Podcasting at the UW: An Evaluation of Current Use

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OVERVIEW

The *New Oxford American Dictionary* selected "podcasting" as the word of the year for 2005. The term refers to the process of making audio files available on the Internet for individuals to download onto personal audio players. Becoming the word of the year is just one way that this practice has garnered attention. In academic circles, much of the buzz surrounding podcasting has been generated by high profile projects, such as Duke University's decision to give iPods to incoming students. In June 2005, a committee at Duke released a report about their first year experience with this technology. In an October 28, 2005 article, *The Chronicle of Higher Education* debated the pros and cons of "coursecasting," the practice of using podcasting for course materials, particularly lectures. One of the main benefits identified by the *Chronicle* was the usefulness of academic podcasts as study aids; one of the main drawbacks, concerns about podcasts impacting attendance. In this report, I position the results of a recent evaluation of podcasting at the University of Washington within the context of this larger conversation.

In summer 2005, Classroom Support Services partnered with Computing & Communications, UW Libraries, and the Office of Learning Technologies to pilot podcasting at the University of Washington. In autumn 2005, Health Sciences Academic Services & Facilities joined the project. The partners decided to begin with courses in Kane Hall, since the size of the courses would facilitate the introduction of this technology to a large number of students with minimal investment of time and resources. In fall 2005, four University courses offered podcasting to a total of 668 students. Three of the courses met in Kane Hall; the fourth course was an online section for one of these courses. This quarter, 13 large-lecture courses, in Kane Hall and elsewhere, are offering podcasting to a total of 4,128 students. So far, Classroom Support Service has tracked 4,390 podcast downloads during the first four weeks of winter quarter.

In October 2005, one of the instructors participating in the podcasting pilot gave his students a brief questionnaire and shared the results with the project partners. Since this instructor taught both a face-to-face and an online section of his course, the questionnaire reached a large number of students; 239 students responded. From the questionnaire, the partners learned that a high number of students had accessed the podcasts; 65% had listened to at least one. The instructor also had some content available via streaming audio on the course website; 69% of students had accessed the streaming audio. The majority of student respondents, 68%, found the audio recordings to be helpful when preparing for homework and exams. The project partners built upon this early knowledge-gathering foray by asking Catalyst researchers to design a WebQ survey to evaluate the use of podcasts in more depth. At the end of fall quarter in 2005, The partners asked instructors teaching with podcasts to inform their students about the anonymous survey and invite participation. The report analyzes responses from one of the participating courses. Out of the 148 students enrolled in the course, 41 completed the survey. Given the informal and voluntary nature of this effort, this response rate was respectable.

The goal of this project was to learn from students about the benefits and drawbacks of using podcasting in large-lecture courses, to raise awareness of the academic uses of podcasting, and to start a discussion of key questions surrounding this educational technology. The results I present here were gathered in a quick, low-stakes evaluation; this is not formal research and should not be taken as such. Due to the small number of participants involved, this report does not offer any definitive conclusions. What it does offer is a starting point for exploring the educational aspects of this technology.

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RESULTS

In the evaluative survey, questions focused on three main areas: students' listening habits, strengths of podcasting, and weaknesses of podcasting. I have included a summary of questions and their responses in the Appendix. All figures referenced in this report appear in the Appendix.

Students' Listening Habits

The majority of student respondents, 63%, indicated that they had never listened to a podcast prior to taking a course that featured podcasting (see FIGURE 1). The data show a broad distribution in the number of podcasts that students listened to during the quarter; most students reported listening to less than half of the podcasts for their courses (see FIGURE 2). Also, 41% of students listened to portions of a podcast, rather than listening to the entire recording (see FIGURE 3). These patterns reveal two ways that students used the podcasts: as a means of experiencing an entire lecture and as a means of accessing portions of a lecture.

Even though 63% of students reported owning an MP3 player (see FIGURE 4), only 14% indicated that their primary means of listening to the podcasts was on an MP3 player (see FIGURE 5). In fact, the majority of respondents, 81%, listened to the podcasts on their personal computers. This pattern has important implications. The students that completed the survey were not utilizing podcasting to make their courses mobile, but rather they were using podcasts in a manner similar to streaming audio. Thus, the patterns we see in this evaluation do not address the implications of general mobility, in terms of accessing course resources anytime/anyplace; instead, they address the impacts of Web-based access to course materials.

Strengths of Podcasting

In both multiple-choice and open-ended questions, we asked students to identify the aspects of podcasting that supported their learning. FIGURE 6 shows responses to a question about the strengths of podcasting. The top choices that students selected were that listening to the podcasts helped them catch up when they missed class and helped them prepare for homework and exams. The comments students made in response to open-ended questions expanded on these points. Students not only discussed the general usefulness of podcasts as study aids, but also provided specific details on how they used the podcasts to clarify materials covered in lectures, enhancing their comprehension of complex concepts. Students also used the podcasts to fill in gaps in their notes. These patterns are consistent with many students' tendencies, discussed earlier, to focus their listening on portions of the podcasts. These patterns indicate that the primary benefit of podcasting is its ability to provide repeat access to lectures. This attribute benefits all students who access the podcasts, not only those that miss a class.

