Pedagogical Strategies in Rapid e-Learning: The Case of the University of the East (UE) Graduate School Blended Learning

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ABSTRACT

The University of the East (UE) Graduate School has just recently ventured into offering courses with mixed mode (traditional face-to-face blended with online) delivery or what is now commonly referred to world-wide as **Blended Learning (F2F+Online)**. To be able to establish this in a very short time, an innovative approach has to be made. Considering budget constraints, the lack of trained faculty on online teaching and learning, and no readily available technical support group, the only way to go is to have the faculty use **Rapid e-Learning** in the development of online course materials. However, the adoption of this strategy imposes a challenge to the faculty who are practically just computer-literate, no more no less.

This paper demonstrates how the challenge can be met head-on by the faculty. A handful of the faculty (the author included) with strong IT background shared their expertise and know-how in Rapid e-Learning. With a plethora of user-friendly educational technology tools nowadays, e-learning materials can be produced even by just the teachers themselves. There will be practically no need for the services of the IT personnel. Some examples of the use of some of these tools are discussed. The discussion focuses on how pedagogical strategies can be contained in the e-learning materials using instructional design principles.

KEYWORDS: Rapid e-Learning, Online Learning, Blended Learning

INTRODUCTION

As early as in 2004, the author has proposed the establishment of online education in the University of the East (UE). Chairman P. O. Domingo accepted the proposal and the author was contracted to do the job. The author conducted seminar-workshops in online teaching and learning for a selected group of faculty members in the undergraduate colleges and graduate school. To put into practice what was learned in these workshops, the author developed a Virtual Learning Environment (VLES) for the faculty-trainees to implement their online teaching. One of the successful trainees in these workshops is Dr. Leila R. Gano who at present is a faculty member of the UE Graduate School. She successfully presented a paper in an educational conference in the United States wherein she demonstrated online teaching using the VLES developed by the author.

Due to some unfortunate misunderstandings among the UE top management of that time, the project was aborted. Practically seven (7) years have passed and UE has let the opportunity to be abreast with innovation in education slipped away. Currently, UE is trying to gain back the

opportunity lost. There are now urgent moves that are being taken to put UE abreast with online education. These moves are being spearheaded by the UE Graduate School (UEGS).

THE TRADITIONAL CURRICULUM DEVELOPMENT STAGES

The stages in the traditional curriculum development in accordance with the Taba (1962) model are the following:

1. **Define target students and their needs**

   Teachers and curriculum designers need to define those students for whom the curriculum is being developed. By first identifying particular students and their needs, curricula will be both more efficient and more effective.

2. **Identify instructional objectives**

   After teachers and designers have defined the target students and their needs, they should state specific instructional objectives, including those in cognitive, affective, and psychomotor domains.

3. **Select the scope of subject content**

   After objectives have been stated, teachers and designers must determine the subject matter, or the content of the curriculum.

4. **Organize sequence and structure**

   Teachers and designers cannot merely select subject content; they must also arrange content in a sequence or structure that will best accommodate targeted students' academic levels and interests.

5. **Select presentation methods and media**

   Following the arrangement of content, teachers and designers should select suitable media to present the planned sequence or structure of course content. Effective presentation methods are more likely to engage students in the learning processes, and thus to accomplish instructional objectives.

6. **Design assessment activities**

   Assessment is a crucial component of curriculum development; assessment of student learning, based on stated objectives, produces data with which one may determine the overall success of curriculum design and implementation.

7. **Implement formative evaluation**

Before implementing a new curriculum, a series of formative evaluations should be conducted in order to identify and assess any weaknesses in the proposed curriculum. This allows teachers and designers to improve design before implementation, and thus improve overall performance.

THE COMMON PRACTICE IN ONLINE CURRICULUM DEVELOPMENT

The common practice in online curriculum development does not deviate much from the traditional one. Due to incorporation of technology, deviations are inevitable in the stages 5, 6, and 7. It is in these stages where the ordinary traditional classroom teachers are confronted with challenges in the utilization of technology.

