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

Report on Teaching Cases

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Introduction

Being part of the project titled "Enhancing Teaching and Learning through Integrating Mobile Learning with Learning Management System", funded by the Teaching Development Grant, this report illustrates teaching cases from five courses where instructors implemented various Moodle features and functions. Each case presents its best practices on *Display, Interface and Navigation* of the course Moodle and *Learning Resources and Activities* implemented on Moodle. These cases are aimed to serve as other instructors' reference when planning on their LMS activity design and pedagogy.

Case #1: A medium-sized core course

Course	BSIM3004 Information retrieval (in Semester One, 2016/17)
Instructors	Dr. Xiao Hu Mr. Peter Warning
Students	Students from Bachelor of Science in Information Management (BSIM)
Overview	This course introduces and explores information retrieval principles, techniques & strategies applied to electronic information sources, methods for evaluating databases, and information literacy frameworks.

Display, Interface and Navigation

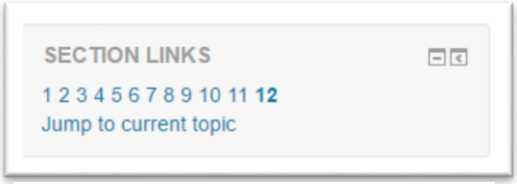

Figure 1

In the first class, instructors brought students' attention to the **Section Links** box on the top left corner of the course Moodle homepage (Figure 1). It displays the shortcut links to different sections (by week or by topic) of the course. "Jump to current topic" enabled both instructors and students to go to the most recent section quickly, saving their time from scrolling down when the weeks along the course period went by.

"General Resources and Activities" was fixed as the all-time top section of the course Moodle page (Figure 2). This course contained a number of course-wide components that spanned across weeks or topics of the course, for instance, **Tutorial Forum**, **Group Assignment Wiki**, and **Group Assignment Critical Analysis**. These components could be effectively centralized in this

section for convenient access. Furthermore, if a course component was obsolete (e.g., **Tutorial Forum**), the instructor would hide it to avoid clustering of excessive components in any sections.