Weaknesses of Podcasting

In an open-ended question at the end of the survey, we asked students to discuss the weaknesses of podcasting. Some of the top answers students provided were that it was difficult to hear questions and discussions on the podcasts, that it was challenging to search for specific information within a podcast, and that the podcasts could not relay visual information. Some of these items were also addressed within the multiple-choice questions. These questions help calibrate the level of concern students had on each issue. For instance, 54% of students reported that they had difficulty following student questions and discussions (see FIGURE 10), while only 28% said that the podcasts did not make sense without visual aids (see FIGURE 11). This pattern indicates that even though podcasts cannot capture visual materials, they have potential as an alternative to video recording, particularly if visuals are provided by other means, such as posting PowerPoint slides online. In a related question, 81% of students indicated that they could identify the PowerPoint slides or other visual aids that an instructor referenced during a podcast (see FIGURE 12).

Another weakness identified by a few of the respondents to the open-ended question was that podcasting provided a temptation to skip class. In the multiple-choice questions, we asked students about the impact that podcasts had on attendance. An overwhelming majority, 77%, indicated that the availability of podcasts had no impact on their attendance. 13% even reported that the podcasts made them more likely to attend class, compared with 10% who reported the opposite (see FIGURE 13). Overall, these patterns suggest that podcasting does not have a negative impact on attendance.

CONCLUSIONS AND RECOMMENDATIONS

I end this report with a summary of conclusions from this evaluation, a discussion of how these conclusions fit within larger conversations on this issue, and recommendations for educators teaching with podcasts and for the University was a whole.

Conclusions

- Podcasts helped students study for exams, catch up on classes, and clarify lectures.
- Podcasts had an impact on note taking. Students used podcasts to expand and improve their notes.
- Podcasts were limited in how much of a classroom experience they could capture. Student discussion and visual elements were left out.
- Podcasts did not appear to have a negative impact on attendance, although a few students raised concerns in this area.
- Students tended to listen to podcasts on personal computers, not on MP3 players.

Connections

In Duke's report on their first year of using podcasts, one benefit they describe is the usefulness of students being able to replay lectures to understand difficult material. In the *Chronicle of Higher Education* article, a professor reports that using podcasts made it easier for him to relay information to students, "he no longer worries, as he once did, that pieces of his lecture will slip through the cracks" (Read, 2005, p. A41). These observations correspond with trends that emerged in our evaluation. Students used the podcasts to increase their understanding of materials covered during lectures. Both the Duke report and the *Chronicle* article go on to discuss some additional options for using podcasting, such as asking students to listen to a podcast of a lecture before class and to spend class time in discussion. Additionally, the Duke report suggests that some of the greatest benefits of the technology are realized when students are the ones to produce audio content for podcasts. These possibilities suggest new avenues for the University to examine as we continue to investigate this new technology.

The information gathered during this evaluation activity also connects to recent research activities at the University. In February 2006, the Office of Learning Technologies will release a report of findings from the 2005 surveys on educational technology. One of the conclusions from that study was that students wanted more course resources to be available online, including information from lectures. Podcasting is one way of meeting students' needs in this area.

Recommendations

Instructors using, or thinking of using, podcasting in their courses should consider the following recommendations.

- Provide audio cues to help students locate information by announcing transitions to new topics and beginning each lecture with a brief outline of the material you will cover.
- Since many students listen to podcasts on personal computers, consider posting other course materials online, such as PowerPoint slides, for students to access while they listen.
- When using PowerPoint slides, directly reference slide headings or slide numbers as you talk.
- Repeat student questions before answering them.
- Consider using podcasts as a way to change classroom practices. Students could listen to a portion of a lecture via podcast before class and you could devote part of your class time to other activities.
- Consider options that provide opportunities for students to contribute audio content to the podcasts.

The data from this evaluation point to a variety of larger questions for the University to consider.

- How does access to additional resources, such as podcasts, impact student learning in large-lecture classes?
- How could podcasting best be used in smaller classes?
- What new opportunities for teaching and learning does this technology enable?
- In what additional ways can this technology be used on campus?
- What are the potential drawbacks of expanding the use of this technology?

This evaluation discusses the first quarter of a one-year pilot project. During winter 2006 and spring 2006 the partners will continue evaluation efforts. If the podcasting pilot continues to show potential for the University, the group will pursue options for making this technology more widely available on campus.

