



EBooks as teaching strategy – preliminary investigation

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Besides serving as tools for leisure-reading and self-learning, eBooks can be effective in the facilitation of teaching and learning. Teachers can proactively make use of eBooks to facilitate teaching and learning. The Mobile Learning Project at The Chinese University of Hong Kong was exploring the use of eBooks from teachers' perspective. This paper was about two cases in which teachers created the eBooks themselves rather than using commercially prepared materials. In one case, the eBooks became reference materials for students to freely refer to when they were in need of more information. In the second case the eBooks created were tightly integrated with curriculum such they were required weekly readings that matched the weekly topics of the course. Much care had also been paid to make the eBooks viewable on the majority of students' handheld devices. Surveys and download statistics of the eBooks were used for evaluation. The findings pointed us to both promises and challenges.

Keywords: Mobile learning, eBooks, mobile devices

EBooks as teaching strategy

EBooks bring a great deal of convenience to its users. Lucia (2001) once said eBooks would never go out of print, and new editions can be easily created. EBooks take up little space and the technology allows students to store several chapters of one or more books at once in one portable reader. That is, 'tons' of reading materials that take up the space of a tall bookcase can now rest effortlessly in one mobile device as if it was a personal

library that could be retrieved regardless of time and space. On the other hand, the software that enables eBooks to be readable on personal devices usually provides features such as full text searching, customizable font size, mark-up, or even note taking (Lucia, 2001). Moreover, the content of an eBook may be supplemented with multimedia, which assures a greater variety of information to be displayed simultaneously. “Hyperlinks can be used to bring the student, while reading the text, to a number of educational resources that cannot be included in the text of the course, such as multimedia materials, interactive exercises, quizzes, discussions, etc” (Mazza, 2008, p. 2). Therefore, eBooks may serve as learning tools especially among students who are comfortable with the technology.

Despite the fact that eBooks can be used for leisure-reading and self-learning among students themselves, we regard that teachers should proactively make use of eBooks in facilitating teaching and learning. The usage of such, from the perspective of teachers, involves in the preparation or even the development of eBooks for students. However, the willingness of students to adopt the use of eBooks in this scenario can be more challenging –limitations of the technology can seriously affect the degree of acceptance towards it especially if the technology is expected to be used by not only the most technology-prone students but all students. Past research by Anuradha and Usha (2006, p. 2) mentioned some of the challenges that hinder the acceptance of eBooks, including: high cost of hardware readers, users’ unwillingness to change, a general lack of awareness in eBooks, and particularly, in the academic setting, the fact that the number of printed books are more readily available than that of eBooks in libraries. Furthermore, the success of eBook relies heavily on the ease of the whole reading process. Malama, Landoni, and Wilson (2004) noted that the layout of the eBook on screen was a significant factor that affected the quality of reading experience among users substantially. A successful layout of such involves in the ease of navigation through a clear user interface, and a clear and logical structure that supports readers’ sense of place in the eBook.

Empirical data is thus in demand to understand whether eBooks can be effectively used by teachers to facilitate teaching and learning in the present tertiary institutions. The present paper reports two cases in which teachers adopted eBooks as innovative teaching strategies. The study was carried out by the Mobile Learning Project at The Chinese University of Hong Kong (CUHK) (<http://www.cuhk.edu.hk/mlearning>), which focused on providing teachers and students the following: practical guidelines, resources and sustainable technical solutions to various mobile learning strategies.

There are many possible ways a teacher can approach to adopt eBooks as a teaching strategy. We regard that the approaches involves the consideration of the three major parameters, which vary across a continuum. The following model (graphically represented in Figure 1) depicts a perceptual map of these three parameters. The cases that our project investigated belong to the parameters as indicated below.