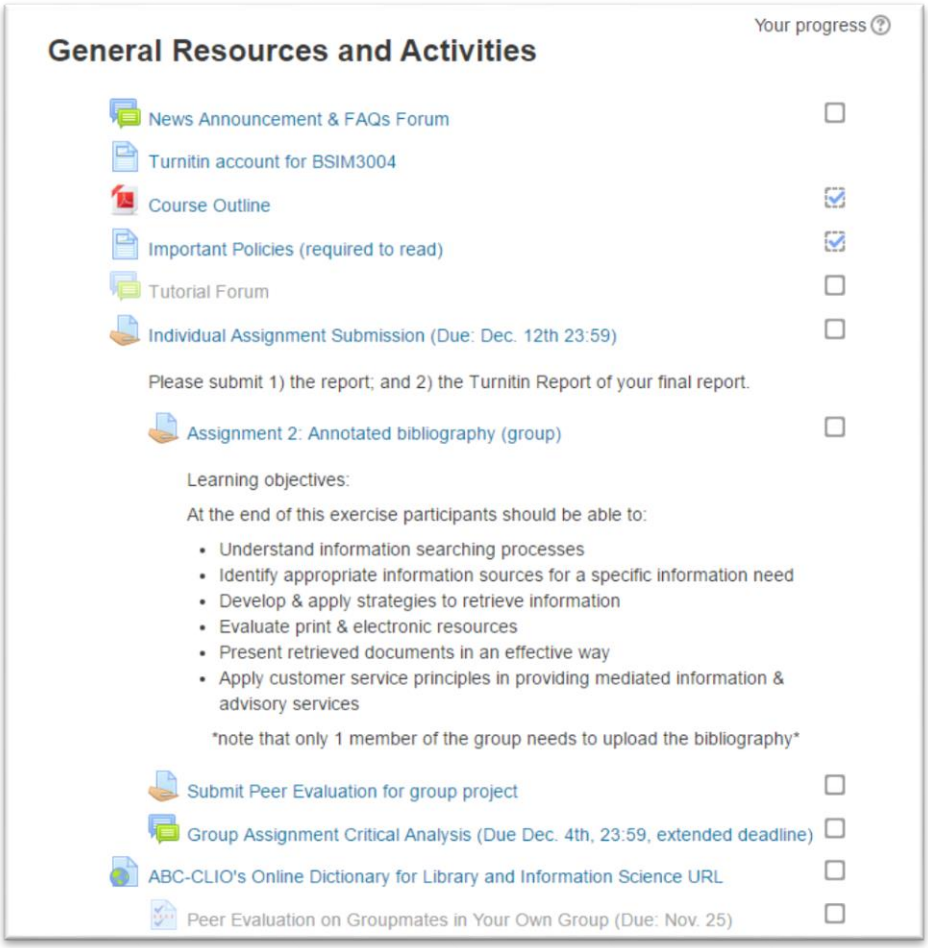

Figure 2

To facilitate mobile access, the instructor intentionally made the titles of each course component relatively shorter. In this way, when students accessed the Moodle page using their mobile device, more information could be displayed on the small screen (Figure 3).

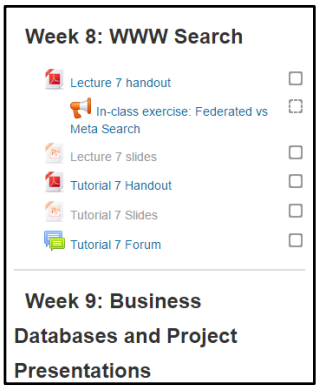

Figure 3

Learning Resources and Activities

Forums on Moodle do not only function as a discussion platform but also carrying out assessment tasks. For instance, students were required to complete a tutorial task every week on the **Tutorial Forum** (Figure 4) which was a Question/Answer (Q/A) Forum. General instructions were visible to students once they entered the Forum and specific instructions of each task were inside a thread. A Q/A Forum differs from the ordinary Discussion Forum in that it requires students to

post a reply to a thread first ***before*** they can view other replies. The main rationale was that students were expected to make their own original contributions when the instructor posted a new topic (i.e., a weekly task), without knowledge of other responses. Student were also encouraged to post replies to their peers' responses later to give constructive advice or raise questions. The meaningfulness of students' own thoughts in the replies was particularly emphasized, thus quality was more important than the quantity. This also allowed students to post a relatively concise reply using mobile access to Moodle.

