

Investigation of Mobile Learning and Mobile-Assisted Teaching Practices among Students and Lecturers in a Higher Education Institution

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(EdUHK)**



香港教育大學

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Mobile learning

Warmup activity: Kahoot

- Go to kahoot.it
- Enter Game PIN:



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Overview

1 Research project information

2 Research methodology

3 Findings & discussions

4 Conclusion

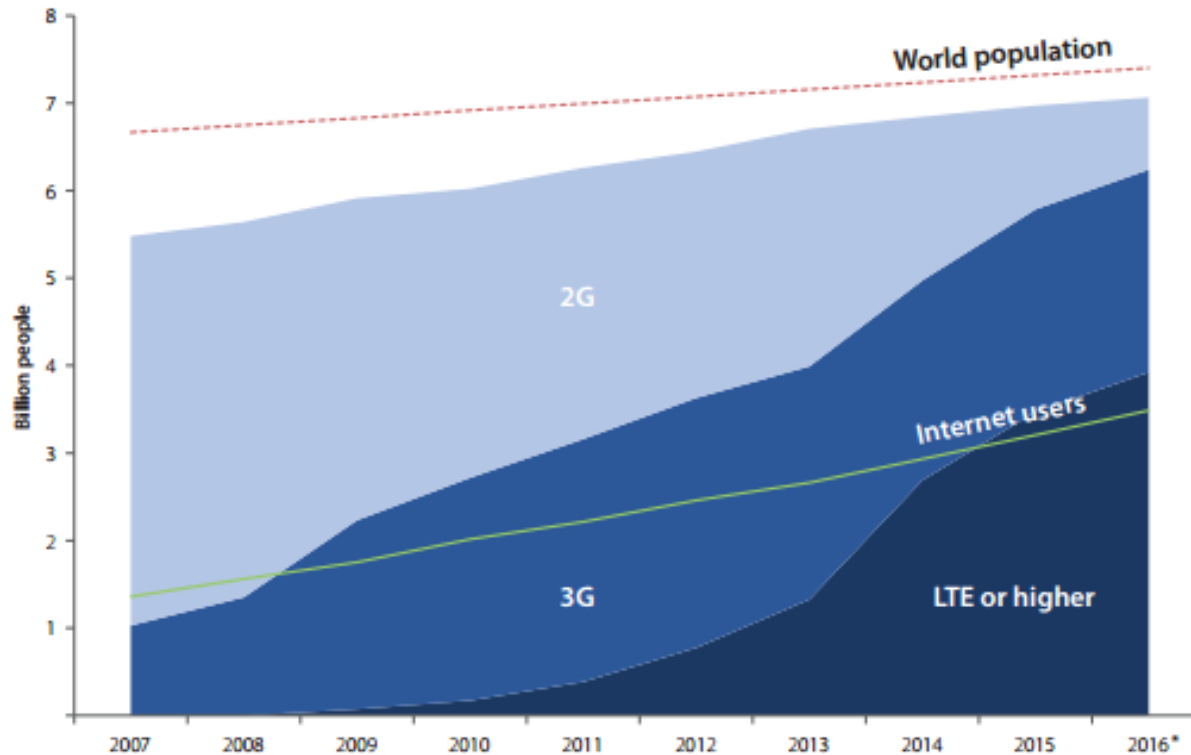


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Why Mobile Learning?



Seven billion people (95% of the global population) live in an area that is covered by a mobile-cellular network.

Mobile-broadband networks (3G or above) reach 84% of the global population but only 67% of the rural population.

LTE networks have spread quickly over the last three years and reach almost 4 billion people today (53% of the global population), enhancing the quality of Internet use.

- In 2016, 7 billion people (95% of the global population) live in an area that is covered by a mobile-cellular network. There are as many mobile-cellular subscriptions as people in the world, with more than half in the Asia-Pacific region.

➔ Situation in Hong Kong

- Hong Kongers Never Go Without their Smartphones:

96% of Users Browse the Internet Daily with their Smartphones, Highest Rate in Asia

(Smartphone research by Google)



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The Project

- Promoting Mobile Learning in the EdUHK and beyond through further development of a Mobile Learning Community (MLC)



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Rationale

- It has become increasingly important to investigate how mobile devices and learning software/apps facilitate teaching and subject learning in tertiary institutions, and how mobile learning can be promoted effectively in higher education.



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Project objectives

1. Identify students' creative and effective use of mobile technologies in learning subject knowledge
2. Identify teachers' creative and effective use of mobile technologies in teaching tertiary level courses
3. Further development of a mobile learning community among tertiary students and academic/teaching staff, motivating them to use mobile technologies in learning and teaching various tertiary level courses
4. Collect e-portfolios about students' mobile learning experiences and share them through the self-developed Mobile Learning Community website



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Project objectives

5. Collect e-portfolios about teachers' mobile-assisted teaching experiences and share them through the self-developed Mobile Learning Community website
6. Promote mobile learning through organizing a series of sharing sessions conducted by staff and students all year round
7. Invite experts from outside EdUHK to give public lectures on mobile learning
8. Evaluate the effectiveness of the MLC activities through various methods



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Research Project: Phase I

- To investigate mobile learning and mobile-assisted teaching practices among students and lecturers in EdUHK
- **Methodology**
 - Quantitative (online questionnaire survey for both lecturers and students)
 - Qualitative (follow-up individual interviews with both lecturers and students)



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Research Project: Phase I

● Data collection

Online questionnaire survey participants:

- 49 teaching staff from various departments
- 110 students from different disciplines (Science, Social Science, Education, Arts and Humanities, etc.)

