

Podcasts: Changing the Face of e-Learning

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Abstract -- We are well into the twenty-first century, and our technology is advancing at blazing speeds. Yet our education methodologies suffer the fate of remaining largely antiquated. Students and educators alike have become more sophisticated; the tools of learning must reflect and compensate for this intellectual advancement. Podcasts have greatly contributed towards that need. Podcasts are simple, effective, dynamic tools that will change the way that students and educators interact in the classroom and in cyberspace. This paper explores the possibilities and potential impact podcasts will have in educating students in the 21st century.

Keywords: podcasts, ipod, e-learning, education, technology

1.0 Introduction

Perform a quick search for the definition of e-learning and you will be flooded with relevant responses. Perhaps the most concise definition is that e-learning is an approach to facilitate and enhance learning through the use of devices based on computer and communications technology [8]. More often than not these devices will include personal computers, CDs, DTVs, PDAs mobile phones, and today, more and more, the use of ipods and ipod-like music and video jukeboxes. The communications technology refers to that which enables the use of the Internet, email, discussion forums, and collaborative software. The following e-learning discussion will spotlight one of the newest members of this family of e-learning tools, the podcast, and its associated technologies and implications.

The podcast concept is simple. It is essentially an audio program that anyone can easily create using a microphone connected to a computer, and free recording software. On the other side of the technology, anyone with a computer that connects to the internet and software that plays standard MP3 format audio files can access, download and listen to these podcasts. It is also possible for someone to subscribe to a particular website in order to have podcasts automatically download to his or her computer and subsequently to his or her MP3 player, as soon as new casts are available. In a sense, the information is 'broadcast' directly to the subscriber's computer [10].

2.0 Creating and Receiving Podcasts

The technology that enables this type of automatic download is a combination of what is called an RSS feed with a linkage referred to as an aggregator. An RSS feed is an XML file that contains all the information about a particular podcast program and each episode of the program. This file is updated every time a new podcast is published. The aggregator can be a website or a software program that helps to organize and manage the RSS feed, and subsequently, the podcasts themselves. For example, Juice is a cross-platform podcast receiver which is freely available, and operates on the Windows, Macintosh, and Linux platforms [8].

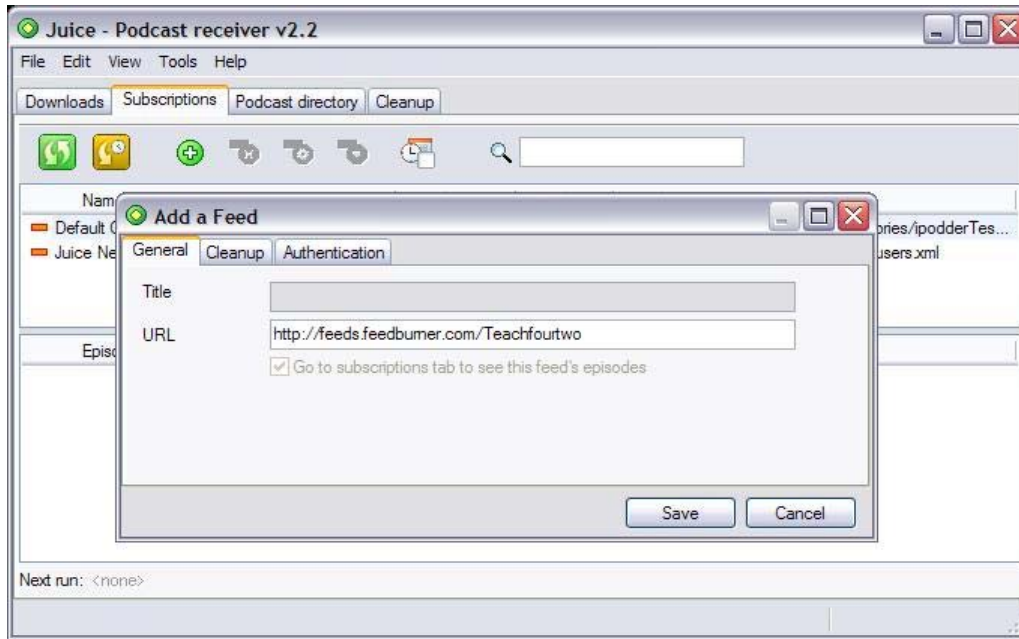


Figure 1: Juice Podcast receiver

The Juice software [8] is designed to automatically download new podcasts to a subscriber's computer as soon as the new casts are available. To configure this automation, one simply copies to RSS feed to the Juice Subscriptions Manager, and the software handles the updates as seen in Figure 1. Once downloaded, the podcasts can be played with any media software. In this case, Juice automatically launches Windows Media Player when it begins the playback. There have already been about one and one-half million downloads of this software, making the dissemination of educational podcasts quite prolific.

