A Students Perspective: Online Educational Techniques Improved by Increased Video Segments

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Abstract: Online education is an emerging educational tool supporting user preferences. In the current on-demand world, education without time constraints is an attractive method for furthering education for many students. The one drawbacks of online education is the lack of face-to-face relationship and personal attention from professors. By using on-demand video that the student can download at their leisure, the perception of face-to-face and personal attention can still be achieved and result in more effective education. This paper discusses the iTunes U application and other video educational tools for future online course integration.

Introduction

Online education is an emerging educational tool allowing students to learn on their own terms. In the current on-demand world, education without time constraints is an attractive method for furthering education for many students. This paper discusses implementing the iTunes U application and other video educational tools for online course integration to improve the learning experience for students. The evaluation of online techniques and how video could improve the learning experience is from the technical degree perspective, although does not limit the use of video educational tools to technical degrees only. For non-technical students, the exercise of downloading a video may be a lesson in itself. Computer skills are quickly becoming a requirement for all students and jobs, not just technical. As online education increases to non-technical degrees, the use of technical resources should still be used because of the trend for all types of business communicating and recreational online use.

From a student perspective who has participated in online and face-to-face education, the flexibility of time and location for online education is conducive to the current students, both traditional and nontraditional. In my opinion, downloadable video replacing face-to-face lectures will push a paradigm shift for increased online education. This paper reviews some current teaching techniques used with many online courses as well as how future video techniques would adjunct online education for the most effective techniques. This paper is based primarily on education experience at Fort Hays State University in

Hays Kansas, Regis University in Denver, Colorado, and Colorado Technical University in Colorado Springs, Colorado.

Online Education

The Sloan Consortium, an online education source, states 2.3 million people took online classes in 2004 (I. Elaine Allen, 2005). A hybrid of online and face-to-face techniques used in online education is usually the most effective, although increasing geographical constraints usually support online only courses. The lectures of professors who have extensive knowledge in the subject area are usually lost when online only courses do not utilize video capability. Other attributes of face-to-face education style is the perception of assistance and direction from an expert on the subject. That perspective of assistance can be replaced with online only courses through increased communication and more use of video lectures.

Online Environment Techniques

Some experience with online environment techniques include:

- Discussion threads from paper reviews
- Instructor discussion threads from questions addressing online or book readings
- Student discussion threads from student lead subjects (addressing paper review or book readings)
- Instructor directed homework problems
    - Digital drop-box or email submission
- Course project
    - Digital drop-box or email submission
- Video lecture downloads, VHS checkouts, CD checkouts

Current online only education focuses on discussion boards, text reading, project execution, and email as weekly educational techniques. Students of the current generation are more comfortable with understanding and communicating visually as opposed to text only (Burget, 2004). Lectures are a great visual educational tool. Some institutions currently use video lectures that can be downloaded as well as in videocassette and CD format which can be mailed to the students ("Sinclair university distance learning", 2002-2003). For online environment techniques, discussion threads are created for each topic or week of discussions. The discussions from paper reviews either discuss content or peer reviews of the paper (Calonge, 2005). Advantages of discussion boards include allowing students to read the postings, digest, think about the topic, possibly research more on the topic, and write the reply at their own leisure. Many times in a face-to-face course, discussions are only valid at one particular time based on the conclusion of an instructor's lecture. However, the personal attention of face-to-face solicitation for discussion from instructors gets students involved in the conversation. The personal attention and instructor solicitation for student involvement gets lost during discussion board only online education. When integrating video lectures, online discussions can bring back personal attention while still allowing the students to

formalize more in-depth thoughts as opposed to what the students are thinking at one particular moment, the last five minutes of the lecture.

Those downloadable videos usually consist of the full lecture provided on the collegiate course website in various formats. Fort Hays State University use a QuickTime or Windows Media Player plug-in for video applications (University, 2006). Other references for video education refer to QuickTime which takes a Broadband connection (Shinagawa, 2004). These video applications assist with students getting the important lectures a knowledgeable professor can provide, although the Broadband requirement and the length of the lectures are not conducive for the student's of today. Shorter length lectures satisfies the current on-demand world and online student.

