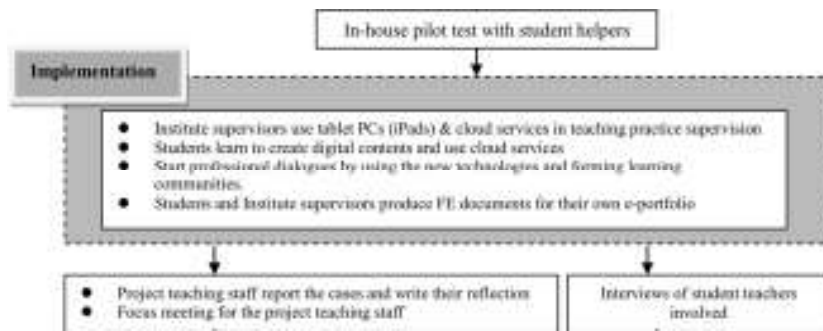


Design stage



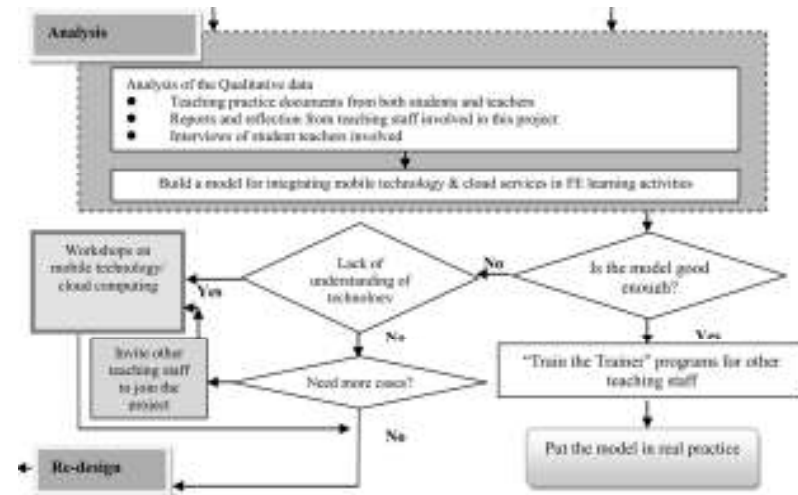
12

Implementation stage



13

Analysis stage



14

Done by the Principal Researcher

PILOT CASE

15

Before the FE visits

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



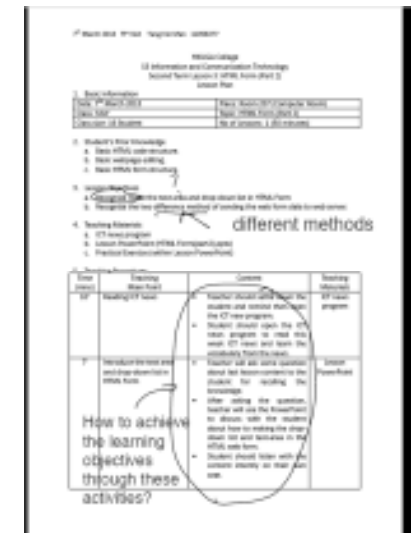
16

- 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.



17

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



18

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

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.



20

19

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



21

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

22

After the FE visits

- 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.



23

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

24

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.

25

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.

