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Mainstreaming Captions for Online Lectures in Higher Education in Australia:
Alternative approaches to engaging with video content

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Outline

1. Background (Katie)

- Definition, History and Background

- Use in Education

- Benefits for of captions for at risk students

- Benefits of Accessible Education

- Benefits of Captions for all students

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Findings of Research (Mike)

- Providing Captions

- Study Design

- Survey and Interview Results

- Future Directions and Implications

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definition

- The text version of speech and other sound in traditional audio visual media such as films, television, DVDs and online videos. Captions are usually provided to enhance audio content and are typically recognised as benefitting two main groups
  1. people with hearing or learning difficulties
  2. those who come from a non-English speaking background (NESB).
- Generally in the context of education media, but this has relevance to education too

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history

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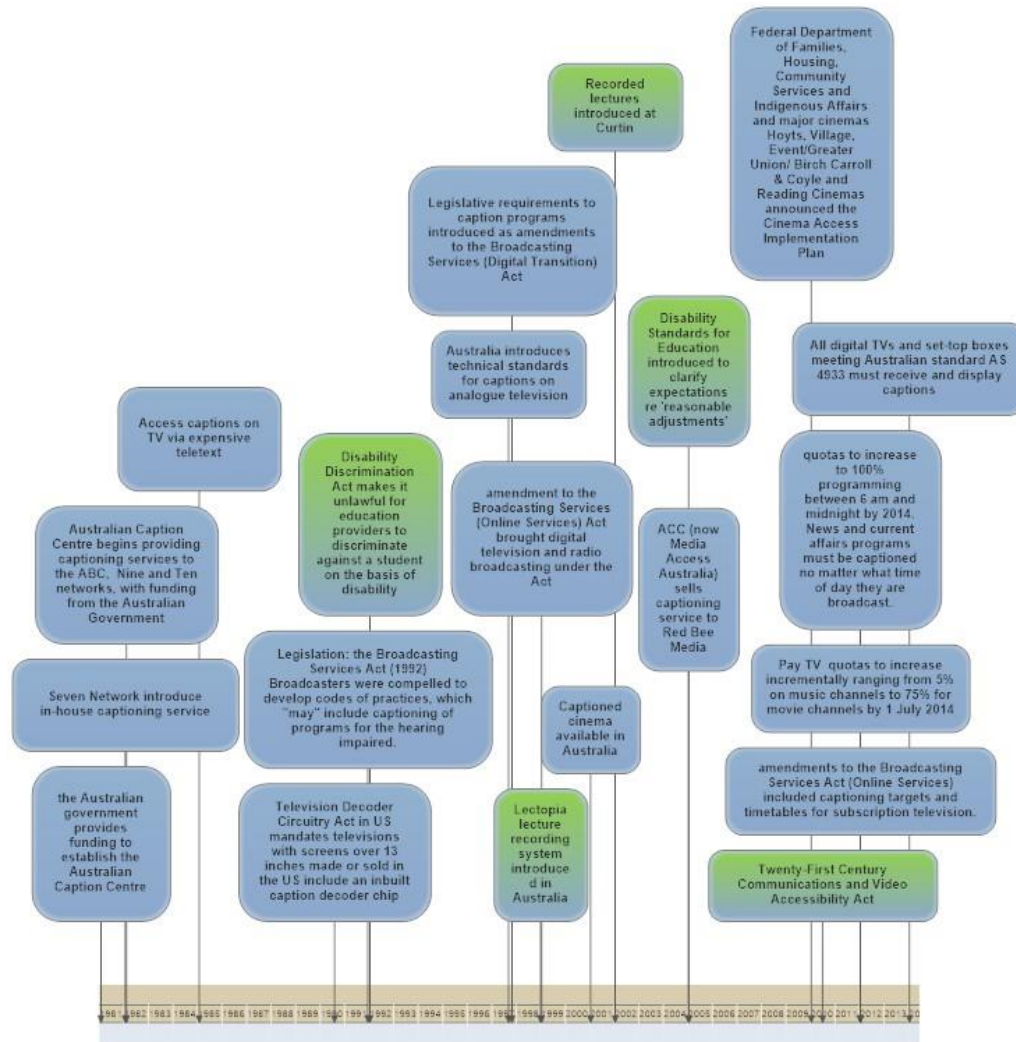
Background

