Digitising Note taking accommodations: Revolutionising the Way Students Work with Spoken Information

Jim Sprialis

Sonocent

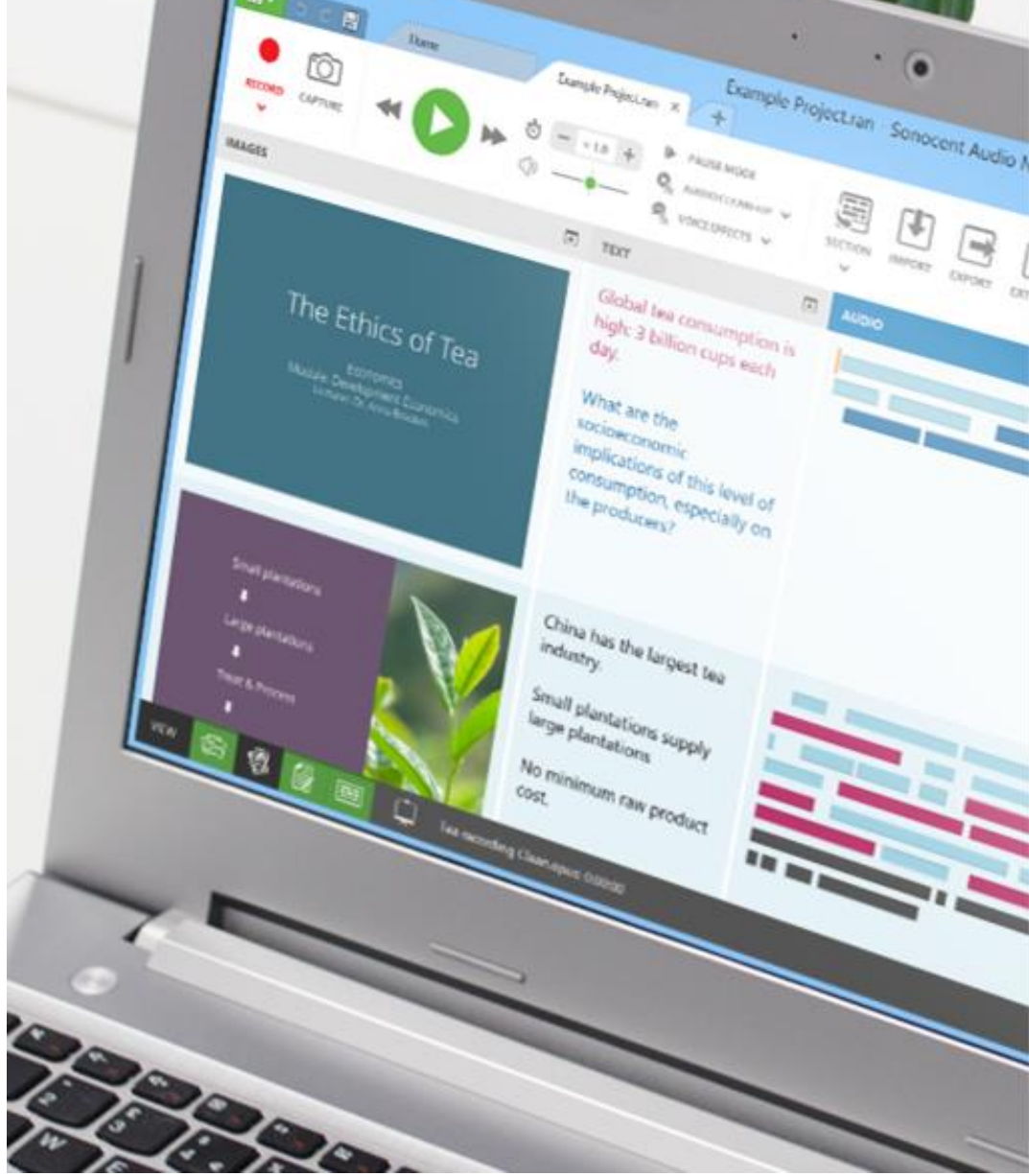
ADCET February, 2018

About Jim Sprialis

- 30 year teaching career in mainstream and special education
- Assistant Principal, State Manager – Inclusive Technology Service
- Established Sprialis Consulting in 2014
- Service schools, higher education, workplace
- Apple Accessibility Ambassador
- National Education Manager for Voice Recognition Australia
- Australian Representative for Sonocent

Session Outline

- Importance of effective note-taking
- Challenges for students with disability
- What is effective note-taking?
- The Sonocent workspace
- What about lecture captures and flipped content?
- Current impact and learner benefits
- Q&A



Effective note taking is incredibly important to student attainment

“...accurate and complete notes are critical for students to be **successful** in content area classes.”

Boyle, J.R. (2012)

"...if information is **recorded poorly in their notes**, students will more than likely **perform poorly on tests.”**

Stringfellow, J.L., & Miller, S. P. (2005)

Better notes lead to better grades

Titsworth, B.S. (2001).

“The **highly positive relationship between notetaking** [...] **and achievement** was [...] confirmed correlationally”

Titsworth, B. S., & Kiewra, K. A. (2004).

Additional note taking roadblocks

Note-taking is a highly complex task placing more burden on memory and processing skills than playing chess

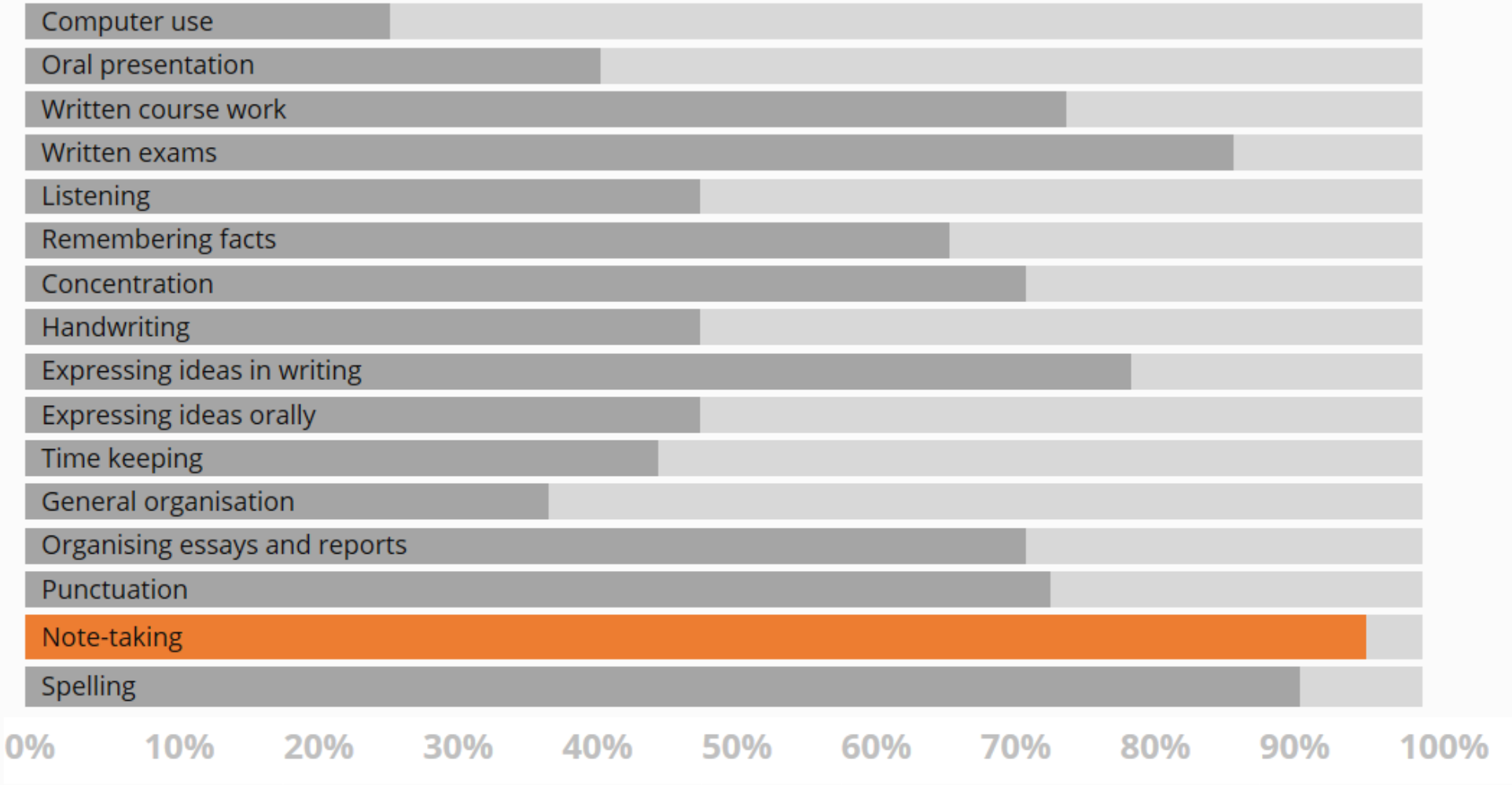
Piolat et al., (2005).

Trying to process and manipulate extensive verbal information places great demands on working memory

Note-taking is the biggest problem students at university with dyslexia feel they encounter*

*Webster. D.M (2016). Listening to the Voice of Dyslexic Students at a Small, Vocational Higher Education Institution to Promote Successful Inclusive Practice in the 21st Century. Journal of Learning and Teaching Vol. 2, No. 1, p78-86.

SwD really struggle with note taking



What is effective note-taking?

- **Capture**
  - Need to **capture** the information to later **review**
- **Synthesis**
  - **Summarising** is key to learning
  - Helps recall and **long-term retention**

"Studies have found that note-taking is most effective when notes are organized and transformed in some way."

Brown, C (2015). What's the best, most effective way to take notes? The Conversation.

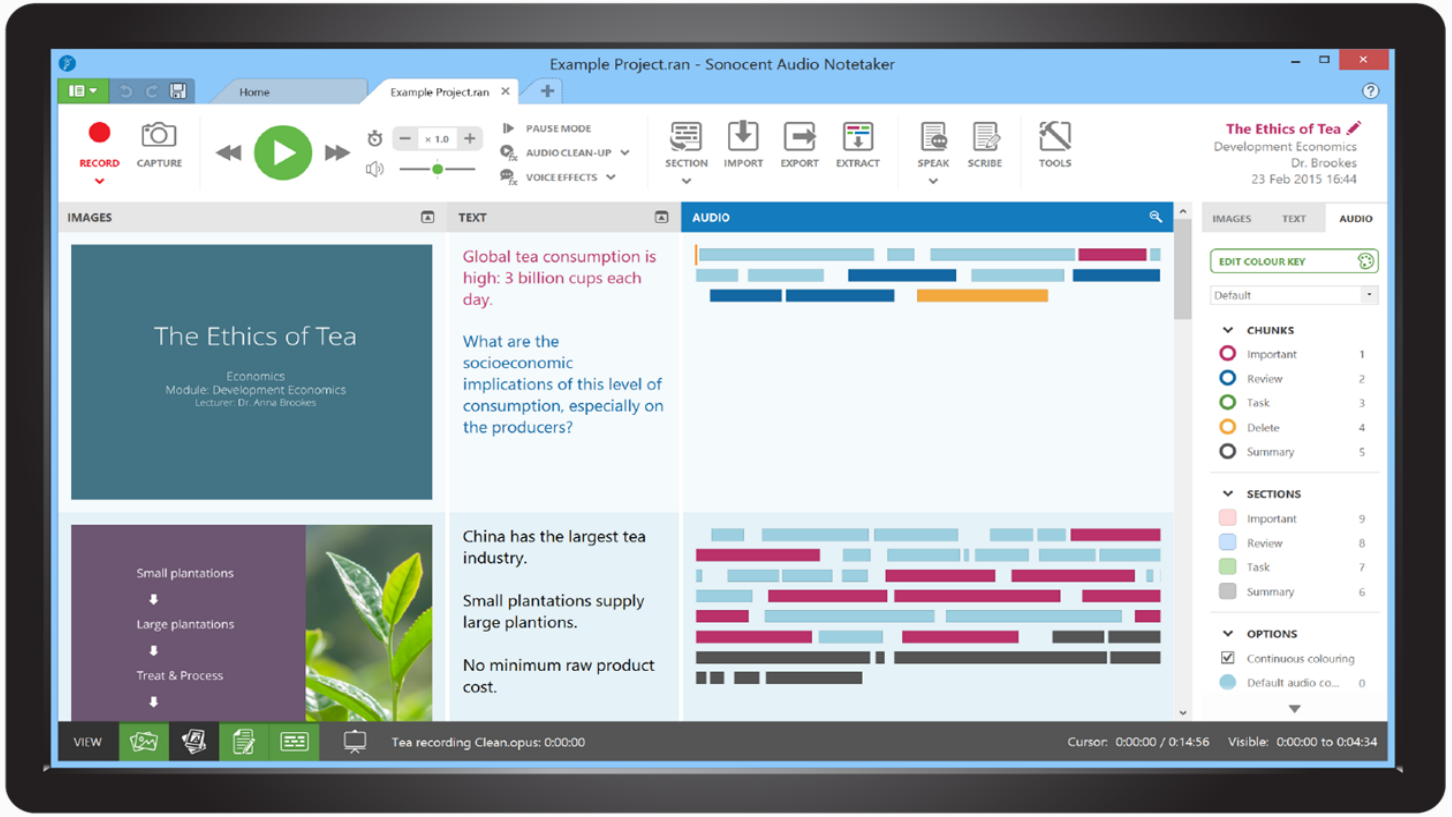
Active learning, a key aspect of **student engagement**, is **reduced** when students are not **directly involved in the process of collecting and sorting information for notes**

(Brazeau, 2006)