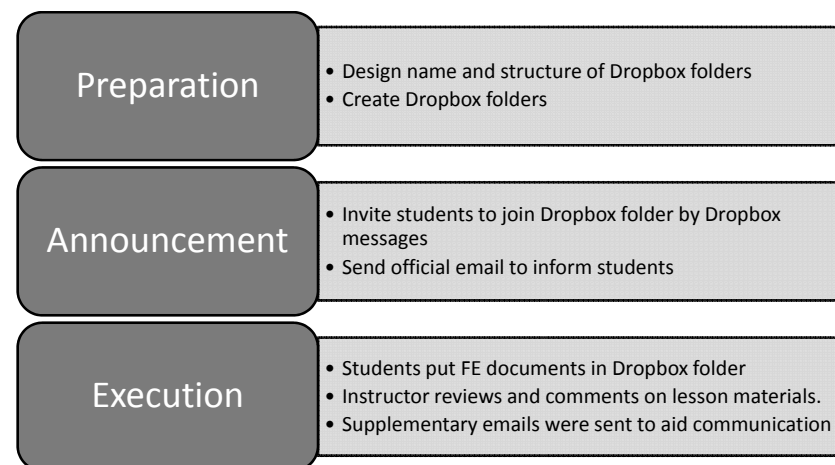
26

Done by Mr. Walter Ng

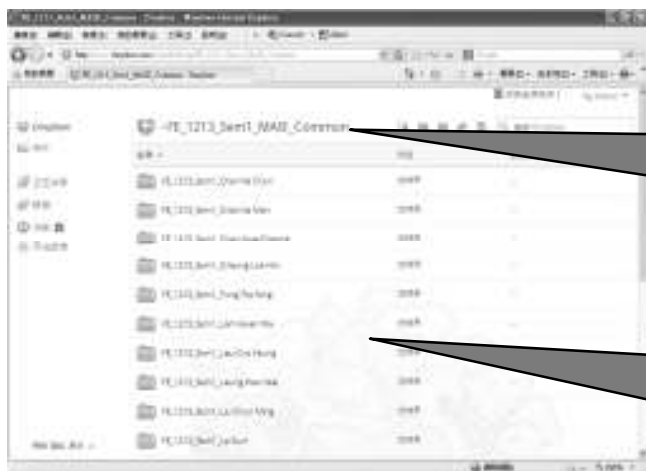
CASE STUDY

27

Three Stages of Using Cloud Services in FE



Name and Structure of Dropbox Folders



Common folder for sharing common materials, such as sample lesson plan, visit schedule, notes on pedagogy

Individual folder to store documents of each student. It can be viewed by others for sharing purpose.

Official Email to Students

- Dear All,
-
- **Important Messages ! Please Read Carefully !**
-
- In order to **promote sharing and mutual support culture amongst students**, the cloud service, Dropbox, is used. I have created a common folder for all students and an individual folder for each student. Please register a Dropbox account using your HKIEd email address and accept my invitation. If you encounter any difficulties, please feel free to contact me.
-
- All your individual Dropbox folders will be put under the common folder (FE_1213_Sem1_MAIE_Common). In other words, **all classmates can access all materials in all folders that I created for you.**
-
- In this arrangement, you should put all your personal FE documents in your own Dropbox folder (FE_1213_Sem1_Student Name). For other materials that are useful for all classmates, you should put it in the common folder (FE_1213_Sem1_MAIE_Common).
-
- If you want to share some materials to me personally, please create a folder by yourself and invite me to join.
-
- ...

Effectiveness of Using Cloud Services in FE

- Promote sharing among students
- Manage resources in a more systematic way
 - Windows Explorer environment
- Reduce extraneous burden of using email in old practice
 - e.g. typing email address, subject, words like “Dear ... , Regards ...”
- Students were willing to use the Dropbox platform.

Application of Mobile Technology

- Lesson materials were downloaded to iPad using Dropbox app for reviewing and writing comments.
- Materials were shown to facilitate post lesson discussion.
- Used in non real time activities.

Possible Constraints

- **Real time** recording using iPad compared with paper and pen – technical hurdle
- Workload that incur from consolidation of lesson observation notes after the class.
- No. of TP visits that are required.
 - Capacity for supplementary lesson observation, if required, and possible post visit workload

Done by Mr. Raymond Yuen

CASE STUDY

34

Before the FE visits

- Raymond created a Dropbox shared folder and invited his student to join the shared folder.
- His student shared documents such as lesson plans and teaching materials in Dropbox.



- Raymond reviewed and commented on the lesson materials.
- He uploaded the lesson materials with his comments to Dropbox.

A screenshot of a lesson plan document. The document is titled "視導_何家公露何家猜 (四德)". It contains a table with the following columns: 時間 (Time), 教學活動 (Teaching Activities), 教學內容/活動/材料/工具/教材 (Teaching Content/Activities/Materials/Tools/Textbooks), 評語 (Comments), and 評語 (Comments). The table has two rows of lesson plans, each with a checkmark in the '評語' column.