Follow-up interviews participants:

- 11 teaching staff (22.4%), each lasted for about 30 minutes
- 35 students (31.8%), each lasted for about 30 minutes



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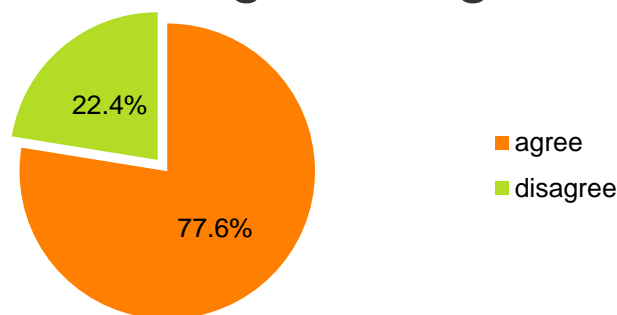
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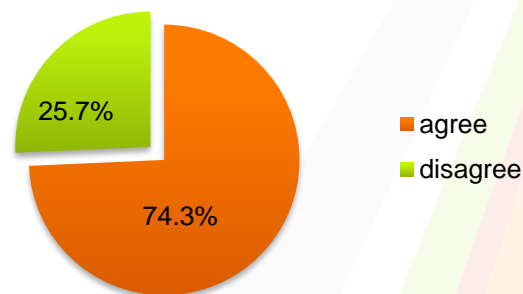
Findings & Discussions

- Mobile learning **SHOULD** be encouraged in subject teaching and learning (Q.2.1):
both teaching staff and students shared similar views

- 77.6% of the teaching staff agreed



- 74.3% of students agreed



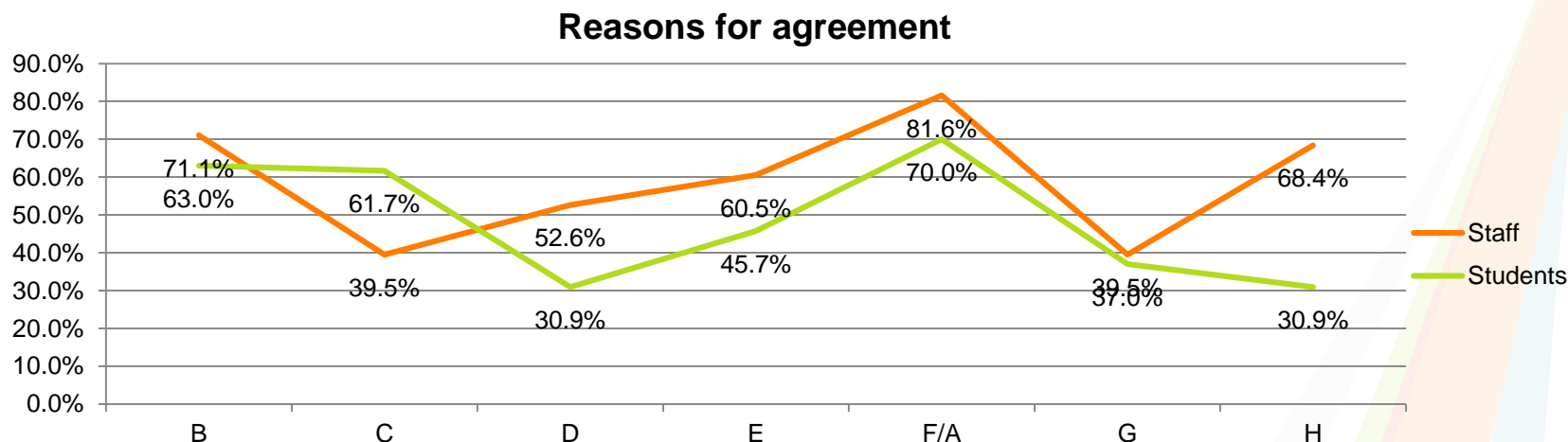
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Findings & Discussions

● Reasons for agreement (Q. 2.2)



B. Mobile devices can increase students' interest & motivation in learning.

C. Usage of online video lessons in learning is more convenient and easy to understand.

D. Mobile learning will improve communication between student and teacher.

E. Mobile learning allows students to take control of their own learning.

F/A. Mobile learning will be a more flexible method of learning as it can be done anytime, anywhere. (Students)

Mobile technologies can allow teachers to engage students in learning in a flexible manner, and encourage this learning to continue outside classroom. (Teachers)

G. Mobile learning can provide an adaptive learning environment.

H. Mobile learning can boost learner engagement.



Findings & Discussions

● Reasons for agreement (interview data)

- **S2** said, “ In Year 1, a teacher used Edmodo in class, asking us questions and we needed to give responses. I think we are more involved in the learning process.”
- **S3** pointed out, “Our peers use ‘Kahoot’ in their presentation, asking us questions and we are eager to answer them. It is fun and we enjoy it.”
- **T1** stated, “Facebook is a useful learning platform. I tried to establish a group on Facebook.”