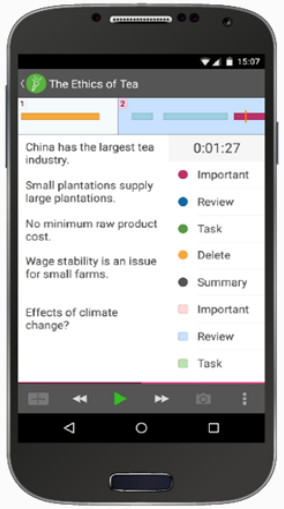
Note-taking is most effective when done

independently

The Sonocent workspace



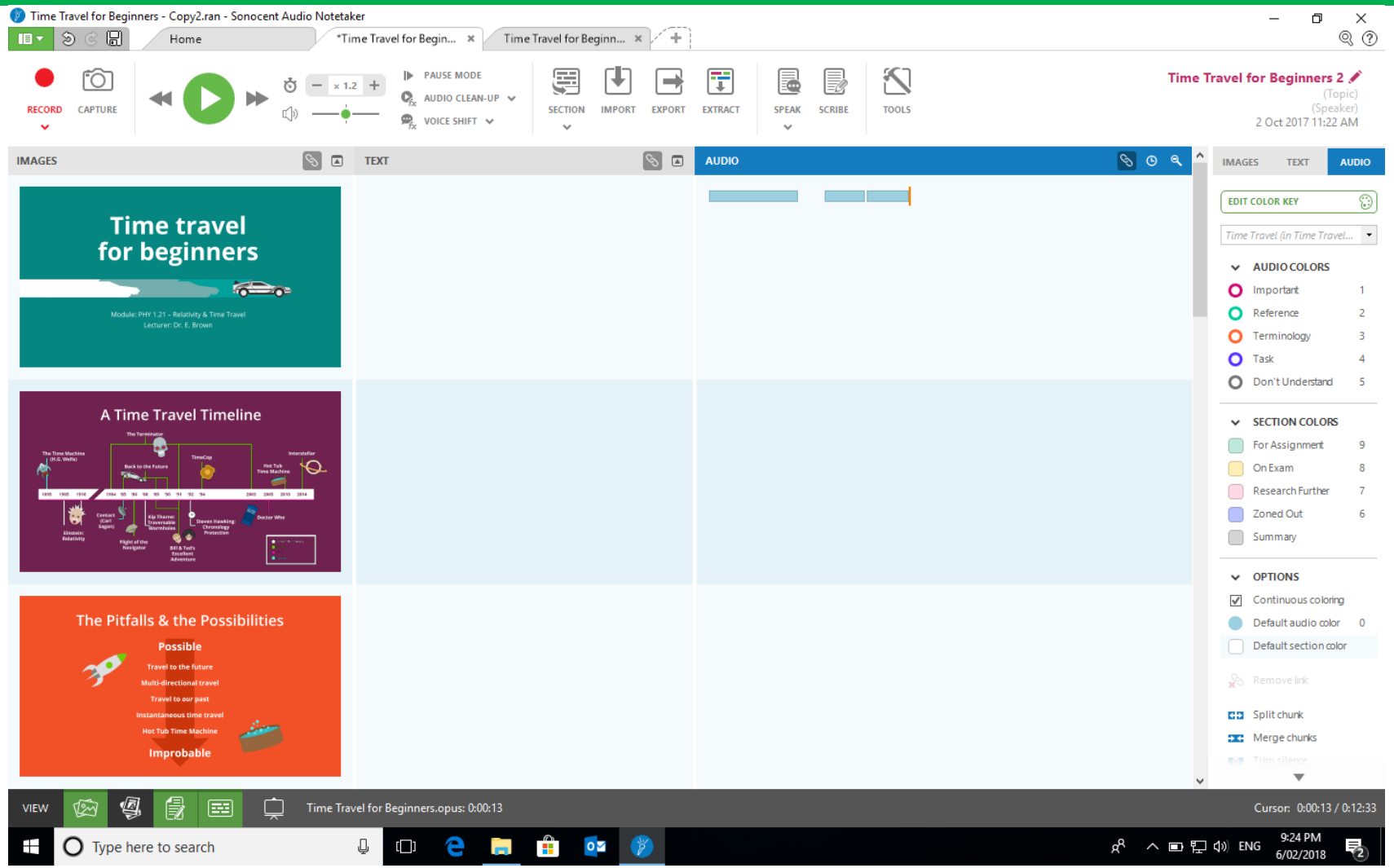
Sonocent Audio Notetaker (PC/Mac)



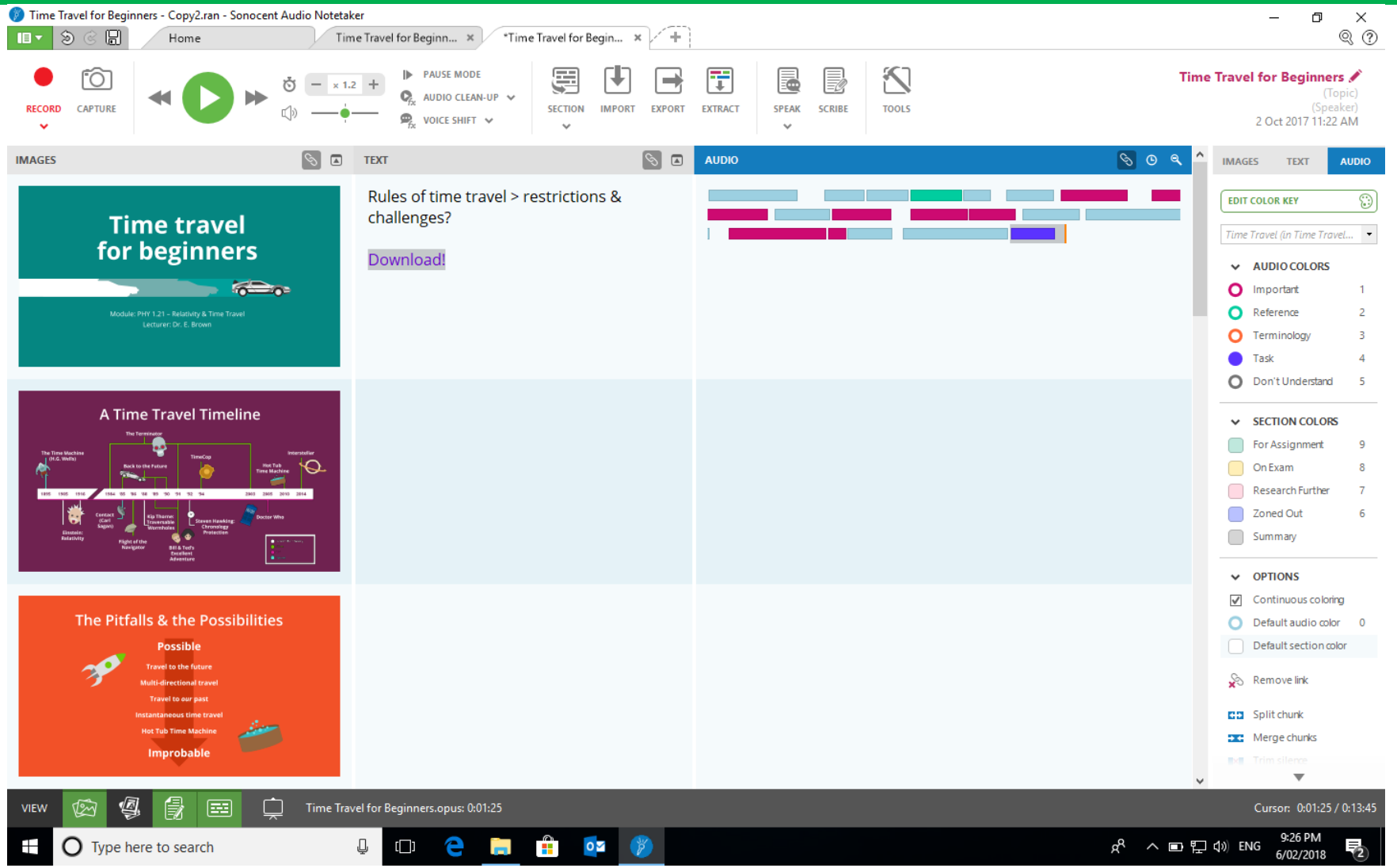
Sonocent Recorder (iOS/Android)