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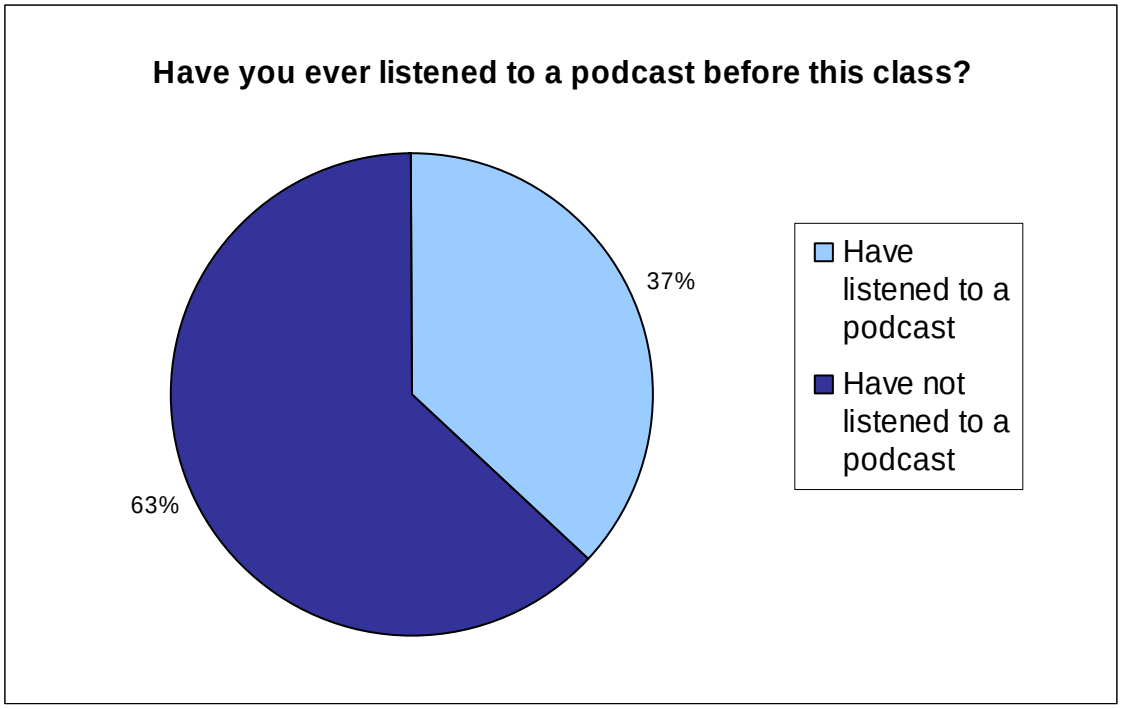
APPENDIX

Figure 1



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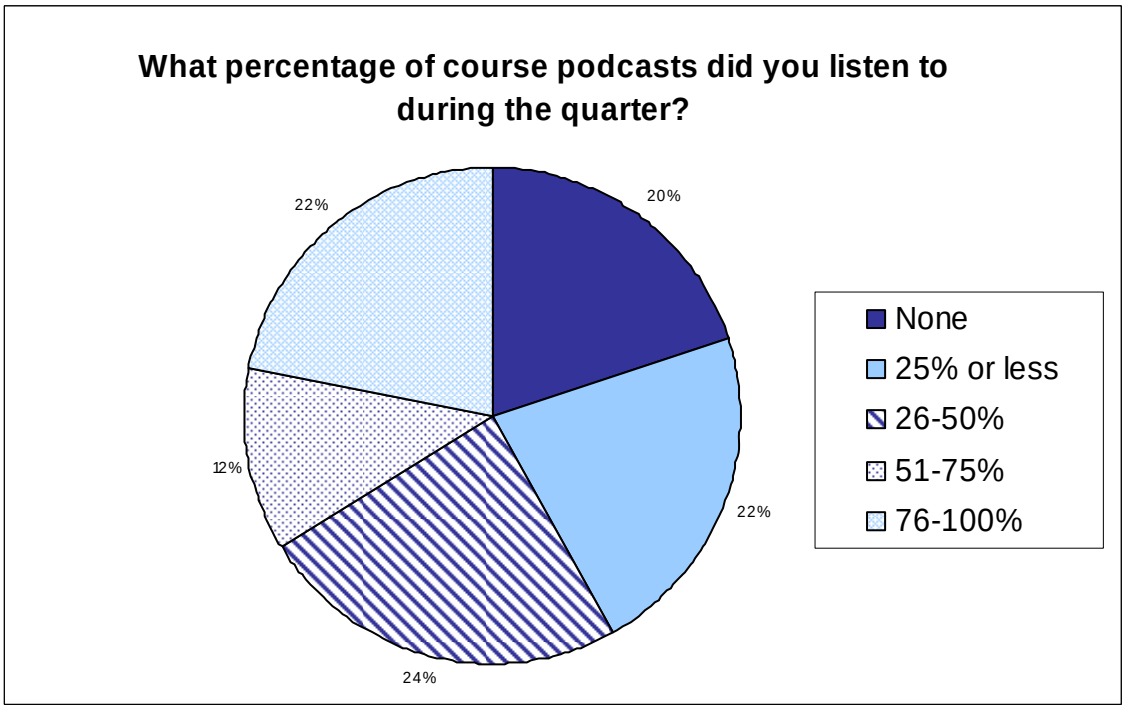

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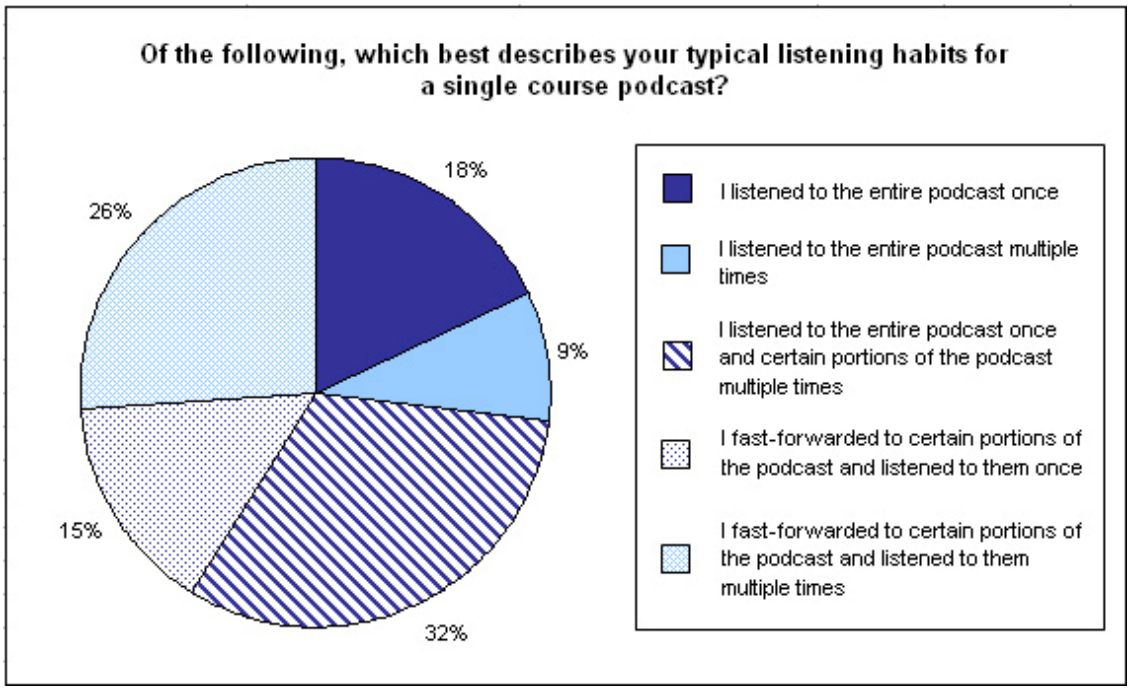