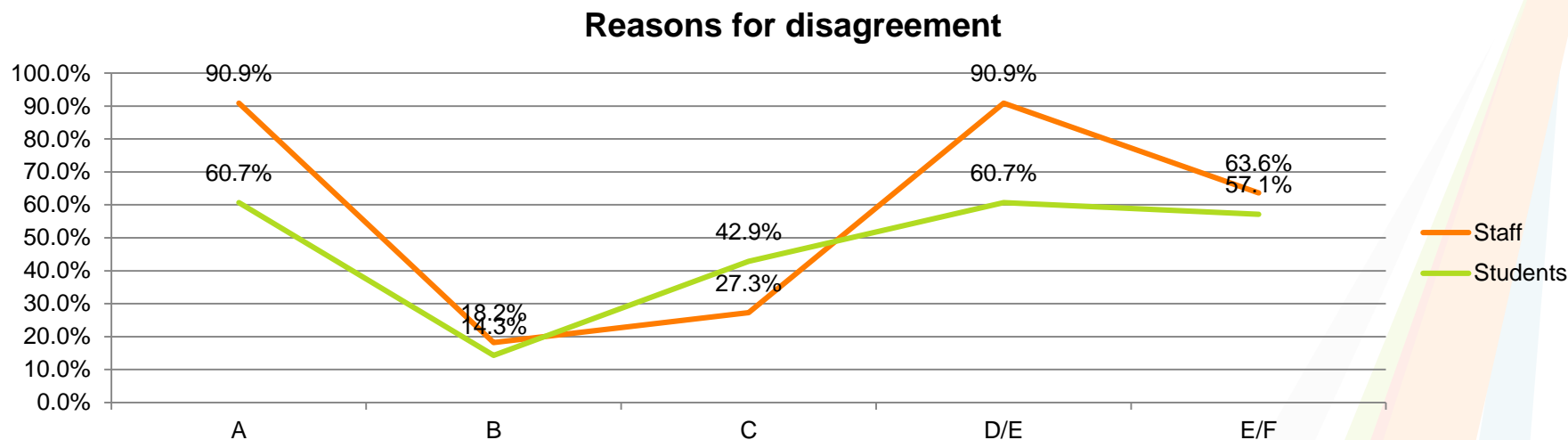
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Findings & Discussions

● Reasons for disagreement (Q. 2.3)



A. Usage of wireless handheld devices in classrooms will distract students' attention.

B. Learning through mobile devices will increase the cost of teaching/learning.

C. Learning through mobile devices will not build teamwork and collaboration.

D/E. Traditional face to face teaching is more effective than mobile learning.

E/F. Teachers may face the problem of keeping all the students on the same level since smartphones and tablets have access to different operating systems and hardware.



Findings & Discussions

● Reasons for disagreement (interview data)

- **T2** stated, “I do not allow them to use mobile phones in class as I am afraid they use their phones to communicate with their friends, distracting their learning.”
- **T3** said, “about 5 to 7 years ago, it became usual for my students to have mobile phones in school, and university teachers started to have debates with the students whether or not to use the mobile devices in the classroom. The first response is that students would be distracted. I still have colleagues both in Hong Kong and the United States feel that way about mobile devices, so do I.”



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Findings & Discussions

● Reasons for disagreement (interview data)

- **S6** said, “Sometimes the teachers do not allow us to use the mobile devices in class because they do not know what we are doing during the lessons, and maybe because some of us are studying, but some are on whatsapp or facebook...”
- **S7** pointed out, “in one of my courses, printing out notes is one of the course requirements by the teacher. Maybe she is afraid we will be distracted by mobile devices.”



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Findings & Discussions

● Reasons for disagreement (interview data)

- **S10** said, “ I’d rather print out the notes myself as I like writing on paper while listening to teachers. Also, I do think traditional teaching is better than mobile learning.”