The Sonocent workspace in action

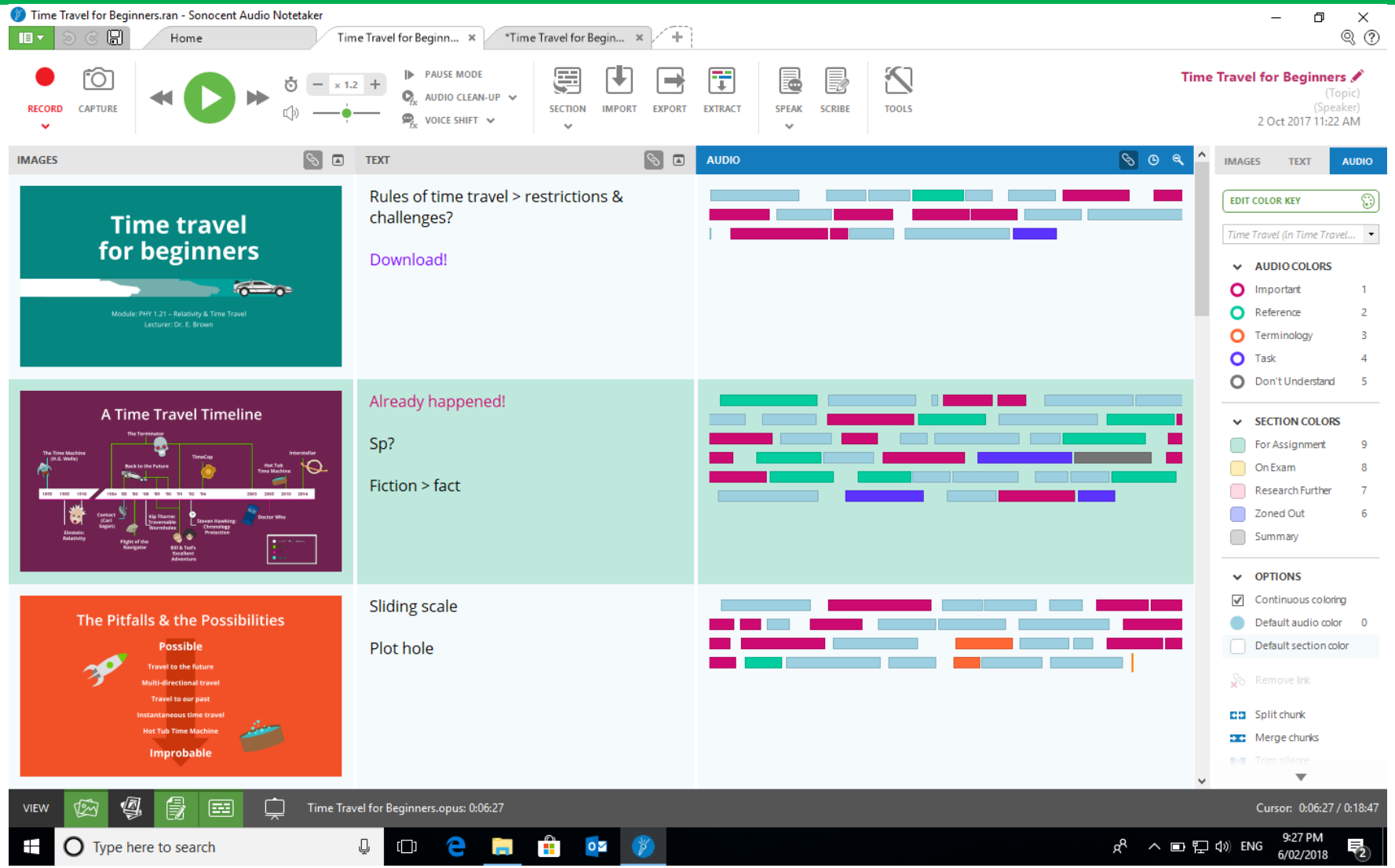
Preparing for and capturing a lecture



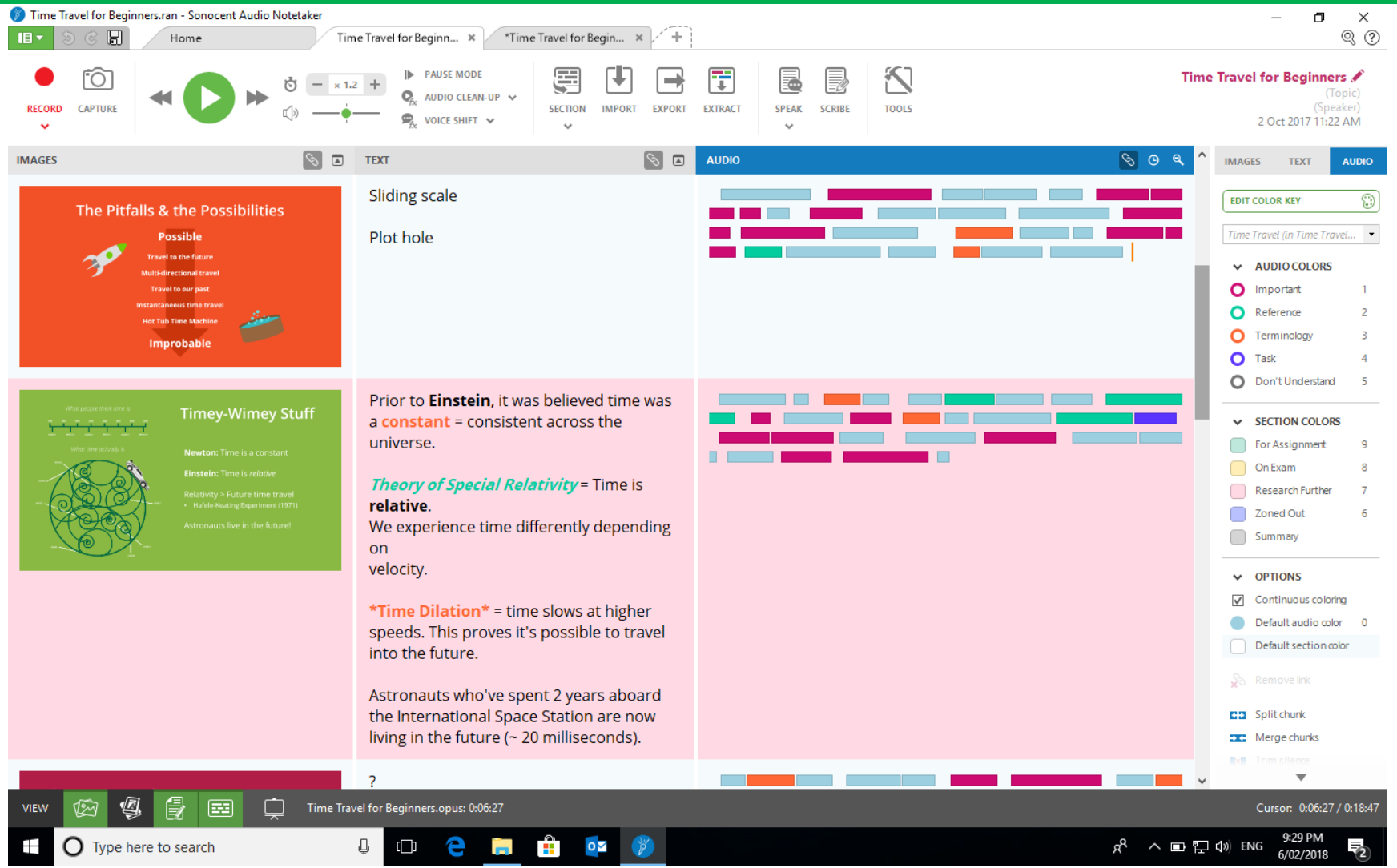
Annotating the spoken information



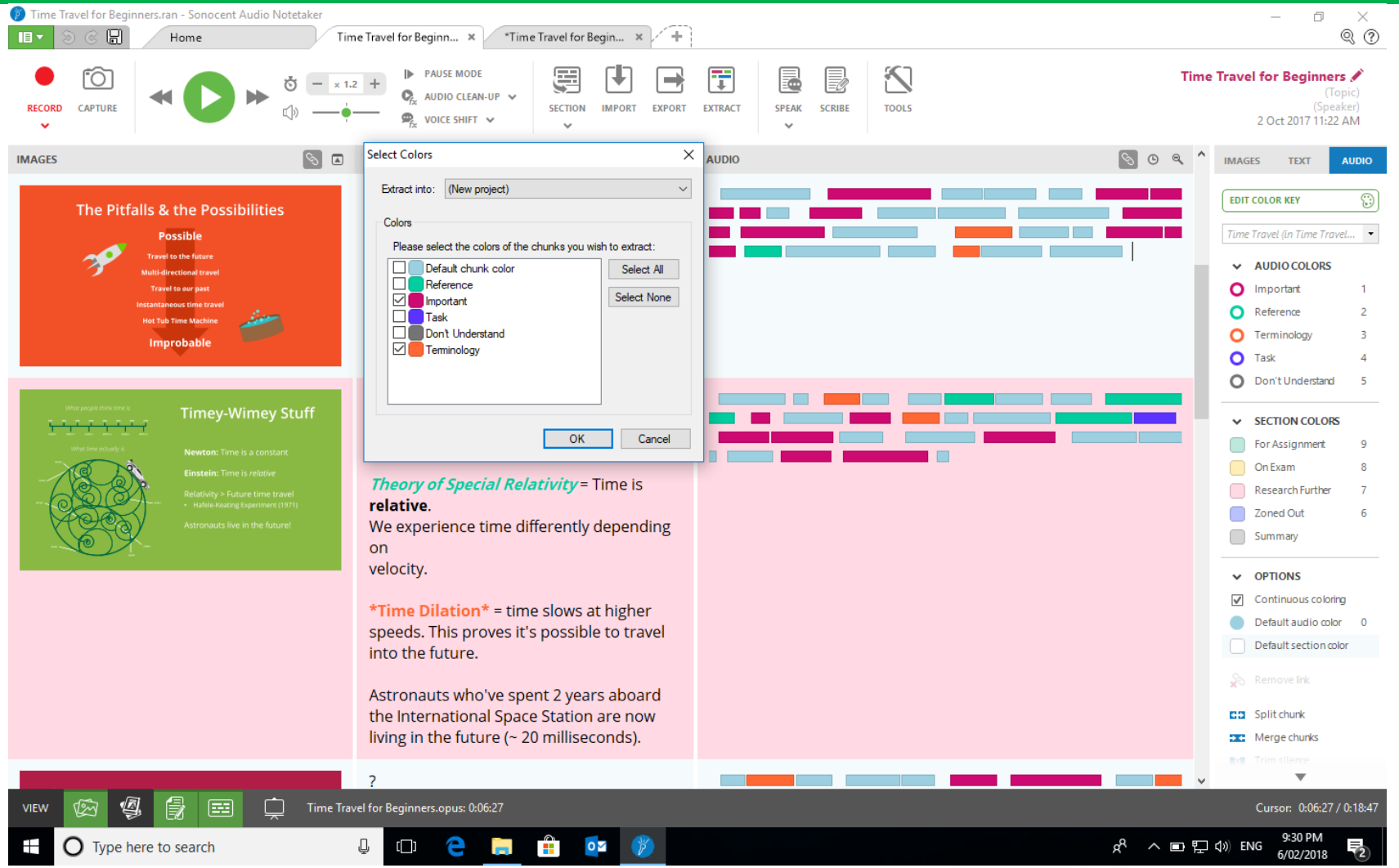
Adding written notes



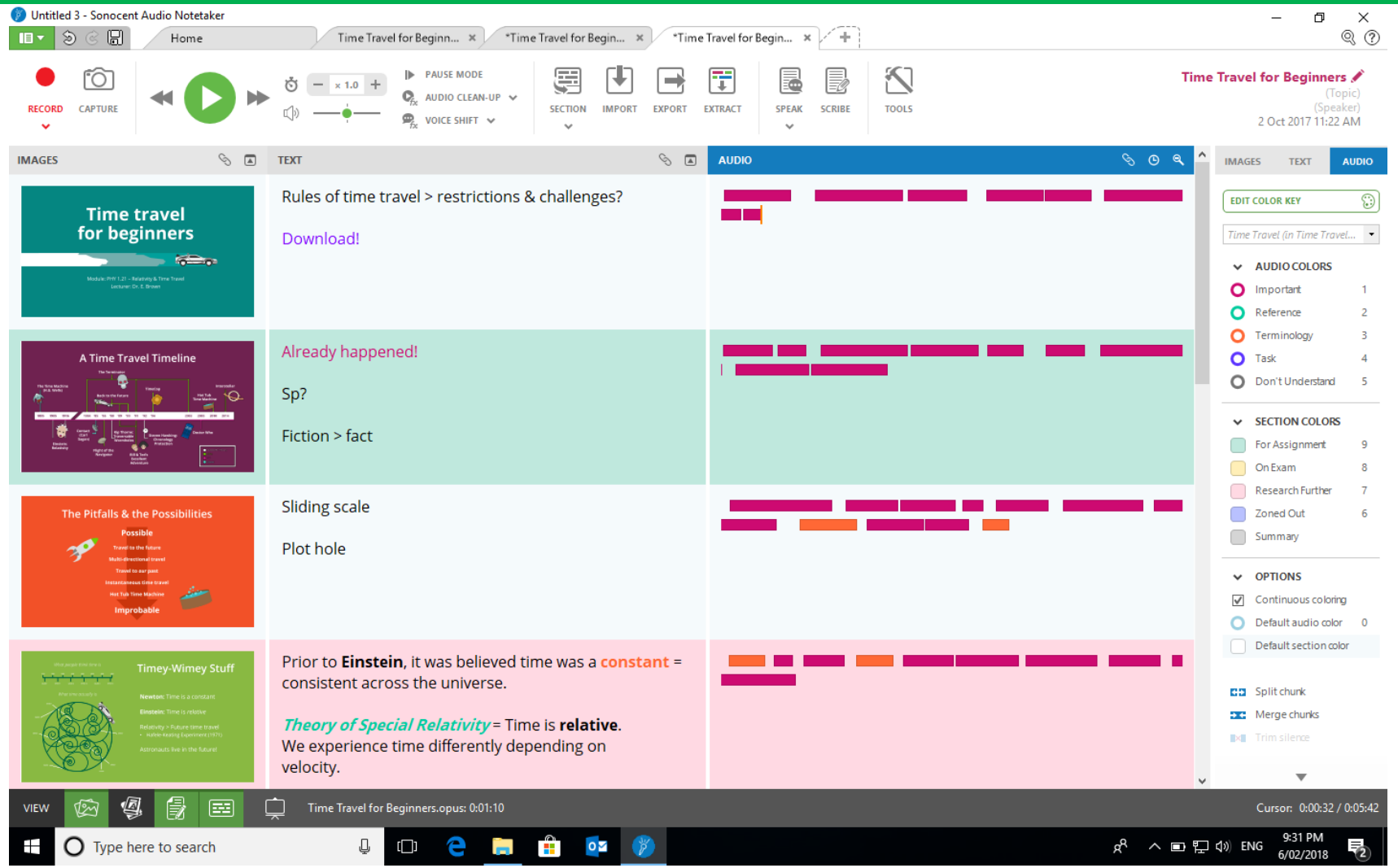
Export audio summary as a study guide- 1



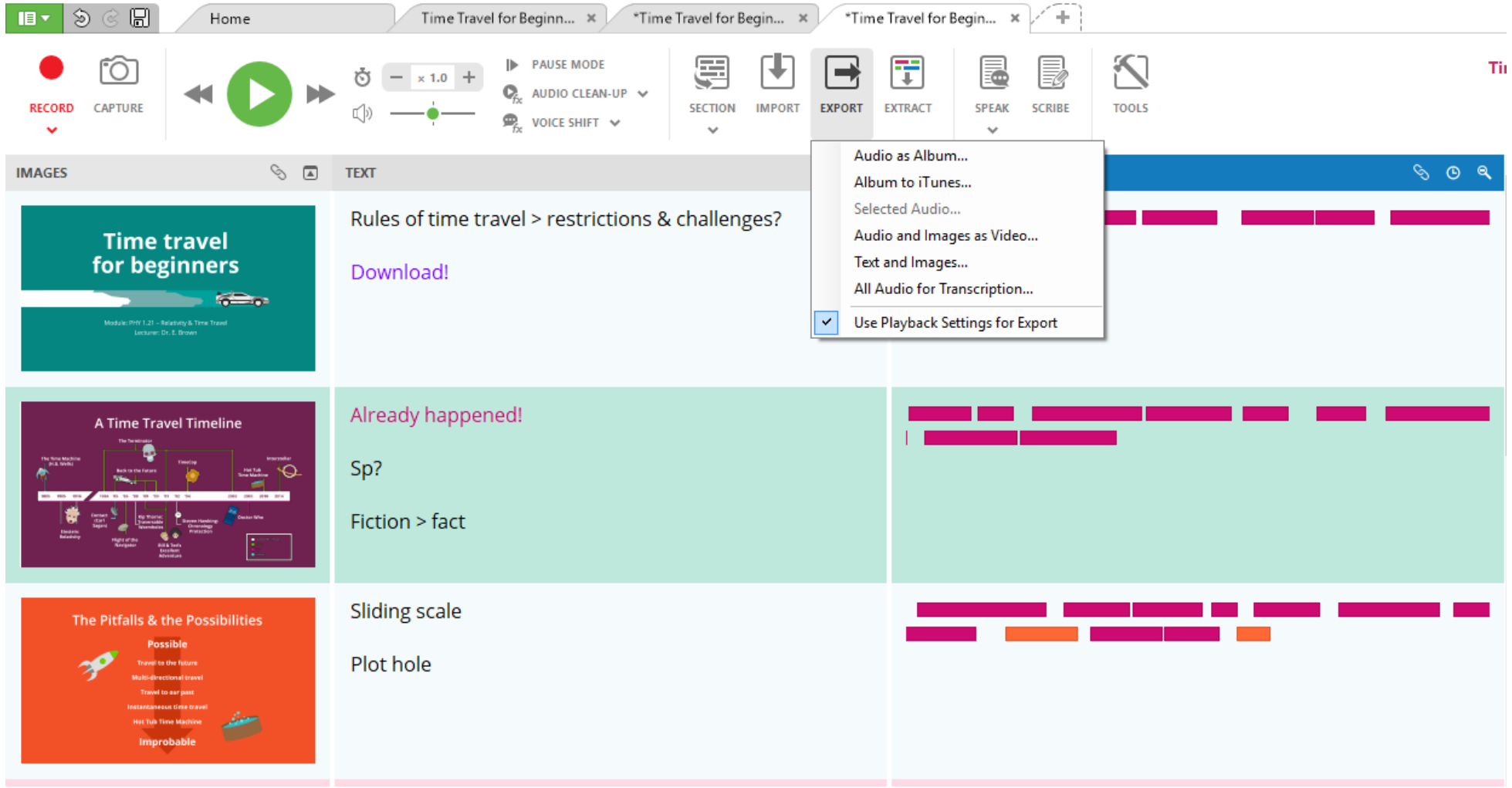
Export audio summary as a study guide - 2



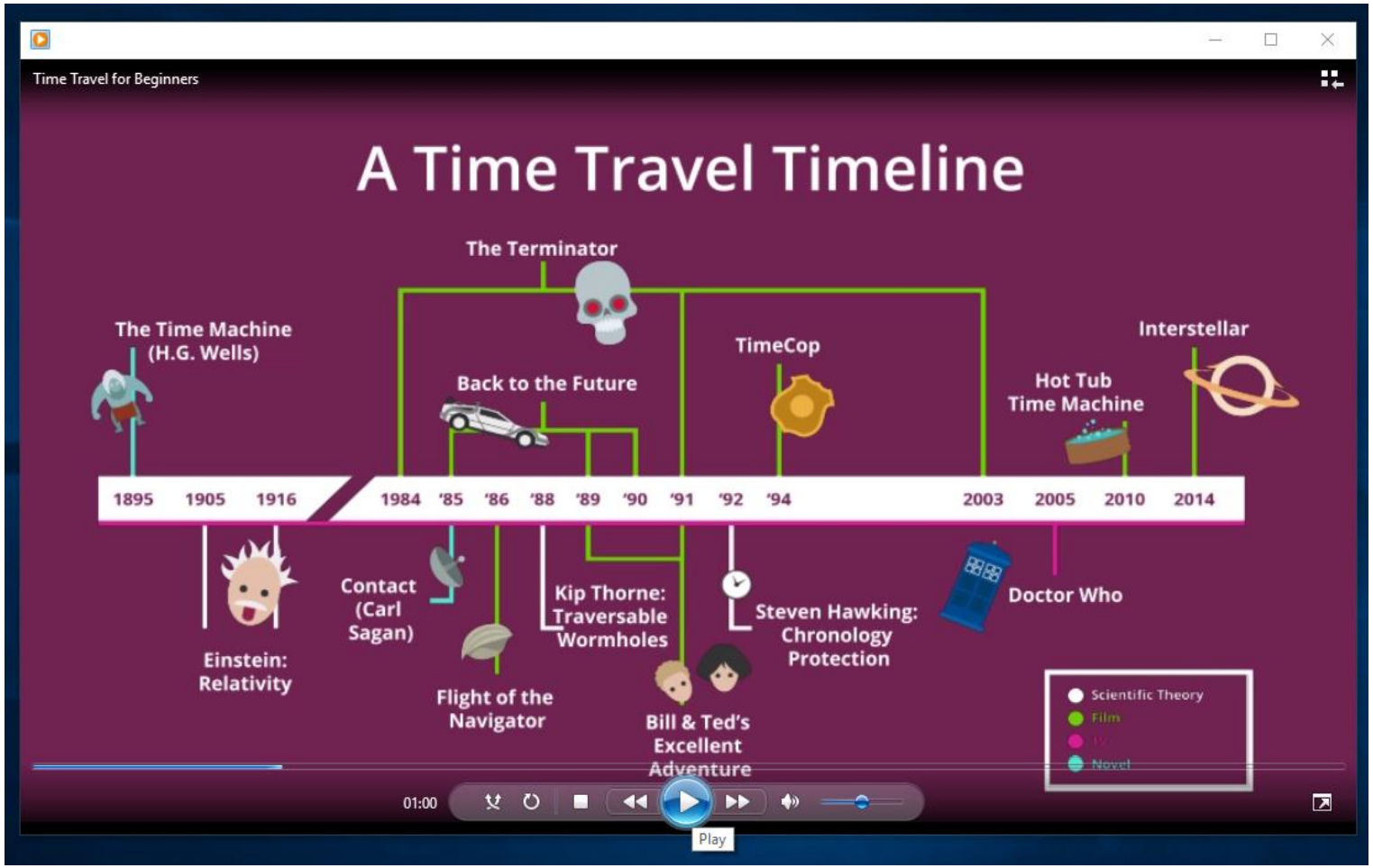
Export audio summary as a study guide - 3