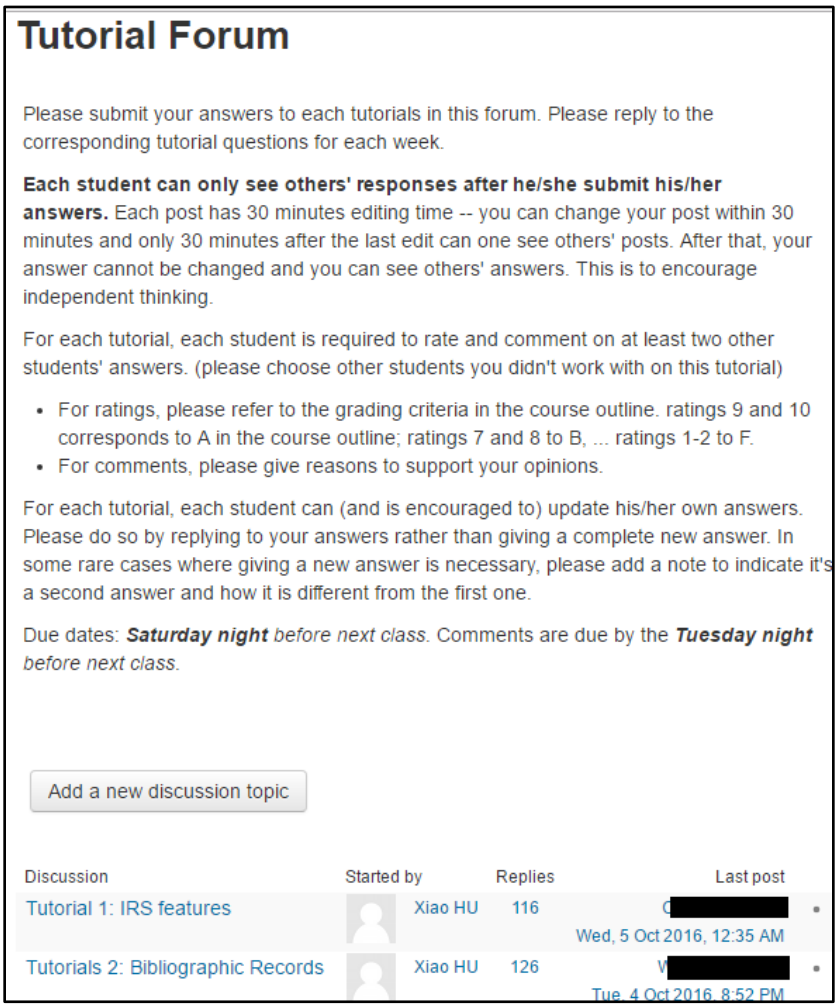

Figure 4

Wiki was also used for students to collaboratively work on a group assignment. In this course, students used a Wiki workplace to work on their group. Each group had a Wiki page, where the instructor initially created a template for it, standardizing the structure of pages so that every group had the same starting point. The revision history was recorded by Wiki, allowing students to trace their groupmates' or their own contributions along the time. Instructors took advantage of this revision history for monitoring students' progress during the course period and upon completion of the assignment.

In addition to the ordinary Forum and Wiki functions, there were a number of short **Feedback** tasks, through which students were highly encouraged to use the mobile access to Moodle to give immediate feedback such as casting a vote on certain issues (Figure 5). Such polls could be made anonymous so as to probe students' most honest opinions. Students could also view the results of the class poll immediately after they voted, whereas instructors usually showed the "live" results onsite. The interactivity among students were enhanced as students were prompted to discuss with each other after seeing a trend on some views among their peers.

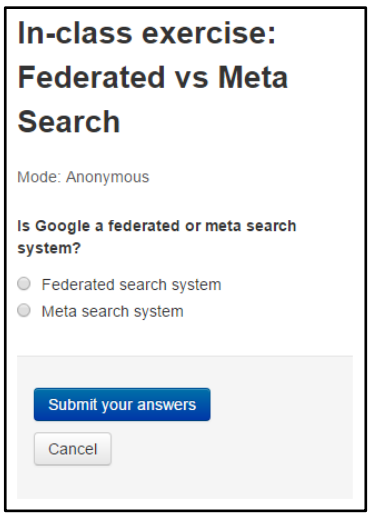

Figure 5

Figure 6

An activity block called **Random Glossary Entry** was added to the left column of the course Moodle homepage, a rather prominent position compared to other blocks. This glossary was intended for each student (and also instructors) to input an entry of biography with a self-introduction and a profile photo at the beginning of the course, where the block would show a random entry of any student's biography every time a student accessed the page (Figure 6). This also drew students' attention, particularly during the start of the course. The main purpose of this glossary was to build a learning community for students, so that they would get familiar with each other first and interact with one another more frequently as the course proceeded. The block can be shown or hidden according to the students' own preference, regardless of the form of access to Moodle (web or mobile access).

Case #2: A Common Core course

Course	CCST9003 Everyday Life and the Internet (in Semester One, 2015/16)
Instructor	Prof. Ricky Kwok Dr. Leon Lei (Chief Teaching Assistant)
Students	Undergraduates from the University
Overview	This course was a Common Core (CC) course for students from different disciplines in the University and this course principally aimed to help students develop a computational state of mind for everyday events.

Display, Interface and Navigation

This course organized sections in an unconventional arrangement. Resources and activities were first categorized based on their nature (e.g., course-wide information, assessment tasks) instead of 'by topics', and then placed in their corresponding sections (e.g., **General Information**, **Assessments**, etc.) (Figures 7, 8). Except for the **General Information** section, all other sections

with resources and activities occasionally needed in each lecture and tutorial were displayed with the heading only. This design allowed students to reach a specific category promptly, especially when using mobile access. Also, when a student wanted to access a certain assignment, he could directly go to **Assessments** without the need to also remember the supposed "Topic/Week" under which this assignment would have belonged to. Such organization was partially attributed to the relatively large number of course components in such a Common Core course where resources were sometimes discipline-wide and might not be categorizable by topics.