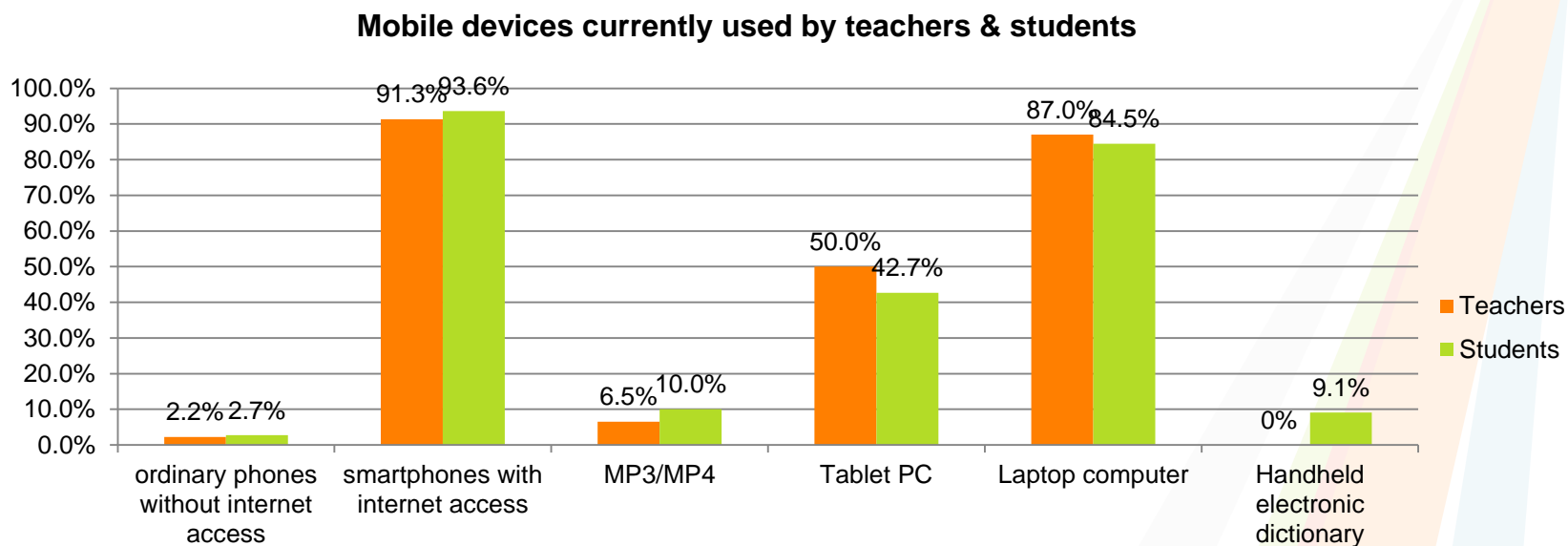
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Findings & Discussions

- Mobile devices currently used by teachers & students (Q. 2.4)



- In the survey, over 90% of teachers and students are currently using smartphones, the highest percentage of usage among the six types of mobile devices.



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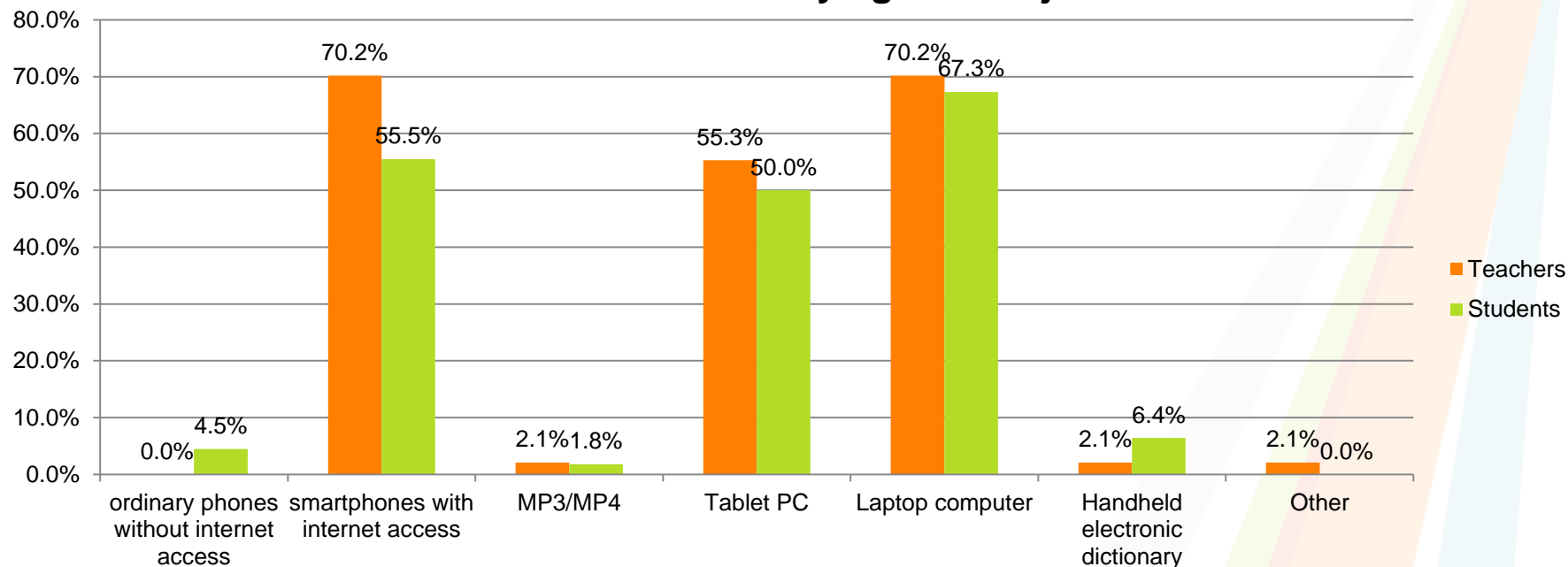
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Findings & Discussions

- **Most useful mobile devices for preparing/carrying out subject-related activities (Q. 2.5)**

Most useful mobile devices for carrying out subject-related activities



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Findings & Discussions

- **Most useful mobile devices for preparing/carrying out teaching/learning activities (interview data)**
- **S11** said, “ I don’t have any teachers who use mobile devices in teaching.”
- **S12** expressed, “I have two teacher who use iPad. One is to show us the apps for teaching in an English course. The other one shows us his PPT slides and photos on his iPad via the projector.”



