

Forum: A New Approach for the Production of Educational Content

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Abstract

eLearning is developing at an ever increasing rate as universities and colleges recognize its vast potential to reach a deeper and fragmented student pool. For a while, eLearning was touted as the future of education, the goal we should be aiming for to answer the needs of a diversified student population with requirements predicated by the need to constantly learn new things coupled with the realities of daily life.

However, as the rosy glow has faded somewhat, educators, students, and researchers alike, have raised important issues to challenge some of our assumptions as producers of on-line course content. Instructors cite a lack of time and training and concerns over security, students complain of feeling isolated and poorly stimulated by uninspiring content, while researchers question the use of “sacred” concepts such as interactivity and their real impact on the user experience.

As designers and developers of on-line content for a university, we have had to address these issues to produce content that reflects, in the end, more accurately what the ultimate users feel comfortable with, but also reaches the goals set forth by faculty. This forum will focus on some of these issues and the process we went through to come up with possible solutions. We will use as an illustration of our results, an on-line course dedicated to the study of Organized Crime that we are in the process of developing and that proposes some ideas to create more appealing and enriching educational on-line content.

1 Common challenges

This section covers a number of common issues relating to the production of on-line educational content and some possible solutions.

Might as well read it in a book: From a user/student perspective, one of the first issues we decided to focus on is the fact that most on-line courses simply transpose lecture or text-based content to the Web and do very little to use and highlight the Web’s interactive possibilities. We have all heard some universities boast to having dozens of courses on-line. Problem is, if we were students, we would never take any of these courses because they are slapped together rapidly and cheaply by simply transposing existing written content onto a web page. As Reinhard Ziegler wrote in his column in *e-learning Magazine*: “Learning design must focus on the experience, not just the content. The point isn’t simply what’s being cooked up, or how it’s delivered, but how it tastes.”

To answer that challenge, while being fully aware that, to some degree, we would have to deal with a fair amount of written content, we decided to marry a visually compelling hyperlink structure with a more traditional linear and text-based approach to education. The chosen structure combines the eye-catching qualities of documentary film and takes advantage of new

informational tools without leaving non-Internet savvy students behind.

Rather than overburden the text, all supplementary information is tucked away into the Resource Centre, accessible via links in the text or the menu, and which is database driven to support the cross-referencing and categorization of information. References, word definitions, web links, animated charts, and video interviews form a valuable body of knowledge on the subject matter, a dedicated library of sorts.

The use of the Resource Centre further breaks down the linear nature of the content and allows the user/student to experience the content in a way that best fits his/her learning style. Students can choose to sequence their knowledge in a linear manner, using the reference points introduced in the body text of the lessons, or go from one category of information to another and take in the information in a way that suits their interests better.

This also removes some burden from educators who can provide students with supplementary information that they can experience at their own pace instead of using class time to deliver that information to a group of students, some of which may already have that knowledge. This also removes for students the feeling of a being at the end of a one way oriented transmission, which lends them a sense of agency.

Moreover, the use of the Resource Centre allows the instructor to enrich the course as time goes on by adding graphs, animations, videos or definitions to give further support in areas where students seem to have more difficulty understanding or grasping content.

Hello... Is anybody out there? Another major area of concern for users and producers of on-line educational content is the degree of communication between students and between students and the course instructor. There are two basic types of technological communication solutions: asynchronous and synchronous. “In the asynchronous approach, the interaction between parties does not require them to be engaged at the same point in time. In synchronous communications the interaction between participants requires simultaneous engagement of the participants. Examples of technologies for asynchronous communications are hypertext publication (namely www), e-mail, mailing lists, newsgroup/bulletin boards and file download (ftp). For synchronous communications the more often used technologies are: chat/IRC, whiteboard, audio-video streaming and videoconferencing.”

In the short term, we are developing a series of tools that intend to mirror or compensate for the immediacy and fluency of communication in a classroom environment. Gathered under one point of access, these tools will initially consist of an XML based chat room, a discussion board and an e-mailing form that gives students a direct and private access to their instructor. In the long term, we are studying the possibility of developing an area where

students could, among other things, exchange messages, chat with video, draw things on a board, and exchange files. They would also be able to set up specific profiles about themselves, which they could make visible to other students. The highlight of this communal space is that it would be possible for a student to see what another person sees on his/her screen. They could discuss an aspect of a lesson and then go to the space to show/highlight what they are talking about.

These tools allow students to ask questions and voice their opinions without feeling intimidated, which is an advantage of on-line learning compared to classroom learning for some students. Moreover, their questions can serve as reference points and clarification for other students. Finally, in contrast to the fleeting nature of oral communication, exchanges that happened on a bulletin board, for example, are recorded and can easily be accessed by other students, possibly triggering further interactions. They are also accessible at any time and place where the web site is accessible.

Theory meets reality: One common student complaint is that the material they are learning does not have much to do with everyday reality and that they have a hard time imagining different perspectives on a given topic. In our case, while the course we are developing will be given within the Political Science Department, it has a strong criminality and public policy focus, which makes the presentation of a variety of current opinions even more of a necessity.