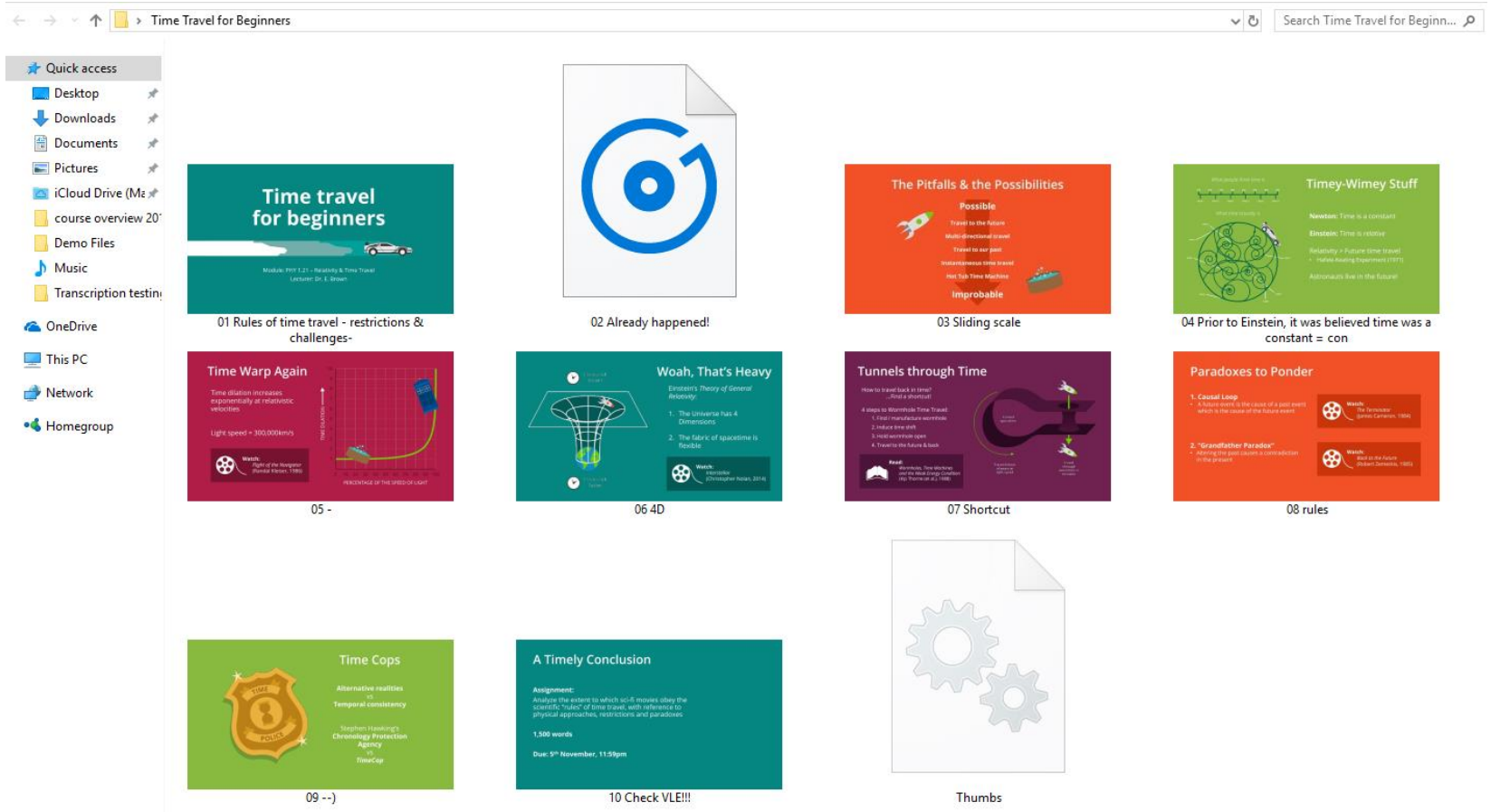
Export audio summary as a video



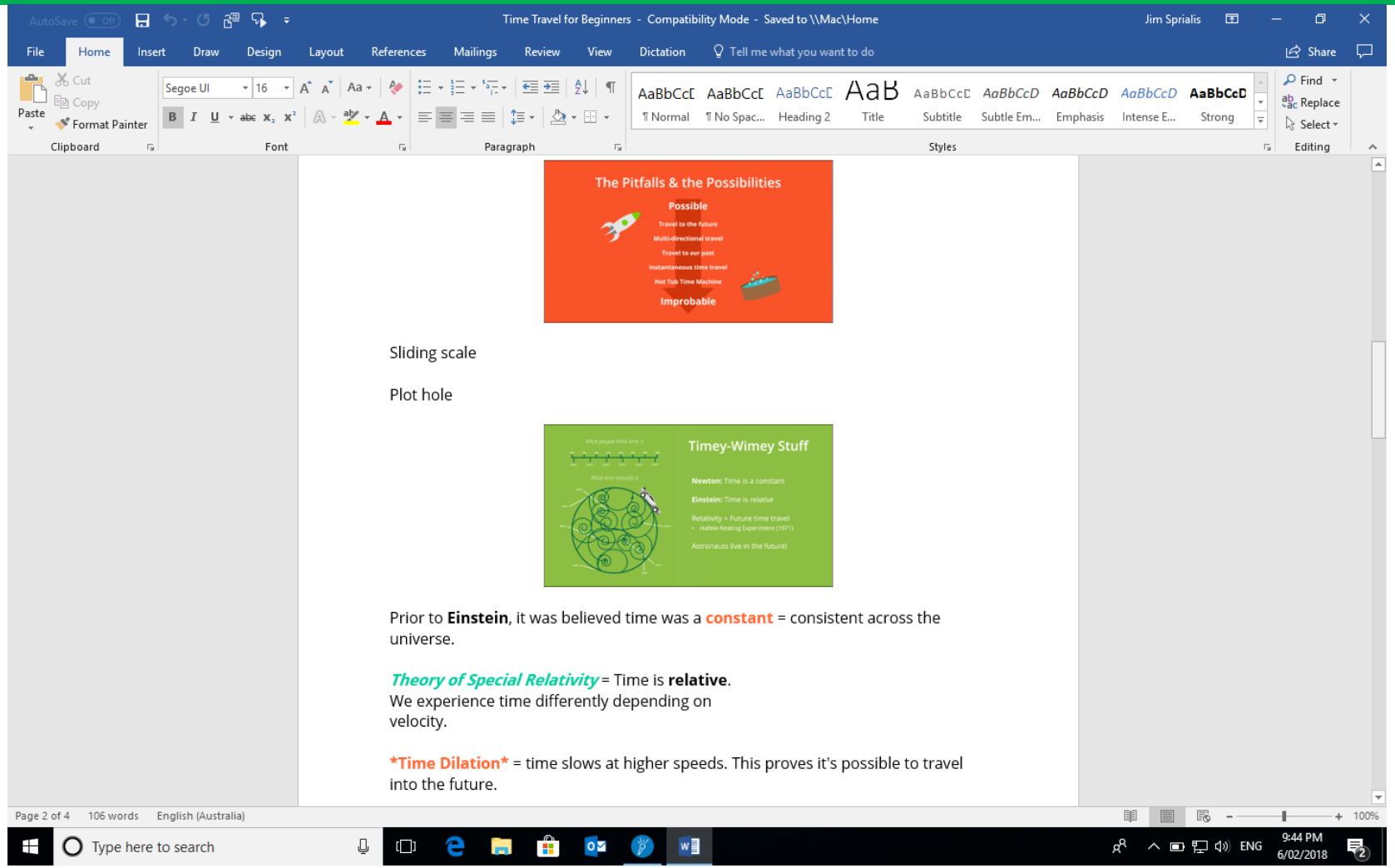
Exported study guide – video format



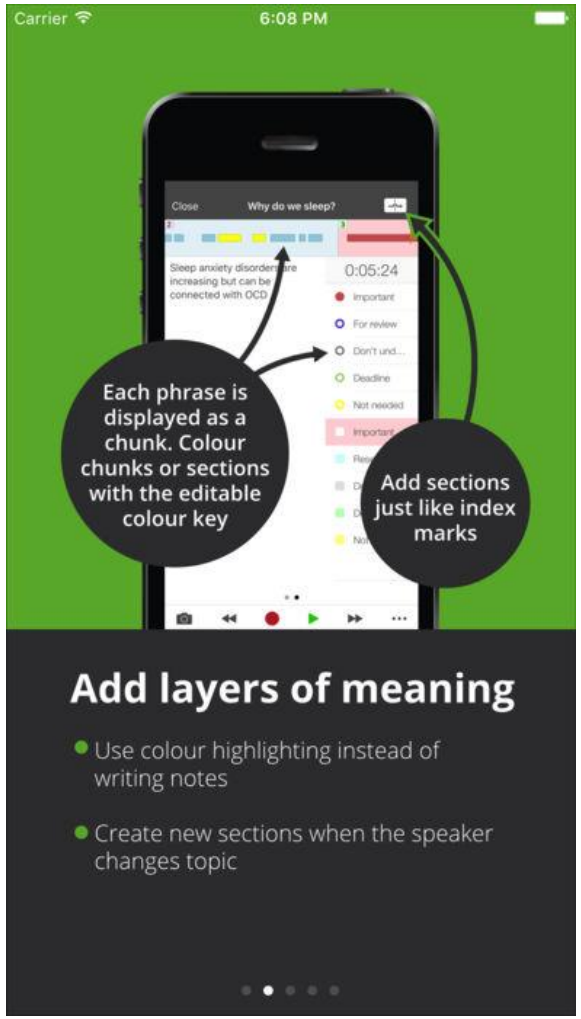
Exported study guide – playlist album



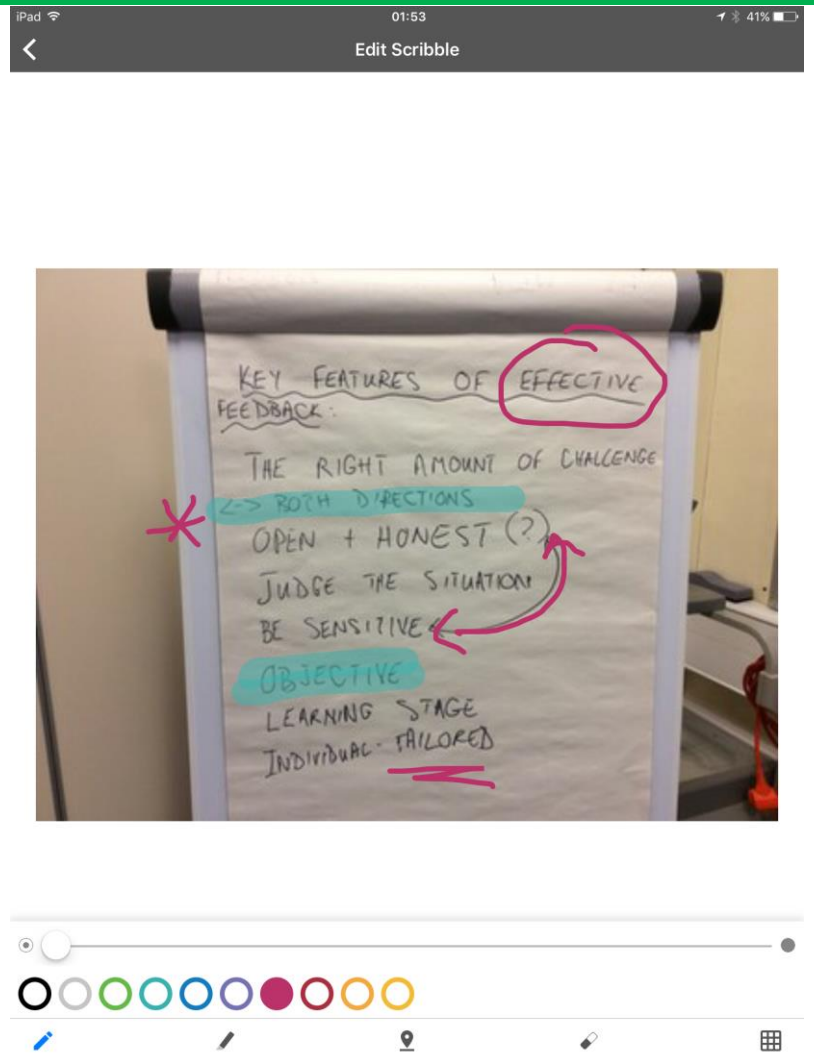
Exported study guide – MS Word format

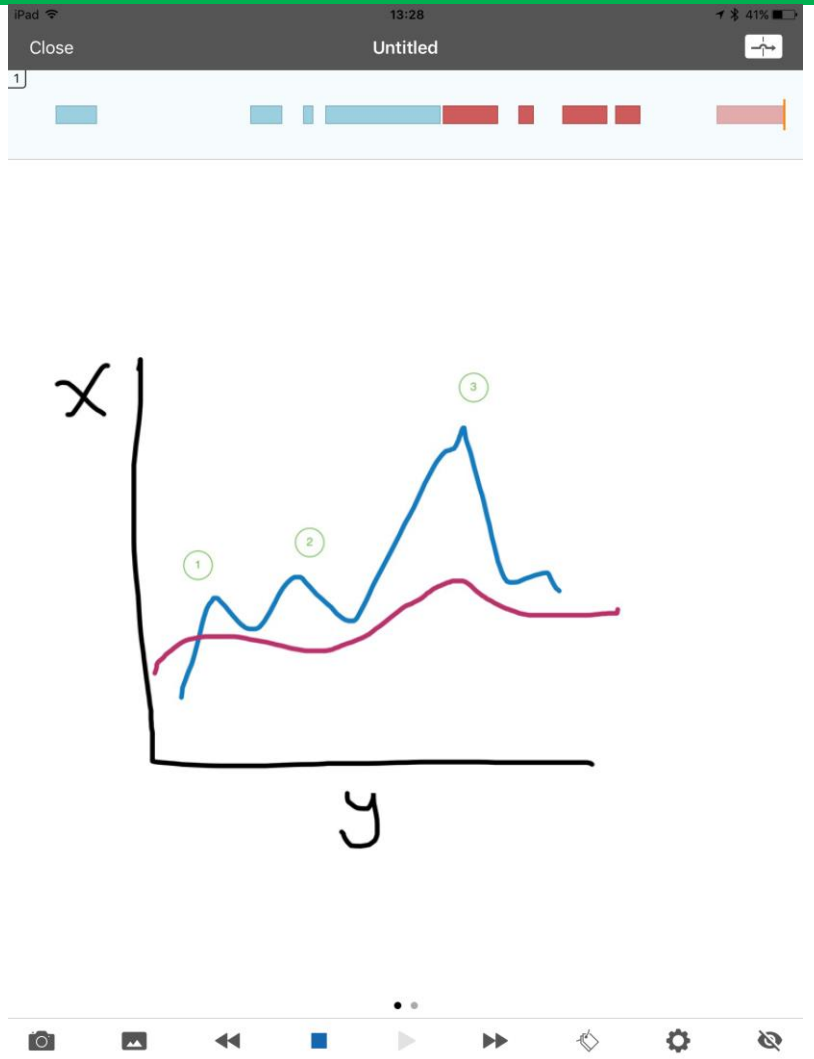


Sonocent Recorder – free companion app



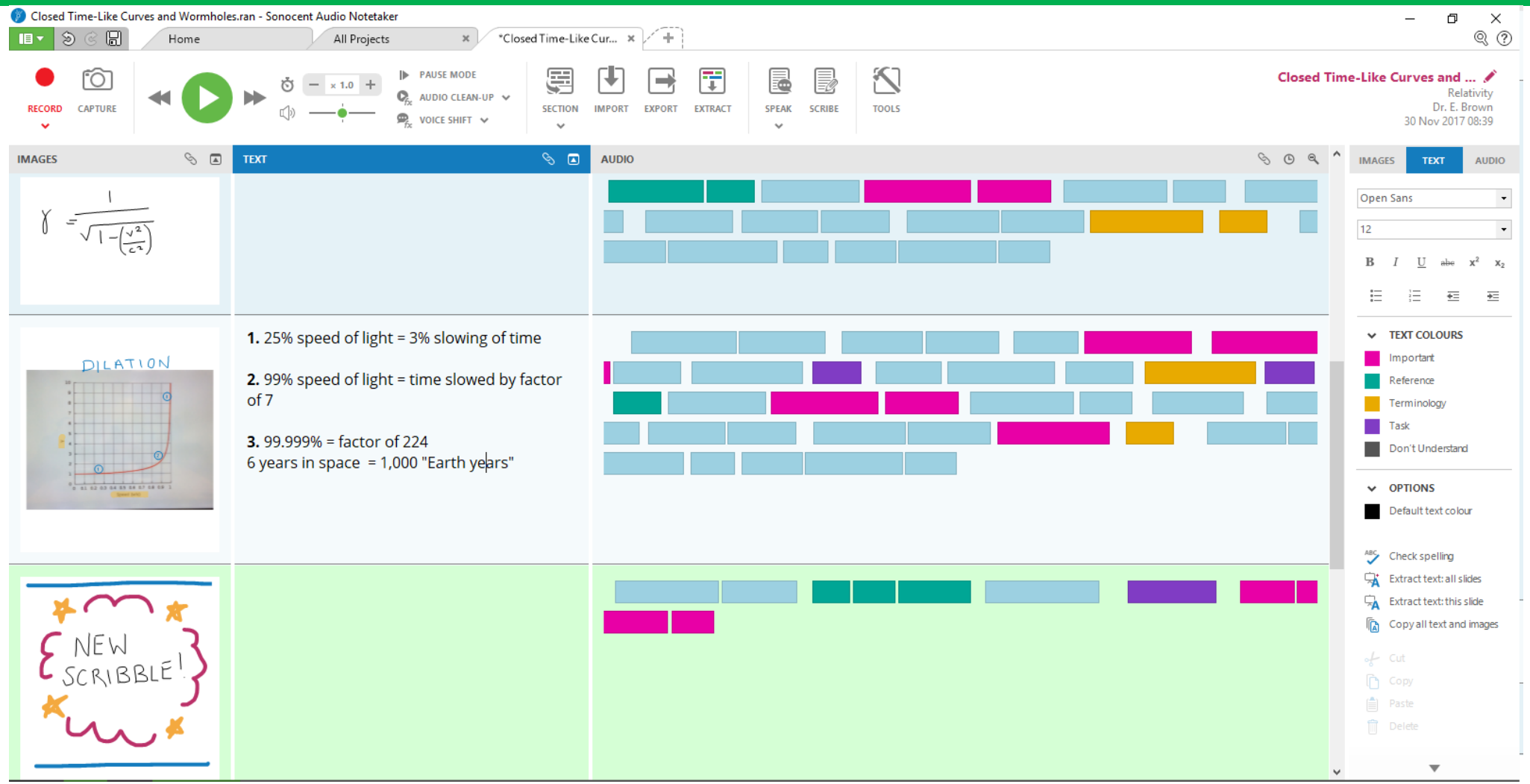
Sonocent Recorder – Scribble feature





Slide 23

Import app recording to desktop software



To recap, with Audio Notetaker , students can:

- Capture everything, reducing anxiety about missing key information
- Immediately apply active listening comprehension strategies
- Begin synthesizing audio content that is aligned to slides and text
- Extract selected highlights to repurpose as study guides and written assignments

The visual representation of the recording adds a tangible cognitive bridge to the audio content.

The software scaffolds the application and development of study skills.

Most importantly, struggling students are empowered to build greater independence and ownership in their learning.

What about lecture captures?

Lecture capture is purported to support students with disabilities by circumventing the note-taking problem…