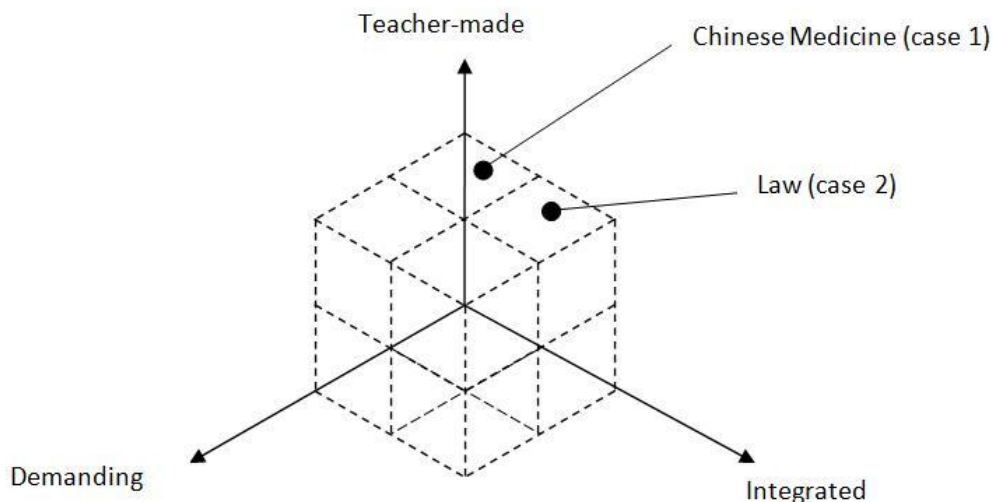


Figure 1: Model explaining various designs of eBook teaching strategies

Teacher-made vs. commercially-prepared materials (vertical component of the diagram)

Teachers often choose to adopt commercially-prepared materials or teacher-made materials. The former is available at big eBooks stores (e.g. Amazon, Barnes & Noble, etc) that can be readily incorporated into a particular course at university. Whereas the latter, with the availability of open-source eBook standards such as ePUB and the prevalence of software that allow the creation of eBooks, is now feasible for teachers to develop tailor-made eBooks specified for their own courses of teaching and learning.

Each of these types has its own advantages and disadvantages. Commercial eBooks require less effort to be adopted by teachers and yet as a result of Digital Rights Management (DRM) restrictions, commercial eBooks have been blamed to cause a great deal of inconvenience to its users (Turner, 2005). Moreover, it is very difficult to find a commercial eBook, which fulfill the exact requirements of a course. In contrast, teacher-made eBooks can be customized easily by teachers. For example, the eBook chapters can be separated into different files and released in respective sequence and timing that best suit curriculum and learning activity design. The construction of tailor-made eBooks represents substantial effort from teachers. Nevertheless, they can be made available to students free of charge, which serves as another advantage over commercially made eBooks. Besides, past research by Putney (2004) suggested that teacher-created eBooks led to higher degree of motivation among students in using the technology.

Hardware demanding vs. less-demanding designs (bottom left component of the diagram)

The design of eBook can be on one hand, heavily relied on expensive and up-to-date devices and on the other, based on technology that poses minimum requirements on hardware and software. That is, the pressure exerted on teachers or students in purchasing additional devices is downplayed.

The first solution to impose less pressure on the requirement hardware is the adoption of JAVA-based eBooks. Most mobile devices (even low-priced models) that were produced in last couple of years supported JAVA ME and allowed the execution of MIDlet applications. mjBookMaker is a piece of software that allows the conversion of MS Word, FB2 and plain text into MIDlet applications, which can be executed on JAVA-enabled phones. JAVA-based eBooks (MIDlet) are in-built with a simple eBook reader, which is coupled with basic and yet comprehensive eBook functions such as search, bookmark and tables of content. By taking advantage of the in-built function, together with mjBookMaker, which provides a convenient solution in making eBooks, academic eBooks can be made available rather easily. However, because JAVA-based eBooks are designed for low-end mobile phones which do not have high processing power to perform complicated tasks, JAVA-based eBooks are usually limited in functionalities. For example, eBooks of such do not contain tables nor support large images. Users of these eBooks cannot make their own notes as they read along the text of each page. Last but not least, the screens of these mobile devices are usually too small to be read comfortably by users. In comparison with the first solution which is more compatible with low-end devices, ePUB may be a better choice for higher-end mobile devices such as smartphones. The ePUB (short-term for electronic publication) is a free and open eBook standard developed by the International Digital Publishing Forum (IDPF). The format of ePUB is designed for reflowable content. That is, text display can be optimized for a particular device. Moreover, while the first solution is less interactive and incompatible with non-text elements, the ePUB supports URLs in addition to images.

