

Implementation and evaluation of using MLPA to enhance student's learning effectiveness

Date : 2 June 2016

Venue : B4 – LP – 13

Time : 1:30 – 2:00

Project objectives

- A. Improving the quality of teaching and learning – Mobile learning could facilitate student-teacher interaction and access to the learning resources anytime and anywhere.
- B. Supporting affordances for student learning
 - Foster collaborative learning
 - Reduce time-consuming tasks
 - Create mobile knowledge retrieval and gathering
- C. Reflecting student learning process – student learning is highly associated with the use of mobile learning systems which are extremely beneficial to learners' growth

Performance Indicators / Evaluation of Outcomes

- Attitudes toward using M-Portfolio Inventory (AMI)
 - Attitudes toward using MLPA will be measured in two parts: general attitudes toward user's operating skills on mobile phones or tablets, and specific attitudes toward the MLPA.
 - System satisfaction (2 items), System activities (3 items), Learners' autonomy (2 items), System functions (3 items), and System acceptance (3 items).
- College Learning Effectiveness Inventory (CLEI)
 - It comprises six scales and 50 questions for measuring the factors that impact student learning, including **academic self-efficacy (ASE)**, **organisation and attention to study (OAS)**, stress and time press (STP), involvement with college activity (ICA), **emotional satisfaction (ES)**, and class communication (CC).

Three phases of study

- There are three phases of the project :
 1. Development of learning apps (MLPA) May – Aug 2014
 2. Implementation phase I (Sept – Dec 2014) and;
 3. Implementation phase II (Sept- Dec 2015).

Course : SED 3001 Enrolment no. – about 500

MLPA learning apps

Required Platform: Android (Phase 2), iOS & Android (Phase 3),

User: around 500 person per semester

Project starting date: January 2015

Pilot run: Sept 2014 - Dec 2014 (Phase 2); Sept 2015-Dec 2015 (Phase 3)

HKIED technical support: Virtual Machine – an empty place to install system

●	Instant chat room/forum
●	Upload/download photos, videos, articles and share with teachers and students
●	Trace the source of uploaded materials
●	In-app browser for users to search and surf websites
●	Data mining - tracking function, charts building on results (i.e. website visited most) -> export to Excel
●	Pop-up notification, PUSH function
●	Rate classmates' presentation
●	Leave comments to classmates (without disclosing sender's info)
●	Set up evaluation forms for grading purpose (include M.C. and open-ended questions)
●	Calculate average marks and build charts -> export to Excel
●	Instant class activity – Post and answer questions (similar to live chat room)
●	Extract keywords from students' answers (Word cloud/Bar charts) -> export to Excel
●	Mark students' attendance

Download procedure

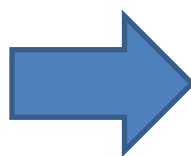
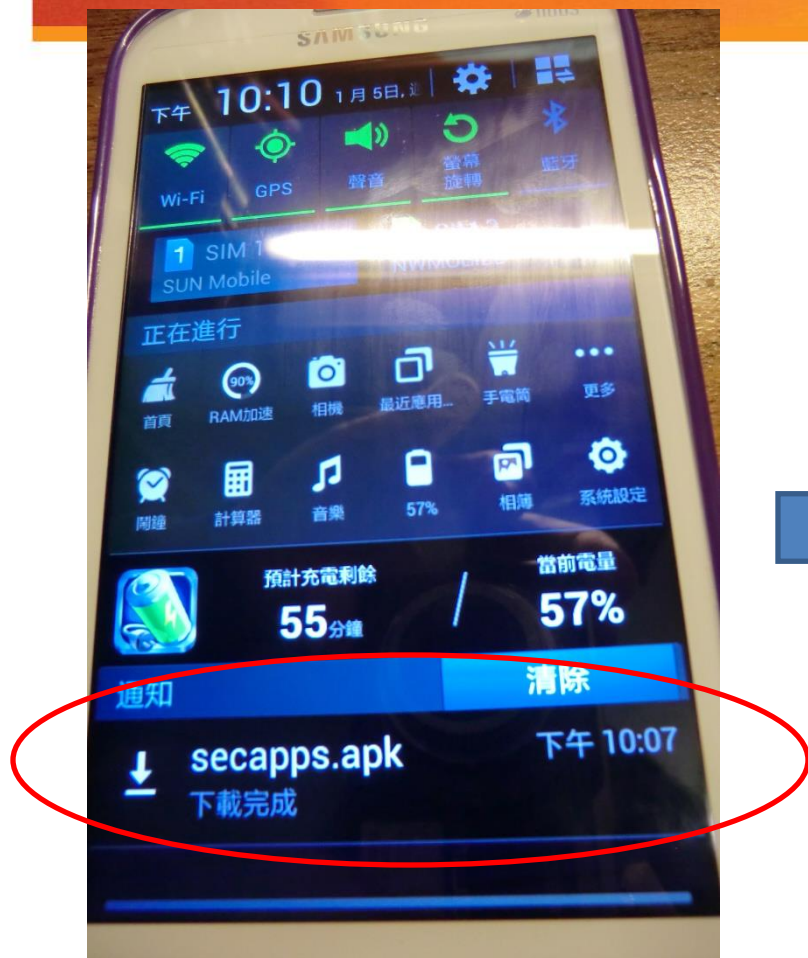
Download apps

