

**The University of Hong Kong
Teaching Development Grant**

**Enhancing Teaching and Learning through
Integrating Mobile Learning with Learning
Management System**

Instructors' Handbook

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1. Why integrate mobile learning with Moodle?

1.1 Advantages of learning through mobile phones

- **Learning anywhere and anytime**

One of the reasons for wanting to use mobiles is that the learners could complete the activities anywhere (during transportation, in a class, between classes etc.) anytime (Stockwell, 2008; Shen Wang, & Pan, 2008).

- **Promoting collaboration and interaction**

As a kind of network-centered devices, mobile phones today harness the Internet to promote collaborative learning experiences. They allow sharing of content among dispersed types of learners (Wang & Shen, 2012), encourage learners' active participation in the learning process and engage them in constructivist learning through social and intellectual interaction (Shen, Wang, & Pan, 2008).

1.2 Students' use of smart phones in HKU

A 2011 survey on mobile services in academic libraries in Hong Kong and Singapore reveals that the possession rate of mobile devices was 93.4% among HKU students, and 61.9% of them used smartphones to access the Internet (Ang, 2012). It has been nearly six years since the survey, and today we could only expect the penetration rate is even higher. Indeed, instructors in HKU have started seeing students use smartphones to access learning resources on Moodle. Thus, mobile access to Moodle has attracted some attention. The HKU Moodle has installed the Mobile Theme to provide a more comfortable learning environment. The Mobile Theme is a display custom-designed for smartphone browser screens. The HKU Moodle will automatically display the Mobile Theme if the smartphone access is detected. Teachers and students can use the Mobile Theme to view the course content pages, access all of the Moodle functions including News Forum, Discussion Forum, Choice, Feedback, Quiz, URL, Wiki, etc. Students can also submit their assignments by using this Moodle Theme.

1.3 Challenges in teaching and learning

To better incorporate technology in teaching and learning, the University of Hong Kong prudently delineated different levels of integration of technology in pedagogy, curriculum design and assessment (HKU, 2011):

- 1) Provision of information and resources e.g. course outlines, reading lists, presentations
- 2) Enhanced teaching and learning e.g. students collaborating on the Moodle platform, database activities, discussions, blogs, wikis
- 3) Innovation and expansion of learning opportunities e.g. international collaborations, inter Faculty collaborations, supporting experiential learning

However, Moodle has been used mostly at the 1st level so far. There are three main challenges of using Moodle in teaching and learning: low level of engagement, low level of interaction, and low level of collaboration.

1) Challenge 1: Low level of engagement

Ideally, students can use Moodle as a **virtual home** of the courses. They should access Moodle frequently and do everything related to the courses on Moodle. However, students usually only log on to Moodle when it is absolutely necessary. The possible reasons why they do not use Moodle often are:

- Instructors view Moodle as a mere repository of resources;
- Even with non-repository course activities, students find them not interesting;
- Students might not value course activities that bear no relationship with their final course performance
- Students lack a sense of community in class, not to mention that on course Moodle.

2) Challenge 2: Low level of interaction

Students are expected to interact with each other and instructors, since these interactions help students learn better from each other, make the class more interesting, and help instructors be more aware of student' learning. However, students mostly only interact on Moodle at the minimum required level. The possible reasons are:

- Few interactive activities (e.g., Feedback, Discussion Forum) have been set up on Moodle;
- Instructors seldom use Moodle to initiate interactions with students
- Students are intimidated by the perceived difficulty;
- Students are busy with the course work and it is hard for them to find time to participate in such interactive activities.

3) Challenge 3: Low level of collaboration

In lieu of group tasks and activities, students are expected to collaborate on Moodle so the instructors can easily **track students' progress** and **archive their work** and **provide feedback**. However, they might not collaborate as much as expected, or would choose to collaborate in other platforms (e.g., Google Doc) that are hard or impossible to monitor their progress. The possible reasons are:

- The course design does not necessitate online collaboration
- Some of the collaborative Moodle activities (e.g., Wiki) might appear difficult to some students
- Students prefer other platforms (e.g., Google Doc) that they have been using for a long period of time
- Instructors and students have gotten used to off-line collaboration

2. Integrate mobile learning with Moodle to mitigate challenges in teaching and learning

2.1 How to improve engagement?

- Cultivate students' habit of using Moodle
- Make course Moodle more user-friendly
- Encourage mobile access to Moodle
- Build a sense of community on course Moodle

2.1.1 Cultivate students' habit of using Moodle

Strategies:

- Demo course Moodle at the beginning of a course;
- Demo new and unfamiliar Moodle activities in class;
- Make the expectations clear at the beginning of a course;
- Make it compulsory to complete activities: Instructors can set conditions for marking completion of activities, add a course completion status block, pace the activities by enabling "Restrict Access" in activity settings, and show the students their progress is monitored and the activities are not accessible after due date. See https://docs.moodle.org/26/en/Activity_completion_settings for the details of **activity completion setting** and https://docs.moodle.org/25/en/Course_completion_status_block for the details of **course completion status block**);
- Keep reminding students to use Moodle;
- Play a role model (To cultivate students' habit of using Moodle, the instructors themselves should engage in Moodle activities as much as possible);

- “Our course Moodle is Our Facebook” (Instructors can create discussion forums or blogs for students to talk about interesting things or message students to say hello, so that students will know Moodle could be fun and informal in addition to being the formal host of course components).

2.1.2 Make course Moodle more user-friendly

Strategies:

- Clear and logical arrangement of activities. Some suggestions include:
 - More recent information can be placed near the top of Moodle, so that there is no need to scroll/’swipe’ down
 - Course components can be grouped into different sections according to the nature of activities (e.g., all assessment tasks put into one section)
- The activities that are specifically designed for mobile phones can be put together and the titles of them can be marked (e.g., tagged with “#mobile”), so that students will know which activities are better to be done in a focused period of time and which ones could be done when they have little pockets of time (e.g., queuing for a bus, walking, waiting for someone, etc.).
- Shorten the titles of course components for a more mobile-friendly view (e.g., changing “PowerPoint” to “PPT”)

2.1.3 Encourage mobile access to Moodle

To achieve better mobile access to Moodle, the following characteristics of mobile access need to be taken into consideration.

- It could be done in small pockets of time slots (e.g., during a class break);
- It could be done in any (less ideal) environment, not necessarily in the campus or at home;
- The small screens and keyboards of Mobile phones could be an obstacle;
- User may be on the move.

