Shifting Time, Location, and Texts: An Assessment of Podcasting in Our Classrooms

A Podposter by Jennifer L. Bowie for ATTW 2009 March 11th

While podcasting is a fairly new media, "developed" in 2004, it is also very popular, with an estimated 30.8 million US listeners in 2009[1]. Organizations and companies have their own podcasts, from some STC local chapters and university writing centers to Planned Parenthood, NPR, and 30% of Fortune 500 companies. Despite the clear connection between podcasting and technical communication—including a strong focus on audience, purpose, and context—podcasting is only beginning to catch on in technical communication. However, there is much that we can learn from podcasting and even more we can teach our students through the use of podcasting in our classrooms. In this podposter, I present findings from one study that assesses how podcasts, including student-produced podcasts, impact student learning in an advanced writing class.

Previous Research on Podcasting

Since podcasting is still a recent phenomenon, there is little research on the subject, and even less on podcasting in education, let alone writing, rhetoric, or technical communication. There are a few exceptions. One such exception is McKinney, Dyck, and Luber's 2009 study. They found that students who listened to the podcasts with PowerPoint handouts and took notes scored higher on an exam than students who attended a lecture with PowerPoint slides. Tynan and Colbran also researched podcasting and discovered that students think podcasts are valuable to their studies, assist learning, and provide flexibility. In another study, Evans found that podcasts were more effective revision tools than textbooks or student notes and that students were more receptive to learning from the podcast than from lectures or textbooks. Steven D. Kraus conducted one of the few podcast research studies in our general area. In a study of his online writing class he found students thought the podcasts helpful by giving them classroom-like experience and aided in the study of material, but that some students had issues with the extra time the podcasts took or because they were not audio learners.

While these studies are interesting, they focus on teacher-produced podcasts that often recorded lectures. It is important to understand how effective and helpful teacher-produced podcasts are, yet it is also important to understand how effective and helpful *student-produced* podcasts are in student learning. This is especially a concern with areas that focus on teaching communication, writing, and media development—such as technical communication.

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1 Based on the 17 million podcast listeners found in Price, A., Gay, P. and Searle, T. (2006. "A History and Assessment of the Slacker Astronomy Podcast" Astronomy Education Review, 1.5) for 2006 and multiplied by the growth rate of 18% cited in Lewin (2007. "Podcasting Audience Up 18% Since Last Year" http://www.podcastingnews.com/2007/03/22/podcasting-audience-up-18-since-last-year/) for 2007, and then multiplied by this same growth rate for 2008 and 2009.

The Study

The purpose of this study is to assess the impact of podcasting, particularly student-produced podcasting, on learning for college students in a writing class. In this podposter, I am focusing on a quantitative survey distributed at the end of the semester via email. The survey participants were the nine students in the class. Five of the students were female and four were male. All students had access to an MP3 player.

The survey asked for students to rate on a three point Likert-type scale how 12 class components contributed to their understanding and application of 28 skills and knowledge areas. A one rating indicated the component contributed little or not at all to their understanding and application, two indicated a moderate contribution, and three indicated significant contribution. The data were analyzed using t tests to determine statistical significance. Statistical significance is set with the p-value ≤ 0.05. This is a slightly more conservative p-value than the often acceptable p-value ≤ 0.1 to balance out the low number of survey participants.

Note: in the following section I will be referring to various visuals that are available on the ATTW posters if you are listening at the conference, or in the transcript available on the related site.

Findings

While the survey analyzed 28 various skills and knowledge areas, I will focus my analysis for this podposter on 16 that are more relevant to technical communication. Since I am analyzing how podcasting compares to no podcasting, I compare both the general podcast components and the student-produced podcast components to the non-podcast components. The podcast components category includes student-produced podcasts and other podcasts, such as expert-produced podcasts. The student-produced podcasts category includes only podcasts that were produced by the students in the class. The non-podcast components did not directly include any podcasts. Two projects were not included in any of the three categories because one had an optional podcasting component and one had a variable podcasting component. The components of each area are displayed in Table 1 on the ATTW poster or in the transcript.