時間	教學活動	教學內容/活動/材料/工具/教材	評語	評語
1. 10:00-10:15	1. 學生自修	1. 遊戲練習 2. 中文練習卷第4頁 3. 老師講解字詞, 讀例句 4. 學生練習卷第4頁 5. 老師講解字詞, 讀例句 6. 中文練習卷第4頁 7. 老師講解字詞, 讀例句 8. 學生練習卷第4頁 9. 老師講解字詞, 讀例句 10. 中文練習卷第4頁 11. 老師講解字詞, 讀例句		老師給予指導
2. 10:15-10:30	2. 老師講解	1. 遊戲練習 2. 中文練習卷第4頁 3. 老師講解字詞, 讀例句 4. 學生練習卷第4頁 5. 老師講解字詞, 讀例句 6. 中文練習卷第4頁 7. 老師講解字詞, 讀例句		老師給予指導

35

36

During the FE visits

- Student modified the lesson materials and uploaded the revised lesson materials to Dropbox.

期數	教學目的	教學內容/活動/資源/器材	評估策略	評語
1	1. 理解串接電路	1. 串接電路 2. 串接電路中電阻的分配 3. 串接電路中電阻的分配 4. 串接電路中電阻的分配 5. 串接電路中電阻的分配 6. 串接電路中電阻的分配 7. 串接電路中電阻的分配		
2	2. 理解串接電路	1. 串接電路中電阻的分配 2. 串接電路中電阻的分配 3. 串接電路中電阻的分配 4. 串接電路中電阻的分配 5. 串接電路中電阻的分配 6. 串接電路中電阻的分配 7. 串接電路中電阻的分配		

37

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

教師：
加入
其教學材料
備用
手寫
教學內容
教學計劃與內容
教學步驟建議
教學內容之活動編排合適
備用及即有即時配合高質的資源：能為每位學生作好準備！
如何處理2023-2024-1117

教學與學習管理
能運用課堂管理技巧，在更有關連中，掌握時已建立的常規，能作出理想的示範。
有助學生參與活動。
讓的守護備用入口與學生閱讀，實二者其一，特2023-11-17
留意正學生參與活動時，學生參與程度發展，需改善學生的參與及參與。
評估策略：
針對學生的參與度給予恰當的回饋。
給予正面鼓勵。
溝通與互動

38

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

科學科 (Science) 監督表 (Supervision Form)
被監督老師 (Teacher to be supervised): [Name]
日期 (Date): [Date]
時間 (Time): [Time]
地點 (Location): [Location]
觀察者 (Observer): [Name]
被觀察者 (Observed): [Name]
觀察時間 (Observation Time): [Time]
觀察地點 (Observation Location): [Location]
觀察內容 (Observation Content): [Content]
觀察者簽名 (Observer Signature): [Signature]
被觀察者簽名 (Observed Signature): [Signature]
日期 (Date): [Date]

39

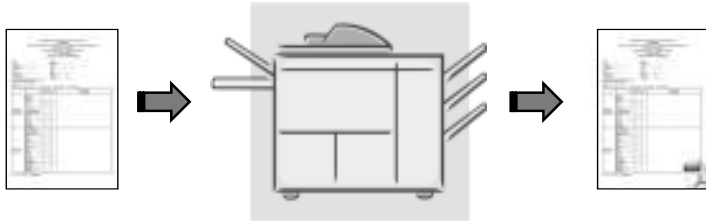
Done by Dr. Barry Lee

CASE STUDY

40

Before the FE visits

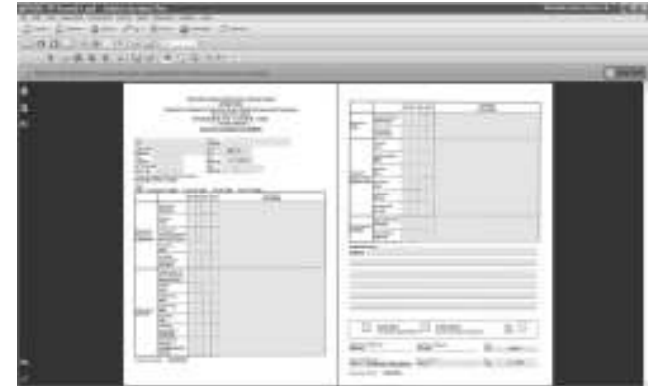
- Barry first converted the paper TP Form to pdf format by scanning the Form with a photocopier with scan function.