Considering those characteristics, some design strategies are provided:

- Create low-stakes activities without much keyboard input (“*multiple choice*”, “*cloze*”, “*matching*” in “*quiz*”, “*Nanogong*” voice activity, “*multiple choice*”, “*short answer text*” in “*feedback*”);
- Allow students to do the activities without pressure or risk by allowing **unlimited attempts** in quiz and choosing “highest grade” as the grading method (see Section 4 in https://docs.moodle.org/26/en/Quiz_settings#Extra_restrictions_on_attempts for details) ;



The image shows a screenshot of the 'Grade' section in Moodle's Quiz settings. It contains three rows of settings, each with a label, a help icon, and a dropdown menu. The first row is 'Grade category' with a dropdown set to 'Uncategorised'. The second row is 'Attempts allowed' with a dropdown set to 'Unlimited'. The third row is 'Grading method' with a dropdown set to 'Highest grade'.

Grade	
Grade category ?	Uncategorised ▼
Attempts allowed	Unlimited ▼
Grading method ?	Highest grade ▼

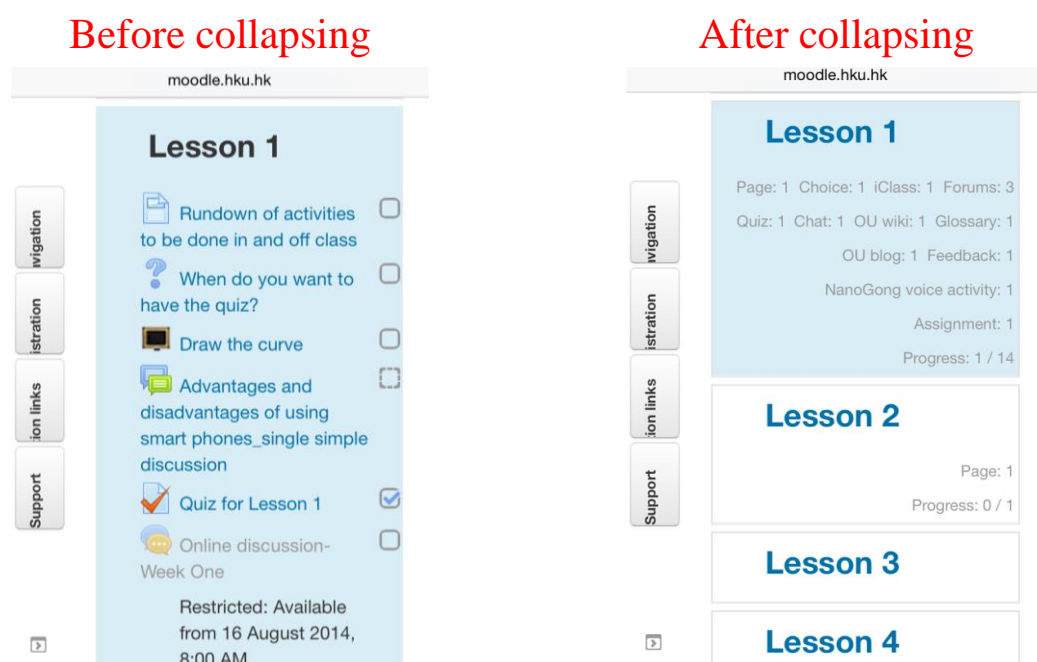
- Make layout of course pages concise by:

providing concise text

brief key points or the summary of courses. Simple notes, simple questions and answers, and other written content with pictures are also good choices);

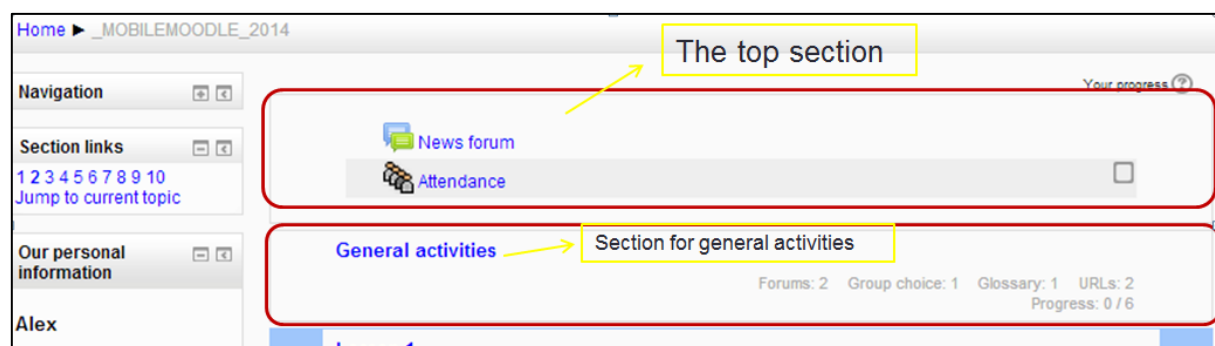
collapsing sections

Administration (the Sidebar on the left of course Moodle page) → *Edit Settings* → *Course Format* → *Course Layout: Show one section per page*);



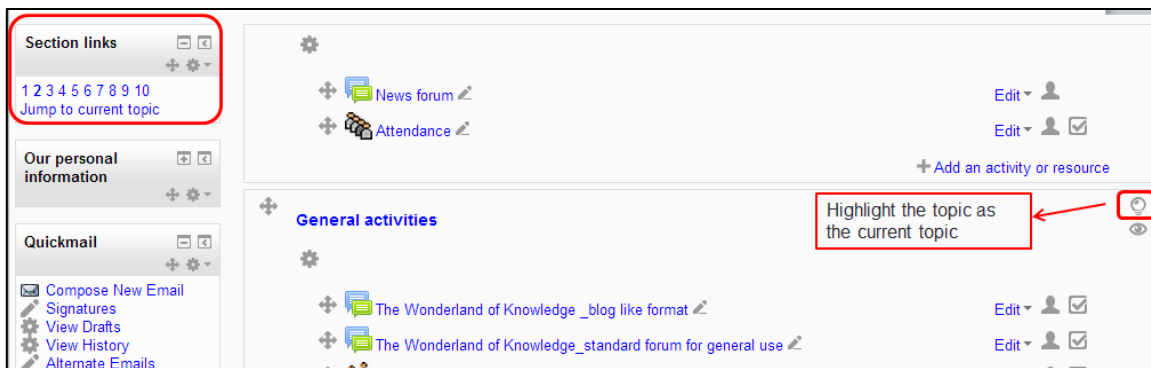
making the top section short

The top section on Moodle is not collapsible, but it can be made short. Instructors could put the resources and activities for general use only on the top or create a special topic for those activities)



adding section links

A “section links” block can be added to help students easily link to particular section. See https://docs.moodle.org/26/en/Section_Links for detailed procedures of setting up a Section Link block. Using the block, students could also jump to current topic if the current topic has been highlighted).