However, ePUB eBooks do not have the eBook reader software built into eBook files as that in JAVA-based books. Instead, in order to read these eBooks, users are required to install an ePUB compatible reader application into their mobile devices. Since high-end hardware is mostly used in this case, ePUB readers are designed with a lot of features, which allow personalization. According to Gupta and Gullett-Scaggs (2010), these personalized functions often permit users to take notes on the margins of an eBooks, to quickly adjust the size of display, and to fill up screensavers with photos from the users. The market of mobile devices evolves with a tendency of higher processing speed (e.g. Apple iPhone, iPad and Android tablets), and higher capability to accommodate richer content on top of text. The latest ePUB eBook is a better choice of format in embedding multimedia for playback during reading. The latest format of ePUB provides a channel for users to listen to audios, to watch streaming or non-streaming videos, and to gain access to other online information as they flip over the pages of an eBook.

Integrated vs. non-integrated approaches (bottom right hand component of the diagram)

The third component of the diagram measures how much an eBook should be integrated as an essential part of a course. On the far side of the continuum, eBooks are adopted in as textbooks, which are expected to be brought to class by students whenever reading is required. Towards the other extreme on the continuum, eBooks serve as additional readings or reference materials, which allow students to review them flexibly at their own pace of

time, irrespective of geographical location.

The use of eBooks reported in Morton, Foreman, Goede, Bezzant and Albertine (2007) was an example of an integrated design in which the content of dermatology course was incorporated into the eBooks in the School of Medicine at University of Utah. These eBooks required relatively advanced hardware in couple with dedicated eBook reader software. The eBook reader supported functions such as bookmarking pages, keyword search, and note-taking, etc. Students of the course regarded that the eBooks were effective in delivering course content.

The iPad programme in Briar Cliff University, on the other hand, was an example of using eBooks in a non-integrated manner. Thompson (2010) reported that the University bought a few iPads, which were allowed to be checked out by students from the library. These iPads were preinstalled with reference eBooks on top of other useful software. The purpose of these devices was to provide an alternative mean for students to access to rich information. When a student returned the iPad, a reset and re-sync process were used to remove all personal information as created by previous users. While the iPad is not as affordable as other tablet computers in the market, Larson (2010), an assistant professor of elementary education at Kansas State University, suggested that Kindle eReaders might be used as another non-integrated approach to broaden and enhance students' reading experiences – a rich source of extended reading materials.

The study

The paper reports two cases in which there were adoptions of eBooks in both teaching and learning in two very different disciplines (Chinese Medicine and Law) at CUHK. The purpose of our study was to determine whether it was feasible to use eBooks as a tool for both teaching and learning. The Mobile Learning Project at CUHK supported the teachers in the creation, implementation and evaluation of the adoption of the eBooks.

As indicated on Figure 1, the two cases had the following specific designs. First of all, instead of using commercial eBooks, we created tailor-made eBooks for the teachers based on teacher-provided text. Secondly, in both cases, the teachers and developers paid attention to the issue of equity - to ensure as much as possible all students receive an equitable learning experience such that students were not discriminated against whether they have had the expensive mobile devices or not. Students were not told to buy any dedicated devices; instead eBooks were developed to be used on the existing mobile phones' platforms they owned. Therefore, firstly, instead of using commercial eBooks, we created tailor-made eBooks for teachers based on text that they provided. The two cases, however, differed in the extent the eBooks were integrated into the curriculum. The details of these two cases are elaborated below.