But is providing students with a recording of their lectures enough?

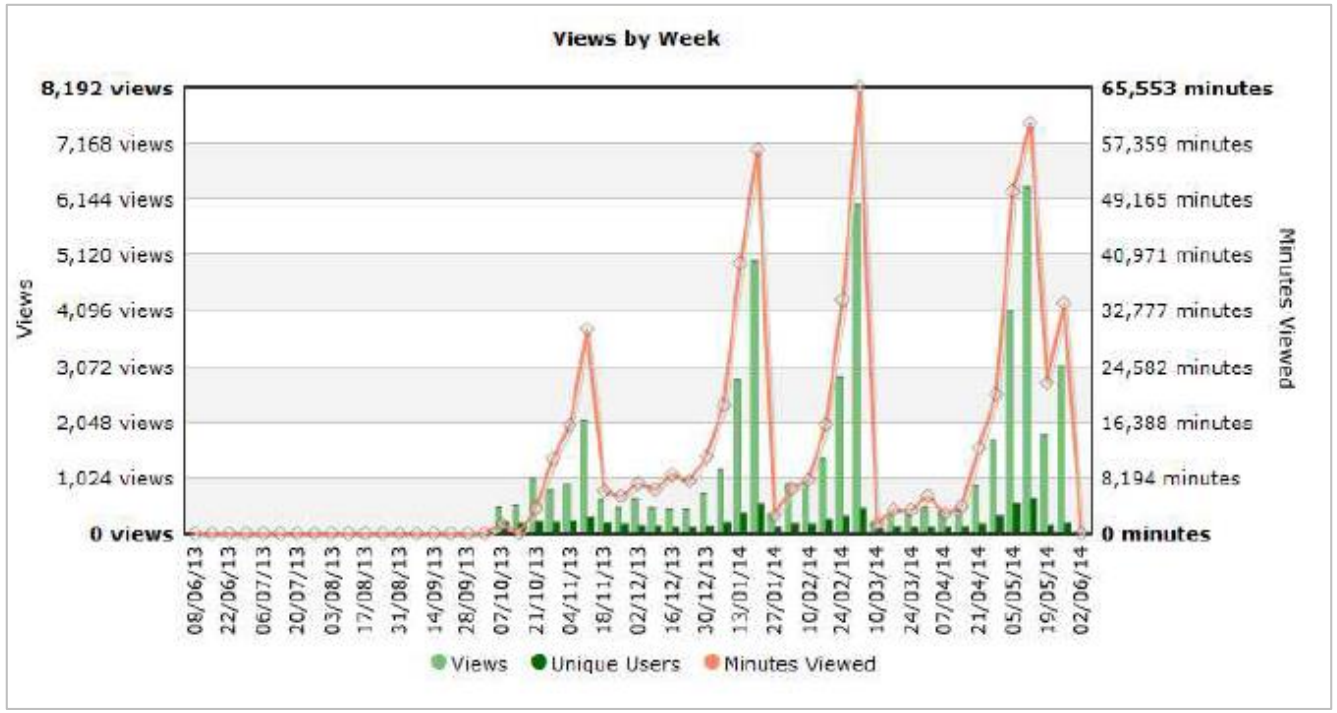
Key findings of literature

- Students benefit from using technologies that enable them to **repeatedly return to material** and **select the pace** with which they study. (Turney *et al*, 2009)

- "transforms an ephemeral event into a **learning object**" (REC:all, 2012)

- **Recorded lectures have little to no effect on student results** (Elliott & Neal, 2016; Danielson *et al,* 2014; Karnad, 2013; Leadbeater *et al*, 2013; Franklin *et al,* 2011)

How do students use recorded lectures?



Recorded lecture viewings, 2013-2014: Elliott & Neal, 2016

- **Revision**
- **Note taking**

Behaviour whilst using recordings

- 94% Pause to think/make notes
- 86% Write notes
- 84% Watch some segments repeatedly
- 51% Consult other sources of information on the topic
- 55% Eat or drink
- 25% Browse mail, Facebook, other web sites
- 15% Mobile i.e. on bus, train, walking

(Sloman, 2013)

Review of recordings is time-consuming

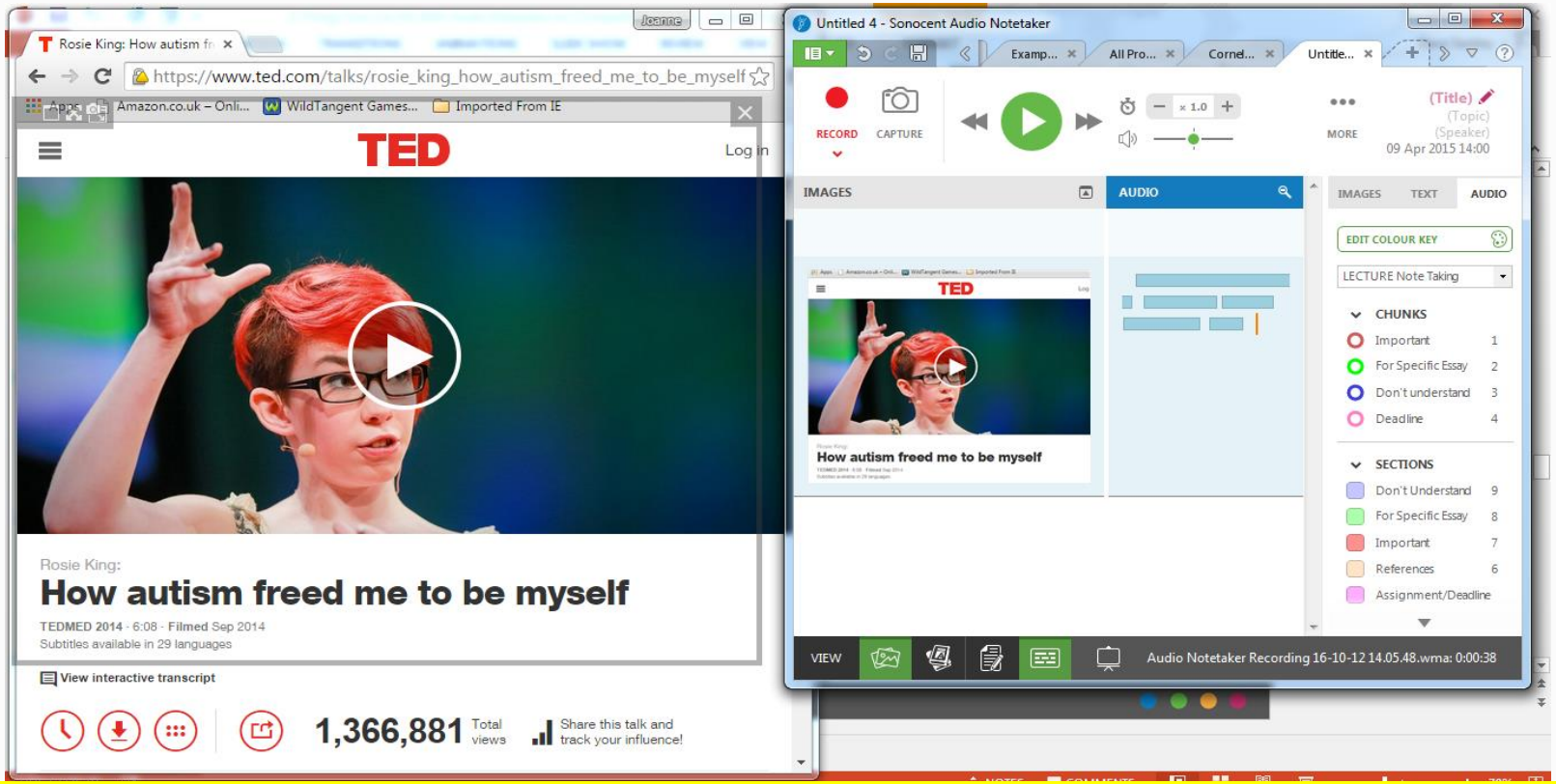
- Students with dyslexia use lecture capture recordings **more** & listen to them for **longer**
- (Leadbeater *et al,* 2013)