Creating a podcast can be a very simple process as well. Any sound editing software, such as, an open source software named Audacity, which is available for free, can be used to create the cast. The content, once digitally recorded can then be easily edited and embellished by the creator of the podcast. The most difficult part of the creation is learning how to use the software for editing purposes. The recording of the audio into a digital media format is as simple as connecting an inexpensive microphone to the computer, and setting the software into record mode. See Figure 3 below.

3.0 Potential Benefits from Podcasting

There are certainly many e-learning situations that would benefit from the use of this type of tool. Such scenarios include the possibility of a sick student being able to download a podcast of the day's lectures he missed at school. Conversely, one can envision the situation of a teacher or professor being unable to attend his or her class for some reason, but making a podcast of the lecture available on a website where students can easily download it. This, or similar procedures and protocols, can be set in place to ensure that students do not miss any material, whether it is they or their teacher who is indisposed. This sort of solution for missed material during unforeseen absences is feasible from the elementary school level to the university level.

Further, these casts, having been made available on websites for the students, to download and review, become invaluable study aides to the student [7]. At any given point in time, the student has the podcast available for reference.

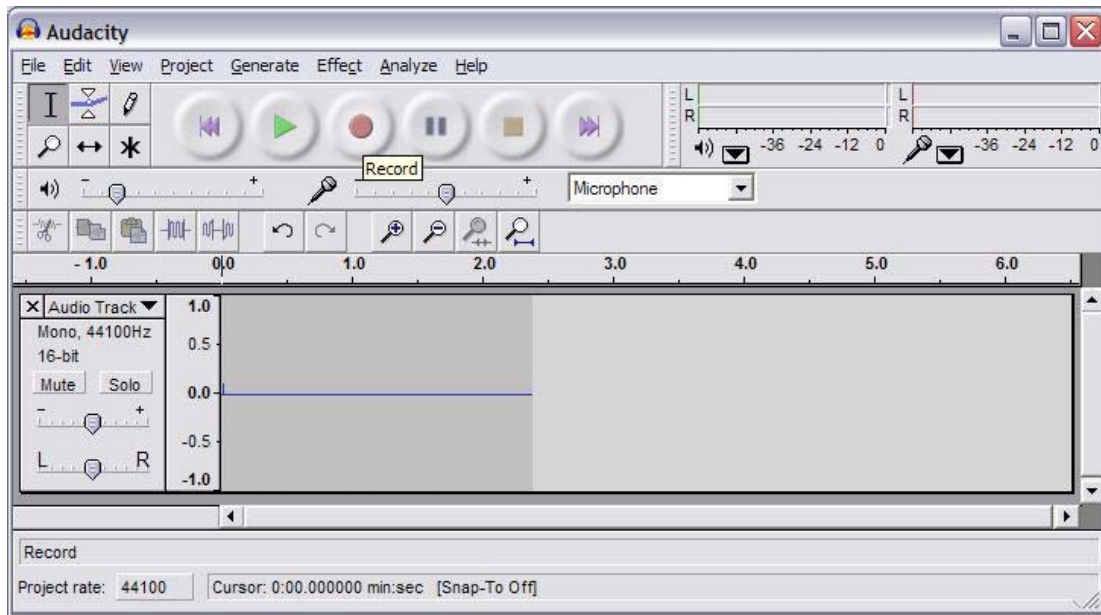


Figure 3: Creating a Podcast

In this manner, a student who may not have grasped a topic fully in the classroom, upon initial introduction to the material, can now learn the material at his or her own pace. Also, if teachers decide to have students use podcasts as presentation tools, then a new dimension of usefulness is added to the tool. In order for students to create these casts, they must become familiar with the software, develop a script for their presentation, practice and polish their presentation style and voice, and edit the content once it is recorded. This editing may take many forms, not just splicing sound bites, but also adding music or sound effects to make the presentation complete. This dimension of learning various technologies and developing creativity are added to the task of thoroughly learning the topic of their presentation in the process.