- 1 in 3 Australian students with disabilities benefit from captions (Cap That 2015)

- Students benefit when individualized approaches to learning are encouraged (Alty et al 2006)

- accessibility for students with disability improves when it is mainstreamed as part of the online educational environment (Searle 2013)

- accessible online environments are important to both students with disability and those without (Kinash, Crichton, & Kim-Rupnow, 2004)

- Closed captions improve both comprehension and vocabulary for the majority of the student population (Podszebka et al 1998).

- Captions improve the educational experience for all students, including those without hearing impairments (Bowe & Kaufman, 2001)

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Research by 3Play Media and the BBC (2015)

- captions benefit a large number of people and are not only used by people with hearing impairments. Captions benefit students

  - with hearing impairments

  - whose first language is not English

  - with learning disabilities, attention deficits, or autism

- Captions also benefit all students

  - comprehend content that is spoken very quickly, with accents, mumbling, or background noise.

  - clarify full names and technical terminology

  - watch videos in sound-sensitive environments, like offices and libraries.

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Captioned lectures benefit "at risk" students

- Essential for people with hearing impairments

- Improve comprehension for students with autism spectrum disorder(ASD) by cutting out background noise

- Anecdotal evidence suggests students with ADHD prefer to autonomously access direct content through transcripts rather than through a note taker. *NEEDS FURTHER RESEARCH*

- many students with dyslexia perform better with text-only media such as lecture transcripts, when compared to media combinations such as sound and diagrams or diagrams and text (Alty et al., 2006; Beacham & Alty, 2006).

- NESB: Captions are an effective aid for individuals of all ages who are learning to read, be they first or second language learners

- Older students who suffer from age-related hearing loss benefit from information being information in multiple ways => can easer cognitive overload

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Benefits of accessible online education to everyone

- Li and Hammel (2003) offers innovative ways to bypass the effects of impairment that can prevent a student from participating

- Mullen et al. (2007) allows a neutrality of identification to allow the student with disability to blend in as though not disabled

- Alltree and Quard (2007) adjustments introduced to assist students with disability have far reaching benefits for the non-disabled population also.

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Beneficial for all

- Online spaces allow more students with disability the possibility of participating in an educational experience.

- Alltree and Quadri (2007): more flexible study options, such as flexible delivery of lectures off campus using digital technologies, addresses the problem students with disability face under the traditional face-to -face learning format.

- Students with disability are a useful reminder of the importance of meeting the varied needs of a diverse population which includes students negotiating paid employment or family commitments with study.

- different students adopt different learning styles (Kinash, Crichton, & Kim-Rupnow, 2004). Approaching accommodations made for students with disability along a continuum of different learning style places disability, as another way of achieving the same goal rather than as a deficit.

- accommodations made to assist students with disability can actually benefit the entire student population.

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For example: Alt text

accessible online environments are important to both students with disability and the mainstream:

images can be effective in providing alternative examples or explanations of content. The addition of an alternative text tag to the image enables a screen reader used by a visually disabled person to read the textual description to the learner, describing attributes of the image. Adding a title representative of a description of an image also allows learners without disabilities a more detailed explanation of the image. Sounds can also be used, but captions or alternative text benefit the deaf and those with hearing by providing a written script to follow and refer back to at a later date. Easy-to-read content benefits all learners by "chunking" the information into blocks of important information that can be easily read and understood by any audience.

(Kinash, Crichton, & Kim-Rupnow, 2004)

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Captions are another example

- students learn in diverse ways, and comprehend information in different ways depending on how accessible they find the delivery
- All students report difficulties hearing lectures
- Captions may also be an important tool to help tackle the underrepresentation of at risk groups in particular subject areas such as science, technology, engineering and maths courses
- demonstrated a positive effect on vocabulary acquisition, which may help students to learn the subject-specific language and vocabulary of these and other academic disciplines.
- Captions improve course retention rates
- Captions offer the ability to adapt content to different context, constraints and audiences eg listening to a lecture in a library where sound is inappropriate

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General mainstream benefits of captions

- Captions and transcripts enable more consistent access to content even when it is not possible or suitable to listen to a lecture

    - students can therefore access the content in public spaces or noisy environments, and can avoid having to replay video content whenever background noise interferes with their ability to hear clearly.