- Students reported reviewing video recordings as **time-consuming**
(Karnad, 2013)

" I will spend two hours, two and a bit on a one hour lecture because I stop it, take lots of notes, re-listen to bits, Google a word that they referenced that I didn't know what that meant or I've forgotten"

LC student survey respondent. (from: Cornock, 2015)

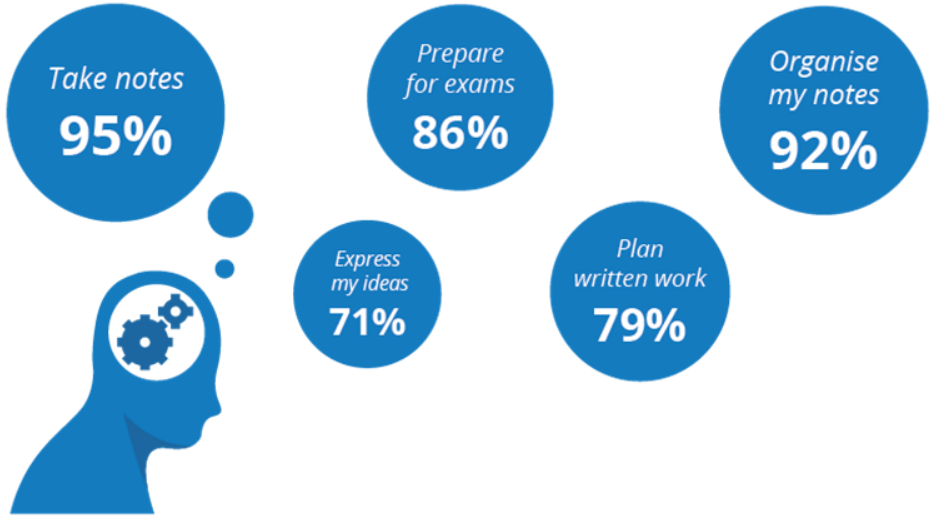
Use Audio Notetaker to record lecture capture videos, webinars and flipped content into a more accessible format



Accessible notes are a vital part of an accessible education

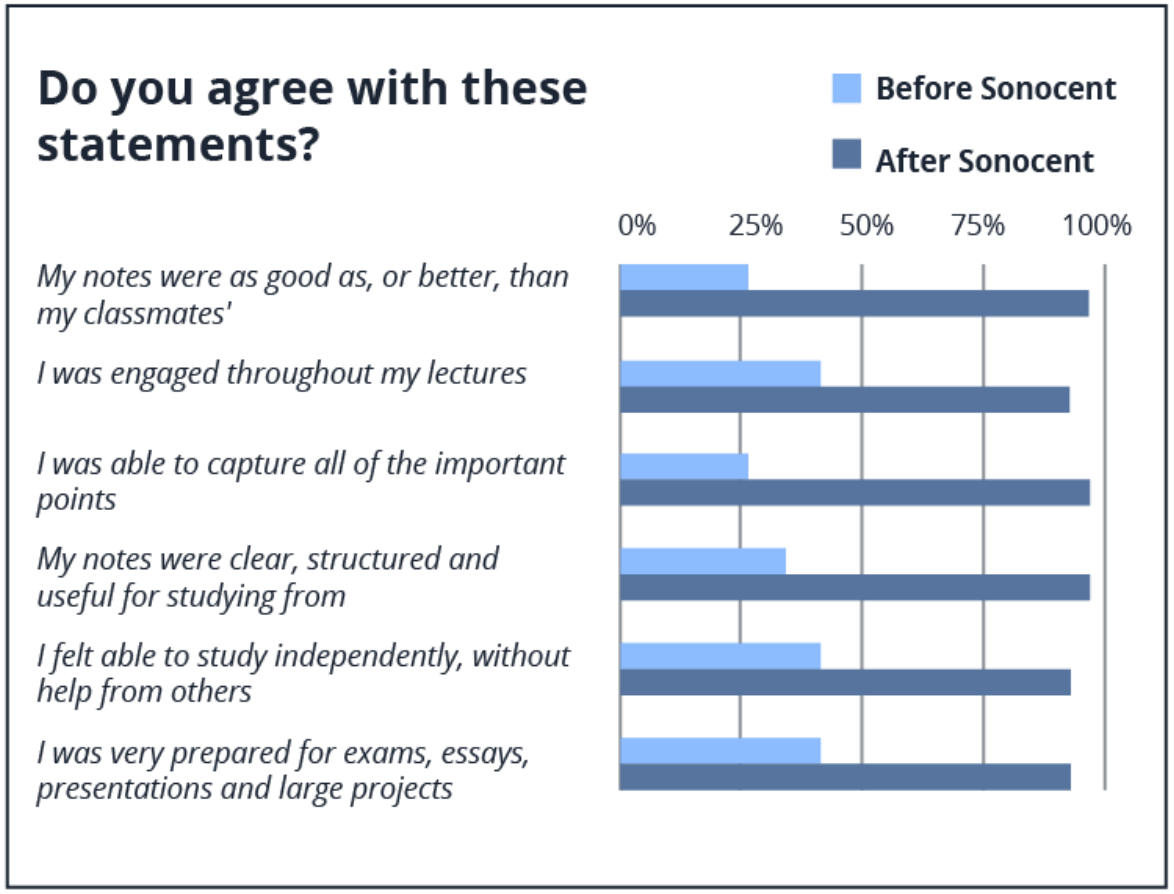
What do students and campus staff think?

Student survey results



78% of students use the Sonocent app for iOS and Android

77% of students use Sonocent outside of lectures, to engage with content in a variety of educational settings

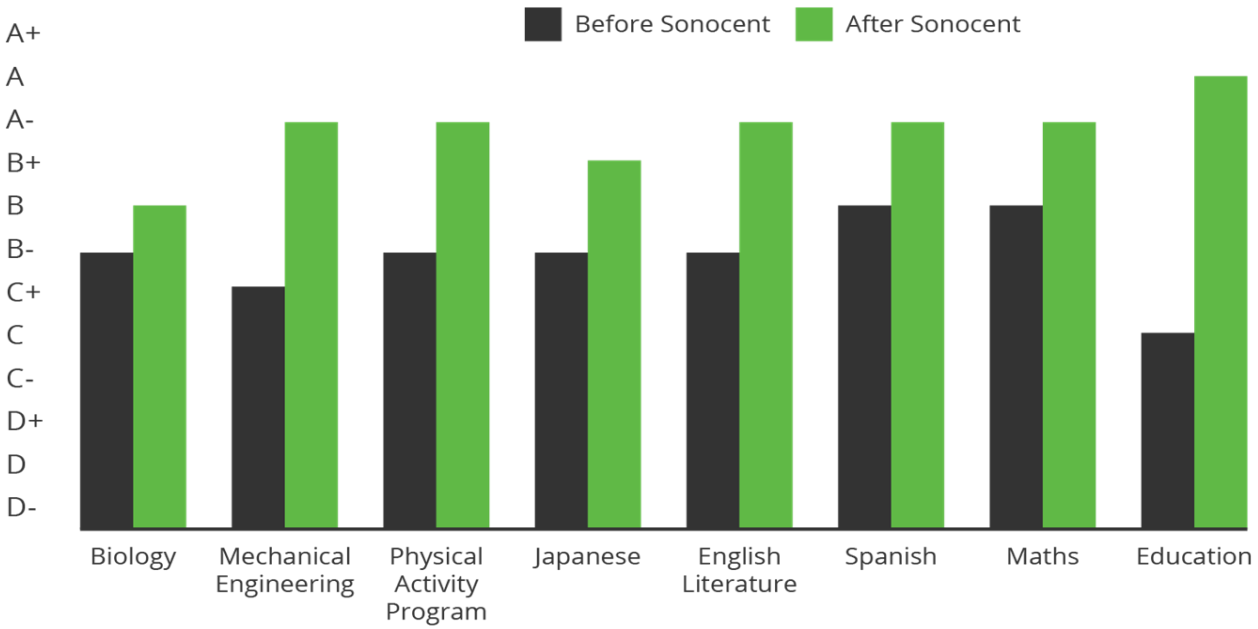


All data from a June 2016 end user survey, with 929 student respondents

Measuring Impact

Sonocent is *proven* to create learning independence and improve grades

Grade increase in individual students at The University of Nevada



"Every student tells me it's making a difference. And it shows whenever we do end-of-semester grades."

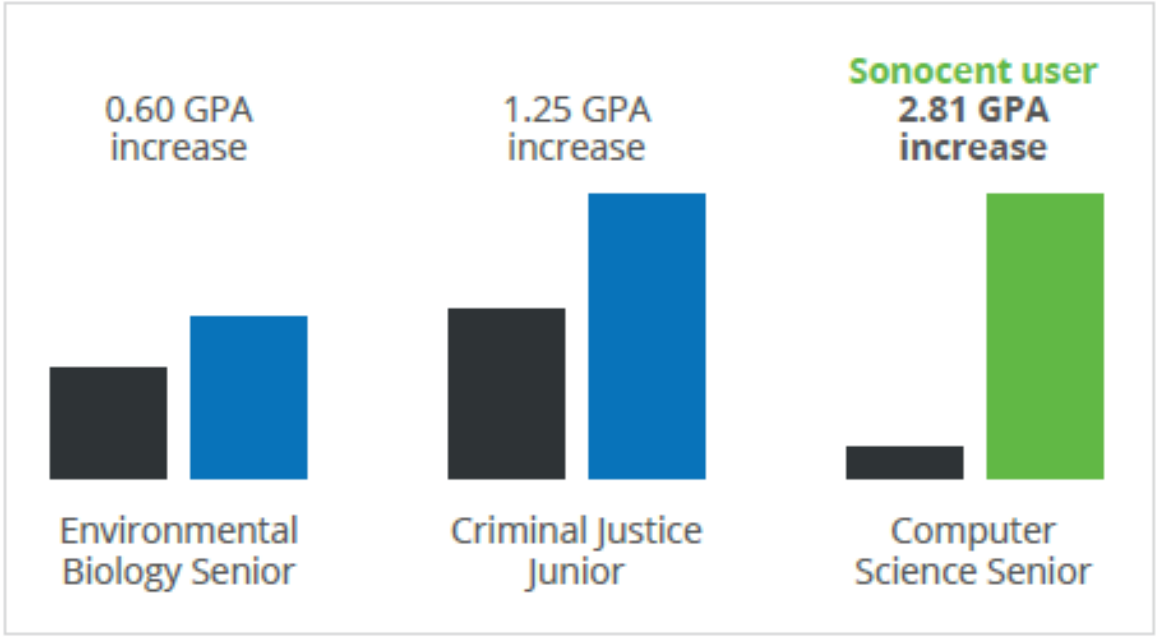
Darrin McCarthy
Lead Student Assistive Technology Specialist
University of Nevada, Reno

80% of students experienced an average improvement of one full grade (e.g. a B to an A) over a single semester

Measuring Impact

Sonocent is *proven* to create learning independence and improve grades

Grade increase for students at Tennessee Technological University



100% of the 25 students identified as 'at risk of failure' experienced an average improvement of more than one full grade over a single semester. They all retained their place at college.

"Of the students to whom we gave the software we didn't have a single one who didn't increase their GPA."

"We had a student who had flunked the previous semester go to somewhere in the neighbourhood of a 3.0 average. He said that had it not been for the software, he wouldn't still be at the college."

Edward Beason
Lead Student Assistive Technology Specialist
Tennessee Technological University

Measuring Impact

Preliminary findings from recent adopters in Australia

Curtin University

One of the first Australian institutions to implement as a digital note taking accommodation

"I recommend it every day and our students are just amazed when we tell them about the wonderful ways Sonocent can assist them ."

Karen Darby, Curtin University

THE UNIVERSITY of ADELAIDE

Conducted a small scale rollout for 2017 academic year

"Sonocent has enabled students to take control of their note taking and enhanced the quality of their notes; they're no longer relying on the content, accuracy and timeliness of notes from a peer note-taker."

Annie Harris and Ngaire Robertson, University of Adelaide

WESTERN SYDNEY UNIVERSITY

Recently completed a pilot project conducted during the final semester of 2017.

"We anticipate that many more students will approach D.A.s in 2018 seeking the software as an alternative to professional notetaking."

Nola Baker, Western Sydney University

During the pilot, students primarily used Sonocent to:

- **Colour code audio recordings according to ‘value’ of the information to the student.**
- **Pair audio with PowerPoint slides from lectures**
- **Create summaries aligned with recordings.**

“I was able to focus more on the parts I had trouble understanding, and remove all the waffle that increases my mind drifting off.”

Wayne, B Science student, Campbelltown

WESTERN SYDNEY UNIVERSITY

Qualitative Data from the Post Pilot Surveys: Key themes in the feedback

- **Focus and improved understanding of material**
  - Students report increased ability to concentrate on the information that matters to them.
- **Ease of use**
  - Students love the fact that the program allows them to work with audio, slides and text in the one workspace.
- **Improved engagement in the lecture**
  - Students have reported that they are able to relax and enjoy their lectures more and participate in discussions.

"**I have loved using this technology.** It has made my notes **succinct** and have kept them **all in one place**, **nicely organised** and **easy to follow** which was **something I was struggling with prior to using Sonocent.**"

Christina, BHSC (O.T.) student, Campbelltown

WESTERN SYDNEY UNIVERSITY

Student feedback from
Western Sydney University Disability Service Sonocent Audio Notetaker Pilot, 2017.

"Being able to download the lecture recordings and take notes whilst looking at the slides in the same app was great as I am usually unable to take complete notes whilst in lectures. I also used it during practicals/workshops that were not recorded so I could go back and revise things I was unable to write down or missed."