The Challenge in the selection of presentation methods and media

The Web is a multimedia system that incorporates text, graphics, audio, animation, and video and the Web provides teachers with more choices of presentation methods than are usual in traditional curricula. Indeed, the growing use of Internet technologies opens new possibilities that move well beyond the provision of more sophisticated delivery tools. Online curricular materials would benefit from graphics in the form of illustrations, diagrams, icons, and backgrounds. Teachers or designers, however, may not have the graphic skills and knowledge of graphics software to incorporate these elements into their curriculum and courses. Moreover, some degree of background knowledge, understanding of, and skill in multimedia production are necessary to produce audio and/or video elements in Web-based learning sites.

Similarly, the creation of animations or simulations requires special programming skills and experiences which teachers and designers may not have. Teachers and designers therefore need to be adept at preparing and organizing content-appropriate presentations in a digital multimedia form. If they do not have the necessary knowledge or skills themselves, they need technical support, either from others within the institution or from an outside vendor, and should work closely with technical support personnel. But how much should curriculum designers and instructors know about the technology, and what skills do they ought to possess to enable them to produce multimedia curricular components? Curricula designers must be familiar with the technology (the terms, capability, feasibility, etc.) to the degree that they know what the technology can and cannot do, and to the point that they can communicate their ideas clearly with technical support staff.

The Challenge in designing assessment activities

If learning is via a computer, then it is more appropriate to assess it by computer. This assertion is becoming a widely-accepted fact, as Web-based testing becomes more and more popular and available. The Internet in general and the Web in particular have unique contributions to make to a broader conception of assessment. Teachers and designers must be able to grasp the unique requirements and features of Web technology for implementing and maintaining Web-based assessments, and to design effective Web-based tests and assignments that accurately assess

students' learning and provide useful data for further curriculum development. When designing online assignments in particular, it is suggested that a detailed list of weekly assignments should be prepared. The list should include the pages to read, questions to be answered and problems to be solved. It should also cover the material for online discussions. This will help to ensure progress in student discussions, and allow students to follow that progress easily.

The Challenge in implementing formative evaluation

Formative evaluation, a critical step in curriculum development, is the process of gathering information to advise design, production, and implementation decisions. The biggest problem in developing online curricula may not be their initial creation, but rather subsequent revisions and updating: even if the content of a course does not require much change, many small details, such as links to other sites, need to be continually updated.

Conducting a formative evaluation of Web-based curriculum requires experts in course content, curricula, media, and administration to work together to develop evaluative methodologies that take into account students' and experts' presence at remote sites. Therefore, teachers and designers need to develop methods for conducting formative evaluations within complex, technology-dependent learning environments and curricula, to set up a reasonable work schedule for continual updating and revision, and to work closely with formative evaluation team members.

Other Challenges on Web-based curriculum and courses development

In addition to the above-mentioned seven major curriculum development stages, other factors relevant to developing Web-based curriculum and courses are also vitally important.

The first factor is the degree of completion of a curriculum before the actual delivery of that curriculum (or course). Many instructional designers do not always have the entire curriculum organized and developed before the school semester begins; rather, they prepare the course material as the semester progresses. It is far better to have the entire course organized into weekly modules before the students actually come online. They emphasize that, at a minimum, the underlying structure of the modules as well as the first three weeks should be prepared prior to student participation. As mentioned before, a substantial amount of planning and preparation must go into the design of an online curriculum and course.

The second major concern is the team approach. The major difference between developing online curricula and traditional curricula (as delivered by textbooks and lecture notes) is the need for a team approach. It is difficult for a single individual to have the range of skills and time required to develop an entire online curriculum or course. Faculty members are usually subject-matter experts and familiar with how the content should be taught, but they typically have little experience developing curricular materials for online learning. An instructional designer, multimedia producer, systems analyst, network programmer, etc. should be invited to work with faculty members to develop various course components in the appropriate formats. This calls for the establishment of a ‘Online course developer group'. They suggest that this group meet periodically, either in person or online, to share resources and experiences. A joint effort such as

this encourages and offers material resources for those who are involved in online curriculum development, and those who are still curious or anxious about online teaching.