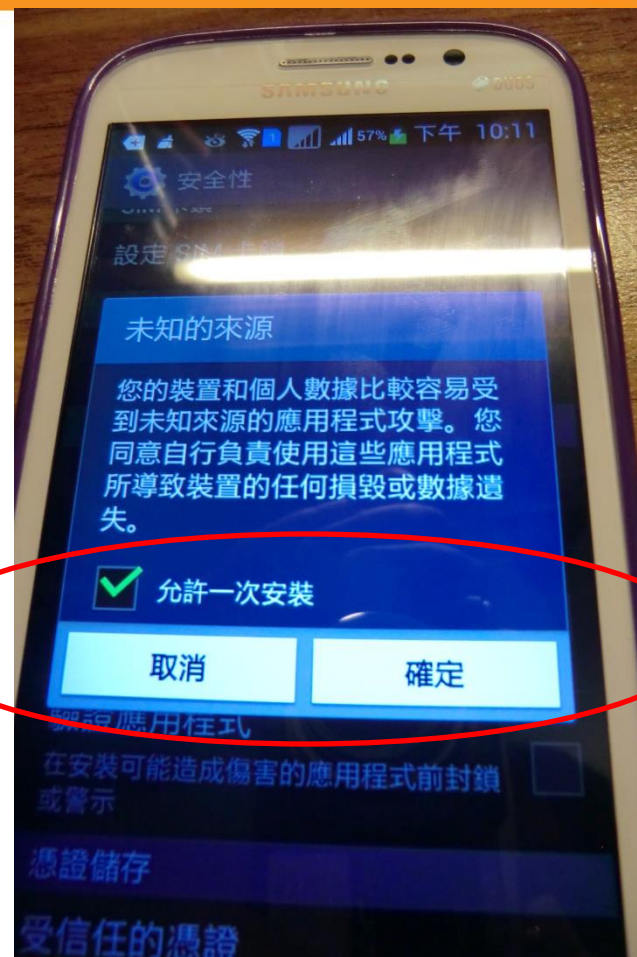
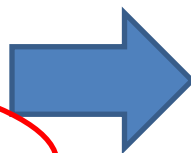
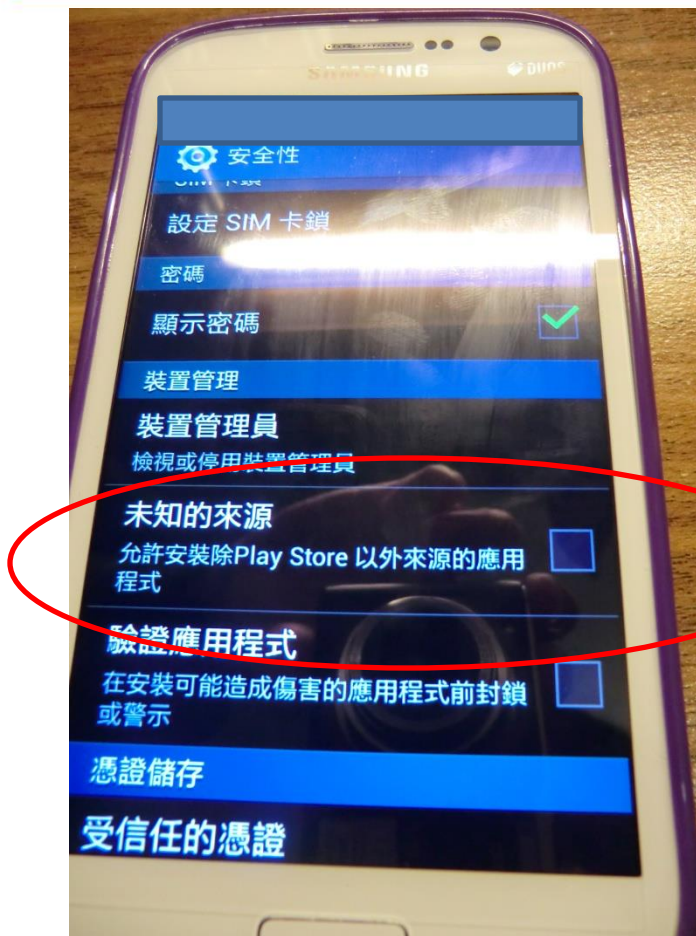
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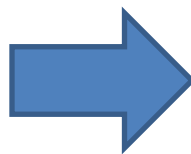
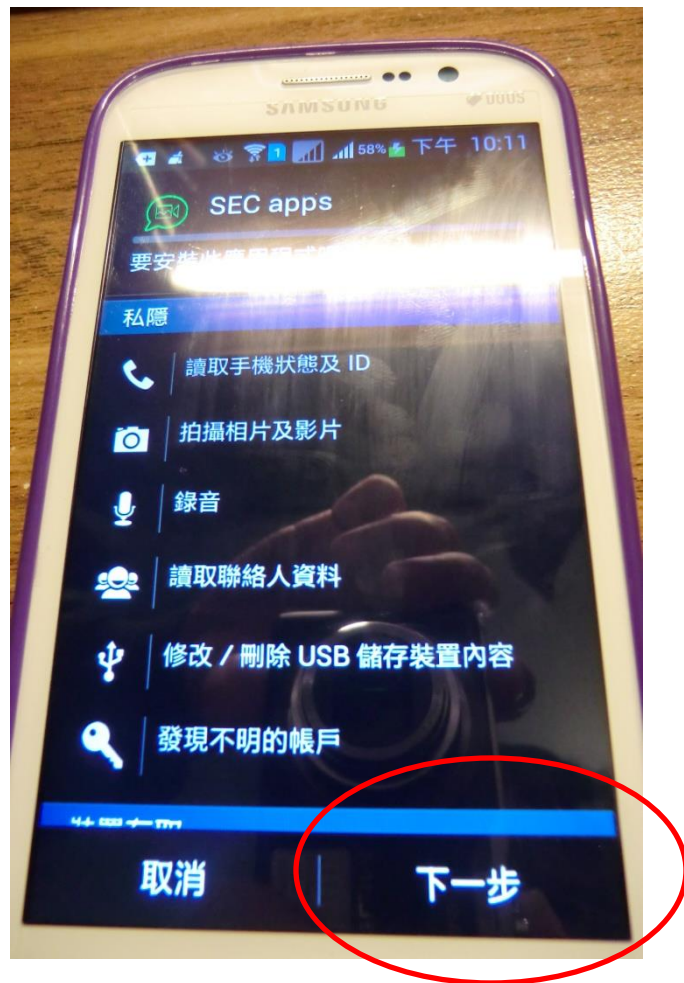
For IOS system phone:

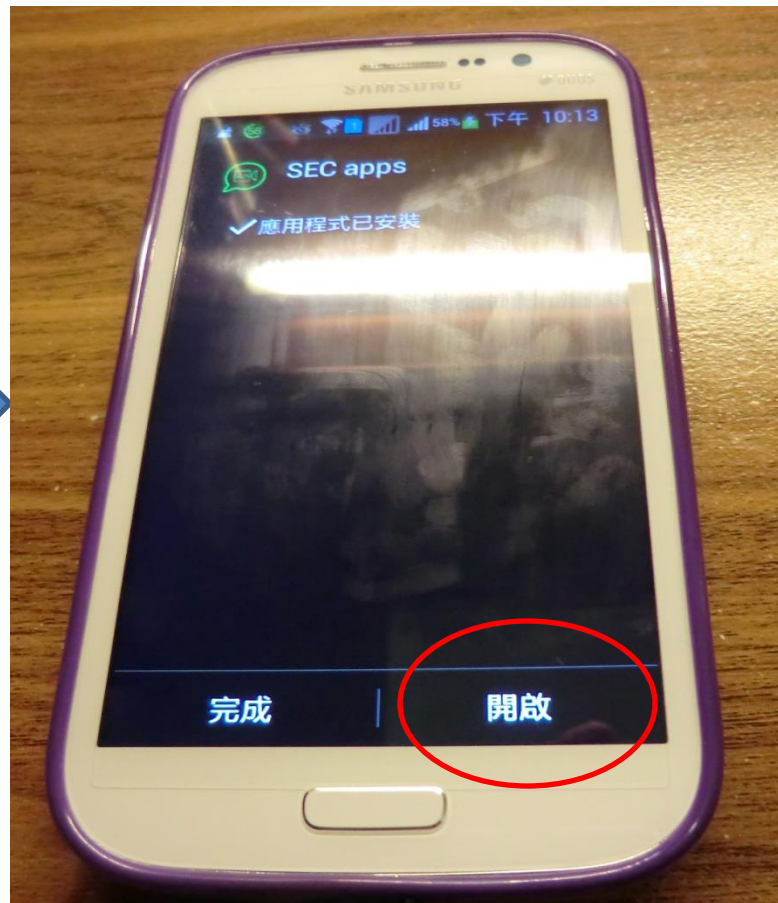
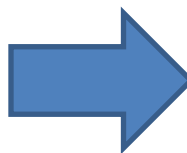
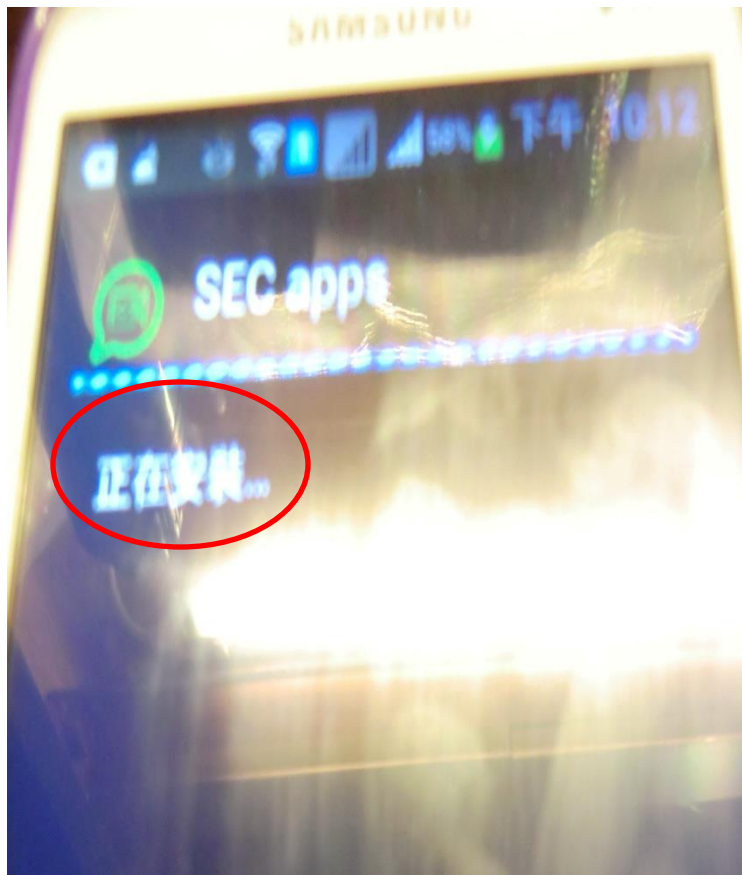
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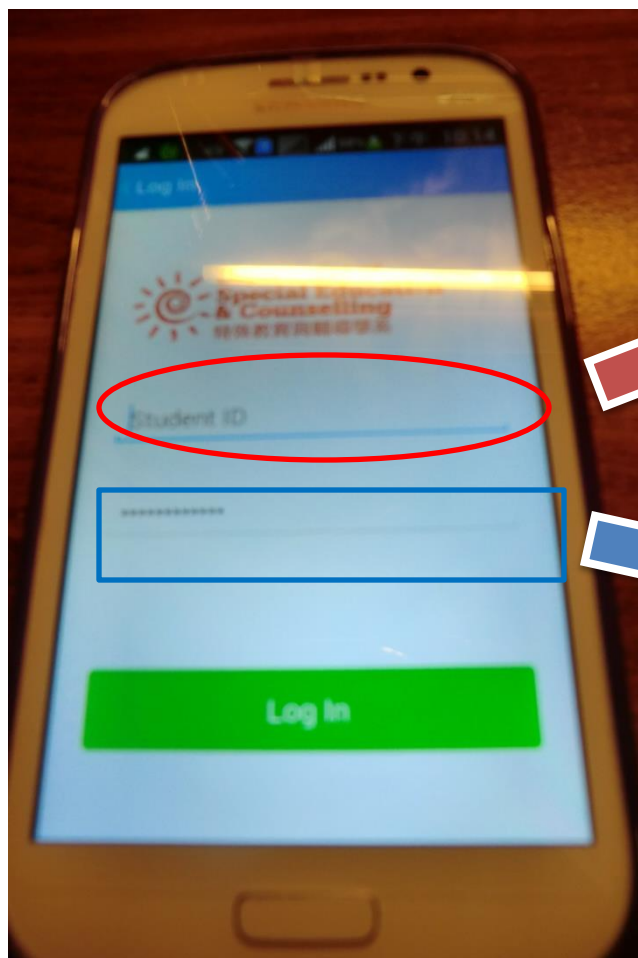
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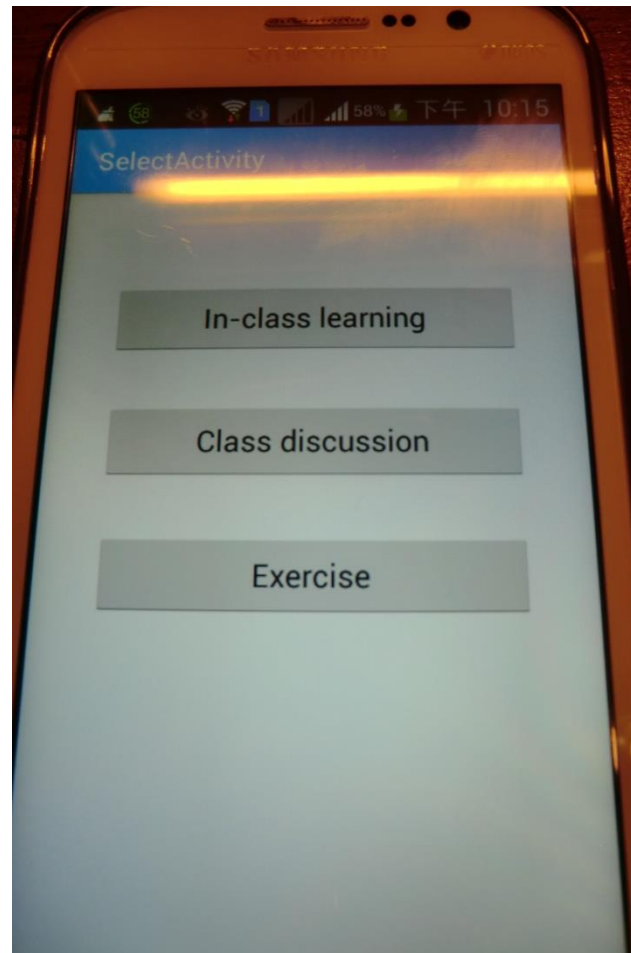