- provision of captions is an advantage in a purely online learning environment.

    - Mode of learning becoming more popular

    - Important for students with slow or intermittent internet connections, poor quality speakers or headphones, and computers that struggle to stream large files
    - creating captions or transcripts for video media can revolutionise the way students index, search and retrieve information

- Search Engine Optimisation

- Students can more easily search for particular terms to find relevant lecture content when revising (Gernsbacher, 2015).

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Our research question

- *Do students as a diverse population benefit from personalised learning approaches, and accommodations designed to assist students with disabilities? Do these approaches benefit the entire student cohort, and how do all students utilise captioned lectures as part of a personalised approach to learning?*

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Study design

- Providing Captions

- Study Design

- Training Module

- Survey and Interview Results

- Future Directions and Implications

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Providing captions

- Accommodation rather than Universal Design
  - CAP Plans

- Echo360 captions provision and eatures

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Study Design

- Taking advantage of initial captions provisions

- Providing captions

- Survey and Interviews

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# Training Module

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Results – demographics

- Respondents ranged in age from 18 to 65 with a relatively even spread across the age brackets therein. While the students surveyed were enrolled in first and second year units, only 48% were under 30 and 52% were aged between 31 and 65, reflecting a significant portion of mature age students participating in the study. A total of 64% of respondents were female and 36% were male.