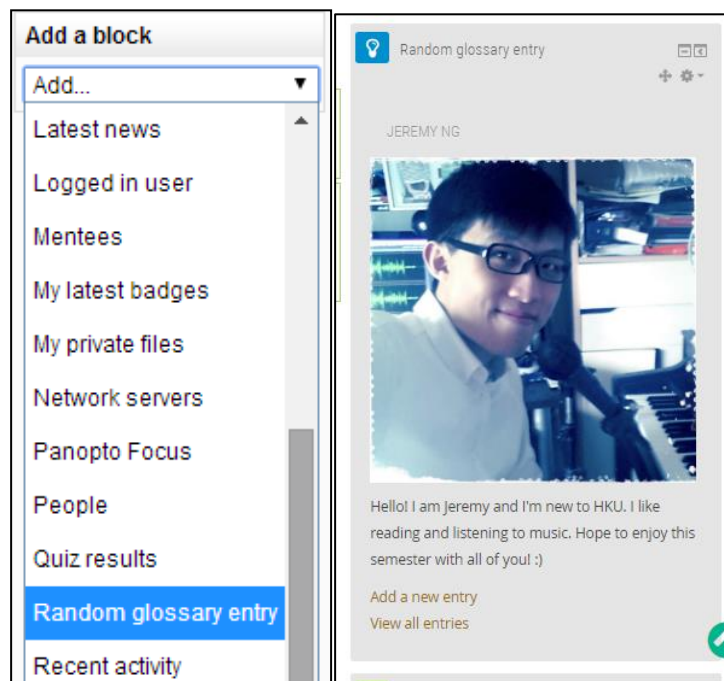


2.1.4 Build a sense of community on course Moodle

Strategies:

- Create an activity (e.g. glossary) for students share their personal information to know better of each other (can also create a random glossary entry block to show a random student's self-introduction on the course page).

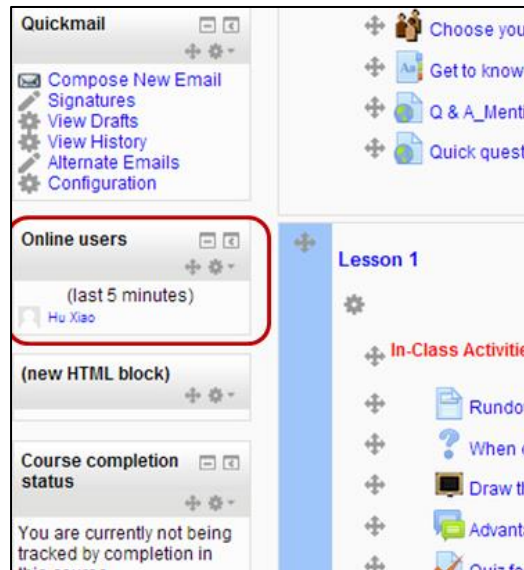
See https://docs.moodle.org/26/en/Random_glossary_entry_block for set-up details);



- Create forums for the discussion on different topics (The topics of the forums are not necessarily restricted in course content. “Student Lounge” and “Funformation to Share” are examples);

- Say hello to whoever is online by:

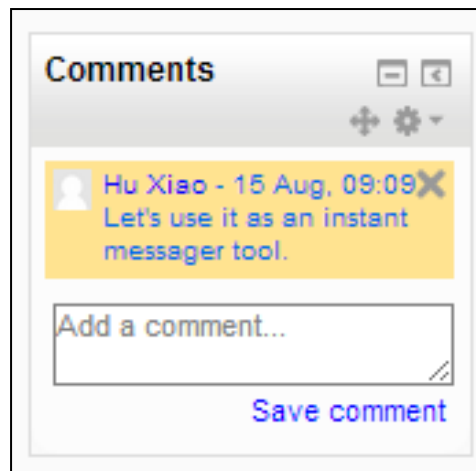
making online users visible (An “Online users” block can be added on the course page so that instructors and students know who are online. See https://docs.moodle.org/26/en/Online_users_block for details);



sending message to other online users (If you click on the envelope icon next to somebody's name, you will be able to send a private instant message to that person);

having a chat room always available (Instructors could create a chat room for informal chatting);

adding a comments block (can be added in the course page as an instant messenger tool. See https://docs.moodle.org/26/en/Comments_block for details).



2.2 How to improve interaction?

- Design easy interactive activities and implement them on Moodle
- Teach students how to use the activities
- Give rewards (e.g., bonus points for class participation) to the participating students
- Build a sense of community on course Moodle
- Make use of built-in notifications of posts in forums

To improve interaction, easy interactive activities such as **Choice**, **Feedback**, **Chat**, **Message**, **Quick Mail**, and **Forum** will be helpful. However, designing interactive activities is not sufficient. One of the reasons why students do not want to participate in Moodle activities is that they are unfamiliar with or even unaware of them. Thus, **demonstration** and constantly **reminding** students of the activities are crucial. Instructors could demonstrate new Moodle activities in the first class to help students get familiar with using them.

A second way of improving interaction is making interactive activities required. Please refer to Point 4 (“Make it compulsory to complete activities”) in Section 2.1.1 for details. Giving rewards for the completion of the activities on Moodle can also be a viable option, such as awarding **bonus points** for course participation.

Building a sense of community on course Moodle is also a way of improving interaction in and off class. For the strategies of building a sense of community on course Moodle, please refer to Section 2.1.4.

Instructors can also make use of the built-in messaging system to improve the interaction with students. The messaging system allows notifications about system events, such as new forum posts or assignment submissions. This is useful for mobile learning because the user can configure notifications about system events to be sent to their personal e-mail accounts when they are on the move (Aberdour, 2013). Instructors can use Moodle

as the channel of course-related communication with students, so that their own email inbox can be saved for other purposes. This also helps to centralize all course-specific communication to Moodle. Please see

<http://moodle-support.hku.hk/cms/?q=teachers/userguides/Forum>

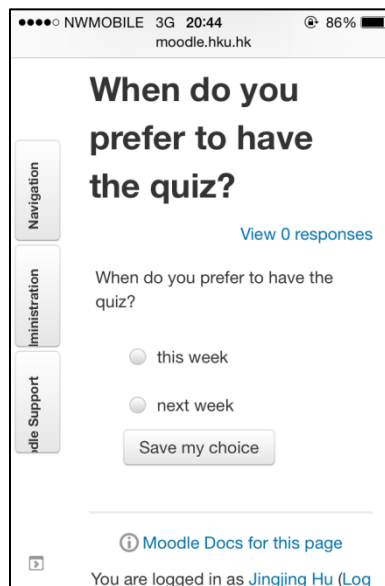
for details for subscribing forum posts and

https://docs.moodle.org/26/en/Assignment_settings#Notifications

for the setting of notifications of assignment submissions.