An excellent example of the creativity that is developed during a podcast creation can be seen in the work being done at a San Diego County elementary school. There, a music teacher is having his students develop podcasts based on their studies of Africa [6]. The presentations, which were originally slated to be regular oral presentations, were rethought by the instructor, after he took a course explaining the benefits of the technology, and its usefulness in the classroom environment. The students are honing their vocabulary, writing, editing, public speaking and presentation skills, and educators, at that school and elsewhere, are beginning to appreciate the benefits of podcasting.

4.0 Podcasts and Education

Podcasts can even be used, and have begun to be used, in language classes for instruction [1]. Students, even as early as the high school level, can benefit from this venue of learning. Students are able to record themselves speaking their prospective language, and then they are able to immediately listen to their pronunciation, intonation and grammar usage. They can also record native speakers, and practice mimicking intonation and pronunciation. It is also a very useful tool for students who are too shy to speak the foreign language in front of their peers. This, of course, also applies to students learning English as a second language.

Podcast are better e-learning tools. The podcasts are, without a doubt, superior learning tools to the antiquated tape recorders that could be used to produce audio presentations. The main reason is the quality of the end product is much better, but it is also easier to edit digital audio using freely available software, than it ever was to edit an audio cassette [2]. This means that even students at the elementary school level can be exposed to, benefit from, and become proficient in this technology.

Compared to other electronic tools, the best feature of the podcast is that it is very simple to create, edit, and publish. It is also very easy to listen to the end product via a computer, or a portable music jukebox. The learning curve for the software that is needed to create these is very shallow; the software tools are very easy to use. Further, the tools needed to create these are freely available. This is an important and very attractive feature to all students, who generally do not have the resources or desire to spend money for academic purposes. The fact that the software is free, not only appeals to students and their parents, but to school systems as well. This software adds quality to the learning environment, without forcing school boards, colleges or universities to have to allocate additional funds. There are, however, some professors at the college level who are shying away from this technology. The reasons have less to do with technology than sociology. At the undergraduate level, students are notorious for poor attendance. Professors have concerns that posting lectures and information in the form of podcasts on a website, will contribute to absenteeism [3].

Although no formal studies have been made, and no credible statistics gathered, at this early point in the use and dissemination of the technology, other professors feel differently. These others believe that the use of podcasts, or any other technology, does little or nothing to contribute to student absences. In contrast, they recognize that today's student's often having full-time jobs and family responsibilities would be absent regardless of the method of teaching. These professors further believe that posting podcasts and lecture notes allow a student with legitimate reasons for their absences, to stay current on the material, even if their responsibilities require them to be elsewhere. An additional benefit in that the new method of conveying information to students is causing educators to rethink their approach. Some will consider more quizzes, some will embrace the Socratic method, and some delay the posting of the podcasts until a later date. This ensures that students attend classes and use the podcasts only for review. Others look to include livelier material that will prevent the student s from not tuning in due to boredom.

5.0 Conclusion

Increasingly, universities are posting classroom content and university information to sites like iTunes. This material is then available to the students instantly. At the University of Michigan, for example, lecture halls have been outfitted with recording equipment [5]. A student is responsible for starting the recording before the lecture and turning it off after the lecture. Once recorded, the lecture is uploaded to iTunes and made available to students minutes after the lecture is complete. Students have requested such accommodations from the administration, because they feel that the lecture content requires additional review. Again, because the university incurs negligible costs to use this technology, and because the podcasts are free to download from the iTunes website, the service is provided and used with minimal use of resources, and much mutual benefit.

Unfortunately, the use of this application in classrooms is only now beginning to take place. Fear of technology, or complete ignorance of its existence, has frightened away many prospective educators, thus robbing students of the opportunity to learn from not only listening to, but creating these podcasts. This will certainly change as more and more educators become aware of the software's simplicity and ease of use. Then they will be able to appreciate its importance and begin to use it as an affective e-learning tool.

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