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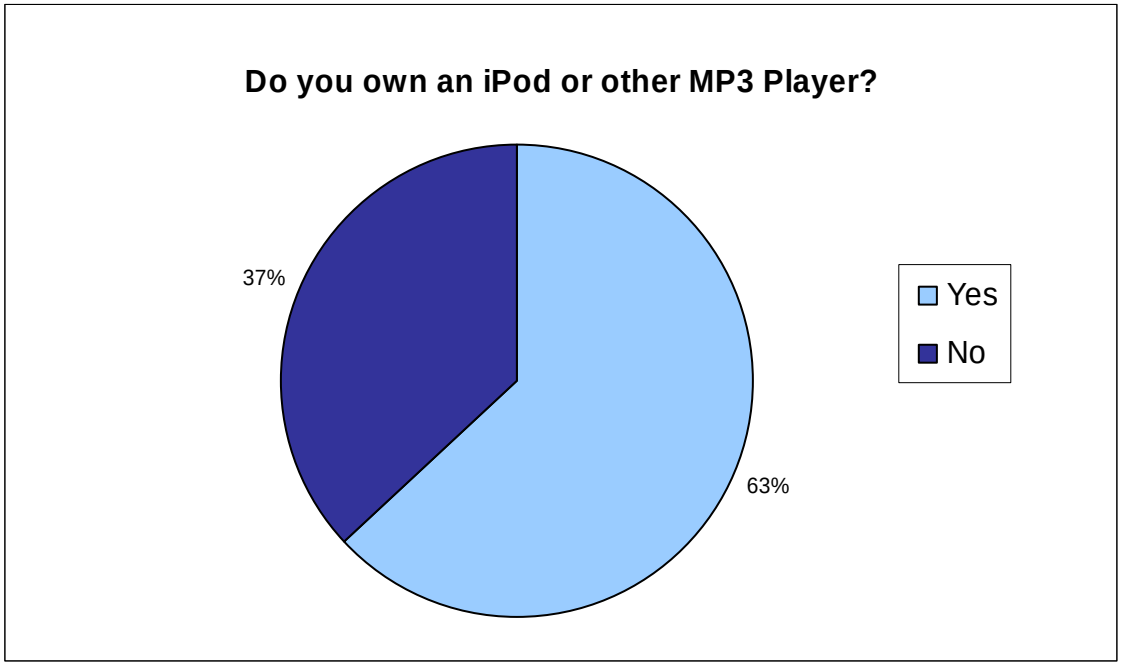

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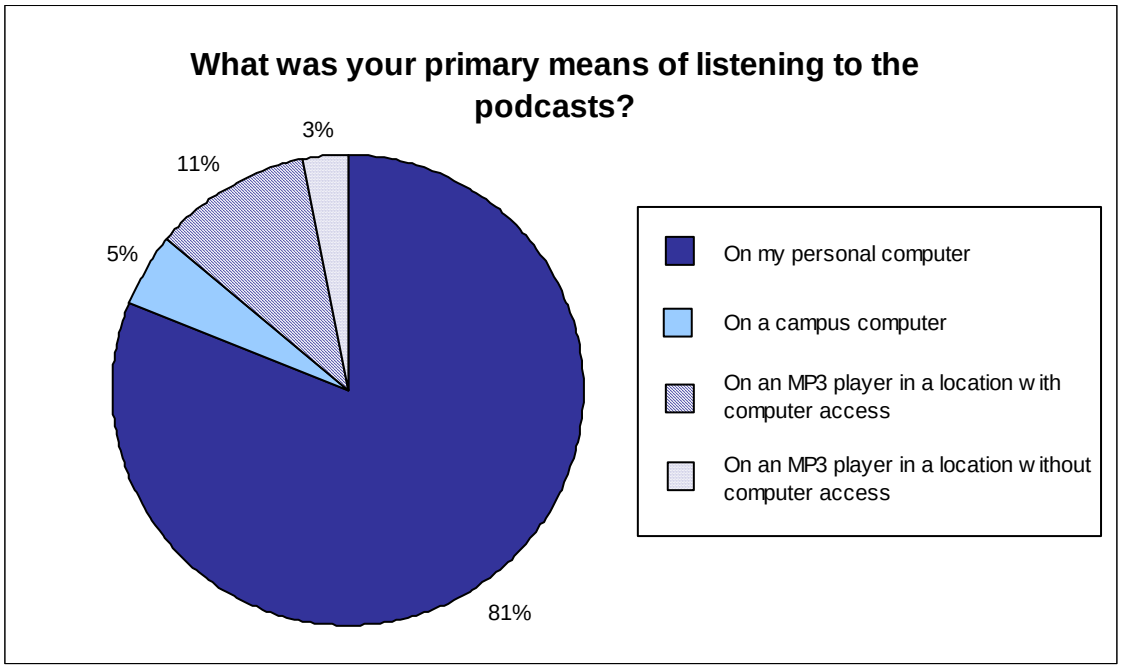