In order to determine the effectiveness of podcasting, I first compare the components of the class with podcasting and with student-produced podcasting to class components with no podcasting across the 16 skills and knowledge areas. The mean scores of the three component categories are shown in Table 1. Of the three categories, the student-produced podcast components were rated as contributing the most, with a mean of 2.40. Non-podcast components were rated the second highest with a mean of 2.38 and podcast components were scored the lowest with a mean of 2.33. However, these differences were not significant. While these scores are all fairly close, these findings do suggest students saw the student-produced components as contributing slightly more to their knowledge and skills.

Between the podcast components and non-podcast components, six of the 16 areas have statistically significant differences. Each of the areas with significant differences is marked with an dagger and in a blue cell in Table 2. Figure 1 shows the comparison of the means for the significant and nearly significant difference. Five of the areas, audience, ethos, logos, analysis, and written communication, were significantly higher in the non-podcast components, indicating a higher the student-identified impact of the class components on the skill or knowledge. Only one skill and knowledge area was significantly higher for the podcast component of the class—oral communication—which is not very surprising. Delivery was close to being significantly higher for the podcasting components with significance showing at p=0.07, but not quite statistically significant at the $p \leq 0.05$ significance level. These findings suggest something that will surprise few teachers—some class components aid student learning in certain skills and knowledge better than others. Based on these findings, it seems podcasting is good for oral communication and delivery skills.

Similarly, there are significant differences between four of the student-produced podcast components and the non-podcast components, as displayed in Figure 2. Audience and written communication were both higher for the non-podcast components, and this difference was significant. However, both technological skills and oral communication skills were significantly higher for the student-produced podcast components. In addition, both delivery and tone are higher for the student-produced podcast components and the difference is almost significant at p=0.07. Thus, these findings suggest that student-produced podcast components offer a greater number of potential benefits than general podcast components and compare more favorably to the non-podcast components, since the non-podcast components scored significantly higher in fewer areas.

It is also important to understand which components of the class were the most and least effective. With this information teachers can better select class components to meet their class needs. Table 3 displays the mean score for each component, with podcasting components shown in blue, podcast optional components in green, and non-podcast components in white. The most effective components were the Capstone Project and Podcasting (in general), which tied at 2.63. Following closely is the Week in Review Podcast Project with 2.60. Also rated more highly effective are the Podcast Reading Responses at 2.50, the Media Analysis Project at 2.48, and the Rhetorical Analysis Project at 2.47. Interestingly, of these six effective components, five of them are projects and three of them are the projects that required students to produce their own podcasts. The least two effective components, as scored by the students, Podcast "Readings" and the Podcasting Lectures & Discussions, both tied at 2.17. Also rated less effective were the Podcast Peer Reviews at 2.23; CTW Responses at 2.26; Peers' Podcasts at 2.28; and the Lectures & PowerPoint at 2.28. Components with at least some element of podcasting ranked among the highest and lowest, thus it seems that podcasting alone may not account for the effectiveness of the component. However, the three assignments that required students to podcast were some of the highest ranked components, coming in second, third, and fourth.

Combined with the findings on the comparison of non-podcast components to the podcast components and student-produced components, these findings suggest that general podcasting and student-produced podcasting can be incorporated into technical communication classes to aid students in developing some skills and knowledge areas, but that podcasting may not be the best choice for developing all skills and knowledge areas. Students generally found projects that required them to podcast to be more effective than components that had no podcasting elements or involved listening to, and not producing, podcasts.

Discussion & Conclusions

While this is one part of a small study in one class, these findings are the beginning of important research on podcasts in the writing and technical communication classroom. As this study shows, the incorporation of podcasting into the writing class can be beneficial to some skills and knowledge development, and incorporating student-produced podcasts are further beneficial and overall effective according to the students. The next part of this study will evaluate the effectiveness of podcasts and student-produced podcasts according to my assessment of student work in this class to further investigate how podcasts can impact the writing class.

Further research is needed in a variety of class levels, including lower level undergraduate courses and graduate courses, and with a greater number and variety of students and components to further investigate this issue. As teachers of various media, we need to understand what impacts these media have on our students learning, especially when our students are producing the media. Podcasting, particularly student-produced podcasting, appears to be beneficial to our students' learning and thus deserves both further research and possible integration into our technical communication programs.

Other Resources:

- The related PodPoster site: Handouts, the Podposters, and more
- Class Website "English 4320: Social Media, Politics & the Rhetorical Citizen"
- *Screen Space*: A blog and Podcast about users, texts, and technology (my podcast)
- Email: jbowie@gsu.edu