41

Before the FE visits

- He then converted the pdf TP Form to a fillable form using Adobe Acrobat 9 Pro.



42

Before the FE visits

- He then transferred the fillable TP Form from his PC to his iPad through Dropbox.



43

During the FE visits

- Barry used the PDF Expert app to open the TP Supervision Form.



44

During the FE visits

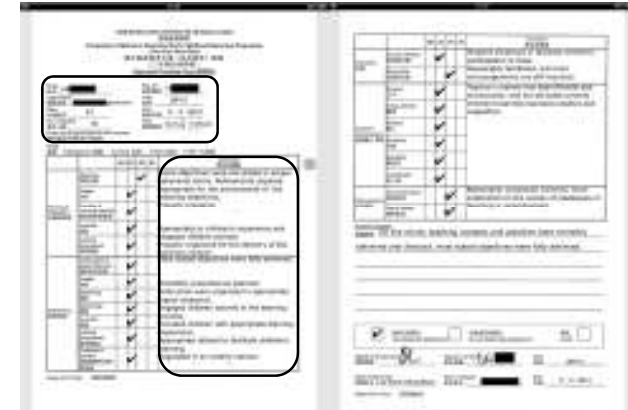
- He also opened a piece of blank pdf paper in PDF Expert app for taking notes during class observation.
- He also captured some photos and documents with the PDF Expert app.



45

During the FE visits

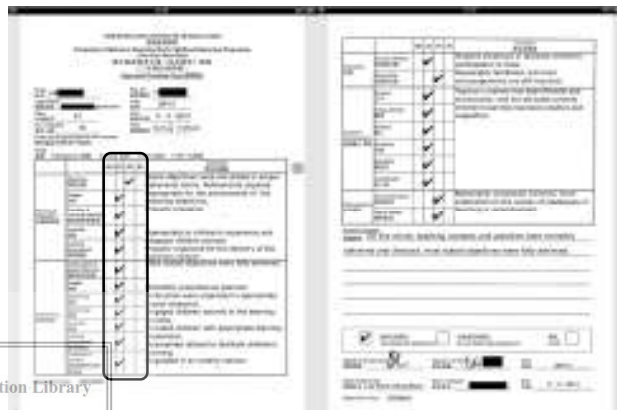
- Barry completed the TP Supervision Form by:
 1. typing directly in the textboxes of the form.

A screenshot of the TP Supervision Form. The form is divided into two main sections. The left section contains a table with various criteria and checkboxes. The right section contains a larger text area for notes. Two text boxes are highlighted with black rectangles: one in the top left section and one in the middle of the right section.

46

During the FE visits

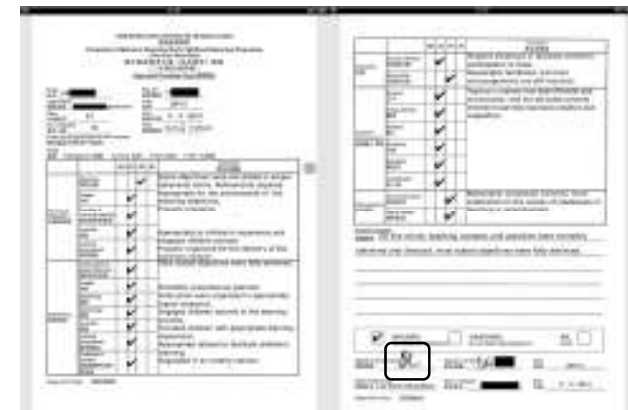
- He completed the TP Supervision Form by:
 2. selecting check boxes in the form.

A screenshot of the TP Supervision Form. The form is divided into two main sections. The left section contains a table with various criteria and checkboxes. The right section contains a larger text area for notes. A vertical column of checkboxes in the left section is highlighted with a black rectangle.

47

During the FE visits

- He completed the TP Supervision Form by:
 3. inserting his graphic signature in the form.

A screenshot of the TP Supervision Form. The form is divided into two main sections. The left section contains a table with various criteria and checkboxes. The right section contains a larger text area for notes. A signature is visible in the bottom right corner of the form, highlighted with a black rectangle.