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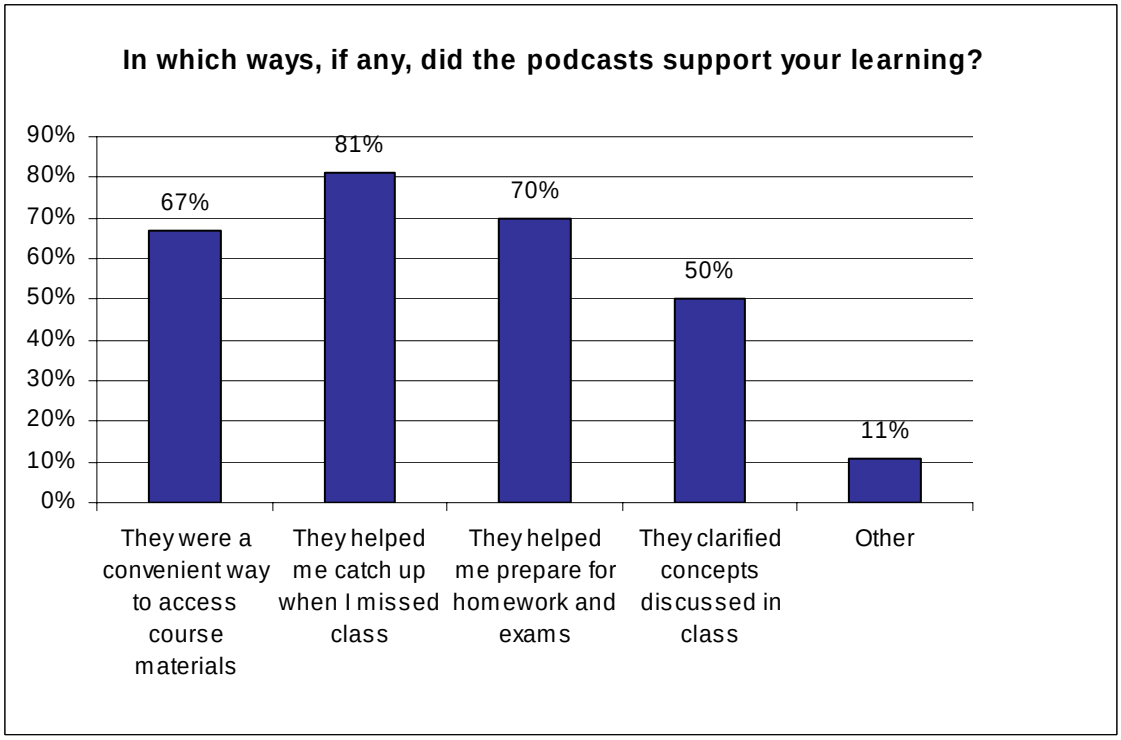

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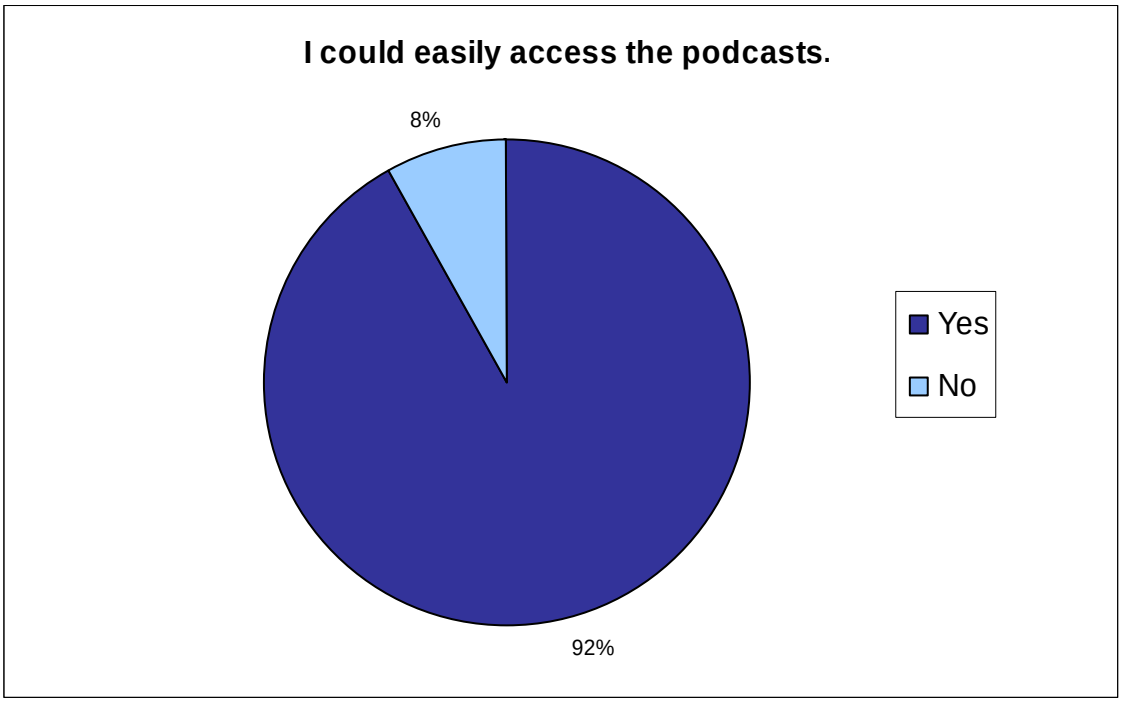

