Impact of Audio Note-Taking Software on the Student Experience



Executive summary

Technology has revolutionized many aspects of daily life. Students now use smartphones, tablets and computers to support their studies. Taking notes is one of the most important parts of studying at college and university but creating good notes under pressure is a highly demanding task. Those students who are able to develop good note-taking strategies are likely to achieve higher grades.

In this paper we examine the reasons that some students can struggle with note-taking and how combining audio recordings with text and slides can help. It will examine the feedback from students using Sonocent Audio Notetaker, a software program which combines audio, text and slide notes and assess the impact the software has on the student experience.

The Value of Good Note-taking Strategies

Developing successful note-taking strategies is key to student success at university and college. Research into note-taking has identified that while creating and reviewing good quality notes from lectures is related to a student's performance in tests, students are often only able to capture between 20% and 40% of the important points¹. While note-taking is often considered to be the process of capturing content in a class or lecture, it is also a wider skill used daily. Whether to organize ideas for a report, revise for an exam, capture a phone message or prepare for a presentation, good note taking strategies can impact on productivity and performance throughout education and into the workplace.

Note-taking is a highly complex task, placing more burden on an individual's memory and processing skills than playing chess². Pererly et al³ explains that being a good note taker relies on:

- (i) identifying and understanding the most important ideas and concepts
- (ii) holding that information in your working memory
- (iii) adding the information to your notes accurately before it is forgotten or the lecture moves on

Many tools and techniques are used to support note-taking such as mind maps and outlining³ but these require organization and confidence in your note-taking ability to be used successfully. Audio recordings of a class, lecture or meeting are often used to support notes taken during a session, particularly by those who struggle with reading, writing or concentrating in a pressured environment. They can assist with reviewing and improving incomplete notes while those who find it difficult to listen and write at the same time may rely solely on the audio recording and make no written notes. Studies monitoring students who had access to recorded podcasts of lectures found that while students reacted positively to having them, they found they could not replace real lectures. Many of these studies also noted that most students accessed recordings prior to exams or assessments to aid revision⁴ ⁵. Students preferred to listen to short audio tracks – between 5 and 20 minutes, which are much more concise than a full class or lecture recording; most wanted to listen to these recordings on their desktop computer⁶. Therefore an easy system for accessing lecture recordings on a computer with simple tools for navigating through and editing will assist students who wish to use audio to supplement or create their notes.



Audiocentric note-taking

Audiocentric note-taking, powered by Sonocent Audio Notetaker, is an approach which combines audio, visuals and text notes in one workspace. The software's interface enables students to embed notes alongside a recording of the session. Through visually representing audio as speech, students can produce effective notes and personalized learning materials. Students can navigate through their audio recording as they would a text document – moving from paragraph to paragraph and scrolling up and down. Key information can be annotated and extracted simply and easily. Students can use color markers to "highlight" important points in their recordings, easily edit audio using the same concepts as a word processor (cut, copy, paste, drag & drop) and export their annotated notes to MP3 devices or a word processor. These tools make it simple to create audio summaries of lectures alongside slides.

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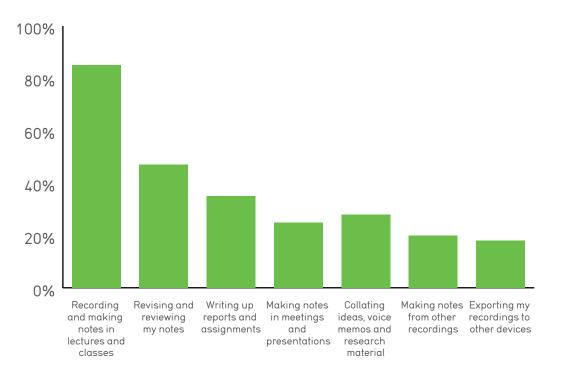
Figure 1: Note-taking interface combining audio, text and slides provided by Audio Notetaker

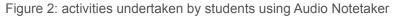
Hadwin, Kirby and Woodhouse⁷ found that when lecture material is complex or challenging, the simple act of listening results in higher achievement than taking notes. Use of this software would provide the student with a complete record of the class, allowing them to go back after class and review the audio. Thus, a student can create interactive, meaningful connections. As a result, Audio Notetaker provides the best possible solution; a student can focus on listening during class and review the lecture later, annotating and highlighting important content. Audio Notetaker captures lectures in manageable, visual "chunks", rather than presenting as a long, tedious audio recording so working with the lecture is easy.

Audio Notetaker – Supporting students note-taking in action

Audio Notetaker has been used by university level students who have difficulties with note-taking for more than 5 years. During this period a number of features have been added, such as the function to record directly into the software while typing and annotating your notes, although many students also use a dedicated recording device or phone to record their lectures. During July 2013, over 6000 users of Audio Notetaker were contacted and asked to complete a short survey on how they used the software. Of the respondents, 577 were students who provided feedback on how Audio Notetaker supported their studies.