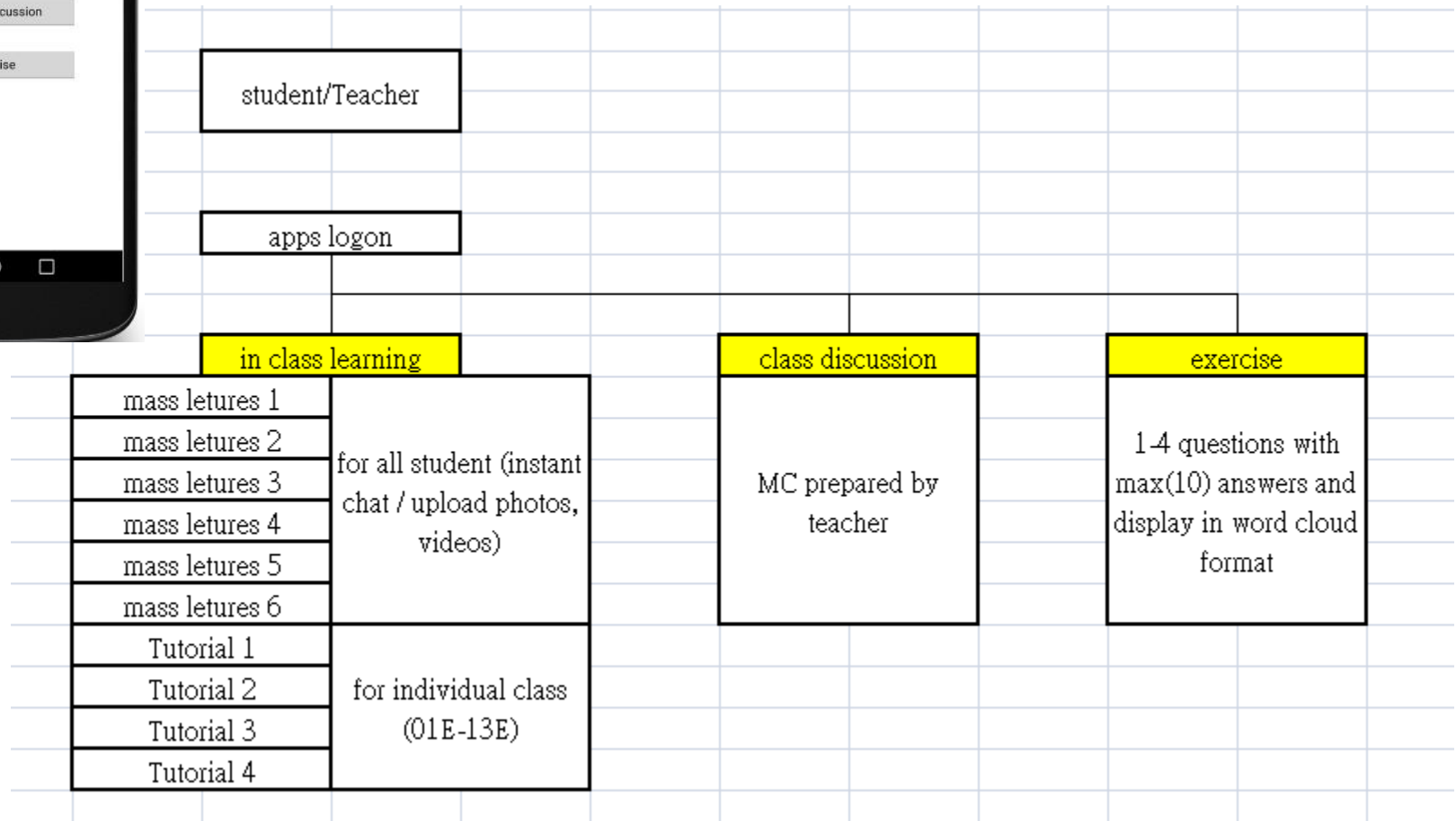
學生編號：
八位數字 (如:11123456)