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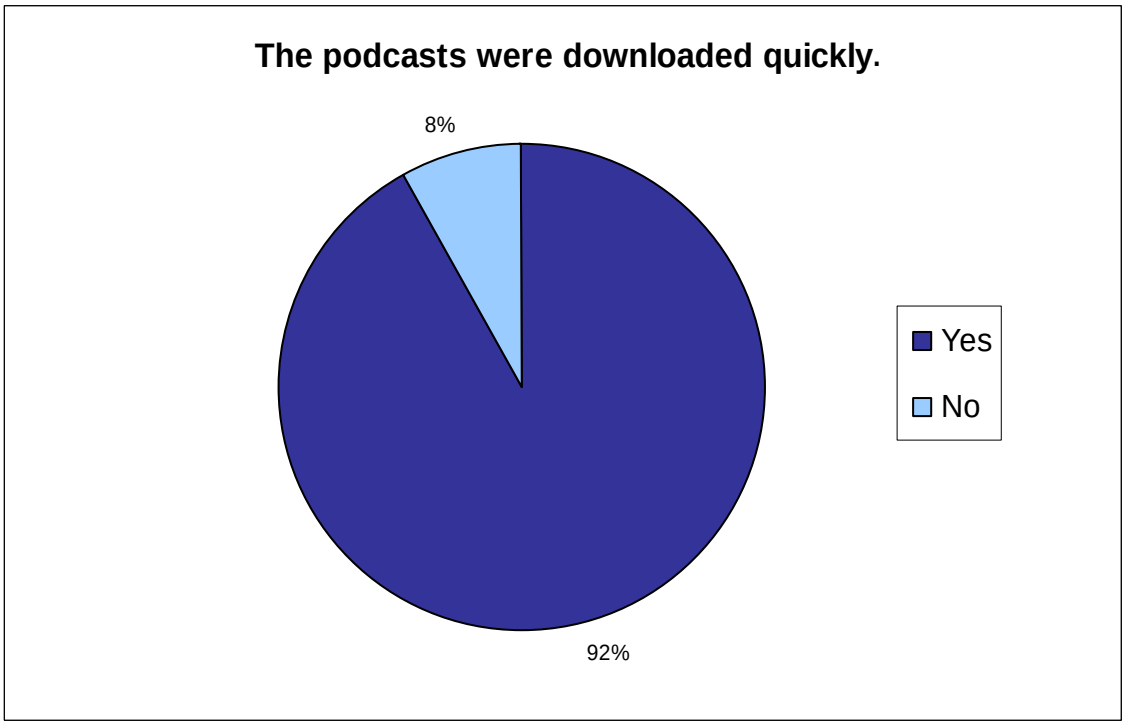