Case 1: Chinese Medicine

In Case 1, a teacher at the School of Chinese Medicine at CUHK developed eBooks as reference resources for students to refer to at times of their self-studies or at times when they are conducting medical consultations. Because most of them did not use smartphones but standard phones, which support JAVA, therefore, JAVA-based eBooks were used in this project. In order to avoid students from becoming over-frustrated in using the technology, eBooks were not required components of the curriculum but supplementary reference materials. These eBooks represented quick reference materials that enabled students to search terminology and to read through information in relation to a particular term. They covered a number of the essential topics in 3 fields: 'Internal Medicine', 'Chinese Materia and Herbal Formulary' and 'Acupuncture'.

Referring to the framework portrayed in Figure.1, the project involved a design that was non-hardware demanding and the materials not integrated into curriculum. In order to familiarize students with these eBooks, workshops were conducted internally to introduce this mobile learning tool. All together, 34 students came to these workshops. They were introduced briefly to the technology and the procedure involved in installing eBooks into their mobile phone, and the techniques to maneuver with functions such as searching, navigating and bookmark. Feedback was collected two times through surveys during the study: the first questionnaire was administered immediately after the completion of workshops, which solicited their first impression towards the technology, and the second one was administered to 34 students through emails after a period of three months to check whether they had used them and whether their perceptions towards eBooks had changed upon using the technology. A total of 31 responses were collected in the first questionnaire, which led to a response rate of 91.18%. The response rate of the second questionnaire was 70.6%, which was represented by 24 responses.

Case 2: Law

In Case 2, a professor from the Faculty of Law at The Chinese University of Hong Kong created a set of 12 Land Law seminar guides to accompany the Principles of Land Law course over the period of one semester. These guides were derived from each topic in the course syllabus and served as good weekly reading materials. Students were asked to review these materials on mobile devices that they currently used. 12 eBooks were created and disseminated to students one after another corresponding to lecture topics.

These eBooks were available in multiple formats so as to assure easy access. In particular, ePUB and JAVA-based eBooks were created to serve students who had smartphones and those who had not respectively. Furthermore, teachers took effort to make these materials available in other channels as well. The same set of reading materials were converted into Word documents and PDFs respectively so that students could view them on desktop computers in addition to their handheld devices. With reference to the model in Figure 1, the usage of eBooks in this case can be regarded as non-hardware demanding and yet highly integrated with the curriculum.

208 students enrolled into the course. These files were uploaded to the course website hosted on the learning management systems (LMSs) – Word documents and PDFs could be downloaded from Moodle while eBooks could be preview via Mobile Moodle. The internal logging system of the LMSs was responsible for tracking the number of accesses to the website and the frequency of downloading (each of the eBooks as mentioned above) that happened within the platform.

Findings

Case 1

Table 1 shows the feedback of students on the two questionnaires administered in Case 1. There were a few patterns of usage that could be identified in this case. Firstly, while many of our students reported to have experiences in reading eBooks on larger screens in less portable devices such as desktop and notebook computers (the score being 3), they had relatively less experience in reading eBooks via mobile phones (the score being 2.2). In other words, it was a relatively novel idea for students to view eBooks via mobile devices when they were first introduced to using eBooks on mobile phones in the workshops.

Table 1: Students' feedbacks on eBooks (Case 1)

	First impression		Actual usage (After three months)	
	Mean	Number of responses	Mean	Number of responses
	1 being 'Never' and 5 being 'Always'.			
Do you read eBooks on desktop/ notebook computers?	3.00	31	-	-
Do you read eBooks on mobile phones?	2.17	30	-	-
How often did you read the Chinese Medicine eBooks on mobile phones?	-	-	3.13	24
	1 being 'Strongly disagree' and 5 being 'Strongly agree'.			
I think the Chinese Medicine eBooks are convenient.	4.06	31	-	-
I will like to use the eBooks introduced in the workshop.	4.03	31	-	-
I think the eBooks introduced in the workshop will be useful to me.	4.13	31	-	-
I think I already have the mobile phone on which I can comfortably read eBooks.	3.48	31	-	-
The Chinese Medicine eBooks were easy to operate.	-	-	3.88	24
I think the Chinese Medicine eBooks are important learning tools.	4.00	31	3.79	24
I feel comfortable reading the Chinese Medicine eBooks on a mobile phone screen.	3.71	31	3.25	24