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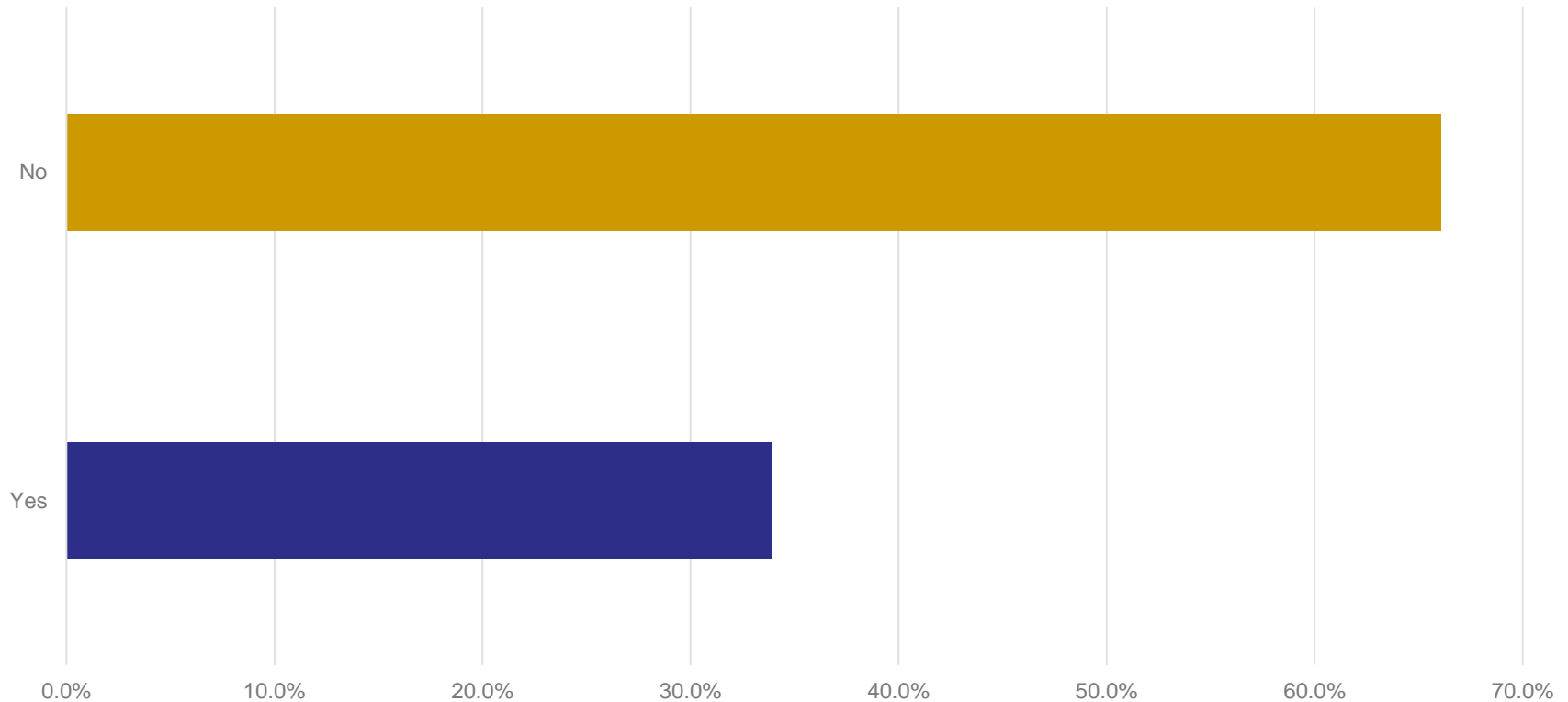# Do you identify as a person with a disability?
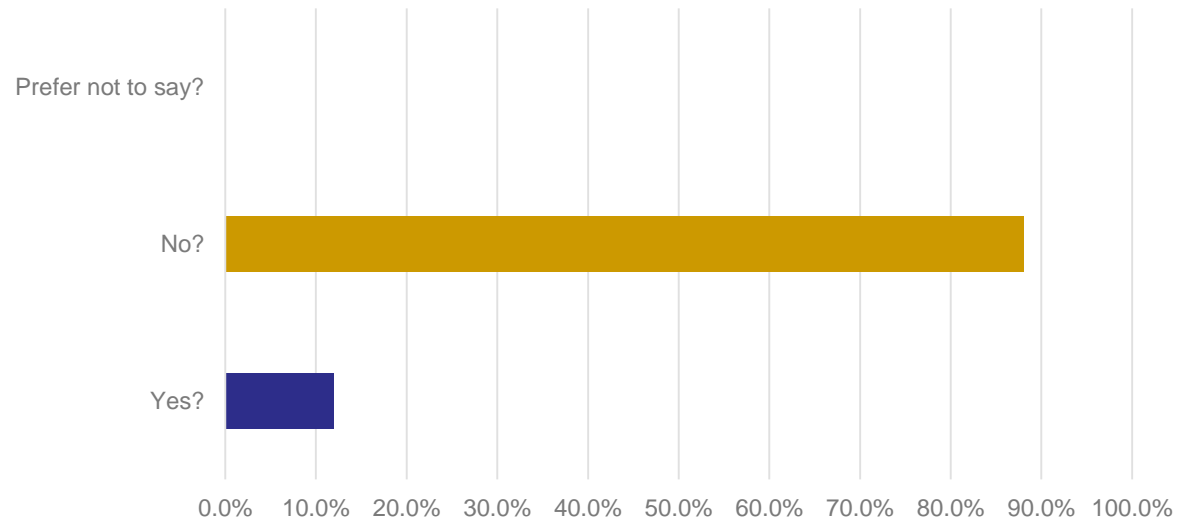
Is English your primary Language?