Findings & Discussions

- **Most useful mobile devices for preparing/carrying out subject-related activities (interview data)**
- **S13** said, “I usually use smartphone on public transport to read articles and during lessons to look for definitions of some difficult words. Tablet is used in class to look through the powerpoints and to read ebooks, and I use laptop at home to do assignments and revisions.”



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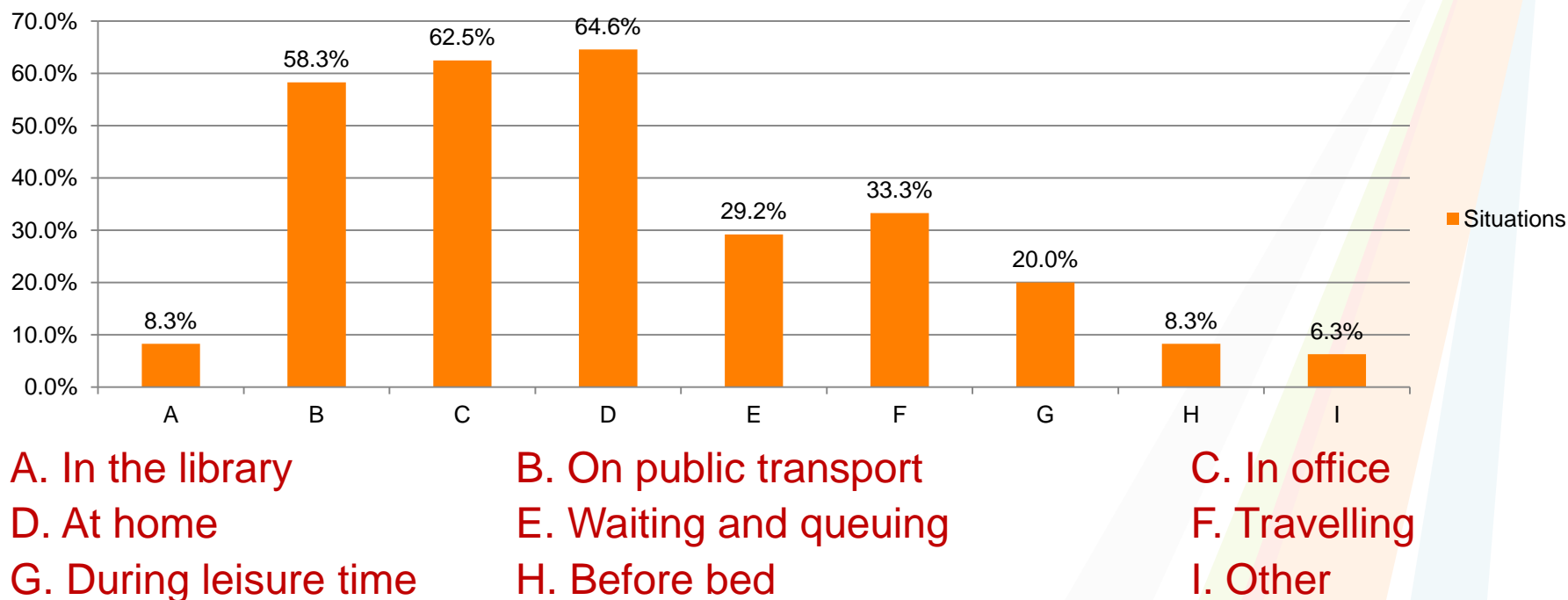
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Findings & Discussions

- Teachers use mobile devices to prepare their teaching materials in the following situations (Q. 2.6)

Teachers use mobile devices in the following situations



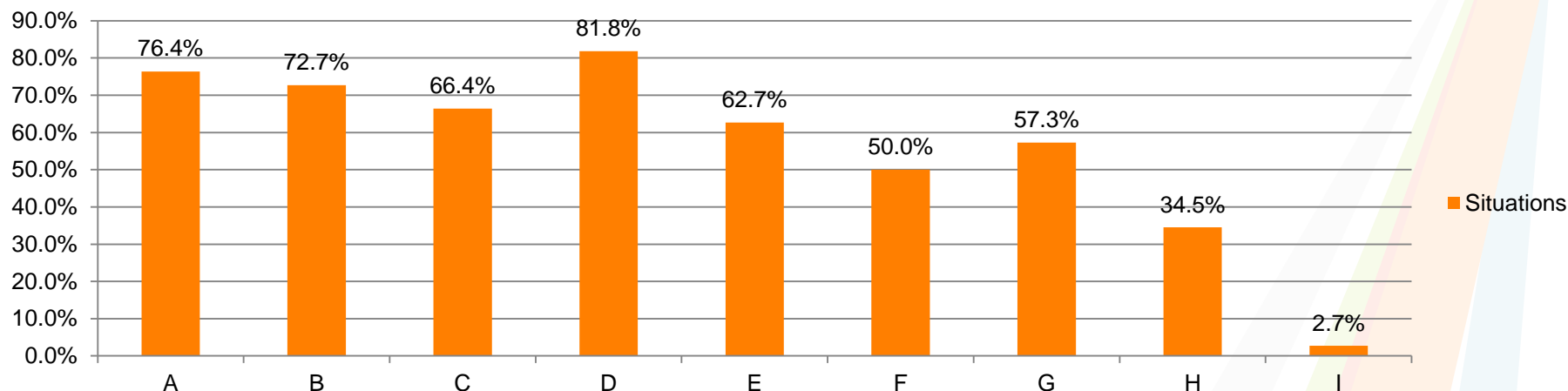
Teachers use mobile devices to prepare their teaching materials mostly at home (64.6%), in office (62.5%) & on public transport (58.3%)