密碼 : pass12345678
(稍後請自行修改)

*** (IOS 系統智能電話不能更改密碼)**



Structure



For Students

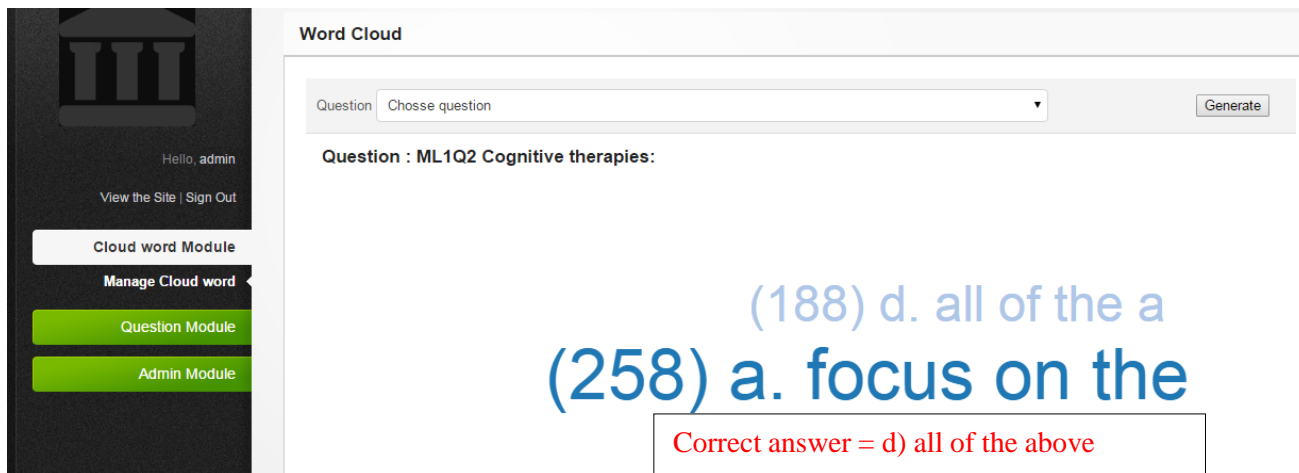
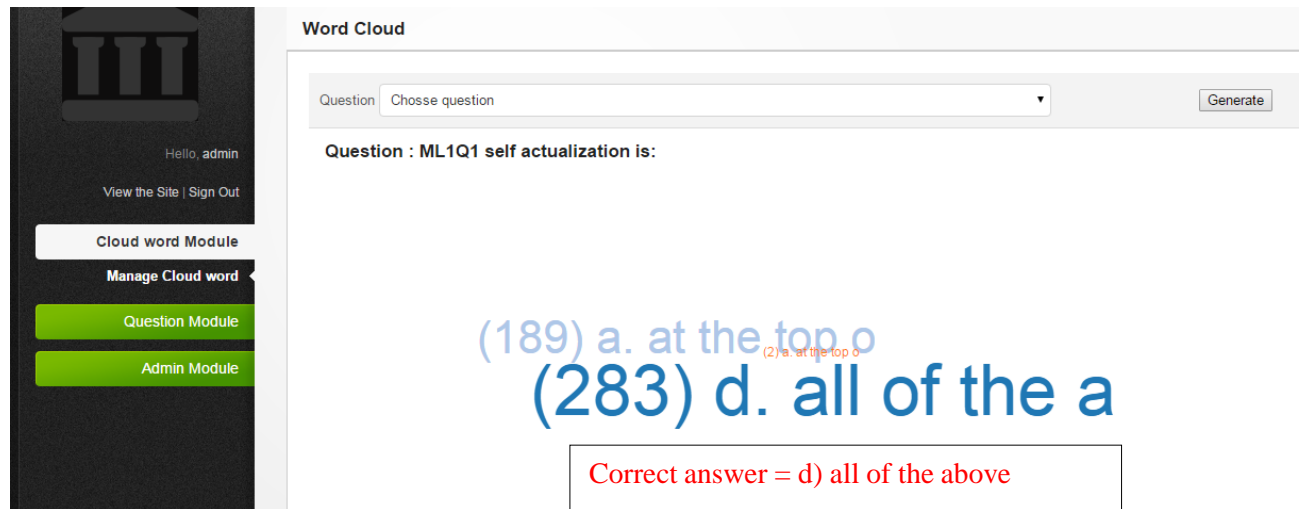
What should students do

