

# Implementation of Instructional Design in a Blended Learning Development Project

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**Abstract:** Instructional design is critical to the success of blended learning development. This paper investigates the implementation of instructional design in a blended learning environment in order to develop a model of practice for improving teaching effectiveness at sub-degree level. Implementation steps of instructional design are identified, and templates for teachers to facilitate blended learning course development are illustrated.

**Keywords:** Instructional design, blended learning, e-course development

## 1. The Blended Learning Development Project

Blended learning is literally defined as the combination of traditional face-to-face classroom learning with a certain minimum level of basic e-learning features incorporated (Graham, 2005). To enhance the quality of learning support to the students, the School of Professional and Continuing Education of the University of Hong Kong (HKU SPACE) had introduced the Blended Learning Policy in 2004. Together with over ten years in practicing e-learning, HKU SPACE used the pedagogy-driven approach to develop e-courses for complementing and supplementing the face-to-face learning delivery (Cheung et al, 2008). In August 2009, a two-year e-course development project was kicked off for developing a blended learning model for improving teaching effectiveness in sub-degree accounting courses. After the first year implementation, all blended learning materials of the project were designed and developed. This paper serves to share our experience and some preliminary findings from the project, with a focus on the implementation of instructional design for blending learning.

## 2. Implementation of Instructional Design in the Blended Learning Project

### 2.1 Project Team with Academic and IT Staff

Restauri (2007) suggested teachers should work as instructional designers, technology specialists and course administrators at the same time in the blended learning mode. Biggs (2003) mentioned that many institutes often wrongly deployed the IT experts only to carry out e-learning development. According to our experience, an e-learning development project should be developed by a project team, consisting of academic and technical staff (Cheung et al, 2009). Therefore, instead of developing the e-course by a group of teachers or IT developers solely, the programme team, teachers, instructional designer and IT experts were to join together to form a project team.

## *2.2 Instructional Design*

The project team identified the major difficulties encountered by teachers in developing blended learning course were insufficient knowledge on how to start with the development and how to continue the development. Instructional tools and design strategies are important components for successful blending and all the components within the instructional method should be appropriately integrated (Rossett et al, 2003). In this project, ADDIE model was chosen by the project team for e-course development after evaluation of several models, such as Dick and Carey model and Instructional Development Learning System (IDLS).

## *2.3 Key Steps of Instructional Design*

Hollis and Madill (2006) found that teachers had pedagogical difficulties in adapting to new instructional delivery methods. Even though the teachers were asked to follow the model to develop e-course materials, they puzzled in how to implement it. In view of this, we developed a six-step paradigm in instructional design to support blended learning to enable the teachers to develop the e-course step-by-step (Cheung et al, 2010):

- **Create an overview for the course.** The teacher would develop an initial plan for the course structure, teaching and learning strategies, learning objectives, teaching plans and assessment methods.
- **Write the re-designed lesson plan.** The teacher would re-design the lesson plan to explore how e-learning can be integrated into the face-to-face learning.
- **Prepare the lesson materials.** Following the re-designed lesson plan, the teacher would prepare the lesson materials, such as handouts, notes, presentation slides and video clips. Assessment questions and discussion topics would also be prepared.
- **Perform research and prepare resources.** The teacher would then perform research and prepare extensive educational resources to support the teaching and learning.
- **Incorporate into learning management system.** The lesson materials, together with the open education resources, are packaged as learning objects for incorporation into a learning management system.
- **Review the created lessons and materials.** The teacher would finally review the lessons and materials before course delivery.

## *2.4 Working Templates for Teachers*

The six steps were intentionally designed to minimize uncertainties of teachers to develop blended learning course and to attract more teachers to develop blended learning in the future. By implementing the six steps one-by-one, the teachers were guided to develop the blended learning course. First, teachers were asked to create an overview for the blended learning course by filling in a template. Contact hours, teaching strategies and teaching plan including pre-class activities, in-class activities and post-class activities are the required fields. Then, the teachers were asked to write a redesigned lesson plan by filling in another template. Detailed learning activities to be carried out by both teachers and students were to be listed in the template. The two templates are illustrated as below:

<b>Course Title</b>	_____	<b>Teaching Plan</b>		
<b>Course Hour</b>	_____	Week	Topic	Tasks
<b>Course Code</b>	_____	xxx	xxx	pre-class
<b>Contact Hours</b>	Lecture and tutorial _____ hours			xxx
	Practical _____ hours			in-class
	e-learning _____ hours			xxx
	Total _____ hours			post-class
<b>Pre-requisites</b>	_____			xxx
<b>Course Aim</b>	_____	xxx	xxx	pre-class
<b>Teaching &amp; Learning Strategies</b>	_____			xxx
	_____			in-class
	_____			xxx
	_____			post-class
	_____			xxx

Figure 1. Course Overview Template

Week 1		
	Teacher	Student
<b>Pre-Class Activities</b>		
Class Preparation	1. Put a flash game on the platform 2. Create a topic for online discussion	1. Play the flash game 2. Express views in the forum
<b>In-Class Activities</b>		
Lecturing	1. Conduct the lecture with PPT slides	1. Discuss and present their ideas
Group Discussion	2. Separate the students into groups for discussion and presentation	
<b>Post-Class Activities</b>		
Chapter Review	1. Prepare a chapter quiz 2. Prepare a chapter review PPT file	1. Answer the quiz 2. View the chapter review

Figure 2. Sample of Redesigned Lesson Plan Template

### 3. Conclusion

Blended learning is widely adopted in the delivery of quality learning. Institutes adopt different extents of e-learning to supplement and complement traditional face-to-face teaching. The role of instructional designer is important in bridging academic and IT staff during the e-course development process. In our project, instructional design was applied and six steps were identified for teachers to follow when developing the blended learning courses. With guided instructions, teachers successfully designed and developed their courses very effectively. The blended learning courses are now developed and launched in the e-learning platform. The courses will be delivered to students in the new academic year. In the following year, we will focus on evaluating the effectiveness of the blended learning courses and making further improvement to enhance teaching and learning continuously. The effectiveness of the six steps of instructional design will also be evaluated. These steps will be introduced to more teachers to help them to develop blended learning more easily.

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