Introduction to Establishing a Hybrid Learning Course: An Interactive PDF Module for the Vietnamese Teachers of English at CEFALT

Hong T. P. Ngo
Department of Educational Technology
University of Hawaii at Manoa
Honolulu, Hawaii, U.S.A.
hongtp@hawaii.edu

Abstract: As a mixed mode of online and face-to-face instruction, hybrid learning has been a feasible solution to schools with limited space and a flexible learning environment for the learners. Yet, this mode of instruction may still be novel to most stakeholders at the Center Foreign Affairs and Language Training (CEFALT) in the Ho Chi Minh City of Vietnam. The purpose of this instructional design project was therefore to create and evaluate an interactive PDF module on establishing a hybrid learning course for the Vietnamese teachers of English at CEFALT. The module provided the teachers with basic knowledge of hybrid learning, effective strategies for incorporating available technologies into their teaching, and a framework for establishing a hybrid learning course. A group of 16 Vietnamese teachers of English at CEFALT evaluated the instructional module. The data collected from the teachers’ performance on the module, pre-test, post-test, and surveys indicated they learned a lot from the instructional module and wished for their school to adopt a hybrid learning mode in the near future. The research results further revealed that the interactive PDF features of the module greatly helped engage and stimulate the teachers in their learning process.

Introduction

"Face-to-face is not the gold standard that it's held up to be," stated Dede (as cited in DeVries, 2008, para. 13). A myriad of schools around the world have successfully utilized technology tools and software to create better learning environments (Beldarrin, 2006) including a hybrid learning mode. A hybrid learning mode places from 30 to 79 percent of the course content online (Simonson, Smaldino, Albright, & Zvacek, 2009). With this combination of instruction, hybrid has proved to be a more effective learning environment for adult learners, compared to a face-to-face environment (Rutgers University Senate, 2009; Tabor, 2007; Leh, 2002). In reality, rapid changes in societal and work environments have presented people with new challenges which require them to pursue higher education. Thus, most of the learners in today’s learning context are

1 Center for Foreign Affairs and Language Training in Ho Chi Minh City, Viet Nam
adults with “diverse backgrounds, occupations, and time constraints” (Sitter, Carter, Mahan, Massello, & Carter, 2009, p. 40). They come to a face-to-face class after work and in a status of being exhausted and hungry (Leh, 2002). At times, they have to leave class early due to family or other obligations. Vietnamese adult learners are no exception.

Increasingly in Viet Nam, more people are gaining access to technologies, particularly the Internet. As of January 2010, the total number of Internet users in Vietnam was 23,068,441. This accounts for 26.89% of the country’s population (Ministry of Information and Communications of Vietnam, 2009). People in Ho Chi Minh City may have better access to technology than those in other areas. Yet, educational administrators have not been able to utilize this advantage to create more effective learning environments. Teachers and learners are still tied to the traditional learning format.

In recent years, Viet Nam with its positive development pace has urged its citizens to pursue higher education. A large number of people have been rushing to training centers after work to broaden their knowledge, especially in the English language. In December 2008, VietnamNet Bridge (the first English online newspaper in Viet Nam) wrote that there were thousands who could not register for TOEIC (Test of English for International Communication) courses because of CEFALT’s physical space limitations. CEFALT has rented other premises; however the training needs of many are still unmet. Many learners have experienced difficulty attending class regularly and on time because of their jobs, family responsibilities, and other commitments. This situation has demonstrated a need for experts to create better learning environments.

The purpose of this instructional design project was to develop and evaluate an interactive PDF learning module on establishing a hybrid learning course for the Vietnamese teachers of English at CEFALT (Center for Foreign Affairs and Language Training in the Ho Chi Minh City of Viet Nam). Through the instructional module, the teachers were able to gain basic knowledge of hybrid learning, how to incorporate Ning (a social network site) into their teaching, and how to design a hybrid learning course.