- Input instant chat content (mass lectures 1-6)
- Upload photos, video and hyperlink
- Complete M.C. questions
- Answer questionnaires

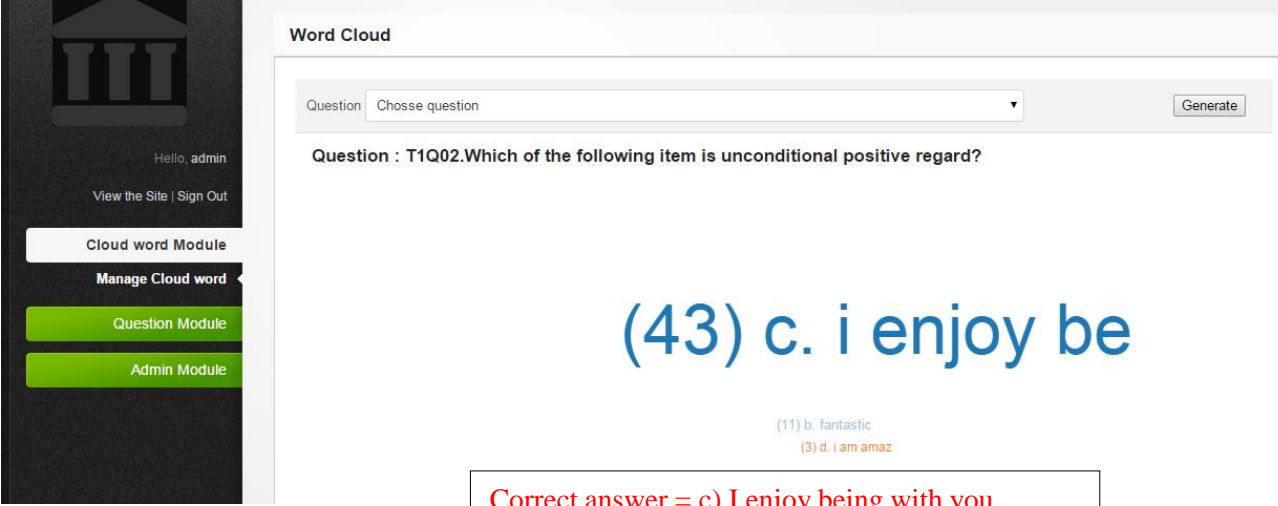
Benefit

- Review the chat content (mass lectures 1-6)

Word Cloud Result of Mass Lecture 1 : 482 students



Word Cloud Result of Tutorial One (13E : 44 students)



The screenshot shows a web application interface. On the left is a dark sidebar with a logo at the top, followed by 'Hello, admin', 'View the Site | Sign Out', and a menu with 'Cloud word Module', 'Manage Cloud word', 'Question Module', and 'Admin Module'. The main area is titled 'Word Cloud' and contains a dropdown menu labeled 'Question' with 'Chosse question' selected, and a 'Generate' button. Below this, the question 'Question : T1Q02.Which of the following item is unconditional positive regard?' is displayed. The word cloud shows '(43) c. i enjoy be' in large blue text. Smaller text below indicates '(11) b. fantastic' and '(3) d. i am amaz'. A red-bordered box at the bottom contains the text 'Correct answer = c) I enjoy being with you.'