Ingrid, B. Science (Zoology) student, Hawkesbury

"I find the Sonocent software is really helpful for screen capture of online lectures, highlighting salient explanations and making a video that allows me to view it later on TV."

Morgan, B. Grad. Dip. Psychological Studies student, Kingswood

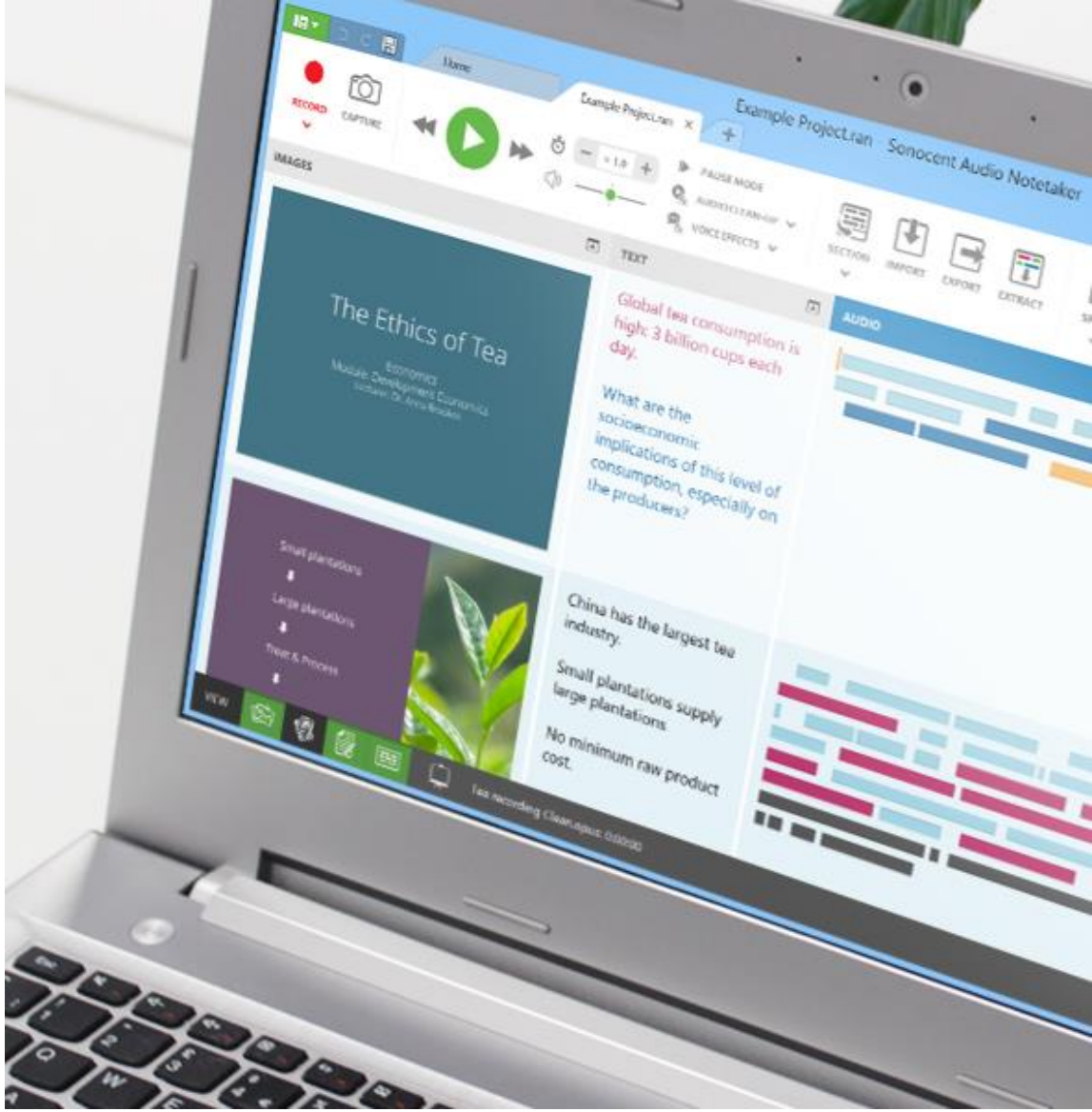
This software package is amazing for students and note taking in general! It helps you structure and organise your notes for not only lectures and tutorials, but also with assignments. This is the kind of software that not only students with disabilities need but … pretty much anyone who does research or studying for a course. ……The university should look at incorporating this software into its course fees and offer it to everyone."

Arthur, B. Psychology student, Kingswood

Key Pilot information

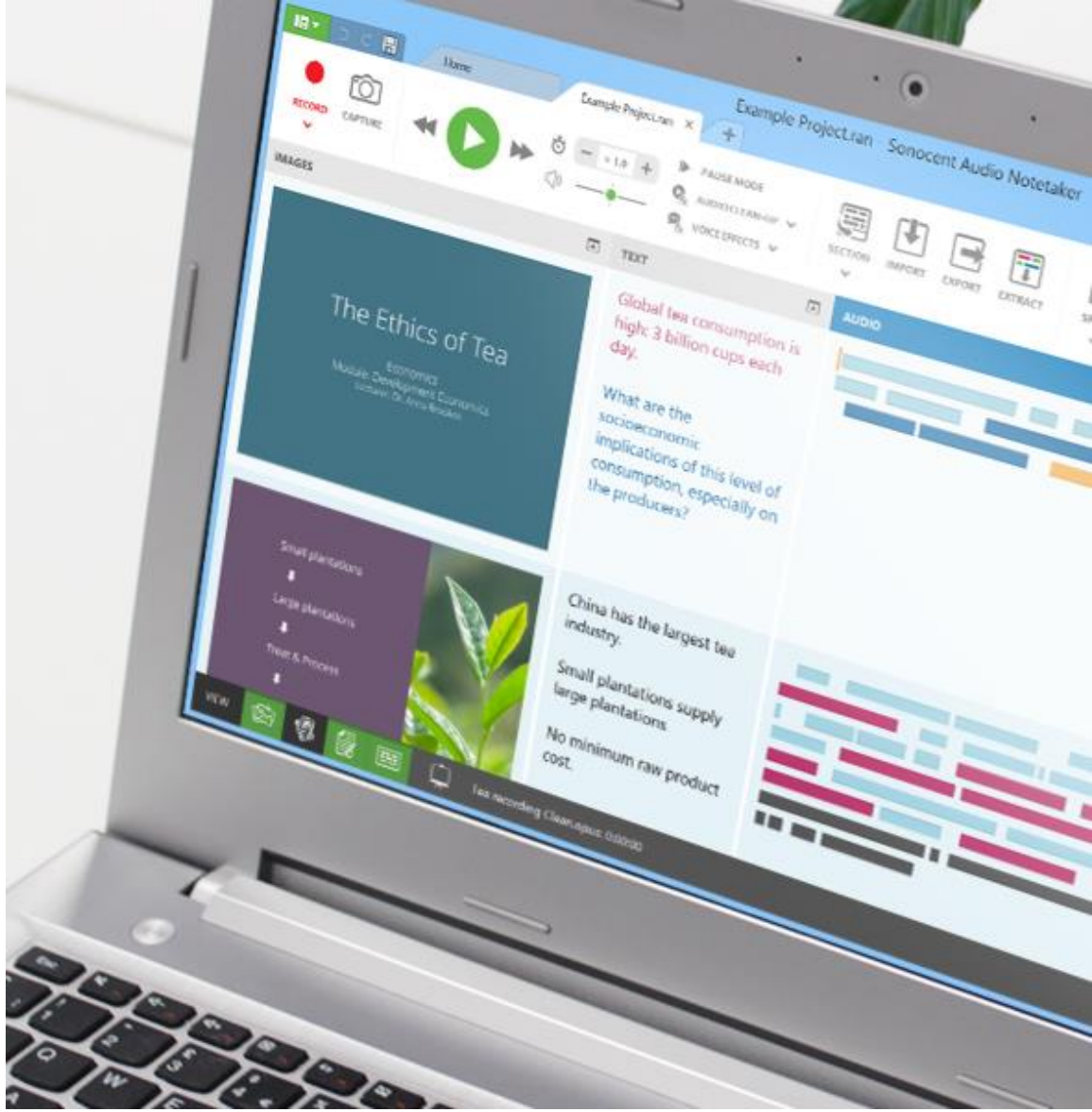
- Professional notetaking has been removed from approximately 200 students this semester, so it is reasonable to anticipate that many more students will approach D.A.s in 2018 seeking the software as an alternative to professional notetaking.

- It should also be a regular recommendation for new students registering with the service in 2018.



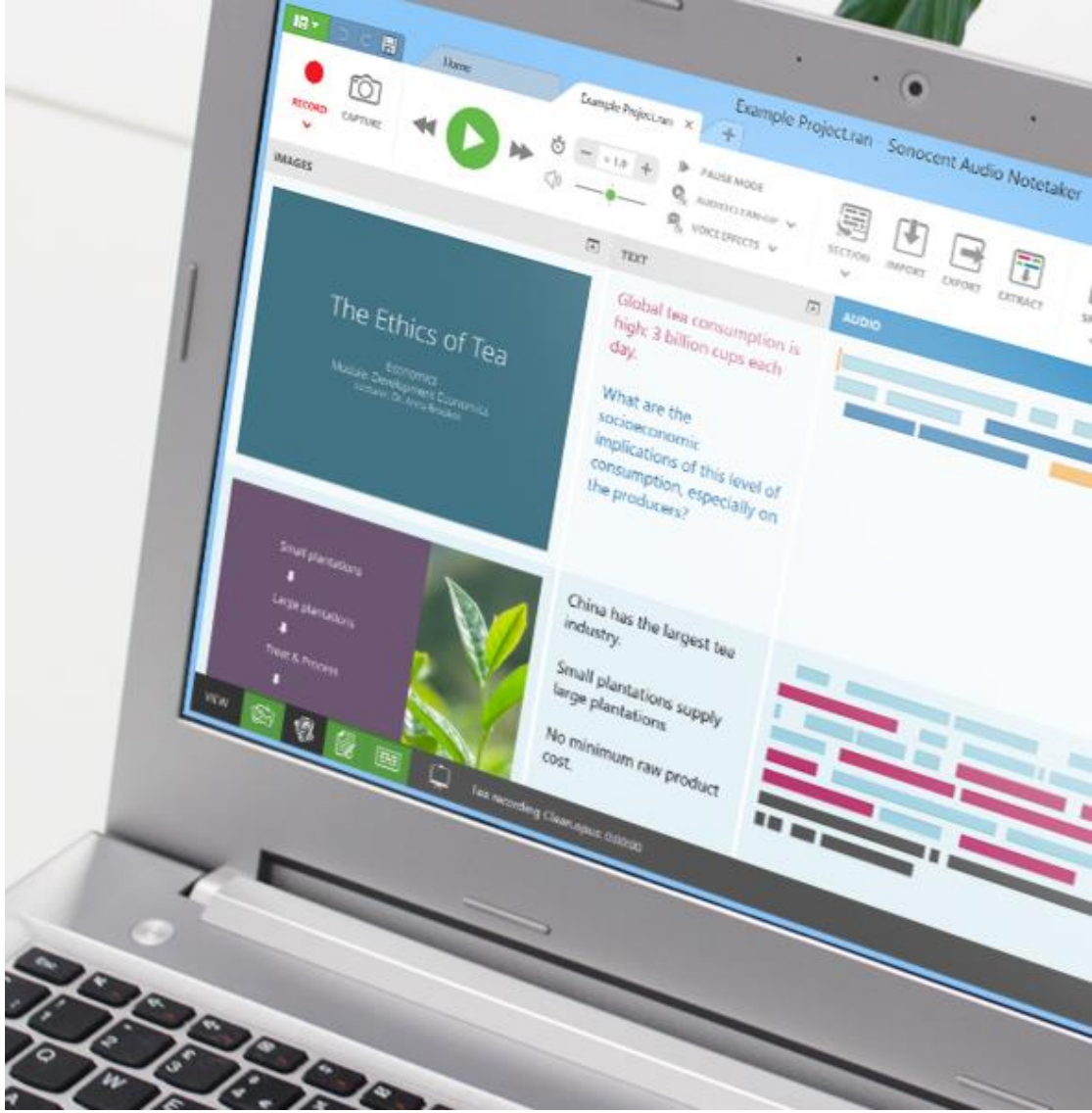
Key Pilot information

- The free trial pilot licenses expired on 15/12/17.
- We have purchased 200 licenses for 2018 academic year. Licenses will be made available to those students who have participated in the trial and indicated that they want to continue to use the software while at WSU.



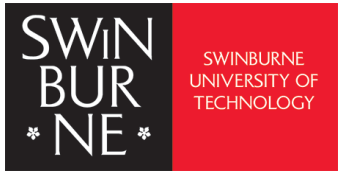
What next? We need to:

- manage licenses and provide support for students using the software.
- collect data over a longer period, including GPA before and after. Data collected over the next 12 months could be used to support a case for a university site license for all students.
- advocate for a universal **Recording Policy** at the university.

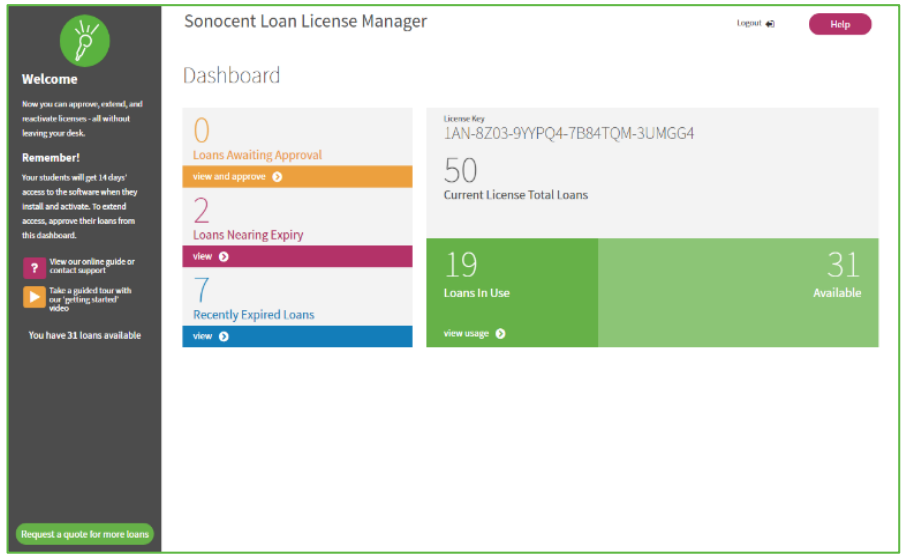


Who else has implemented Sonocent?