Activity design for improving interactions:

1) Choice



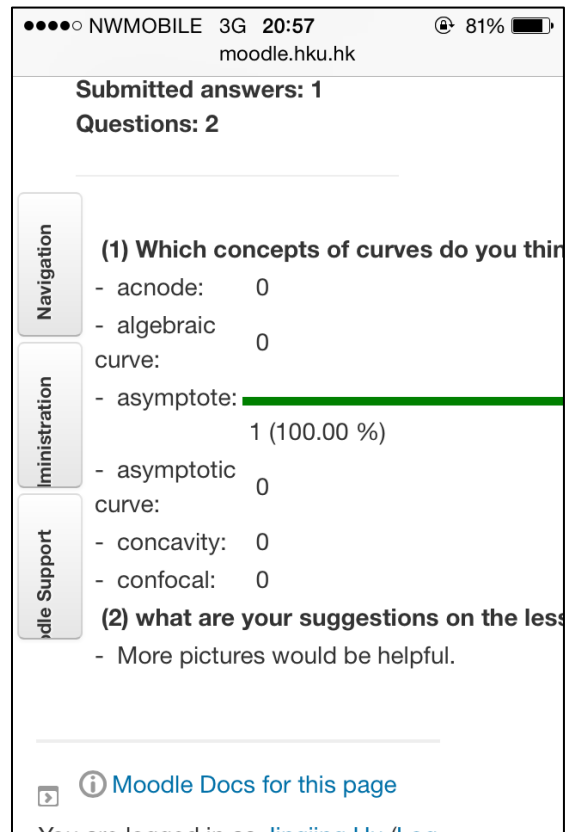
(see <http://moodle-support.hku.hk/cms/?q=teachers/userguides/Choice> for details)

A Choice activity is an activity that allows you to put a question to your students where your students can submit a response from a selection of multiple-choice responses that you have provided with your question. It can be used to:

- Gather initial or pre-event comments, e.g., reasons for taking course, willingness to participating in potential visits, etc.
- Feedback from students about the course, assessments or activities
- Poll to stimulate thinking about a topic or an issue

- In-class, pre-class, or post-class short exercises

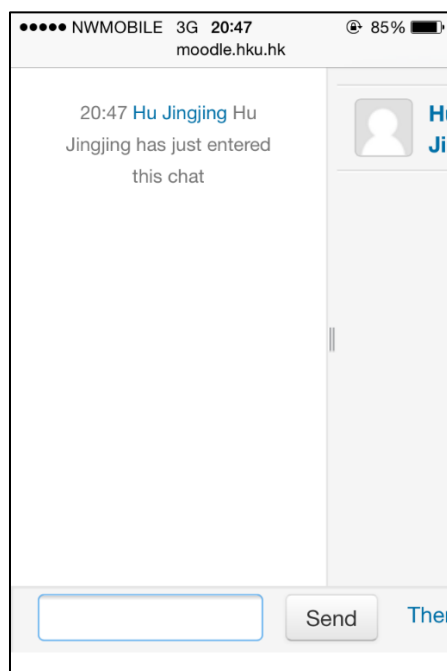
2) Feedback



(see <http://moodle-support.hku.hk/cms/?q=teachers/userguides/Feedback> for set-up details)

- Enables teachers to create a **customized** survey for collecting feedback from participants using a variety of question types including multiple choice, yes/no, or text input;
- Allows **anonymous** responses;
- Can be used for course evaluation.

3) Chat



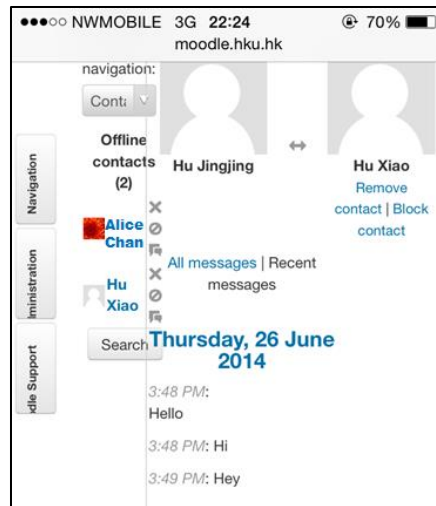
(see <http://moodle-support.hku.hk/cms/?q=teachers/userguides/Chat> for details)

The Chat activity module allows participants to have a real-time synchronous discussion in a Moodle course. Chat has an advantage over a Forum in that it takes place in real time. It is especially beneficial when participants are not able to meet face to face (e.g., during Reading Week). Examples might be:

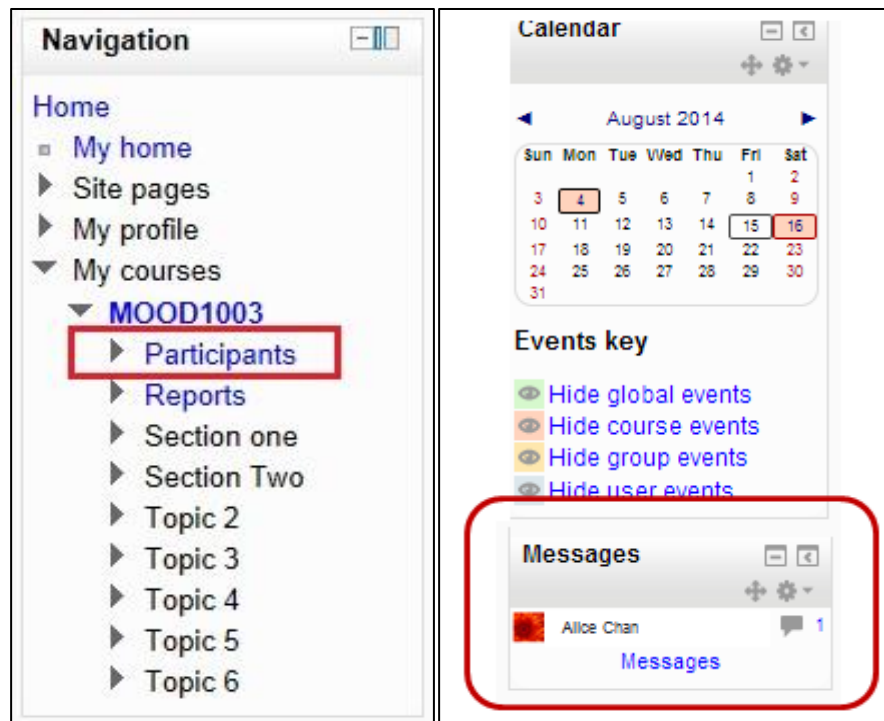
- Regular meetings among instructors and students doing online courses to enable them to share experiences with others on the same course but potentially in a different campus, city (or country)
- Instructors working with students even though he is out of school
- A student temporarily unable to attend in person chatting with their instructor to catch up with the progress or course schedule.
- Students on exchange or internship getting together to discuss their experiences with their peers and their instructor