Findings & Discussions

- Students use mobile devices to carry out learning activities in the following situations (Q. 2.6)

Students use mobile devices in the following situations



A. During lectures/tutorials

B. In the library

C. On public transport

D. At home/dormitory

E. Waiting and queuing

F. During leisure time

G. Whenever doing revisions

H. Before bed

I. Other

- Students use mobile devices to carry out learning activities mostly at home / dormitory (81.8%), during lectures/tutorials (76.4%) & in the library (72.7%).



Findings & Discussions

- **Teachers & students use mobile devices in the following situations (interview data)**
 - Student interviewees agreed that using mobile devices in the library was convenient to search for literature review and related articles for downloading, and hence they need not borrow piles of books for doing assignments or academic writing.
 - Most student interviewees usually used smartphones or tablets on public transport to read articles, to do revisions, to prepare for presentations, to search for the meaning of vocabularies they did not know, to listen to music or to watch videos.



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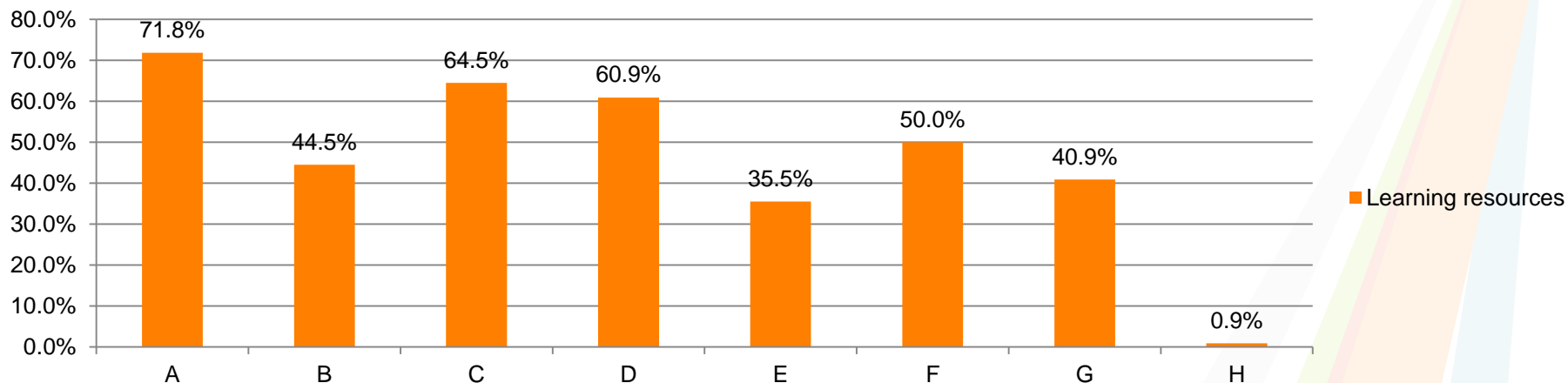
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Findings & Discussions

- **Learning resources students interested in accessing on a handheld mobile device (Student survey Q. 2.8)**

Learning resources students interested in accessing on a handheld mobile device



- A. Lecture PPT slides B. Audio recordings (e.g., recordings of lectures)
C. Videos (e.g., course related, recordings of lectures)
D. E-copy of reading materials E. Interactive educational games
F. Hyperlinks to course related reference materials
G. Course related online discussion/interaction