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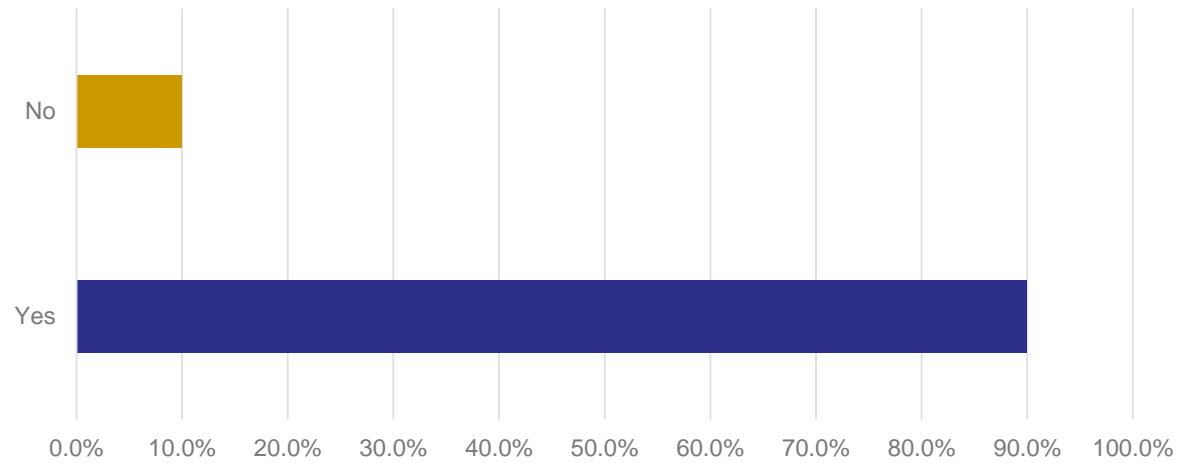
# Engagement with Recorded Lectures and Online Unit Materials

Did you have access to captioned lectures (where a text version of what was being spoken would appear as text at the bottom of the screen)?

- *Many students may not realise the availability of the captions unless they are reminded about them and how easy they are to use. Even if it's a quick mention at the start of the lecture to turn the captions on.*
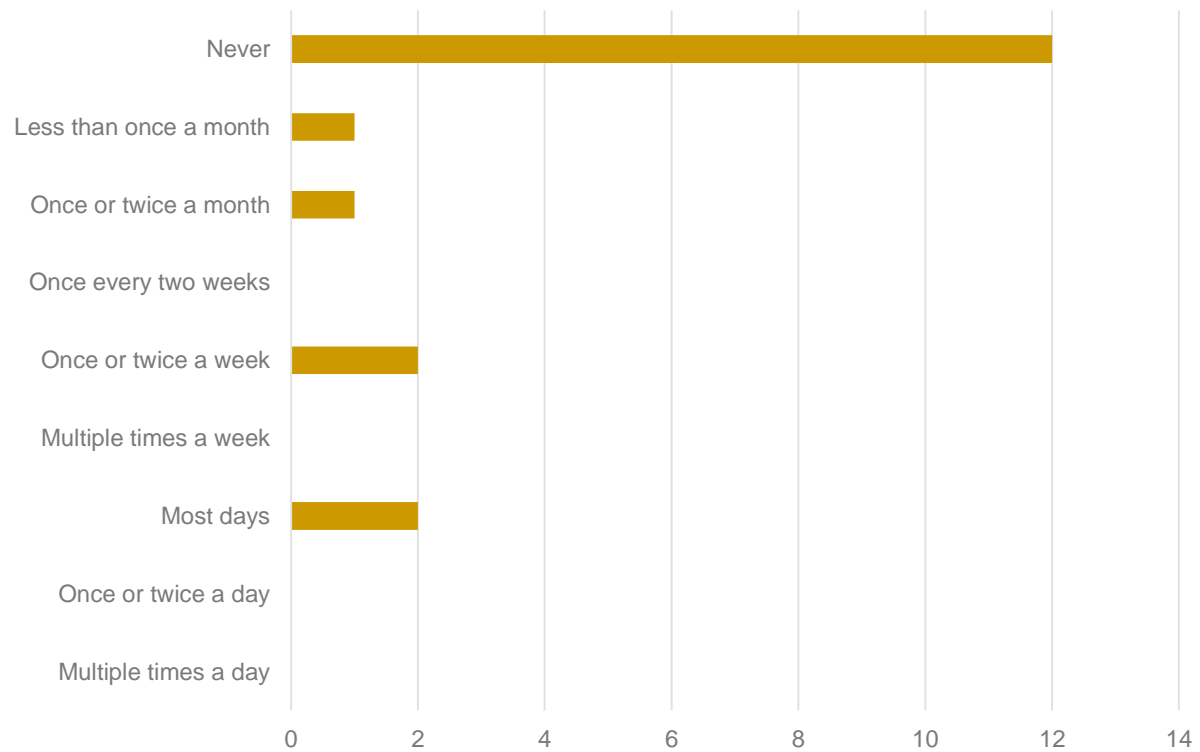
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Did you have access to the training module on the lecture captioning system at the start of semester?