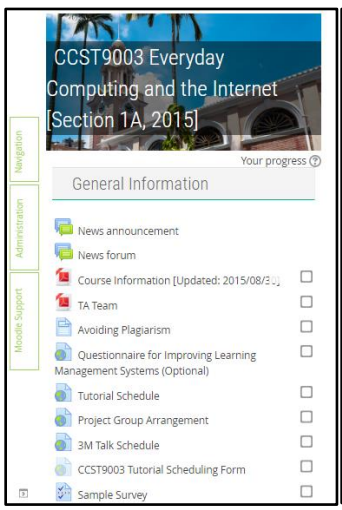

Figure 7

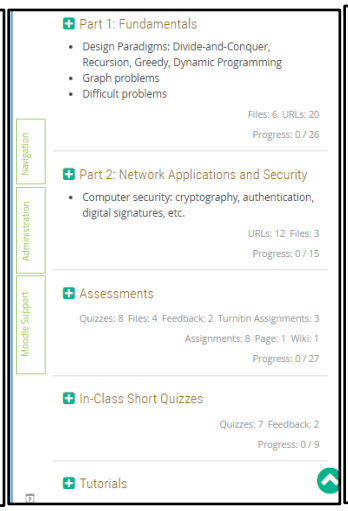

Figure 8

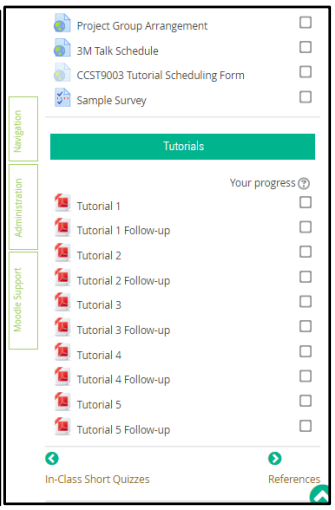

Figure 9

Also, in each of the section (e.g., **Tutorials** in Figure 9), the **General Information** section was always displayed at the top so that students could go to important sites such as the **News Announcement** forum quickly. In terms of navigation, one would always use the two links located at the bottom right and left of the page, to go to respectively the previous or next section. On the fifth section page **Tutorials** for example, when students would like to go to the next section, they could scroll to the bottom right of the page to find the link to the next section page (i.e., "►**References**"). On the other hand, if students would like to go back to the previous section page, there was another link at the bottom left corner that served this purpose (i.e., "◄**In-Class Short Quizzes**).

Learning Resources and Activities

One of the assessment tasks of the course was in-class short quizzes. There were a total of seven quizzes and a new quiz was open to students either once a week or twice a week. Each quiz was usually as short as only having 3 questions so that students could use mobile access to Moodle to complete the quiz towards the end of a tutorial. In general, two types of questions were implemented using the **Quiz** function on Moodle, including multiple-choice (MC) questions (Figure 10), and essay questions which were used for the optional open-ended questions (Figure 11). Instructors inputted the feedback to each option of a MC question when setting up a quiz, so that there would be customized feedback according to a student's answer. Instructors' feedback in the quizzes would appear after the submission deadline and there would be short explanatory paragraphs for each question. This assessment focused on students' participation rather than the

scores they achieved in each quiz. Moreover, the instructor made use of this Quiz function to gather questions or difficulties from students (Figure 11), so that such questions could be addressed in a batch due to the large number of students in a CC course.

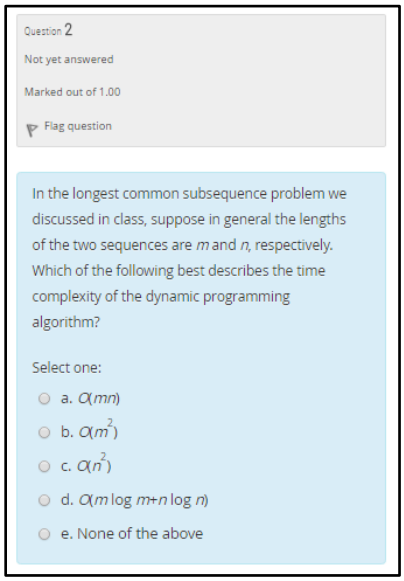

Figure 10

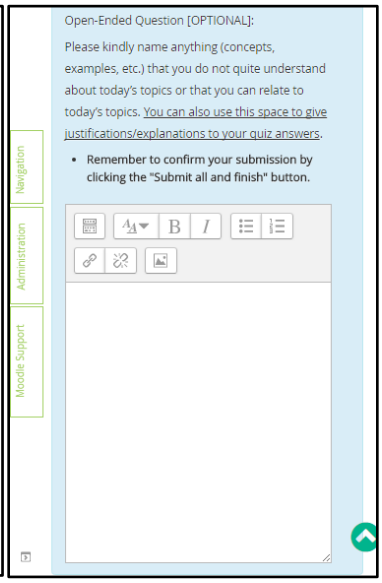

Figure 11

There was a group project assignment in this course in the form of a video presentation. The video of each group was played in the final tutorial, where not only the instructor but also other groups gave scores and comments to the presenting group. **Peer evaluation** required students to review the performance and participation of their peers. The **Quiz** function was used, where a simple and mobile-view-friendly evaluation rubric was provided for students' reference (Figure 12), following several questions (e.g., scores, comments, etc.) (Figure 13).