**Literature Review**

The benefits of the Internet and network technologies, in terms of geography and time, have been able to challenge and overtake face-to-face learning environments (EL Mansour & Mupinga, 2007). Online learning has been instituted; however it is required that online learners should have more learning autonomy and responsibilities (Januin, 2007). Olapiriyakul and Scher (2006) added that dependent or less self-regulated learners tend to get lost during a completely online course. For that reason, Ng, Yeung and Hon (2006, p. 224) recommended “instead of using a purely online teaching mode” it would be more effective to have 30% of the course content taught in a face-to-face classroom.

Hybrid learning has established a flexible learning condition for learners with time constraints, as well as, for schools seeking solutions to parking and classroom limitations (Rutgers University Senate, 2009). If well-designed, hybrid learning courses may produce more effective interaction and collaboration among learners. Reasons, Valadares,
and Slavkin (2005) remarked that learners may benefit much from hybrid courses because hybrid courses comprise both the convenience of online and traditional face-to-face courses. Further, fewer face-to-face class meetings in hybrid learning could make it an attractive alternative for working or nontraditional learners (Tabor, 2007).

When establishing network infrastructure for hybrid learning, it is crucial to consider the accessibility and security of the network systems (Olapiyakul & Scher, 2006). Ning, a social network site, has been proven to be one of “the social networking potentials for distance learning” (Hoffman, 2009, p. 98). Reynard (2008) further emphasized that the learners would study better when they realized the importance of their mutual connections in the learning process.

Balci, Gilley, Adams, Tunar and Barnette (n.d.) added interactive materials would make the learning become memorable. Interactive features such as active links within the document, questions and quizzes could be found in PDF files (Horan & Lavelle, 2003). Rautiainen (2009, p. 33) stated “PDF files are supported on almost all platforms, from common general purpose operating systems and Web browsers to more exotic platforms such as mobile phones and printers.” Huang (2005) further commented that animations, interactivity, and visual design should be incorporated in educational media. If well-designed, educational media can greatly contribute to stimulating learners and making the learning process more active and engaging.

Methodology

The Goals of the Instructional Design Project
The goal of this instructional design project was to develop an interactive PDF instructional module on establishing a hybrid learning course for the Vietnamese teachers of English at CEFALT. Coupled with this goal, the project involved a formative evaluation comprising of one-on-one evaluation and small group testing. The data collected from the evaluation were used to measure the effectiveness of the instructional module and to plan future improvements.

Target Audience of the Instructional Module
The instructional module targeted the Vietnamese teachers of English at CEFALT. The teachers were aged between 25 and 50. All of the teachers had basic computer and Internet skills. Their cognitive abilities were above average. Most of them had at least a Bachelor’s degree in English. They worked at CEFALT as part-time English teachers, but were full-time English instructors in colleges and universities in the city.

Module Development and Design
The interactive module was designed using the Adobe InDesign CS4 software for the content arrangement and Adobe Acrobat 9 Pro for delivering the instruction. The design exploited the interactive features of the educational materials which were believed to offer the teachers convenience in navigating the content. In addition, the interactivity such as buttons and links provided the learners opportunities to interact with the module. The module content was sectioned into four and comprised of 14 objectives, with a
terminal learning objective of establishing a hybrid learning course. The pre-test, embedded test with feedback, and post-test also complemented the module to enhance learning. The content was presented in English, and easy-to-understand terms were used to explain new concepts so as to avoid possible confusion caused by a language barrier.

**Evaluation Instruments**
The evaluation instruments included the pre-test, embedded test, post-test, anonymous demographic and attitude online surveys (Appendix 5 and Appendix 6). The tests were in a Word document format. The pre-test consisted of 16 multiple-choice test questions and was administered to determine the participants’ prior knowledge of the topic. The embedded test and post-test were comprised of 14 multiple-choice test questions, corresponding to 14 skills presented in the module. Feedback was provided for the embedded test in order to elicit the participants’ performance. The demographic survey had ten questions asking the participants about their background information. The attitude survey was composed of 15 Likert-Scale and 4 open-ended text questions about the participants’ attitude towards the module.

**One-on-One Evaluation**
The module was reviewed overseas by the two peer reviewers within the target audience and subsequently assessed by one subject matter expert. The module was then revised based on the feedback gathered after each evaluation session. The reviewers completed the anonymous demographic survey, the pre-test, the module with embedded test, the post-test and the anonymous attitude survey (Appendix 1A and 1B). However, the subject matter expert, a specialist with interactive technologies and extensive experience in designing instructional and training programs, only reviewed the module and completed the online attitude survey.