Results from our first survey concluded that students in general, when they were first introduced with eBooks, perceived positively towards the adoption of eBooks. Students thought that eBooks were convenient (mean = 4.06). They claimed they would use the eBooks, which were introduced in the workshop (mean = 4.03). Besides, students reported these eBooks to be useful to them (mean = 4.13). They believed that eBooks would be important learning tools (mean = 4.00). Students were uncertain about how comfortable it would be reading eBooks on small screens (means 3.48 and 3.71 in two related items), nevertheless, students held high expectation towards these eBooks in other criteria. That is, even if they had to read JAVA-based eBooks in small mobile phones, they preferred eBooks to traditional paper books for the reason of convenience.

Students perceived less positively towards the adoption of eBooks upon 3 months of usage. It seemed that the limitation of eBooks in its display had overridden the effect of novelty, which gave rise to a decrease in the following two criteria. The mean score, which shows the degree of comfort experienced while reading eBooks on a mobile phone screen had reduced from 3.71 (first survey) to 3.25. A decrease was observed concerning whether eBooks were important learning tools (3.79 vs. 4.00 in the first survey). Despite its limitations, students reported to have read eBooks from time to time (mean=3.13). Moreover, they perceived that those eBooks were easy to operate with (mean=3.88).

The last question of our questionnaires consisted of an open-ended question. From the open-ended question of the first questionnaire, students perceived eBooks to be portable and convenient (exact wordings: “eBooks are portable” and “the mobile phone is convenient, no need to physically bring the ordinary books.” respectively). In addition, some of them reported that “it (eBooks) is good when we cannot get access to the computer/textbook”.

From the open-ended question of the second questionnaire, similarly positive comments were recorded. For example, they wrote “eBooks are more convenient and handy compare with ordinary books”, “eBooks can contain a wide range of content related to Chinese Medicine topics”, “using the search function, the information can be searched very quickly”, and “the eBooks can be used frequently during transportation”. Despite all of these positive comments, one student noted that “viewing the eBooks on the mobile phone screen for a long time will make the eyes tired”, which has to addressed in future design if eBooks were adopted to be used repetitively for long hours.

Case 2

Table 2 illustrates the average number of download per student as recorded in the LMSs in Case 2. Each row of result consists of 3 numbers: 1) the total number of students who downloaded a particular eBook from the LMS, 2) the total number of download performed by students in LMS number (as one students might have downloaded the same file for many times, and 3) the average number of download performed by one student respectively.

For the purpose of presentation, ePUB and JAVA-based were grouped as eBooks whereas WORD and PDF were grouped as eDocuments.

Table 2: Access logs from LMSs (Case 2)
(Number of students / Number of download / Number of download per student)

Week	Seminar guide topic names	eBooks		eDocuments	
		ePUB	JAVA-based	WORD	PDF
1	Fundamental principles	60 / 89 / 1.48	74 / 119 / 1.61	184 / 483 / 2.63	5 / 8 / 1.6
2	Leases	46 / 65 / 1.41	51 / 63 / 1.24	174 / 600 / 3.45	1 / 1 / 1
3	Formalities	31 / 36 / 1.16	27 / 30 / 1.11	164 / 457 / 2.79	1 / 1 / 1
4	Priorities	31 / 45 / 1.45	18 / 22 / 1.22	174 / 462 / 2.66	1 / 1 / 1
5	Licences	17 / 22 / 1.29	13 / 15 / 1.15	163 / 402 / 2.47	1 / 1 / 1
6	Informal trusts and Chinese customary trusts	15 / 16 / 1.07	9 / 14 / 1.56	141 / 230 / 1.63	0 / 0 / 0
7	Adverse possession	18 / 21 / 1.17	19 / 21 / 1.11	164 / 380 / 2.32	0 / 0 / 0
8	Co-ownership	16 / 19 / 1.19	11 / 12 / 1.09	157 / 317 / 2.02	0 / 0 / 0
9	Easements	16 / 21 / 1.31	13 / 13 / 1	155 / 327 / 2.11	0 / 0 / 0
10	Land covenants	14 / 17 / 1.21	10 / 14 / 1.4	152 / 311 / 2.05	1 / 1 / 1
11	Leasehold covenants	11 / 13 / 1.18	6 / 7 / 1.17	150 / 307 / 2.05	0 / 0 / 0
12	Mortgages	9 / 9 / 1	7 / 7 / 1	147 / 305 / 2.07	1 / 2 / 2