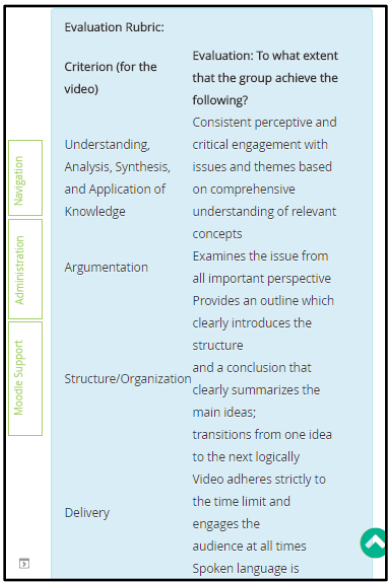

Figure 12

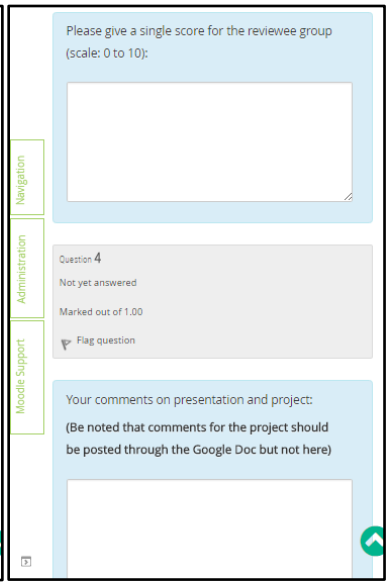

Figure 13

Case #3: Foreign language courses

Courses	FREN2031 French/English – Words and Syntax FREN2032 French/English – Registers and Genres FREN3032 French in the Economic Context (All offered in 2015/16)
Instructor	Ms. Nathalie Iseli-Chan
Students	Students from Bachelor of Arts in French
Overview	These three courses were elective courses taught by the same instructor hosted in a three-in-once course Moodle page.

Display, Interface and Navigation

As the three courses were all electives for students majoring in French, the instructor set up a three-in-one course Moodle page named **My French Electives** (Figure 14). It was convenient for the instructor to post materials that could be shared with students of all three courses at the same time, as language learning necessitates a great deal of learning resources. More importantly, the instructor hoped that students who only took one out of the three courses (e.g., **FREN2031** in Figure 15) would be prompted to look at the other "course sections" (i.e., **FREN2032** in Figure 16 and **FREN3032** in Figure 17). Students were also encouraged to re-visit a course section if they had taken that course before. Each course-specific section was relatively concise for a better mobile access, and that there were other cross-course sections hosting **Glossaries** and embedded videos for students' self-learning. A **Back To Top** button was placed at the end of each section of page so that students could easily get back to the top of the course Moodle page.

Figure 14

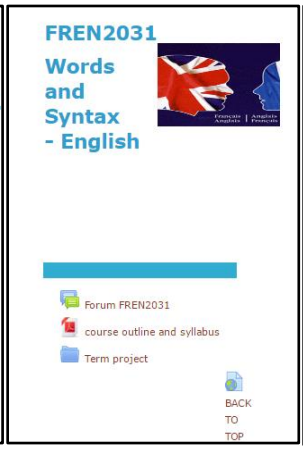

Figure 15

Figure 16

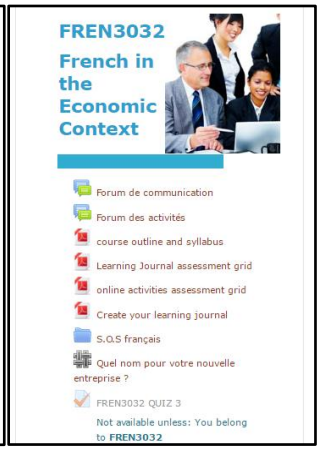

Figure 17

The instructor also took advantage of her basic knowledge of HTML to create and edit a **HTML block** where the shortcut links were added and linked to the different sections (Figure 18). Pictures were also added to this course Moodle page to make the it more interesting so that students could be more motivated to do self-learning in this platform.