When we asked the students how often they used Audio Notetaker, 60.4% reported using it more than once a week during term time with 26.3% using it most days. Audio Notetaker was used for a range of activities from lecture recordings to editing radio presentations to managing focus group recordings. While the most popular activity was making notes from lectures and classes (86.7%), students were also using Audio Notetaker to support their revision (47.3%) and write their assignments (34.8%). This indicates that Audio Notetaker not only helps with traditional note-taking in lectures but also assists students in analyzing, extending and revisiting their notes.





We asked students to indicate the impact Audio Notetaker had on their work and productivity by agreeing or disagreeing with a number of statements. When asked why they used Audio Notetaker, 86.7% agreed that it helped them make better notes while 86.8% agreed it helped them recall information. 79.7% also indicated that Audio Notetaker was easy to use and 61.5% felt it helped them capture ideas quickly, reducing the cognitive burden during note-taking. As recall of information is av key reason for taking notes, this indicates that students feel Audio Notetaker is beneficial. As we were aware that many students had not received support with note taking at school, we asked if they felt they would have benefited from using Audio Notetaker earlier in their educational career. 82.0% indicated that they felt it would have had a positive impact on their studies if they had used it prior to entering university.

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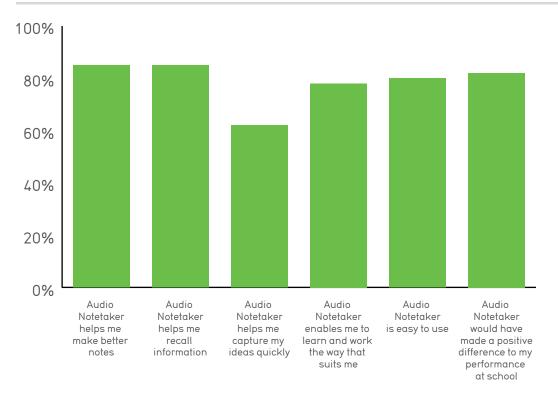


Figure 3: Students opinions on the impact Audio Notetaker had on their studies

Why does Audio Notetaker have an impact?

Many students provided comments on why Audio Notetaker helped their studies. It was important to them that it was easy to use and made it simple to bring notes from various sources together.

"I cannot fault Audio Notetaker; it has been a completely invaluable piece of software in my studies. My favourite feature is the ability to store notes from different types of media in one file, making it easy to collate ideas and thoughts."

One factor that puts off students from using audio to enhance their notes is that it is difficult to navigate to important points or skim through audio as you would do with text notes. Audio Notetaker's innovative visual audio display makes it simple for students to edit and navigate through their recording. Using the software it is possible to navigate through audio by phrase, jump to a section or delete unwanted audio. Students commented on how this supported their studies:

"When I am recording with Audio Notetaker I am able to finely tune-in to exactly what the lecturer is saying and then when listening to it on my computer I can control the speed and get rid of any unwanted sounds."

"With Audio Notetaker you can 'see' the sounds, so it's easy to fast forward and rewind"

"I like that with Audio Notetaker I can combine a lecture recording with PowerPoint slides AND put it on my iPod Touch and look at them anywhere. It is fantastic."

Conclusion

Research shows that while successful note-taking has an impact on student performance, the task of taking notes is complex and demanding. Successful strategies for note-taking for many involve using and annotating audio recordings. The innovative, multi-sensory and interactive workspace provided by Audio Notetaker enables students to support their strengths while taking notes, producing higher quality notes than when using text or audio alone.

References

1- Titsworth, B. S., & Kiewra, K. A. (2004). Spoken organizational lecture cues and student note-taking as facilitators of student learning. Contemporary Educational Psychology, 29(4), 447–461.

2- Piolat, A., Olive, T., & Kellogg, R. T. (2005). Cognitive effort during note taking. Applied Cognitive Psychology, 19(3), 291-312.

3- Peverly, S. T., Vekaria, P. C., Reddington, L. A., Sumowski, J. F., Johnson, K. R., & Ramsay, C. M. (2013). The Relationship of Handwriting Speed, Working Memory, Language Comprehension and Outlines to Lecture Notetaking and Test-taking among College Students. Applied Cognitive Psychology, 27(1), 115-126.

4- McGarr, O. (2009). A review of podcasting in higher education: Its influence on the traditional lecture. Australasian Journal of Educational Technology, 25(3), 309–321.

5- von Konsky, B. R., Ivins, J., & Gribble, S. J. (2009). Lecture attendance and web based lecture technologies: A comparison of student perceptions and usage patterns. Australasian Journal of Educational Technology, 25(4), 581-595.

6- Hew, K. F. (2009). Use of audio podcast in K-12 and higher education: a review of research topics and methodologies. Educational Technology Research and Development, 57(3), 333-357.

7- Hadwin, A. F., Kirby, J. R., & Woodhouse, R. A. (1999). Individual differences in note-taking, summarisation, and learning from lectures. Alberta Journal of Educational Research, 45(1), 1-17.

About Sonocent

Celebrating over 5 years of Audio Notetaker, Sonocent is a leading innovator in productivity software, renowned for its visual and interactive platform. Users of Audio Notetaker benefit from one easy to access hub which stores slides, images, text, audio recordings and other notes in one place.

To find out more about Sonocent Audio Notetaker visit

www.sonocent.com

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