THE AUTHOR'S PROPOSED STRATEGY TO ADDRESS THE CHALLENGES IN ONLINE CURRICULUM DEVELOPMENT

The traditional teachers in the Philippines are generally not tech-savvy. Most of them have not gone beyond using office productivity software. However, most of them are now communicating using email.

Having the foregoing in mind, the author has suggested the Rapid e-Learning strategy.

What is Rapid e-Learning?

Building of e-learning courses in a quick (or rapid) manner is commonly referred to as Rapid e-Learning. The e-learning courses are those that incorporate technology in their presentation and delivery.

Education delivery of courses, whether face-to-face (F2F) or online, undeniably requires course materials – of course! Instructional designing of these course materials for online delivery differs a lot from the F2F delivery. Considering the fact that in online delivery the presentation of the course materials is done in a virtual manner, the instructional designing requires the assistance of technology. Incorporation of multimedia into the course materials becomes a mandatory requirement. Because of this, teachers feel that they are incompetent to meet this challenge in developing e-learning materials. This is also one of the reasons why many teachers are still keeping a distance from online teaching.

With a plethora of user-friendly educational technology tools nowadays, e-learning materials can be produced even by just the teachers themselves. There will be practically minimal need for the services of the IT personnel.

Technology tools needed in the production of e-learning materials include the following:

1. Office productivity software (e.g. MS Office, OpenOffice, etc.)
2. e-Books (e.g. Adobe PDF, DeskTopAuthor, etc.)
3. Graphics software (e.g. Adobe Photoshop, GIMP, Picasa, etc.)
4. Multimedia Authoring software (e.g. CAMSTUDIO, DeskTopAuthor, etc.)
5. Computer-based Exam software (e.g. TCExam, DeskTopAuthor, etc.)

The Proposed UE Graduate School Rapid e-Learning

The Rapid e-Learning strategy proposed to the UE Graduate School meets the following typical challenges in rapid e-learning:

Creating rapid e-learning is not an easy task. The typical challenges include the following:

1. Ensuring a look and feel that is consistent with traditional e-learning
2. Using good and effective instructional design principles in a short time frame
3. Integrating with the chosen Learning Management System
4. Integrating the programming and HTML
5. Providing advanced features such as links, tests, and glossary
6. Meeting schedules without compromising on quality or learning effectiveness

The challenges faced by the UE Graduate School while implementing rapid e-learning are:

1. Tools: UEGS has no rapid e-learning tool
2. Resource: UEGS has no Instructional Designers
3. Deadline: UEGS has to deliver courses online starting SY 2012-2013
4. Quality: UEGS has to adhere to quality standards despite the stringent deadline
5. Budget: UEGS has almost no budget for e-learning

In short, UEGS has the challenge of rolling out an output that would match or surpass the output of a traditional e-learning course at a very small fraction of the school budget and with minimal resources.

The UEGS should adopt different strategies to meet the foregoing challenges. These are reflected in the following suggested actions to be taken:

1. Focus on design: The development group first defined the scope, guidelines and workflow for the course. The scope covered the extent and depth of content coverage. The guidelines included the strategies, look and feel, and the level of interactivity. Finalized the use of page-level presentation strategies such as tabbed pages, drag and drop, rollover text, click text, checklists, and so on. The standards document specified the rules for the use of fonts, audio, positioning of graphics, course length and slide and frame formats. The workflow outlined the tendering process in the form of a flowchart.

2. Content categorization: To meet the course duration and provide adequate content to the audience, content was categorized and segregated into two parts, main content and

additional content. Main content was covered in detail in the course. Additional content was placed in the Reference section of the course. It was included as optional reading at appropriate places.

3. Tool used: It was decided to use PowerPoint to create storyboards. The storyboards were scripted using PowerPoint called wire frames. They had detailed visualization and instructions for the graphics and construction team. Visualized scripts ensured that there was no additional time spent by instructional designers with the graphics and construction team to clarify graphics and presentation-related doubts.