Many times the students choose an educational institute because of the level of professor experience and knowledge of the subject. Providing video lectures allow the educational institutes to continue relying on their professors and professors' expertise. The last step of integrating video lectures is making them user friendly at any location. User friendly video results in the student taking the time to watch the lecture. During this era of quick sound bits, student's attention spans are decreasing. The iPod invention has supported on-demand from any location to listen to music and watch videos. If video lectures can be distributed in small chunks, the probability that students will watch the video lectures increases. Ten minute to twenty minute lectures would be the most appropriate length for student effectiveness. Having that ability of no time or location constraints for video lectures supports student usability ultimately increasing educational impact.

Work-load & Frequency

The work-load and frequency of online discussions and assignments is course specific. The most effective work-load and frequency requirements in my personal case has been when the work-load promotes continuous participation as well as allowing enough time for quality evaluation of discussions and assignments. The workload and frequency is also tied to user interest because more workload can be added if student interest exists. This can be a difficult goal with multiple levels of student expertise and preferences in the same course. The best method for students to be successful is for the course professor to switch up the techniques, disclose upfront all work requirements, and provide due dates prior to starting the class. Adding video lectures in small segments can be a technique used when giving students a chance to catch up on the paper and homework assignments. Other examples of my student experience on work-load and frequency with online courses include:

- Weekly discussion threads
    - Project objective through activities
- Weekly homework problems
- Interim project iterations
- One project delivery (individual/team of 3)
- Combo weekly discussion and homework problems (in groups/without groups)

The large assignments just as large lecture viewing has the greatest risk of failure, followed by a decreased educational impact. Interim project submissions reduce that risk of failure and direct student's paths successfully. Small segmented video lectures provide students on a schedule to participate in school continuously as opposed to having to block out an hour of time to watch a video in its entirety. Online education relies on frequent communication with instructors and frequent feedback of status. The more informal and formal feedback a student receives from the instructor, the higher chance they have of success. Discussion threads on the assignments and video lectures promote continuous participation from students.

New Video Techniques

Online education satisfies most of the traditional academia requirements, although many times lacking the impact of lectures in face-to-face education. Online students need a high level of self motivation and assistance from professors to keep online assignments interesting. Adding small segmented video lectures that can be downloaded and viewed by students at their leisure gives online students a quick assignment to get them started and hopefully interested in a course. Video lectures are downloadable from the internet, usually from the educational institution website. However the storage needs can be offset from a university to commercial by using applications such as the Apple iTune U. The more use of current internet resources, such as integrating pod casts and iPod video collaboration educates students on course material and computer skills. The future of technology is supported by the internet and is changing rapidly. The Apple iTune U application is a free hosted service that allows for downloadable pod casts and video for students (Apple, 2006). These multimedia educational tools can be downloaded to an iPod or to a computer using iTunes (http://www.apple.com/itunes/) to be viewed at the leisure of the student. Educational institutions can also offload some of the bandwidth and system administration for a large servers hosting audio and video. Compatible formats are also another advantage to using iTunes U. Colleges do not need to be in the computer science business, rather concentrate on the education business. Integrating new technology into online education and taking advantage of iPod and iTunes technology can support the time and location independent online student. The constant drive for understanding new technology is also important for teaching how to apply the education after the degree. Professors that integrate use of video downloads and pod casts satisfies course requirements and also gives the student up-to-date online capability education.

Student Preference

A student preference for online education includes a combination of techniques for discussions, homework, video lectures, and projects. The more online interaction with new internet technologies the more applicable online courses are for technical and non-technical degrees. The additional requirement instructors have for online courses is the increased communication with their students. The more communication the better chances for student success. The instructor needs to be the instigator of communication for online courses much more than in a face-to-face setting. Frequent communication of how the student is performing throughout the course is another important key to

institutions successful online implementation. Assigning small sized projects such as ten minute video lectures, assists students to start or have continuous participation.

Future Work

Future work with online education could be performed through industry online education and on-demand business. By understanding the most effective institutional online education techniques, those techniques can be applied to work related education and online business employees. Business employees have the constraints of time and geography, therefore being ideal candidates for on-line education. Using the institutional techniques for intranet education would reduce costs of a business education and could be outsourced to institutions that have the online infrastructure.

Conference Discussion

Some discussions for the conference addressing increased video integration will include:

- What size and time segments of video lectures are the most appropriate for maximum educational impact?
- Should colleges depend on outside businesses to offload technology needs for online education? (i.e. Apple iTunes or should the colleges use their own resources)
- Is iTunesU the best application for video and audio downloading?
- Are there university proprietary issues with using internet business applications for educational institution courses

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