Word Cloud

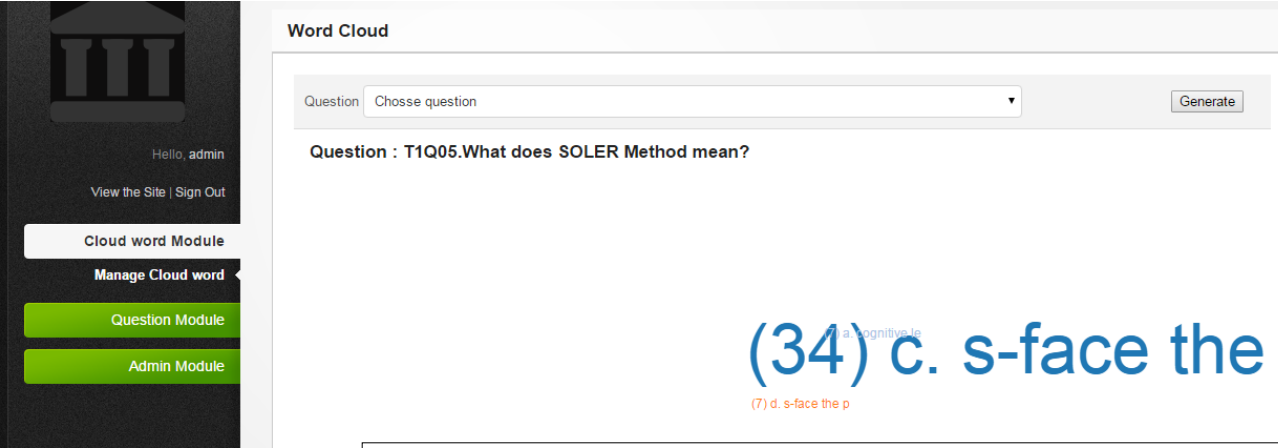
Question Chosse question Generate

Question : T1Q02.Which of the following item is unconditional positive regard?

(43) c. i enjoy be

(11) b. fantastic
(3) d. i am amaz

Correct answer = c) I enjoy being with you.



The screenshot shows the same web application interface as above. The question is 'Question : T1Q05.What does SOLER Method mean?'. The word cloud shows '(34) c. s-face the' in large blue text. Smaller text below indicates '(7) d. s-face the p'. A red-bordered box at the bottom contains the text 'Correct answer = c) S-Face the person squarely, O-Use open posture, L-Lean toward the person, E-Eye-contact, R-Relax'.

Word Cloud

Question Chosse question Generate

Question : T1Q05.What does SOLER Method mean?

(34) c. s-face the

(7) d. s-face the p

Correct answer = c) S-Face the person squarely, O-Use open posture, L-Lean toward the person, E-Eye-contact, R-Relax

Results of study

Table 1 Number of students using learning apps or online web in mass lecture

	Phase 2 Mass Lecture (Pilot run)	Phase 3 Mass Lecture (Implementation)
No. of students in Mass Lecture	456	478
No. of students using apps in Mass Lecture	312	421
No. of students using web in Mass Lecture	121	39

Results of study

Table 2 Means and SDs of AMI

	Phase 3 (Pre) Sept/2015	Phase 3 (Post) Dec/2015
System satisfaction	M = 3.09 SD = 0.95	M = 3.50 SD = 1.25
System activities	M = 3.14 SD = 0.89	M = 3.41 SD = 1.16
Learners' autonomy	M = 3.03 SD = 0.90	M = 3.32 SD = 0.99
System functions	M = 3.14 SD = 0.88	M = 3.49 SD = 1.21
System acceptance	M = 3.02 SD = 0.78	M = 3.51 SD = 0.97

1 Strongly disagree 2 Disagree 3 Agree 4 Strongly agree

Table 2 Paired Sample t-test of phase 3 pre and post CLEI

Academic efficacy (ASE)	Self- Phase 3 : M = 3.05 (Pre) SD = 0.35 Phase 3 : M = 3.19 (Post) SD = 0.32	t = 2.75**
Organization and Attention to Study (OSA)	Phase 3 : M = 3.02 (Pre) SD = 0.28 Phase 3 : M = 3.21 (Post) SD = 0.33	t = 3.76***
Class Communication (CC)	Phase 3 : M = 2.53 (Pre) SD = 0.40 Phase 3 : M = 2.84 (Post) SD = 0.39	t = 4.96***