Figure 18

Learning Resources and Activities

These three courses used the **Glossary** function extensively, though in a way different from the **Random Glossary Entry** as in Case #1. On this shared Moodle page, there are two other main sections named "**Notes et pratique interactive**" (Notes and interactive practices) (Figure 19) and "**Le Coin culture**" (The Culture Corner) (Figure 20). These sections were intended for students from all three courses, enabling them access these materials on their demands. Each glossary (e.g., Pratique de vocabulaire in Figure 19) contains materials including French grammar notes, vocabulary, idioms and expressions, etc. All materials were uploaded by the instructor for students to further their learning outside of the courses. Inside each **Glossary**, students were reminded to see the latest updates of information with "**Browse by Date**" as the instructor would constantly upload new and interesting materials.

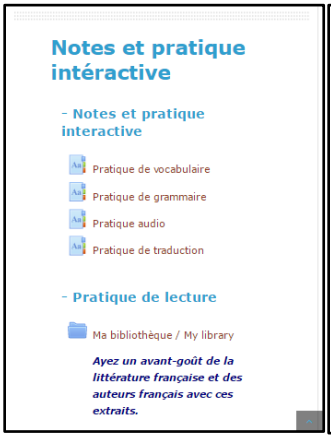

Figure 19

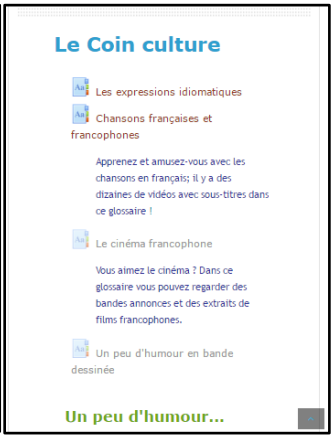

Figure 20

Figure 21

Furthermore, the section 'Le Coin culture' contained some glossaries with French songs and movies that the instructor always encouraged students to use as self-learning materials. The instructor would informally "assign" some out-of-class tasks to students such as listening to French songs for an hour or watching at least one French movie, usually embedded on the course Moodle page (Figure 21), at home or during transportation to and from campus, etc. In this way, students could fully utilize Moodle to access learning resources whenever and wherever they were at their convenience. A remarked purpose of motivating students to use Moodle for accessing learning materials was that the learning resources on Moodle must be teacher-approved as they were uploaded by the instructor, who already performed the process of selecting the most suitable, accurate and appropriate materials (e.g., songs, movies, notes, etc.) and the like for students.

Online interaction on Moodle was largely promoted in these three courses. Two blocks were placed on the top right corner of the Moodle page, namely **Messages** and **Online users** (Figure 22). The latter block showed the names of users (including students and the instructor) who were on the Moodle page. The instructor employed scaffolding by initiating a conversation with students whom she saw online, like asking them what they were checking on Moodle and so on. Gradually, students were observed to have become more proactive and would send an **instant message** (IM) to the instructor when both sides were online. Teacher-student communication was thereby

promoted and reinforced through Moodle. Though WhatsApp and Facebook might have been the preferred alternatives to Moodle as online interactive channels, students could still use the instant messaging function on Moodle to ask the instructor or their peers about any course-related questions directly. A common purpose of interaction for students on Moodle of these courses was found to be seeking confirmation on the deadlines of assignments.

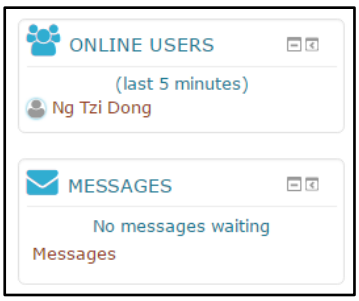

Figure 22

The **Forum** function was also actively used. In FREN3032, the instructor opened a forum for communication and interaction (Figure 22). Students would initiate a new discussion post when they had a question, like an enquiry on a French grammatical issue, where the instructor could provide suggestions and possible solutions, and other students could also offer constructive help. If students asked academic questions through email, the instructor would direct questions to the Forum in hope that other students would also learn from or help their peers. When the instructor had to dispatch some information about the assignments or other learning materials, she would also rely on this Forum.