Results showed that eBooks had generated a great deal of attention at the beginning of the semester when they were first introduced. The effect of novelty seemed to dominate and have attracted about 50 to 60 students (out of 208) to access to these eBooks in first two weeks. Both ePUB and JAVA were used by students. However, the number of download per student in both categories fell quickly to about 10% of students in total in the following weeks even though many of them remained core users of eBooks until the end of semester. In comparison with the results from eDocuments, the number of download per student in WORD and PDF is significantly greater than that in ePUB and JAVA-based eBooks. Therefore, it is reasonable to conclude that students favoured eDocuments than eBooks during the semester. In contrast with the number of download per students in eBooks, which decreased rapidly soon after they were introduced, the number of download per student in eDocuments remained stable over the semester in which over 75% of the students regularly downloaded them every week. To a certain extent, the statistics above seemed to suggest that students preferred materials to be available on desktop rather than on mobile particularly when the content of that piece of material is essential to the curriculum. Although some of these students might want these materials to be always available on their personalized mobile devices, for most of them desktop computers seemed to be more important as they allow them to make notes and to print files.

The format of Word document was by far the most popular whereas the format of PDF was least popular in terms of usage (even if we compare the results with that obtained in ePUB and JAVA eBooks). Even though PDFs can be easily viewed in desktop computers, it is less editable. It is understandable that students preferred to work on formats that provided diverse choice of options, which in turn enabled flexibility in usage.

Lastly, it was interesting to note that the average number of downloads per student for eBooks and eDocuments were roughly 1.3 and 2.4 respectively. The difference might be attributed to the fact that students who downloaded eBooks onto their mobile devices did not need to do the download again as eBooks on mobile devices was presented at all times once they were downloaded and incorporated into personal devices. However, students who downloaded files in one computer might find it necessary to download it again if he/she wanted to work on those files with another computer.

Discussion

As suggested in Figure 1, any particular use of eBooks involves many considerations on the part of the teachers. We would like to revisit these design decisions in this discussion section based on the new understanding we had because of the two cases.

Firstly, teacher-creation of eBooks seemed to be worthwhile strategies to further investigate. The technical skills

behind the development of teacher-made eBooks were minimal but its potential benefits can be great. In comparison with commercial eBooks, which come in rigid forms and styles of content, teachers have more control over the content of their own eBook. Furthermore, tailor-made materials are often a better fit to the curriculum as they can be customized heavily corresponding to various requirements requested by teachers. In addition, as a result of its originality, tailor-made eBooks, in comparison with commercial eBooks are a lot more transferrable as there is less restriction on the distribution of these eBooks. Nevertheless, the success of tailor-made eBooks lies in whether teachers have ready-made materials that can be converted into eBooks and whether they are willing to spend additional time and effort in making their own eBooks. Despite the use of eBook-creation software is deemed simple and easy by our research team, we failed to train a single teacher who can (or are willing to) use the software on their own in the construction of DIY eBooks. Most of our teachers preferred one-stop shop services to an opportunity in learning this piece of technology subsequent to inadequacy in technical support, which should be taken into account if eBooks were to be introduced in the future.