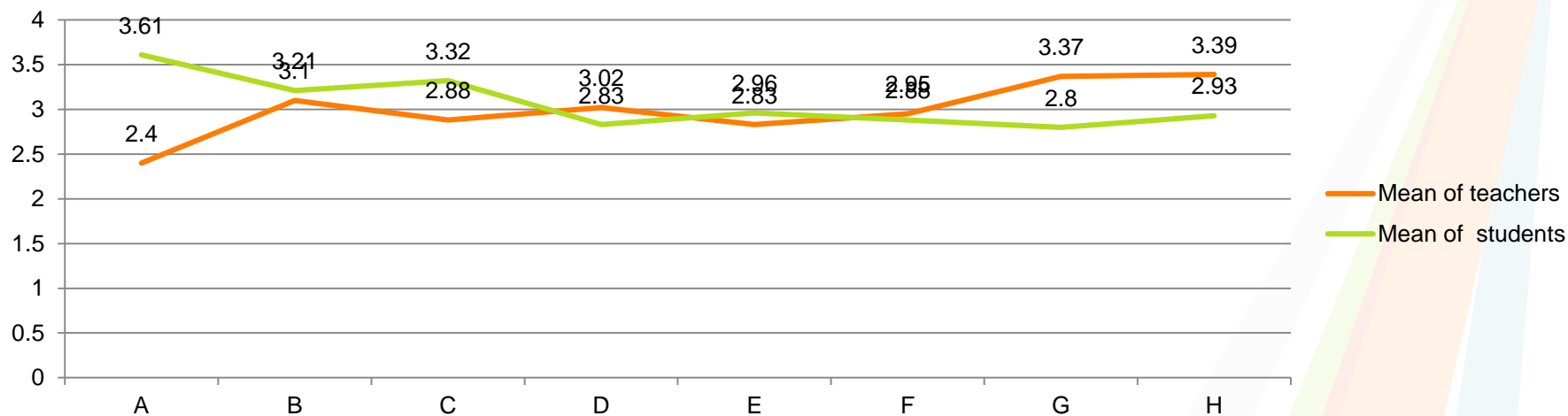
H. Other



Findings & Discussions

- The biggest obstacles to the use of mobile learning in teaching (Staff survey Q. 2.7) & in learning (Student survey Q. 2.9)

Mean of the obstacles to the use of mobile learning in teaching & learning



A. Lack of training

B. Lack of connectivity

C. Devices too varied

D. Student attitudes

E. Expenses involved

F. Devices compatibility

G. Size inconvenience

H. Limited storage



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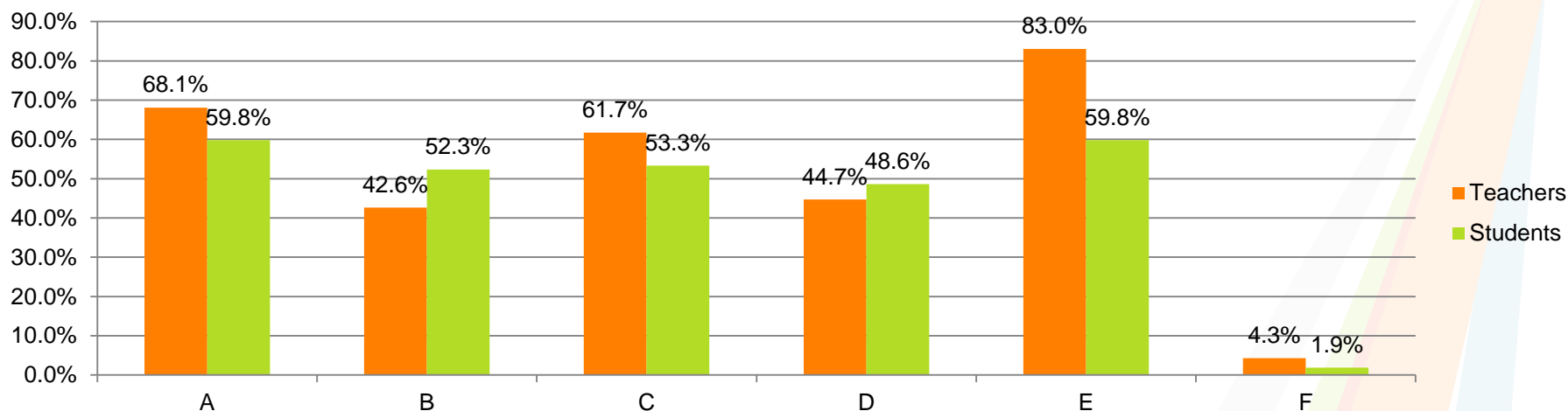
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Findings & Discussions

● Information sharing on the project website (Q. 3.1)