**Small Group Testing**
The participants in the small group testing were chosen from the target audience on a completely voluntary basis. In terms of the audience’s characteristics, there was no difference between the participants and the target audience (Appendix 4). At the very beginning of the evaluation process, eighteen teachers participated; yet two withdrew due to their other obligations.

The small group testing was conducted at a distance and after the module was revised based on the feedback provided by the two peer reviewers and the subject matter expert. The participants were clearly informed of the small group testing process. The module and evaluation instruments were not sent to each participant as a package. Rather, they were divided into the following six steps:

1) Step 1: Consent letter
2) Step 2: Anonymous demographic online survey
3) Step 3: Pre-test
4) Step 4: Module with embedded test
5) Step 5: Post-test
6) Step 6: Anonymous attitude online survey
Knowing the disadvantages of collecting data from a distance, the researcher kept close contact with the teachers through email and long distance telephone calls. This helped encourage the participants and ensure that they did not have any technical problems in working on the module and evaluation instruments.

Results and Findings

A group of 16 participants who were Vietnamese teachers of English at CEFALT completed the evaluation instruments. Both qualitative and quantitative data were garnered. The data revealed four themes: 1) effectiveness of the instructional module, 2) anomalies and future improvements, 3) strengths of incorporating interactive features into learning materials, and 4) possibility of adopting a hybrid learning mode at CEFALT.

Effectiveness of the Instructional Module

The participants completed the pre-test, the module with embedded test, and the post-test in an average of one hour and 49 minutes. Their test scores indicated the success of the module. In Figure 1, the red line depicts that the participants increased their embedded test scores in 13 objectives out of 14 objectives presented in the module. This means the participants were able to master approximately 93% of the instruction after working on the instructional module. The green line, representing the post-test scores, also shows that the participants continued to make a significant progress in objective 1, 6, and 8. An average of the percentage of the correct answers for each test indicates an overwhelming majority of 90.2% of the test questions were answered correctly in the embedded test. This number went down to 84.8% in the post-test, but it was at an acceptable level. In the pre-test, the participants could only answer 50.4% of the questions accurately (Figure 12 in the Appendix 2).

![Test Scores by Objective](image)

**Figure 1.** Pre-test, embedded test, and post-test scores by objective.
Organizing the test scores by participant, the researcher noticed each participant improved their learning as displayed in Figure 2 below. The scores ranged from 21.4% to 64.3% in the pre-test (demonstrated by the blue line), but they were from 71.4% to 100% in the embedded test (demonstrated by the red line). An average score of 16 participants was 50.4% in the pre-test, 90.2% in the embedded test, and 84.8% in the post-test (Appendix 2).

![Test Scores by Participant](image)

**Figure 2.** Pre-test, embedded test, and post-test scores by participant.

The attitudinal data and margin comments reveal that the participants were satisfied with their learning experience and highly valued the module. An average 4.7 out of 5 points accounting for the “strongly agree” comments on all the positive statements was for the module (Appendix 3). Most participants wrote that it was exciting, engaging, pleasing, useful, and rewarding, but also challenging and tiring. Some commented that the module was very informative and well-designed and the instruction was easy to understand. All of the participants remarked that the feedback provided in the embedded test helped enhance their learning, the learning objectives were clearly described, and the content was sectioned appropriately. One participant added “the feedback is really clear and detailed enough to help learners correct themselves.” Another added “this is the second time I have the chance to know about hybrid learning, but I really appreciate all the useful information in your module.”

From the one-on-one evaluation process, the researcher received strong support on the effectiveness of the module. The attitudinal data shows that the peer reviewers and the
subject matter expert placed high value on the module through an impressive average of 4.9 points (out of 5 representing “Strongly Agree” opinions on all the positive statements about the module). One peer reviewer expressed she liked the organization and the design the best. She elaborated that “the instruction and design are exceptionally fantastic and highly practical for an academic environment.” The other participant liked the module content and the Ning platform the best. These two reviewers also offered some margin comments including suggestions on revising question 2, 3, and 4 (Appendix 1B). As for the subject matter expert, “the instructional design of the module is very sound. Learning is scaffolded and the sections provided just the right amount of information before it becomes overwhelming. The self quizzes help for retention of the material.” “Engaging, informative, [and] appreciative” are the three adjectives that the subject matter expert used to describe his module-review experience.