4) Message

(see <http://moodle-support.hku.hk/cms/?q=teachers/userguides/Messaging> for details)

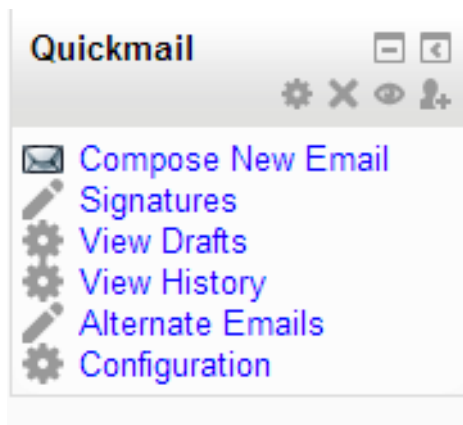


- It allows instructors to send messages to **individual** students. So it is good for talking about private issues;
- It gives notifications once a message arrives, so students or instructors would be informed of new messages immediately and be prompted to reply more actively;
- The relatively less neat display might render mobile access only in urgent circumstances
- There are two ways of sending messages: one is clicking the **Navigation** sidebar to find the target course participant (i.e., a student); another way is to use the built-in Message block on the course Moodle page for instant messaging



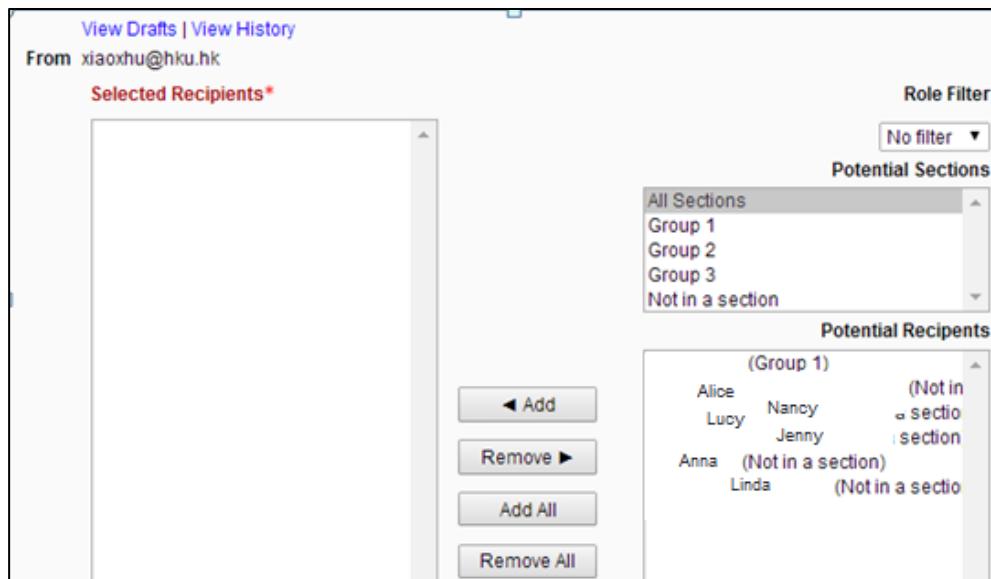
5) Quick mail

(see <http://docs.moodle.org/24/en/Quickmail> for set-up details)

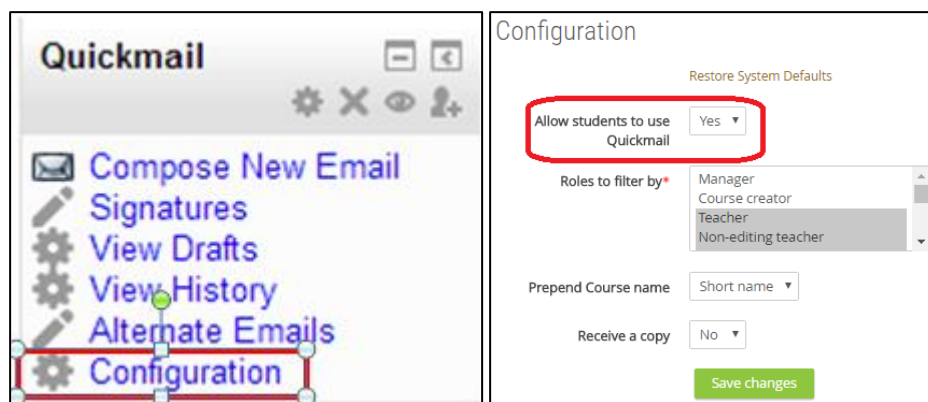


The Quickmail is a block that provides emailing capability within Moodle courses. It allows teachers to email students with the following functions:

- sending regular emails;
- Emails can have attachments;
- keeping email history;
- sending emails with student groups (e.g., a project group);



- Students can be allowed to use Quickmail if some configurations are done.



6) Forum

(see <http://moodle-support.hku.hk/cms/?q=teachers/userguides/Forum> for details)

Forum types and pedagogical design:

- Standard forum for discussion

A single simple discussion forum where the instructor could post topics and the students reply to each topic. This is suitable for a more focused follow-up discussion during class.

Discuss on the video_Each student post one discussion*

香港百年歷史回顧(第一輯) 香港的由來 Hong Kong History

被香港當時最大規模的地產項目

Each one of you could add a new discussion topic related to any aspect you see from the video (e.g., particular events in the history of Hong Kong, the architectures, the people, etc. Your participation in this activity will be graded.)

Discussion	Started by	Replies	Last post
The architectures in old Hong Kong	Jingjing Hu	1	

NWMOBILE 3G 22:09 moodle.hku.hk 72%

Please ask questions related to the topic "smart phones" in Lesson 1 and discuss.

Add a new question

Discussion	Started by	Replies	Last post
What are the disadvantages of smart phones?	Jingjing 0 Hu	Jingjing	Fri, 25 Jul 2014, 3:59 PM
What are the advantages of smart phones?	Jingjing 1 Hu	Jingjing	Fri, 25 Jul 2014,

Advantages and disadvantages of using smart phones_single simple discussion

Display replies in nested form

Advantages and disadvantages of using smart phones
by Jingjing Hu - Friday, 25 July 2014, 2:14 PM

What do you think are the advantages and disadvantages of using smart phones?

[Edit](#) | [Reply](#) | [Export to portfolio](#)

Re: Advantages and disadvantages of using smart phones
by Jingjing Hu - Friday, 25 July 2014, 3:37 PM

I think one of the advantages is that it's small and portable.