4. Parallel processing: There was no time wasted by either graphics or construction in waiting for inputs from the subject expert/instruction designer (ID). Let us see how this happened:

    a. The ID worked on the table of content and content categorization; people from the construction team created the shell; graphics person created common icons and graphic elements for the course.

    b. The ID starts scripting using existing templates. The smallest module is rolled out in 2 days. The module is passed on to the graphics and construction team. The module is also sent for user's feedback. Based on the feedback, other modules are modified and created.

    c. User's feedback is incorporated by the ID while others continue scripting the other modules. The graphics team creates the icons. Development team is simultaneously working on the shell and integration of the module.

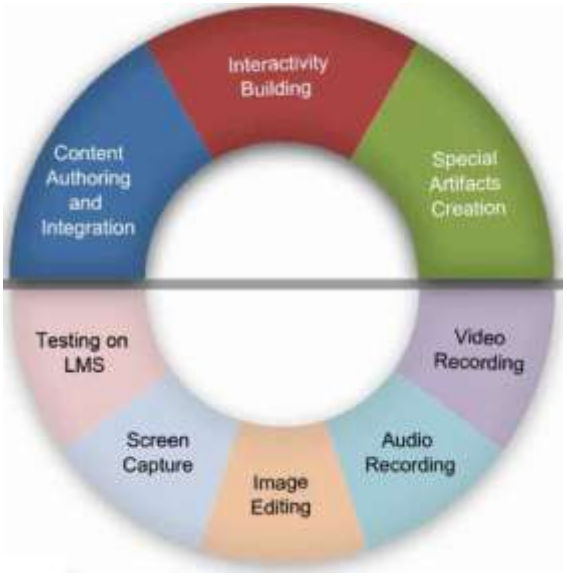
    d. This synchronized process resulted in the constructed modules being rolled out quickly after the completion of scripting, resulting in successful completion of the project.

The types of development tools currently used for e-learning course creation are:

1. Rapid development tools
2. PowerPoint to e-Learning conversion tools
3. Custom Flash development
4. Custom HTML development
5. Office productivity software such as MS Office or Open Office

The e-Learning Course Design Process

The design process and tools used are depicted in the following figures:



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The proposed software to be used corresponding to the design process are the following:

PROCESS	ACTIVITIES	TOOLS CATEGORIES	TOOLS	SOFTWARE
*Content Authoring and Integration *Interactivity Building *Special Artifacts Creation	*Testing on LMS *Screen Capture *Image Editing *Audio Recording *Video Recording	*Authoring Tools *Interactivity Tools *Specialty Tools	*LMS *Screen Capture Tools *Image Editing Tools *Audio Recording Tools *Video Recording Tools	*AERVLES *OfficeProductivity *DeskTopAuthor *CutePDFWriter *FlashSlideshowMaker *Adobe Photoshop *GIMP *Picasa *Screen Shot Captor *Camtasia *Audacity

				*Microsoft Windows Movie Maker *Xerte Rapid e-Learning Suite *eXe

Whenever possible and because of budgetary constraints, the freeware or open source software are chosen first.

The author has already many years of experience in using DeskTopAuthor as the primary authoring tool for developing e-learning materials. It does not have a steep learning curve that makes it easy for teachers to adopt it in their Rapid e-Learning strategy. With the use of this authoring tool in combination with the LMS developed by the author (i.e. AERVLES), the deployment of online courses will not take much time. An example case is the putting up of the Visayas State University Online Education.

CONCLUSION

Online course materials development poses a big challenge to traditional teachers like those at the UE Graduate School. However, their rich experience in the traditional classroom teaching makes them well-prepared for embarking into online course delivery. Surely, incorporation of technology in the course delivery is one big challenge. With the leaps and bounce in the advances of technology, the challenge is minimized. One case in point is the course development strategy using Rapid e-Learning. Adoption of this strategy will guarantee the success of implementing Blended Learning in the UE Graduate School.

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