Anomalies and Future Improvements
This instructional design project received a lot of positive comments on the module. Nevertheless, Figure 1 and Figure 2 above show two anomalies on the participants’ performance. First, an amazing number, 93.8%, of the participants excelled in the objective 6 which identifies the purposes of signing up for a free Ning account. This number implied that the participants possessed sufficient prior knowledge of this skill. Second, of the participants, 50% were unable to maintain their impressive achievement as they did in the embedded test. This regression may be attributed to the fact that the post-test was not administered as immediately after the module readings and the embedded test was. Furthermore, 9 out of 16 participants did not find time to complete the post-test within the four days, but sent the post-test scores to the researcher at least 8 days as of the receiving date. Retaining the 14 skills demonstrated in the module over a period of time was less likely to the participants with various obligations and commitments. Therefore, this could explain that a decrease in the post-test scores of half of the participants was definitely possible.

The aforementioned anomalies warrant future consideration. First, if the module were to be revised, objective 6, identifying the purposes of signing up for a free Ning account, should not be deemed one of the new skills that needed to be taught. Second, the researcher should not assume that all of the participants would complete the module and evaluation instruments in a timely manner. It should be noted that “unlike children and teenagers, adults have many responsibilities that they must balance against the demands of learning. Due to these responsibilities, adults have barriers against participating in learning” (Lieb, 1991, para. 3).

Strengths of Incorporating Interactive Features into Learning Materials
The presence of the interactive features brought the module a clear and logical structure and ease of navigation. Fifty percent of the participants strongly agreed and 37.5% agreed that the navigation was clear, simple, consistent, and motivating. One wrote that he or she liked “the layout, the design, [and] the color” the most. Another commented that the module had a clear structure and attractive layout. One remarked, “the designer has chosen an interesting [delivery] method of teaching and learning [...]” Finally, another stated that he or she liked the interactive features of the module the most.
Possibility of Adopting a Hybrid Learning Mode

In the demographic data (Appendix 3), nearly 81.2% of the teachers as participants of the research agreed there should be a more flexible learning environment for working or non-traditional adult learners. Of the participants, 37.5% agreed with the statement that a traditional learning environment is not ideal for these learners due to time constraints. Almost half, 43.8% expressed neutral opinions and only 12.5% disagreed with this statement. After completing the instructional module, it was more likely most of the participants were in favor of a hybrid learning mode. An impressive 87.5% of the teachers wished for their school to adopt hybrid learning in the near future. The remaining 12.5% were undecided. Moreover, all of the teachers wanted to gain more advanced knowledge of establishing a hybrid learning course from the researcher.

Conclusions

The research results collected from the formative evaluation authenticated the effectiveness of the instructional module, as well as, orientated the researcher’s future work in instructional design and research. The module success highlighted the great value of an interactive PDF. This strongly encouraged the researcher to continue using it for delivering information and creating test items when developing future instructional modules. The interactive features which were incorporated into the module offered much convenience for participants and stimulate their learning. The peer reviewers, the subject matter expert, and the 16 participants, all commented that they were most impressed by the design of the module. In addition, the qualitative and quantitative data collected from the formative evaluation disclosed the need for more instructional modules and the need for a better learning environment for the adult learners at CEFALT. As earlier mentioned, 81.2% of the participants expressed the current face-to-face learning environment might not be appropriate for working and nontraditional adult learners at CEFALT.
References


CEFALT: Center for Foreign Affairs and Language Training in the Ho Chi Minh City of Viet Nam was founded by the Minister of Foreign Affairs on December 13, 1997. CEFALT offers diverse training programs in international relations and foreign languages (English and Chinese) to government officials and those who demand the country. Address: 87 Tran Quoc Thao Street, District 3, Ho Chi Minh City, Viet Nam. Website: http://www.cefalt.edu.vn/default_en.asp