Timestamp	1. The learning apps provi	2. The learning apps provi	3. The learning apps provi	4. The learning apps provi	5. The learning apps is ea	6. The learning apps maki	7. The content provided by	8. The learning apps is us	9. The operation of the le	10. The learning a
1/6/2015 11:27:13	Strongly agree	Mostly agree	Strongly agree	Strongly agree	Strongly agree	Strongly agree	Strongly agree	Mostly agree	Mostly agree	Mostly agree
1/9/2015 14:21:14	Slightly disagree	Moderately agree	Mostly agree		Mostly agree	Slightly disagree	Mostly agree	Moderately agree	Mostly disagree	Mostly agree
1/9/2015 14:21:27	Slightly disagree	Moderately agree	Mostly agree		Mostly agree	Slightly disagree	Mostly agree	Moderately agree	Mostly disagree	Mostly agree
1/12/2015 20:09:03	Mostly agree	Mostly agree	Mostly agree	Moderately agree	Strongly agree	Moderately agree	Strongly agree	Moderately agree	Moderately agree	Slightly disagree
1/13/2015 0:56:15	Slightly disagree	Moderately agree	Mostly disagree	Moderately agree	Slightly disagree	Slightly disagree	Slightly disagree	Slightly disagree	Slightly disagree	Slightly disagree
1/13/2015 9:26:29	Moderately agree	Moderately agree	Mostly agree	Moderately agree	Moderately agree	Slightly disagree	Moderately agree	Moderately agree	Moderately agree	Moderately agree
1/13/2015 9:26:41	Mostly disagree	Mostly disagree	Mostly disagree	Slightly disagree	Slightly disagree	Slightly disagree	Moderately agree	Moderately agree	Slightly disagree	Slightly disagree
1/13/2015 9:26:50	Moderately agree	Moderately agree	Mostly agree	Moderately agree	Moderately agree	Slightly disagree	Moderately agree	Moderately agree	Moderately agree	Moderately agree
1/13/2015 17:17:37	Slightly disagree	Slightly disagree	Slightly disagree	Moderately agree	Mostly agree	Slightly disagree	Moderately agree	Mostly agree	Moderately agree	Moderately agree
2/10/2015 15:26:31	Moderately agree	Moderately agree	Moderately agree	Moderately agree	Moderately agree	Moderately agree	Moderately agree	Moderately agree	Moderately agree	
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2/10/2015 15:28:20	Moderately agree	Moderately agree	Moderately agree	Moderately agree	Slightly disagree	Moderately agree	Moderately agree	Slightly disagree	Moderately agree	Moderately agree
2/10/2015 15:28:37	Slightly disagree	Moderately agree	Slightly disagree	Moderately agree	Mostly agree	Slightly disagree	Mostly agree	Mostly agree	Slightly disagree	Mostly agree
2/10/2015 15:32:47	Mostly disagree	Mostly disagree	Mostly disagree	Mostly disagree	Mostly disagree	Mostly disagree	Mostly disagree	Mostly disagree	Mostly disagree	Mostly disagree
2/10/2015 15:34:08	Moderately agree	Mostly agree	Mostly agree	Moderately agree	Moderately agree	Moderately agree	Moderately agree	Moderately agree	Moderately agree	Moderately agree
2/10/2015 15:34:15	Strongly agree	Mostly agree	Moderately agree	Slightly disagree	Mostly agree	Moderately agree	Mostly agree	Mostly agree	Mostly agree	Mostly agree
2/10/2015 15:36:24	Slightly disagree	Slightly disagree	Mostly disagree	Moderately agree	Mostly disagree	Stronly disagree	Mostly disagree	Stronly disagree	Stronly disagree	Slightly disagree
2/10/2015 15:36:46										
2/10/2015 15:37:08	Mostly disagree	Slightly disagree	Slightly disagree	Mostly disagree	Mostly disagree	Stronly disagree	Mostly disagree	Slightly disagree	Mostly disagree	Stronly disagree
2/10/2015 15:37:08	Moderately agree	Moderately agree	Moderately agree	Mostly agree	Moderately agree	Mostly agree	Moderately agree	Moderately agree	Mostly agree	Mostly agree
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2/10/2015 15:37:34	Moderately agree	Moderately agree	Moderately agree	Strongly agree	Mostly agree	Strongly agree	Strongly agree	Strongly agree	Mostly agree	Mostly agree
2/10/2015 15:38:49	Moderately agree	Moderately agree	Mostly agree	Mostly agree	Moderately agree	Moderately agree	Mostly agree	Moderately agree	Slightly disagree	Moderately agree
2/10/2015 15:39:30	Moderately agree	Moderately agree	Moderately agree	Moderately agree	Moderately agree	Moderately agree	Moderately agree	Mostly disagree	Stronly disagree	Mostly disagree
2/10/2015 15:45:39	Mostly agree	Mostly agree	Moderately agree	Mostly agree	Mostly agree	Mostly agree	Mostly agree	Strongly agree	Mostly agree	Mostly agree
2/10/2015 15:53:25	Moderately agree	Moderately agree	Slightly disagree	Moderately agree	Stronly disagree	Slightly disagree	Slightly disagree	Stronly disagree	Stronly disagree	Slightly disagree

1. Apps 是否方便使用? (包括下載過程及運作過程)

答：下載過程順利, 指引清晰。欣賞導師能與時並進，切合年輕人需要運用apps教學。

2. Apps的各項功能容易讓你理解嗎?

答：不容易明白，須老師講解才能理解。

3. Apps能否提供足夠的資料讓你學習?

答：足夠，老師提供的題目能讓我對課堂內容加深認識。但因互動作答環節須講求步伐一致，但題目顯示題目不清晰，令我未能跟上步伐，來不及在老師講解答案前作答，

4. Apps的運作是否穩定?

答：一般，最初使用時會”hang”機，後期情況有所改善。

5. 你對Apps 的 “in-class learning” 部分是否滿意? 群組成員的互動能促進你的學習嗎?

答：大致滿意。但訊息較多而且欠缺主題，建議老師就課堂內容設定題目，指導學生於課後在討論區內發表意見。

6. 你對Apps 的 “class discussion” 部分是否滿意? 老師的回饋中能促進你的學習嗎?

答：大致滿意，但老師可多利用此平台就課堂內容設定題目，指導學生回答問題，此舉可讓老師總結課堂內容，更可有助學生溫習課堂內容。另外，建議放置題目於apps內，方便運作。

7. 你認為apps有改善之處嗎?請詳述。

答：1. 指引要更清晰

2. 老師可多利用此平台就課堂內容設定題目，指導學生回答問題，此舉可讓老師總結課堂內容，更可有助學生溫習課堂內容。另外，建議放置題目於apps內，方便運作。

3. 希望更多任教老師使用apps, 可有更多互動。