48

During the FE visits

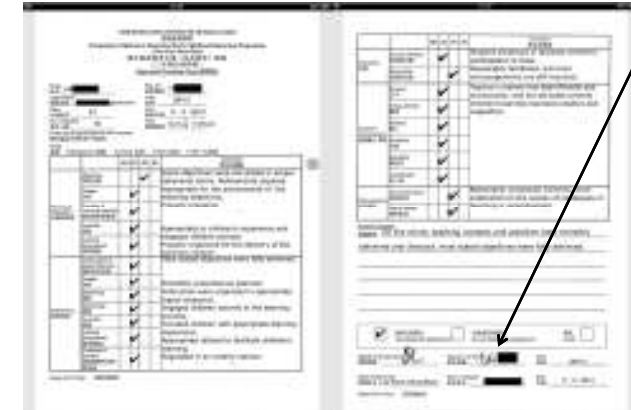
- He completed the TP Supervision Form by:
 4. asking student to sign after discussion.



49

During the FE visits

- He completed the TP Supervision Form by:
 5. transferring student's signature to the form.



50

After the FE visits

- Barry prepared a noneditable student copy with the PDF Expert app, and then emailed to student using the iPad email app.



51

Done by Dr. Eugenia NG (Co-supervisor)

CASE STUDY

52

Before the FE visits

- The Co-supervisor created a Dropbox shared folder and invited her students to join the shared folder.
- Her students shared documents such as lesson plans and teaching materials in Dropbox.



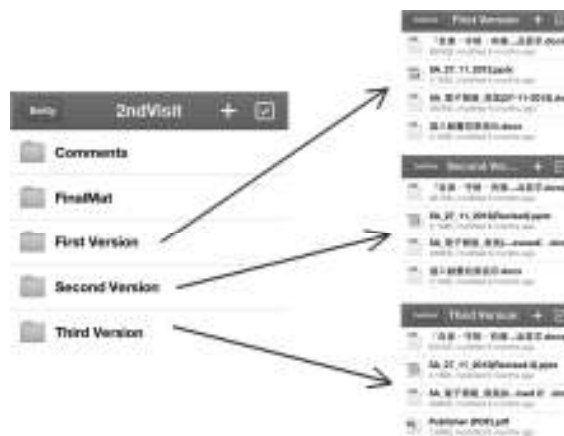
53

- The Co-supervisor gave comments and notified her students through email.



54

- Students revised the materials a few times.
- They uploaded the revised materials to Dropbox.



55

During the FE visits

- The Co-supervisor used iPad to capture some photos in the lessons.
- She wrote down her comments and suggestions on the FE supervision form directly using PDF Expert.



56

- After the lessons, the Co-supervisor discussed with her students according to the photos in the iPad and the comments in the FE supervision form.
- After the discussion, she sent the student copy of the FE supervision form to her students through email.

57

Done by Dr. Pamela Leung

SEEK FOR IMPROVEMENT

58

- 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.



59

- 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.



60

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



61

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



62

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

SEEK FOR IMPROVEMENT

63

During the FE visits

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

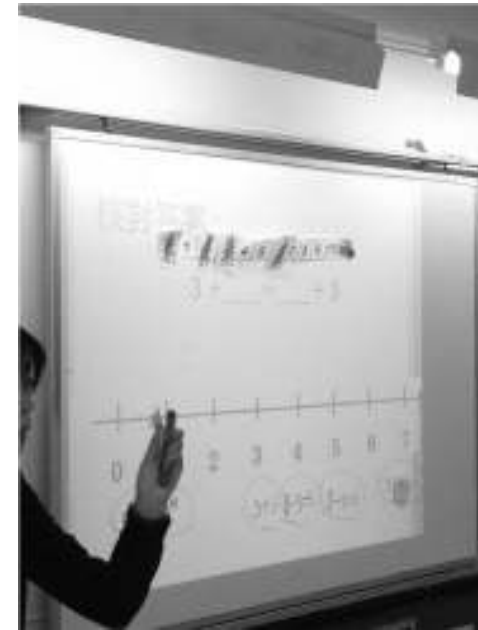


img_002.mov

64



65



66



67



68



69



70



71



72



73



74

- 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.

75

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

76

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.

77

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.

78

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

79

80

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

81

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

82

Thank You
謝謝

83