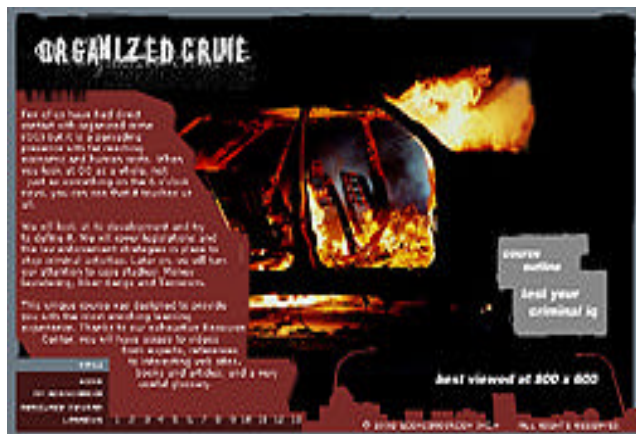
We have addressed that problem by lending a strong documentary voice to our course. We interviewed several experts (lawyers, police officers, legislators) in different fields related to organized crime to give students a concrete understanding of what it means to deal with organized crime on a daily basis. These video interviews are accessible in two different ways. Students can either click on links within the text, which lead to specific video clips on a given topic or they can view a complete interview by accessing it directly in the Resource Centre. Here again, students are given a choice on how they want to experience the material. For students who are hearing impaired, the video clips are accompanied by subtitles and a transcription, making no aural information necessary for the comprehension of the subject. Concurrently, for those who are visually impaired, it is possible to zoom in on the Flash movie through the right-click menu, increasing the font size to their specific needs.

I'm no web geek! One aspects of eLearning that educators are often concerned about is how they will manage the content of an on-line course once it has been developed. They maintain that they do not have the time or proper technical training to upkeep such sites. In the case of our course on organized crime, this problem is compounded by the fact that it is a topic in constant flux, which means that the content needs to be updated fairly regularly.

To respond to this concern, we have tried to make the back end of the course as user friendly as possible. For example, to facilitate the management process, instructors have access to a simple database driven interface, on the administrative side of the web site, where they can modify, add, and delete pages of the lessons, as well as entries in the Resource Centre. This feature lends great versatility to content management, while reducing the need to possess specific technical skills. Furthermore, visuals, content, and coding are totally separated, and all the text is in databases. This simplifies the management process enormously.

For example, inserting the text for a new lesson takes 20 minutes, instead of a week.

A visual makeover: Another common problem in on-line courses is their lack of visual appeal. This is often due, in part, to a very linear structure, which lends itself poorly to the inclusion of interesting visual elements. The consequence clearly is that a course web site that is unappealing will do very little to captivate students' attention and this lack of interest will translate itself, most assuredly, into poor learning and possibly, poor performance.



Organized Crime course homepage

Here again, to try and solve that problem, we have borrowed from the documentary style to enhance the quality of our course web site and try to accurately express the nature of organized crime. Visually, the feel is definitely organic. Jagged borders and a background of asymmetrical shapes counteract the inevitable linear visual presence of text. The combination of written text, visual elements, and complementary information provide the user with a heightened sense of diving into the meat of the course. Moreover, in order to appeal to a university level audience and convey the content efficiently, the main body of text was placed over a black background to reduce eyestrain, while animations and navigational elements set a mood and pace of study that do not interfere with the focus of attention.

To achieve this organic feel, we have heightened the interactive quality of the web site by using Flash to bind content, navigation, and learning objects. By breaking the course into several levels and movies, we were able to easily integrate as many interactive objects as necessary, so that the course can keep growing and improve as it is used and tested by students and professors.

Finally, the lessons and video transcriptions can also be printed or downloaded in PDF format, extending the content to different mediums at the wish and necessity of the student.

2 The effects of the technology on the teaching and learning

It is one thing to complain that most on-line courses developed in the past are, at best, a rehash of written content transposed directly to the web. However, we must remember that this is due in part to the technical limitations of the medium, such as HTML. Today, with new languages and tools being developed every year, the production of visually appealing, interactive, and compelling on-line course content is certainly easier. This has several

advantages. For example, our use of Flash not only reduces the layout restrictions imposed by HTML, but the modular capabilities of Flash also allows designers and programmers to work separately over the same prototype, joining and modifying their individual contributions. This technology offers the advantage of uniting a graphic application with an object-oriented language, reducing production cost and at the long term providing a more flexible and versatile application.

The advances in technology certainly also had an impact on teaching. While some educators might feel overwhelmed by the possibilities brought on by technology, other see in them a world of options to present content in a new, more versatile and more enriching way. While on-line courses may not replace the classroom fully, they should be made as closely akin to the classroom experience as possible so that students who cannot attend regular classes are not forced to endure sub-standard education.

3 Conclusion

The ultimate goal of this forum is for us to address common concerns regarding eLearning and share possible solutions when it comes to creating on-line courses with educators and other producers. We do not profess to having found the “only way” to develop an on-line course; only one possible way. Mostly, we are looking forward to exchanging ideas with participants so that the field of eLearning can grow in a more positive direction, one that addresses what Reinhard Ziegler calls the primary complaints about eLearning: “First, managing content in the e-learning infrastructure. Second, making the content more engaging. Third, getting the content through electronic pipes that are unreliable and usually too small.”

*To access the main course web site, as well as two of the 13 lessons of the Organized Crime course we refer to in the text, go to: <http://132.205.52.178/siggraph/>, username: **siggraph** and password: **siggraph2003**. This is not the final version that we would be presenting at the conference, as we are making additional changes, but it will give you a good idea.*

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