Secondly, the strategy that our project adopted to reduce the reliance in technology-demanding hardware so as to assure access to eBooks, resulted in both advantages and disadvantages. In terms of advantages, hardware-lenient eBooks (e.g. the JAVA-based eBooks) did effectively allow more students in accessing eBooks via mobile devices that they had been using. The adoption of hardware-lenient eBooks served as an immediate strategy in relieving the stress to purchase additional equipment for viewing these eBooks. However, eBooks that work in less-advanced equipment are normally limited in functions. Results from Case 1 revealed that students experienced discomfort as they had to read long paragraphs via small screens installed in lower-end hardware. Nevertheless, the initiative to explore and to develop eBooks in the future should focus on dealing with reading experiences in higher-end rather than lower-end hardware as it is expected that ownership of higher-end devices with large screens will be substantially prevalent due to the rapid advancement in technology recently.

Thirdly, results from the cases above seemed to suggest that eBooks as references is a preferred strategy to eBooks as tools for disseminating notes and/or curriculum-central materials. Reference materials are often too thick to be printed out or carried around. The fact that these reference materials were made available for viewing on mobile devices allowed students to carry and to read important information regardless of time and geographical locations – our finding in Case 2 in which the average number of download per student in eBooks was lower than that of Word documents to a certain extent confirmed such characteristic. In terms of eBooks that are tightly integrated with a curriculum, students from our studies had a tendency to print them out or to work on them via a desktop computer.

In short, the study confirmed eBooks to possess great potential in becoming a teaching strategy. The experience in the Chinese Medicine eBooks was particularly promising. Despite the limitations in the lower-end hardware, students in general, perceived eBooks to be beneficial in various aspects. They perceived eBooks to be convenient and portable, which aroused their intention in using them regularly. Most importantly, they were positive about the ease of use of the technology and the benefits that it has towards learning.

Conclusion

The study explores the design of eBooks in two respective courses at The Chinese University of Hong Kong in which teachers adopted eBooks proactively in the facilitation of teaching and learning throughout the course of a semester. Teachers created eBooks by themselves in both cases rather than using commercially prepared materials. In Case 1, eBooks were adopted as reference materials for students to refer to when they were in need of more information whereas in the other case, eBooks were created and integrated tightly with the curriculum in a way that students were required to perform weekly readings corresponding to the topic to be delivered in a particular week of the course. Teachers in both cases took substantial steps in assuring eBooks to be viewable in majority of the handheld devices owned by students.

There were both promises and challenges in our findings. eBooks were good learning tools but students' willing adoption could be challenging. The study revealed that limitations in eBooks (especially in situations related to older technology and hardware) could seriously affect the experience in learning with the technology among students. In addition, results from Case 2 showed that the nature of the content had an impact on the choice of medium in viewing the same set of materials. That is, students chose to view some materials in ePUB or Java via mobile devices and some in WORD or PDF via desktop computers depending on the nature of materials that they were reading about. In general, eBooks seem to be a good format for rich referencing materials.

The study also showed that teacher-creation of eBooks is technically and pedagogically feasible. Therefore, there are good reasons for teachers to adopt their own materials into his or her teaching strategies in complete or partial replacement of commercial resources. There is a wide variety of software available in converting text into eBooks. The time and skills required to develop an eBook is less substantial whereas the time required to write the content in the very beginning is more demanding.

Lastly, we should bear in mind that the two cases reported in this study only showcased two of the many ways in adopting eBooks as a strategy of learning at university. While the implementation of eBooks in both cases was novel to the teachers, results as recorded in our questionnaires might vary significantly if teachers were able to revise upon reviewing the comments and limitations. Therefore, it is necessary to explore the use of eBooks in other subjects and in varied designs in order to get a wider picture of the feasibility and effectiveness of eBooks in tertiary education. Nonetheless, the paper represents the starting point of continuous effort in supporting and investigating the use of eBooks as means for teaching and learning by teachers at tertiary institutions.

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