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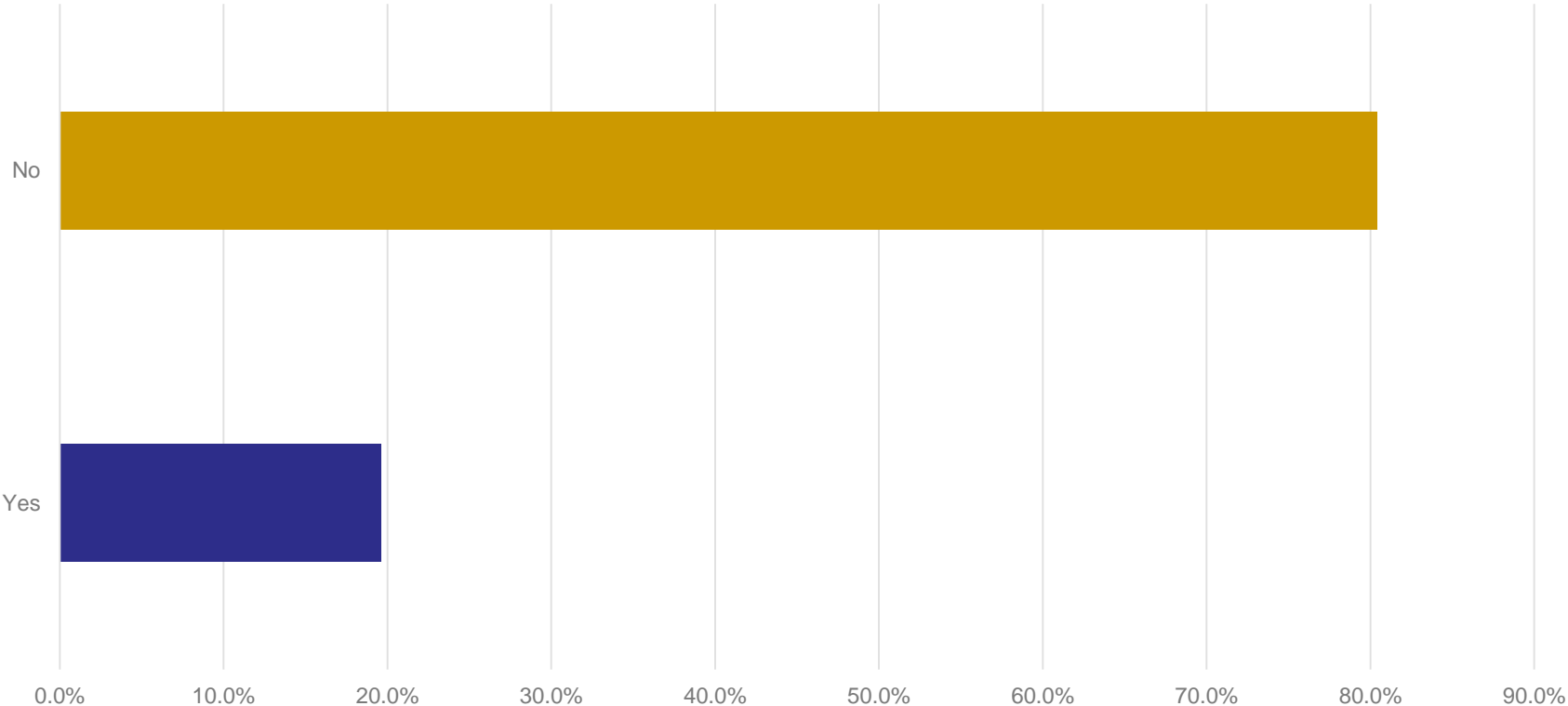
How often, if at all, did you use the search function to find a word
and skip to that part of the lecture