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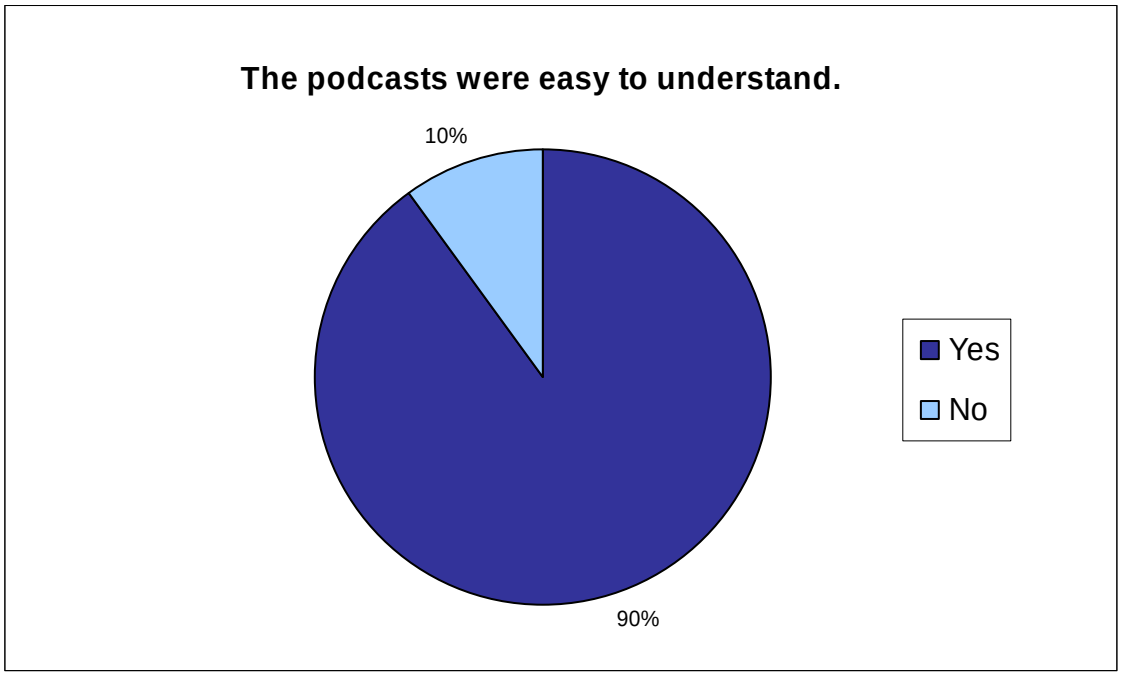
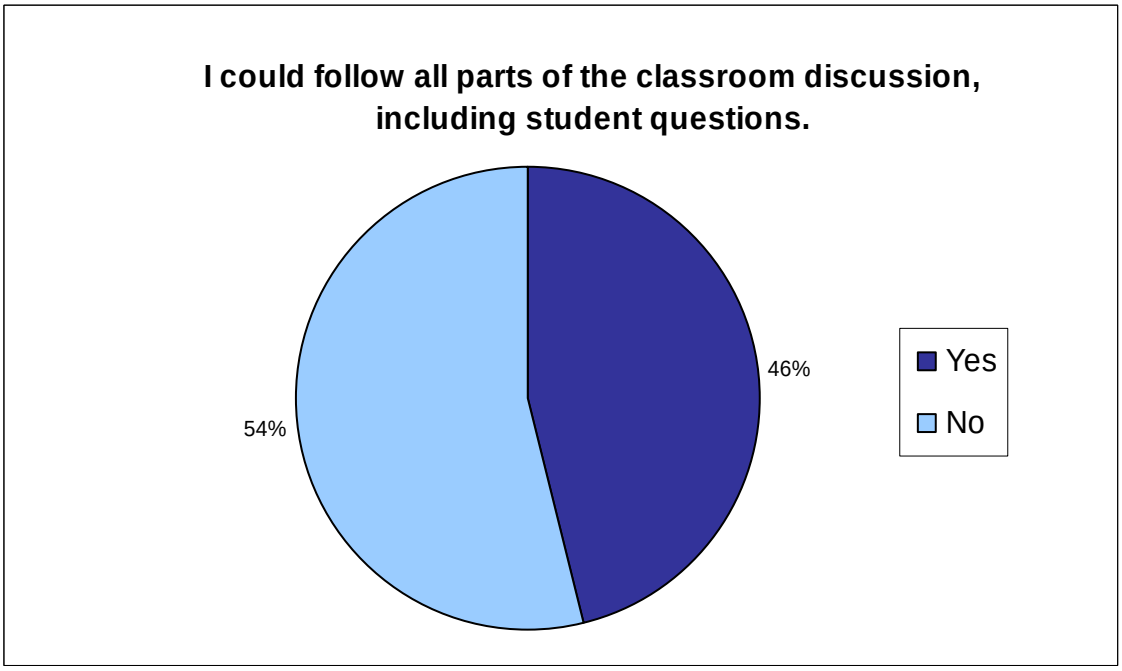


Figure 10



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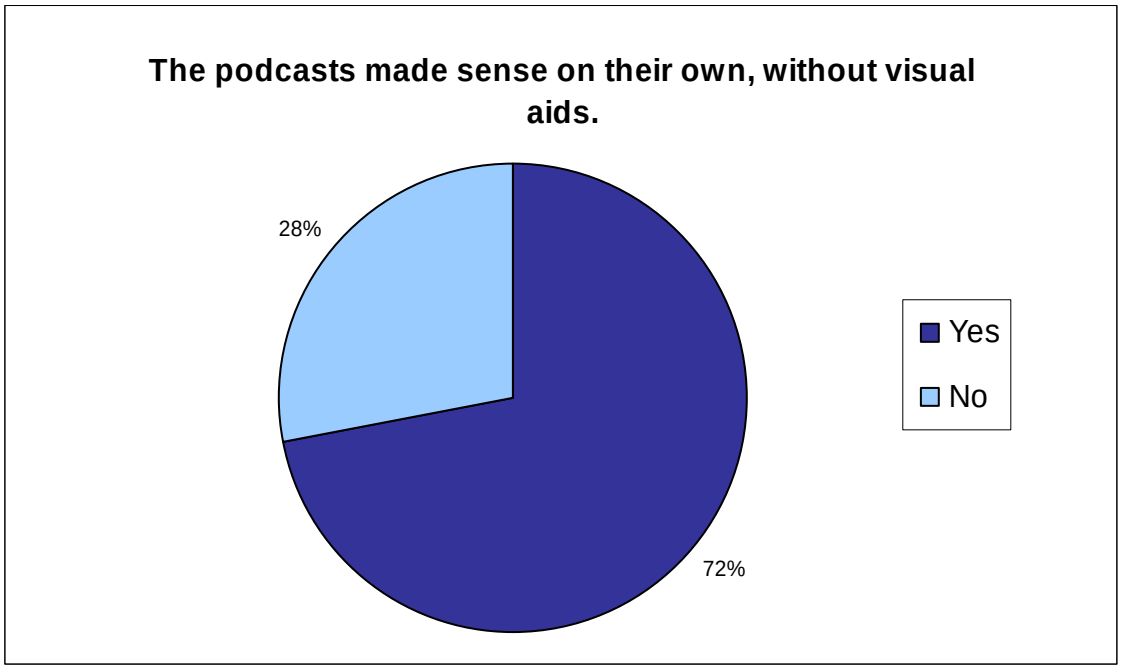