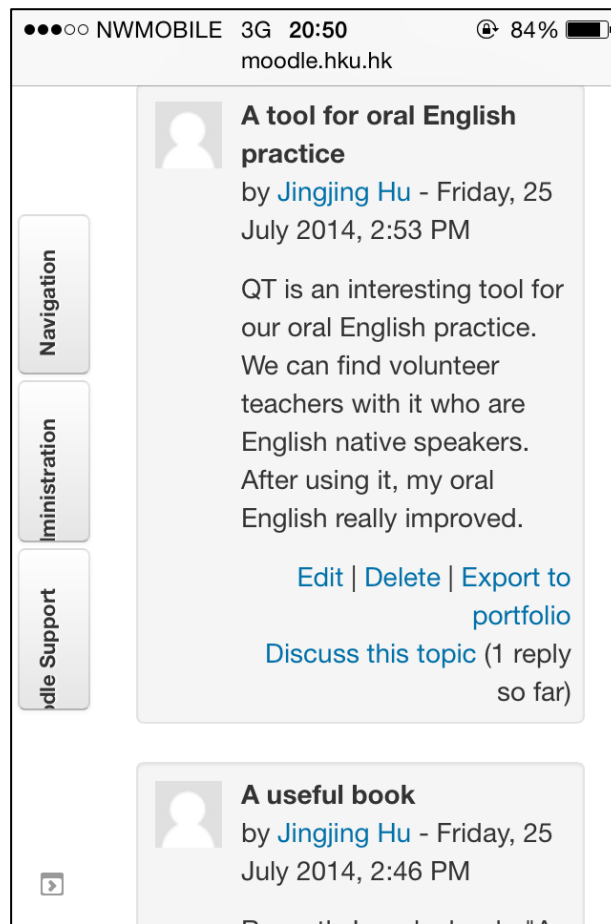
[Show parent](#) | [Edit](#) | [Delete](#) | [Reply](#) | [Export to portfolio](#)

In this forum, not only the instructor but also a student can post exactly one new discussion topic, which everyone can then reply to. It can be used to post discussions in response to a reading material or a video, etc. Such discussion is better to be done off-class, for students need more time to read and reply to the topics posted by other students. Mobile access is also supported.

- Q and A forum

In this type of forum, students must first post a reply to a thread **before viewing other students' posts**. It can prevent students from looking at others' comments and generate greater originality in their own posts. This forum is good for tasks that require students to contribute their own thoughts and to give opinions on their peers' responses.

- Standard forum displayed in a blog-like format



Standard forum can be displayed in a blog-like format. Discussion topics are displayed on one page with "Discuss this topic" links (Students can post discussions on anything they have learnt in and off class, or raise questions on things that need further explanation).

*Tips for using forums on mobile phones:

- Use “standard forum for general use” rather than “standard forum displayed in a blog-like format in the Configurations (Compared with “standard forum displayed in a blog-like format”, “standard forum for general use” is more mobile friendly, since it is easier to find the topics in this type of forum).
- To avoid too much scrolling, a forum related to a course topic can be created under that corresponding section on the course Moodle.

- Select appropriate subscription mode (Subscription is a way of notifying students whenever something is posted on a Moodle forum. **Auto subscription** or **forced subscription** is suggested for more awareness and preventing excuses from not accessing the forums. See <http://moodle-support.hku.hk/cms/?q=teachers/userguides/Forum> for details).

7) External Apps: Twitter

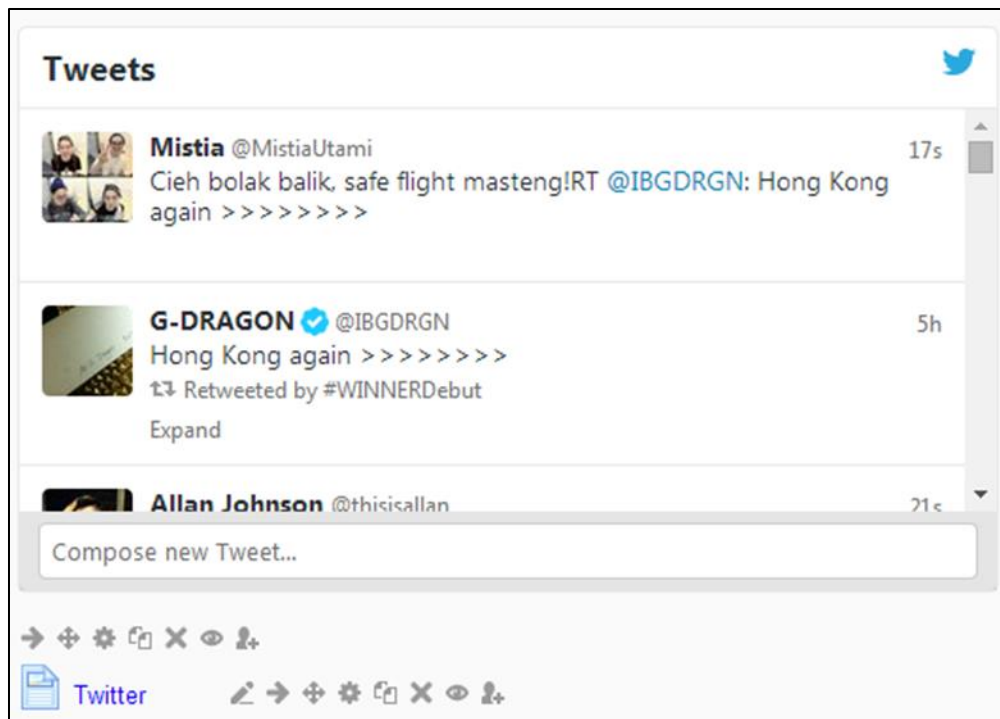
There are several websites/apps that will facilitate student-instructor interaction in class. They can be embedded as URL resources

(https://docs.moodle.org/26/en/URL_resource), labels

(https://docs.moodle.org/26/en/Label_module_settings) or pages

(<https://docs.moodle.org/26/en/Page>) in Moodle. One of the examples is Twitter (Mentimeter, Socrative, and Pinterst are also examples. Mentimeter and Socrative are similar to Choice and Feedback. Pinterest is a popular social media site for creating virtual pinboards of the things you discover online). Twitter is the most popular social media for increasing interactions. Tweeting helps academic performance, such as continuing discussion, interaction with each other, reminding, updating information, and socialization (Junco et al, 2011). It has the following features:

- In Moodle, Twitter widgets can be embedded as labels or pages (There are two main steps to embed twitter widgets as labels or pages: 1. Get twitter widgets' html code; 2. Paste the code to "html" in "label text" or "page content". See <https://www.youtube.com/watch?v=wWSLLs5U06E> for how to get twitter widgets' html code)
- Can have a course-specific hash tag: #HKUBSIM3004
- There are many ways of using twitter in education (see <http://www.schrockguide.net/twitter-for-teachers.html> for more information)



2.3 How to improve collaboration?

- Design easy and fun collaborative activities on Moodle and integrate them to course design
- Teach students how to use the activities
- Make it explicit and reasonable how collaborations are to be assessed
- Emphasize that collaboration progress is as important as the product

To improve collaboration, the easy and fun collaborative activities such as **Group**, **Glossary**, **Wikis**, and **Blog** will be helpful. However, as similar to the case for interactive activities, unfamiliarity with how to use these Moodle activities can also be a reason why students do not want to collaborate on Moodle. Therefore, designing collaborative activities is not sufficient to improve collaboration. Teaching students how to use the activities is also a key to encourage collaboration on Moodle. Instructors could demo the activities in class to help students get familiar with using them. Besides,

making it explicit and reasonable how collaborations are to be assessed and setting multiple deadlines (e.g., by stages of a group project) are also important for improving collaboration on Moodle.

Activity design for improving collaboration:

1) Group

Please form up project groups by enrolling yourselves to one of the groups. Usually, students form groups off-line, choose an empty group and enroll themselves into this group on Moodle.

Each group will need to have 4 members (one group will only have 3). Please sign up as soon as possible. Note each of you must have a group before the project starts.

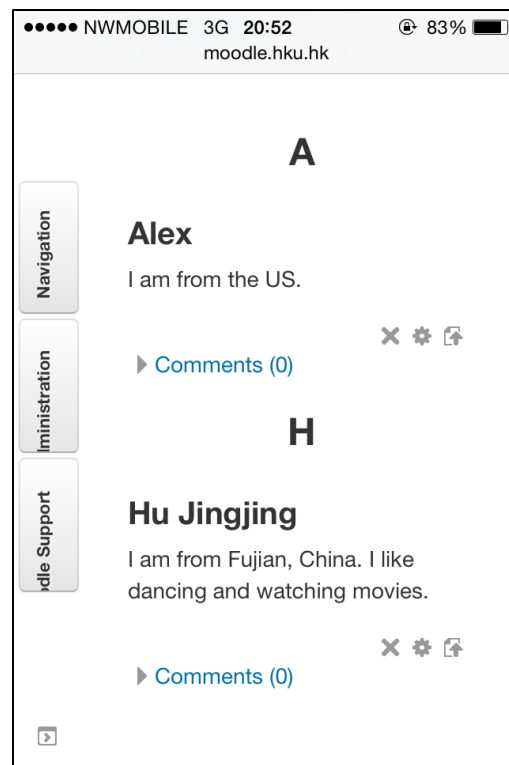
Choice	Group Show descriptions	Members / Capacity	Group members Show
<input type="radio"/>	Group A (Full)	4 / 4	
<input type="radio"/>	Group F (Full)	4 / 4	
<input type="radio"/>	Group G	0 / 3	

- Separate a big class into several groups on Moodle can **visualize the grouping** in the class.
- Teachers can use “Grouping” function to create groups on Moodle (*Settings > Course administration > Users > Groups*).
- “Group Choice” allows students to enroll themselves to a group created by the teacher. Teachers can limit the number of students in each group (See <http://moodle-support.hku.hk/cms/?q=teachers/userguides/GroupChoice> for details).

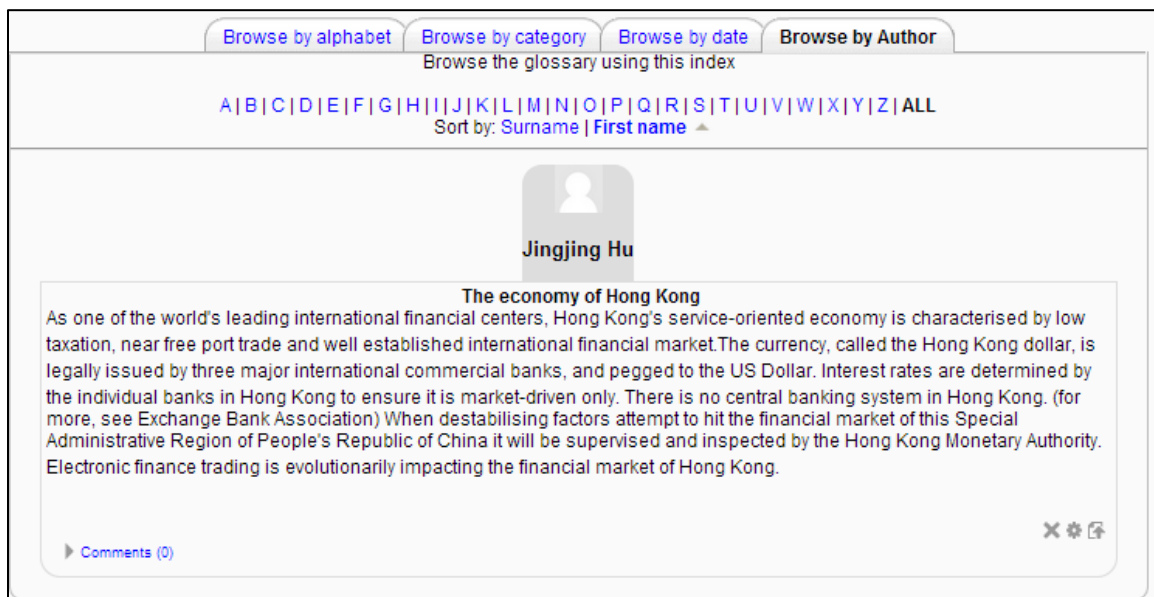
2) Glossary

(See http://docs.moodle.org/24/en/Using_Glossary for the settings.)