Over 300 institutions, including:



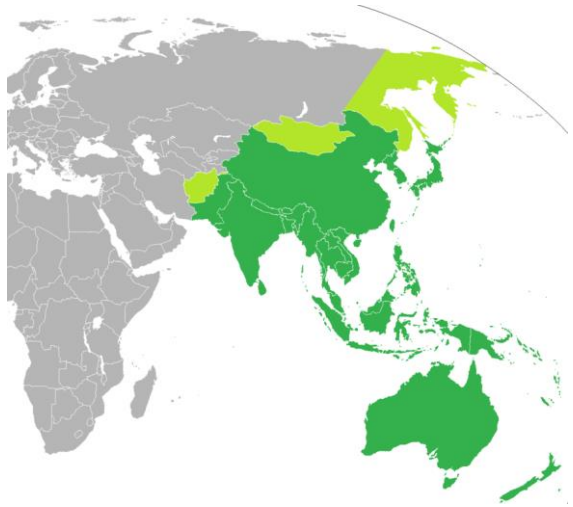
Request a free campus trial



Accessing Sonocent

- Free semester trial of Audio Notetaker
- Ongoing support provided
- 25 user license provision recommended
- More information at
  - www.sonocent.com/australia

Invitation is open to institutions across Asia-Pacific



Frequently Asked Questions

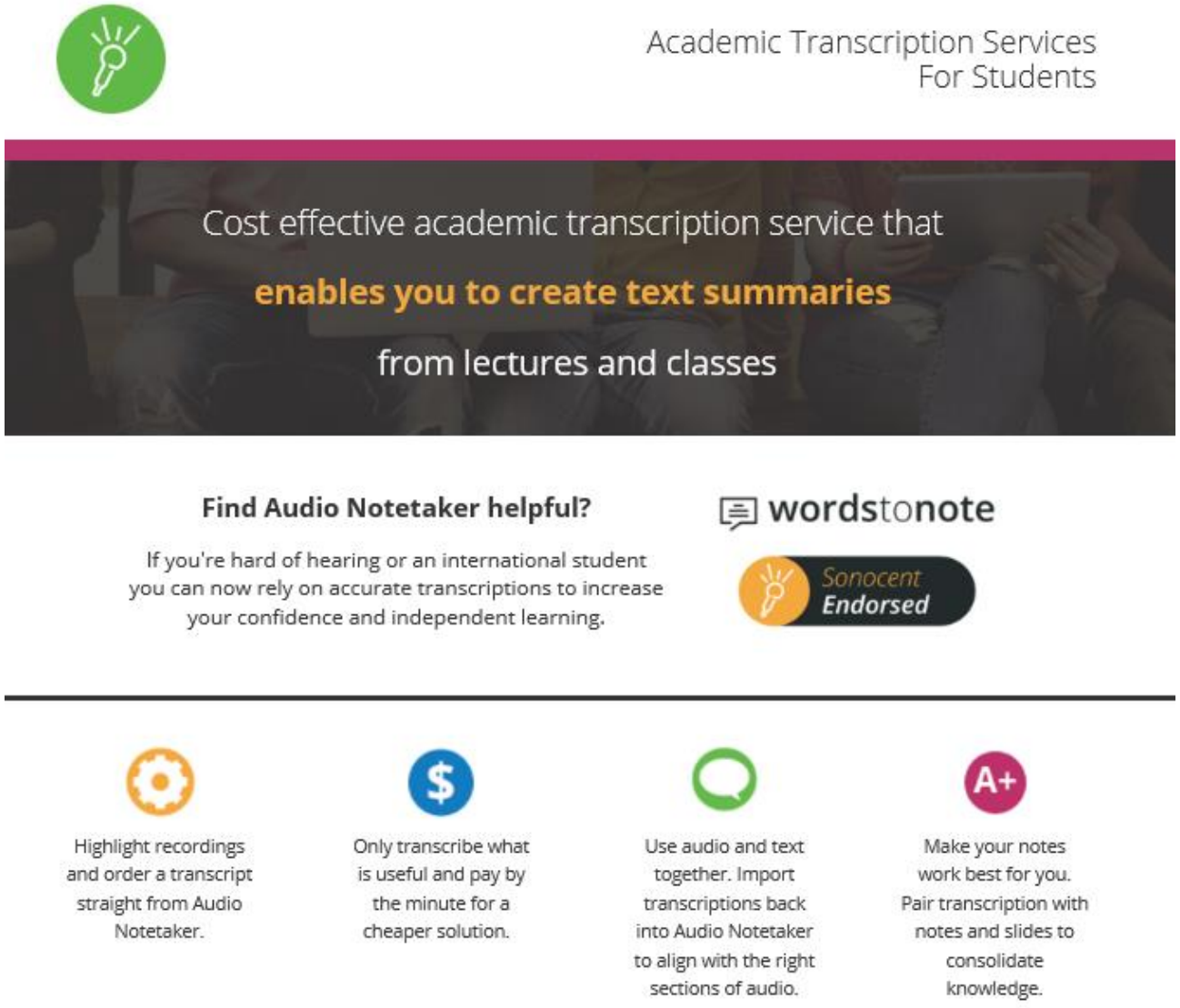
The recording quality.
What is it like?
- Audio Replace

Can it transcribe audio?
- Dragon
- Wordstonote
- www.wordstonote.com

To what level has it reduced the provision of peer note takers?
- University of North Florida

How much training do students need to use the software?

Is the software accessible?
- Lecture capture format of choice for Uni of Huddersfield



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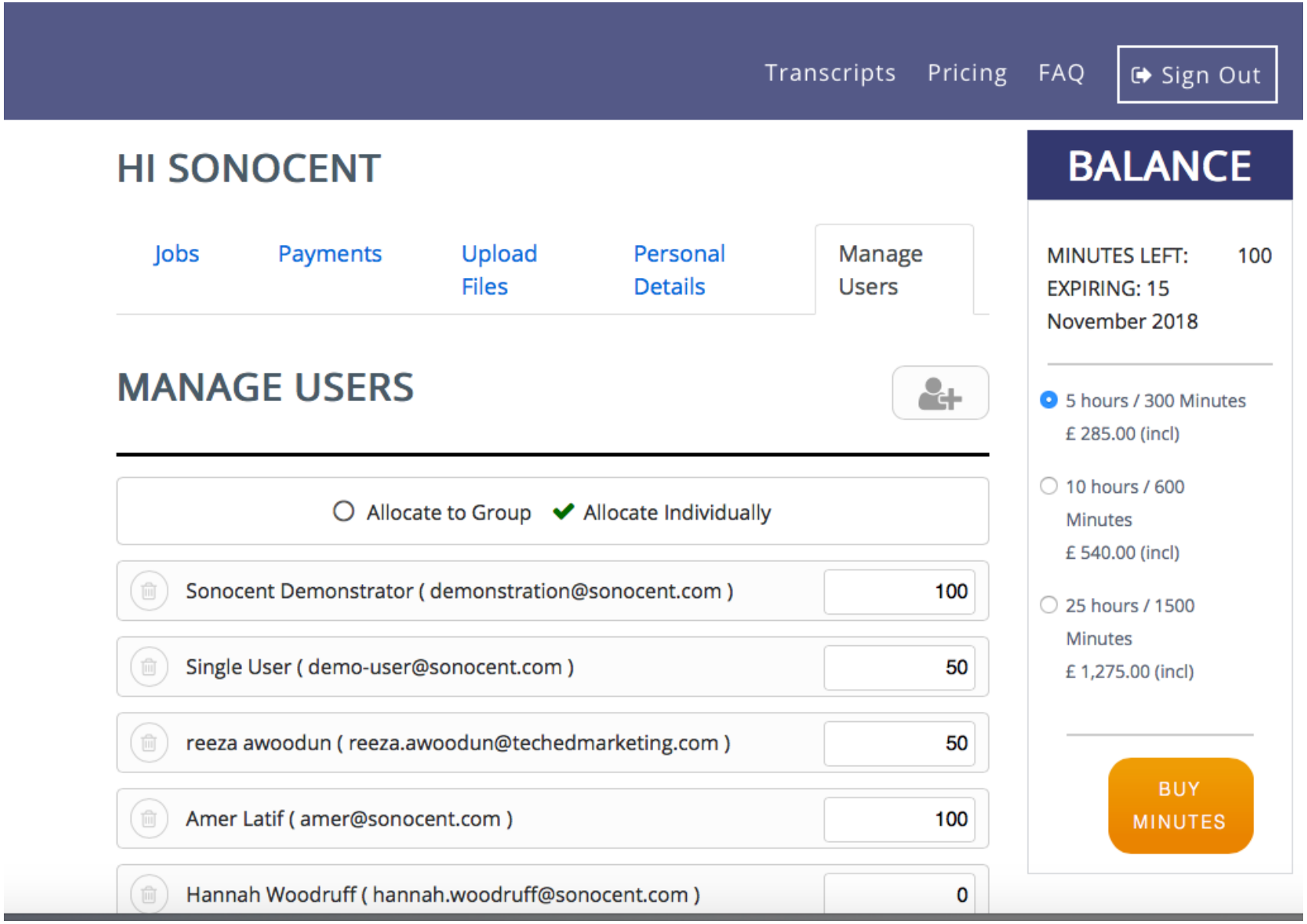
Slide 45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Sign Out
HI SONOCENT
Jobs
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Personal Details
Manage Users
MANAGE USERS
Allocate to Group
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Single User (demo-user@sonocent.com) 50
reeza awoodun (reeza.awoodun@techedmarketing.com) 50
Amer Latif (amer@sonocent.com) 100
Hannah Woodruff (hannah.woodruff@sonocent.com) 0
BALANCE
MINUTES LEFT: 100
EXPIRING: 15 November 2018
5 hours / 300 Minutes
£ 285.00 (incl)
10 hours / 600 Minutes
£ 540.00 (incl)
25 hours / 1500 Minutes
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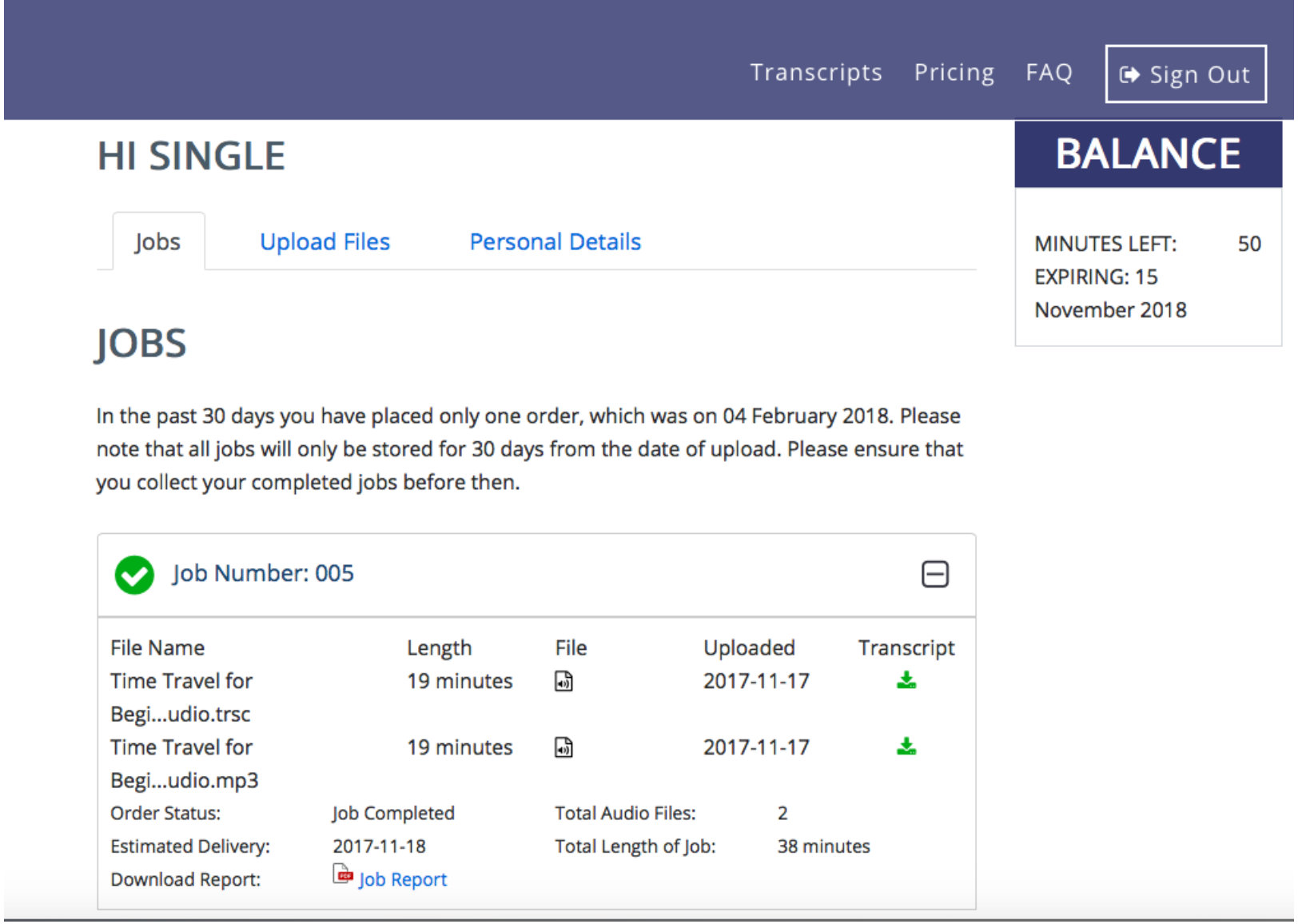
BUY MINUTES

Slide 46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JOBS
In the past 30 days you have placed only one order, which was on 04 February 2018. Please note that all jobs will only be stored for 30 days from the date of upload. Please ensure that you collect your completed jobs before then.
Job Number: 005
File Name
Length
File
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Time Travel for Begi...udio.trsc
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19 minutes
2017-11-17
Order Status:
Job Completed
Total Audio Files:
2
Estimated Delivery:
2017-11-18
Total Length of Job:
38 minutes
Download Report:
Job Report

References

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