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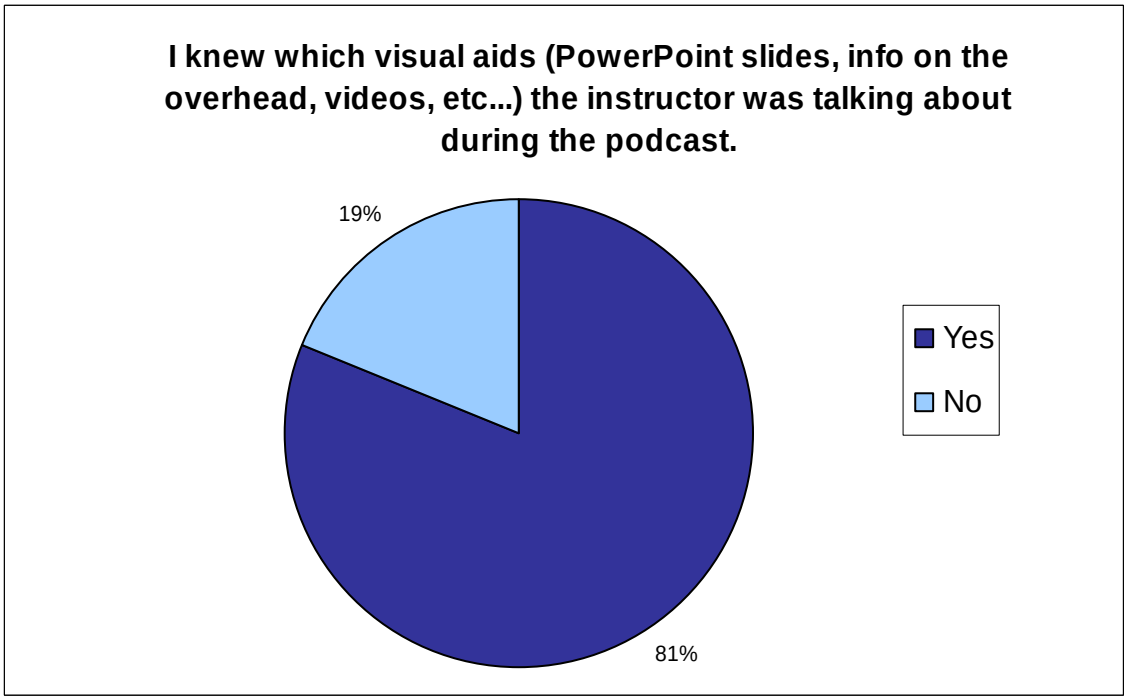

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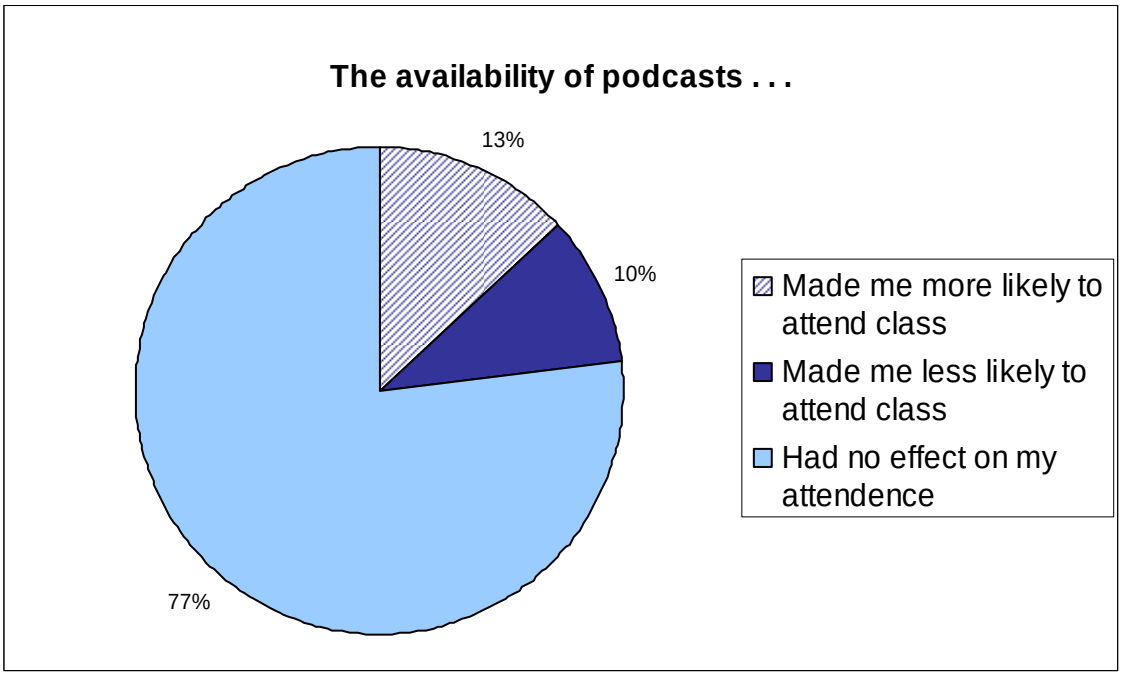
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