Example 1:



Example 2:

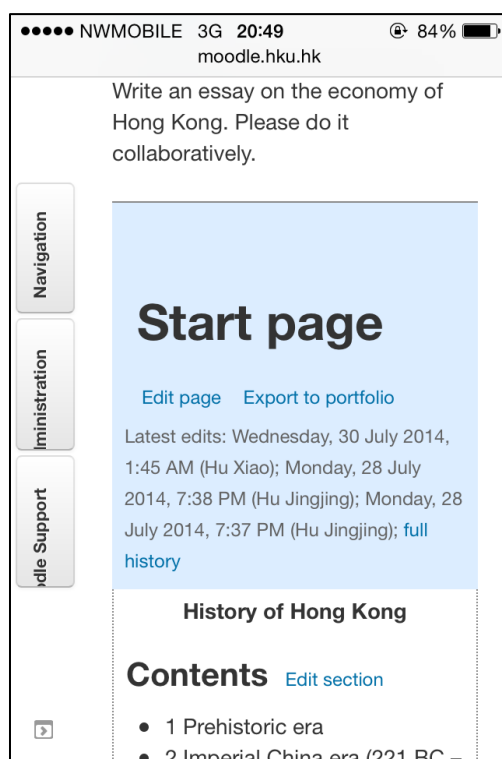


Glossary is a collection of items contributed by everyone. It allows participants to create and maintain a list of definitions, like a dictionary. Students can comment on each other's work. It can be used as:

- "Getting to know each other": (Make a glossary in which new students in the first class add their photo and self-introduction. Add this glossary to the **Random glossary entry** block on the side of your course page and the biography a different new student is shown randomly on every view.)
- A collaborative **bank of key terms and definitions** related to course topics
- A **revision resource repository** of facts to remember
- "Thought for the Day"
- A "handy tips" resource of **best practices** in a practical subject
- A **sharing area** of useful multimedia files e.g., videos, images or sound

3) Wikis

(see <https://docs.moodle.org/26/en/wiki> for more information)



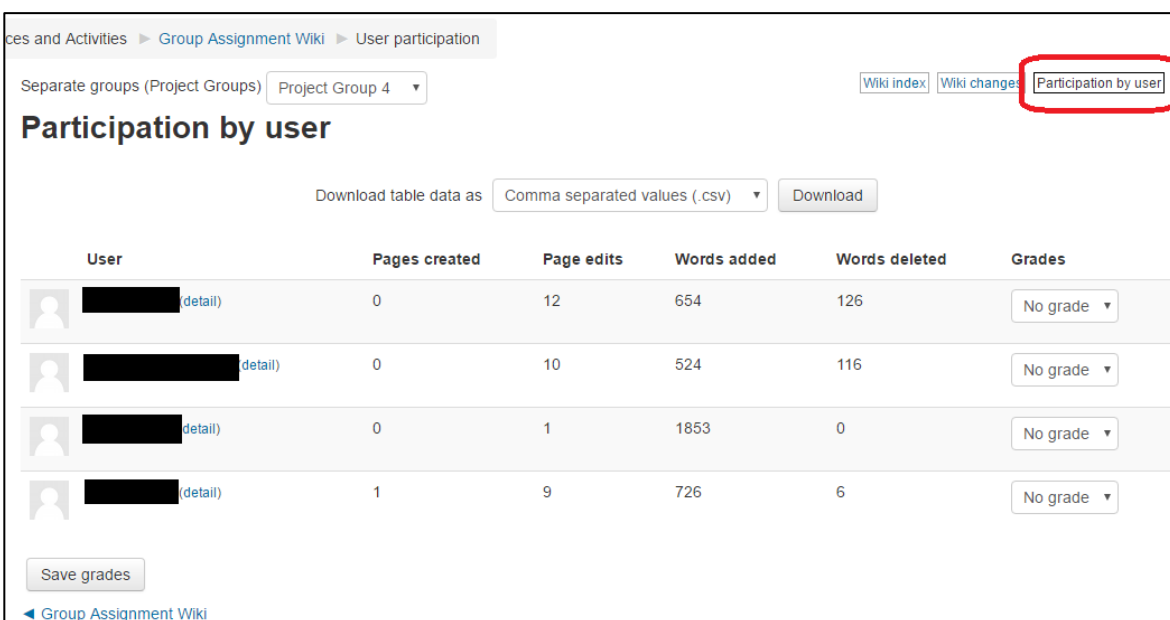
Wikis are collections of collaboratively authored web pages. You might, for example, ask your class to use wikis to present the fruits of their research, or the drafts of their group reports, for comments and input from their own group members or other groups.

The OU Wiki activity in Moodle allows you to track the revision history and assess the individual input of team members of a group wiki.

*Tips for enhancing the learning experience on OU Wiki:





- better to have a template on the first page for students to work on top of a standardized structure of Wiki pages;
- teach students how to use it for collaborative projects;
- show them the instructors' view of page history to let them know their participation in the collaborative learning is observable

(See https://docs.moodle.org/26/en/Using_Wiki#History for details)



Participation by user

Download table data as: Comma separated values (.csv) Download

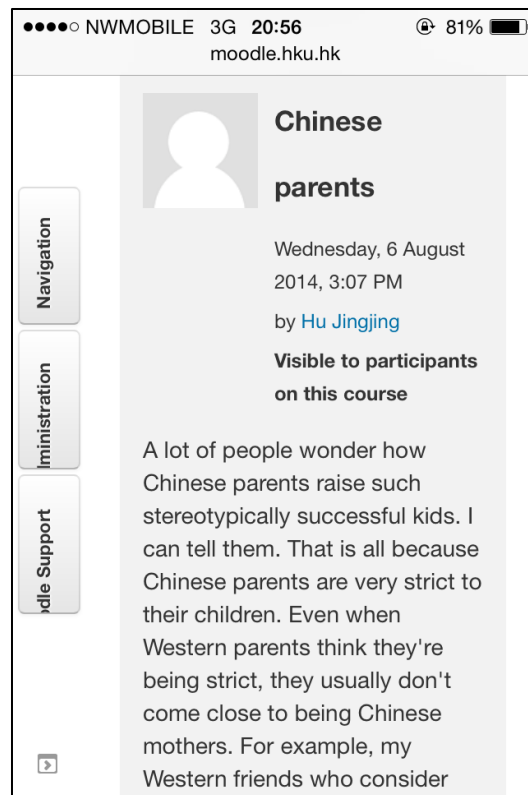
User	Pages created	Page edits	Words added	Words deleted	Grades
 (detail)	0	12	654	126	No grade ▼
 (detail)	0	10	524	116	No grade ▼
 (detail)	0	1	1853	0	No grade ▼
 (detail)	1	9	726	6	No grade ▼

Save grades

Group Assignment Wiki

4) OU Blog

(See <http://moodle-support.hku.hk/cms/pdf/Moodle%20OU%20Blog%20Guide.pdf> for detailed settings)



Teachers can use OU blog to create user blog and course blog. Users, course users/ HKU Moodle users or even public users, can leave comments on the blog, depending the privacy settings. It can be used for reflective journals that are a viable option of an assessment task.

*Tips for enhancing the learning experience on OU Blog:

- Teach students how to use it e.g., for collaborative projects;
- Show students the “participation by user” let them know their contributions of any kind to the blog are observable.

Visible groups All participants ▼

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	User	Posts	Comments
	Alice	0	0
	Anna	0	0
	Jingjing Hu (Details)	2	0

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