Information on website



A. App reviews

B. Students' mobile learning e-portfolios

C. Teachers' e-portfolios of using mobile devices in teaching

D. Discussion forum

E. Videos of seminars/workshops/sharing sessions on mobile learning



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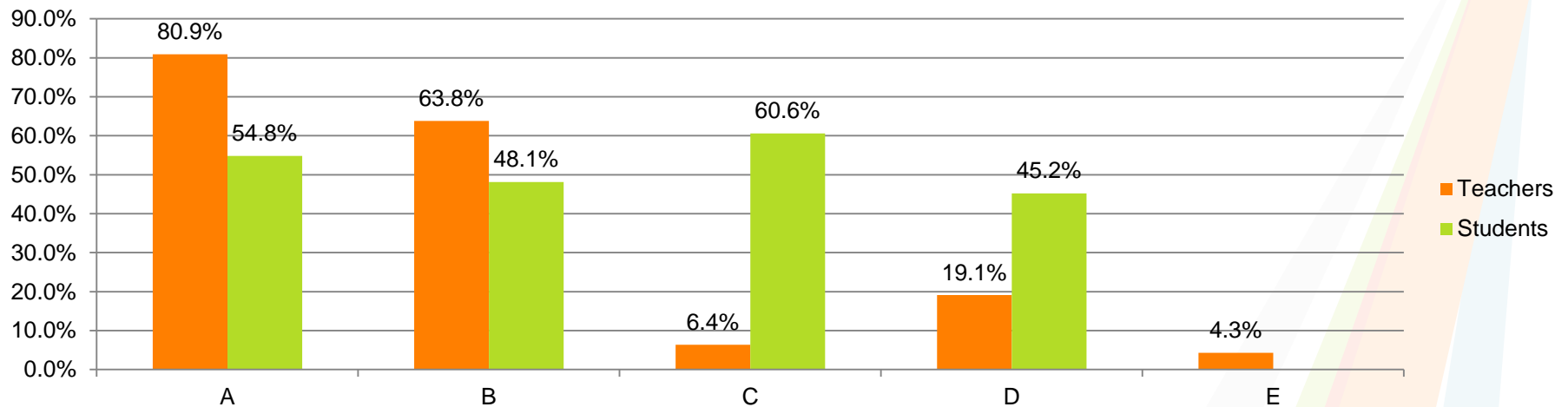
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Findings & Discussions

● Activities for participation (Q. 3.2)

Activities to be taken part in



A. Seminars/workshops by invited experts in the field of mobile learning

B. Teacher/student sharing session on apps in teaching & learning

C. Writing of app reviews

D. Discussion forums on mobile-assisted subject teaching & learning

E. Other



Findings & Discussions

● Most popular apps/software used by students



E-C Dictionary



Moodle



Google drive



Google docs



Google sheets



Google slides



Google search



Google translate

- Google drive, Google docs, Google sheets & Google slides are highly recommend by students for sharing resources and for doing group

➡ Findings & Discussions

● Most popular apps/software used by teachers



Moodle



Kahoot



Socrative



Edmodo



Google drive



Google form

- Teachers have the practice of uploading content notes, powerpoint files, reading materials and reference resources onto the Moodle platform, while providing online quizzes, survey questionnaires and discussion forums

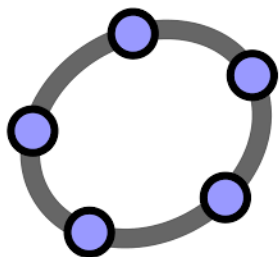


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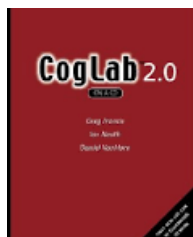
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➡ Findings & Discussions

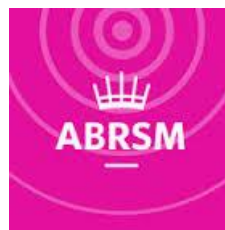
- Some learning apps introduced by teachers to students



GeoGebra
(teaching
mathematics)



Cognitive
Psychology



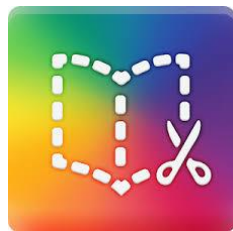
Music
(aural practice)



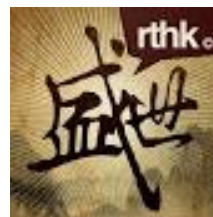
Music (touch
screen piano)



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Duolingo
(language learning)



Book creator



中華五千年盛
(Chinese history)



TED
(English learning)

➡ Findings & Discussions

● Some learning apps recommended by students



中文輸入法字典



EN-JA Dictionary



Free dictionary by Farlex



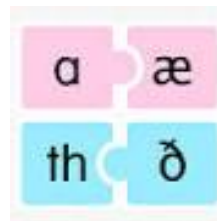
Garage band
(a full feature recording studio)



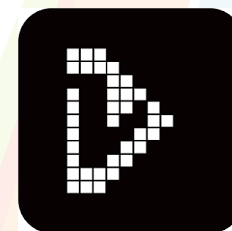
韓文發音



Memrise
(language learning)



Phonemic Chart
(pronunciation practice)



Voice tube
(English learning)



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Student Network Group for Mobile Learning of English

where learning meets mobile

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Student Stories



Wang Siyao



Wang Pengjin

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Tang Sui Kwan



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Wan Tsz Nga

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Sharing Sessions

Academic Output Presentation 2015/2016

(Organized by BA(Lang. Studies) and BEd(EL) programmes)

Date: 5 April 2016

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App Review

Please click on the app icon to read the app review and download the app.

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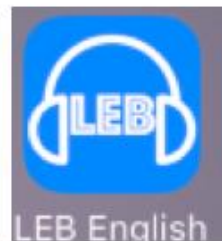
Listening



BBC News



Sounds Right



Learning English for BBC



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Conclusions

● MLC Membership:

- A total of 666 members have been recruited
- 55 teaching staff
- 611 students



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Conclusion

- Students are looking forward to seeing more and more teachers using mobile technologies in teaching as it is agreed that this is a **trend** in the 21st century.
- Teaching will be **more interactive**, students will be **more engaged** in learning and learning outcomes will be better achieved with the appropriate application of mobile technologies.
- Face-to-face traditional teaching will not be replaced by mobile learning, but can be **supplemented** by it.



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