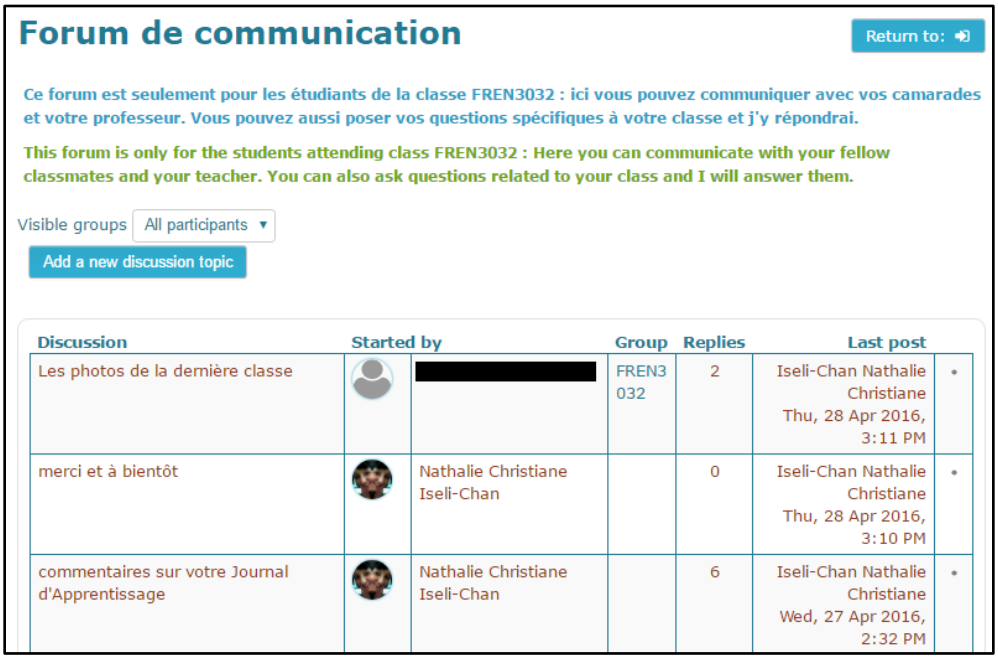

Figure 23

Case #4: A large-sized foundation course

Course	GEOG1003 Contemporary global environmental issues (in Semester One, 2016/17)
Instructors	Dr. Jinbao Li
Students	Students from Faculty of Social Sciences
Overview	This course

Display, Interface and Navigation

This course adopted a rather all-in-one approach in displaying learning resources and activities on its Moodle page (Figure 24). The instructor organized course components according to the course schedule, i.e., week by week. For instance, the links to the **Required Reading** and **Suggested Reading** were displayed first in each course section, followed by the lecture slides for the week, and at times a **Pre-class** / **Post-class Short Exercise**. This would be convenient for students using mobile access such that they needed not scroll up and down for different sections in the small screen.

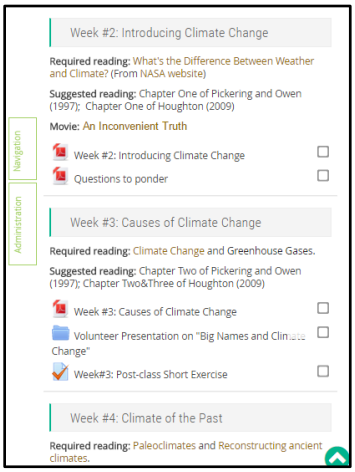

Figure 24

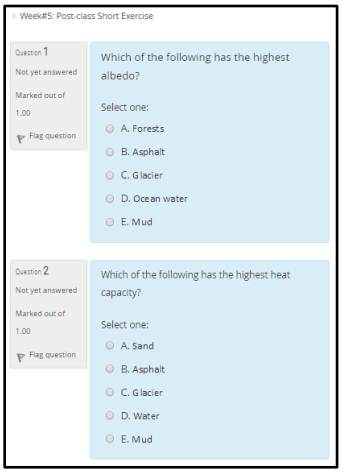

Figure 25

Learning Resources and Activities

Despite that this course implemented very few Moodle activities used in the other cases, the instructor set up bi-weekly short exercises using the **Quiz** function. There were **Pre-class Short Exercises** to prepare students for the forthcoming class, and **Post-class Short Exercises** for students to review concepts and knowledge delivered in class. Each exercise (Figure 25) contains at most 8 multiple-choice questions that students could easily answer using their mobile devices. The instructor emphasized that these exercises would not be counted towards their course grade so as not to impose pressure on students.