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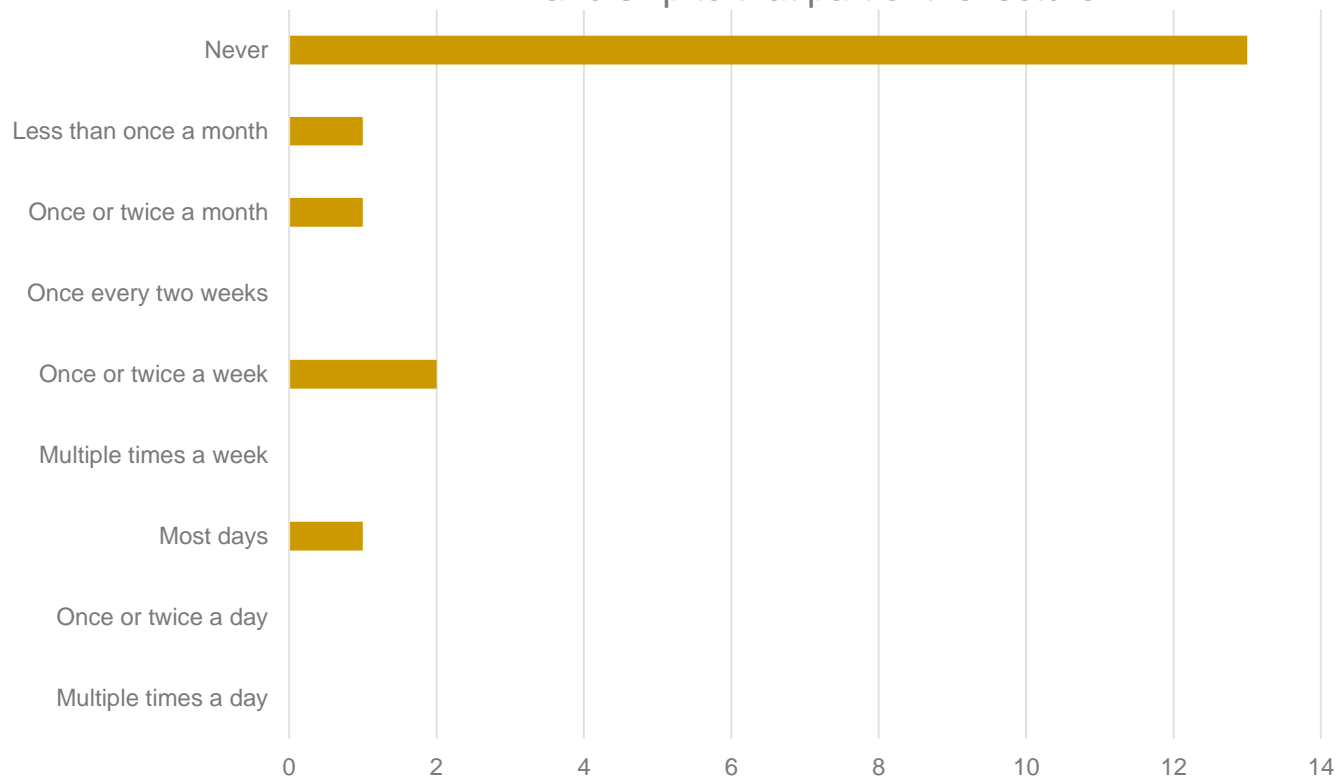
How often, if at all, did you Access the full transcript of the lecture to read

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- *Transcripts are particularly useful in addition to captions as they allow the user to quickly skim the material rather than sit through a whole lecture. Transcripts also allow translation into other languages, highlighting text and other features that make the content more accessible.*

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- *I typically receive requests for lecture transcripts at the commencement of each study period. In SP3 [during this study] I did not receive any requests.*

- *I feel that lecture transcripts would be particularly useful as this is the most common request I receive from students, especially those with disabilities.*

- *I think transcripts and keyword searching would likely be useful to many students who access lectures through recordings (or who access recordings even after attending the lecture in person).*

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- *I used the captions keyword search. I think I would like to use the lecture transcript as well but I did not use that in this unit.*

Overall did you find that the captions helped in your use of the recorded lecture material?
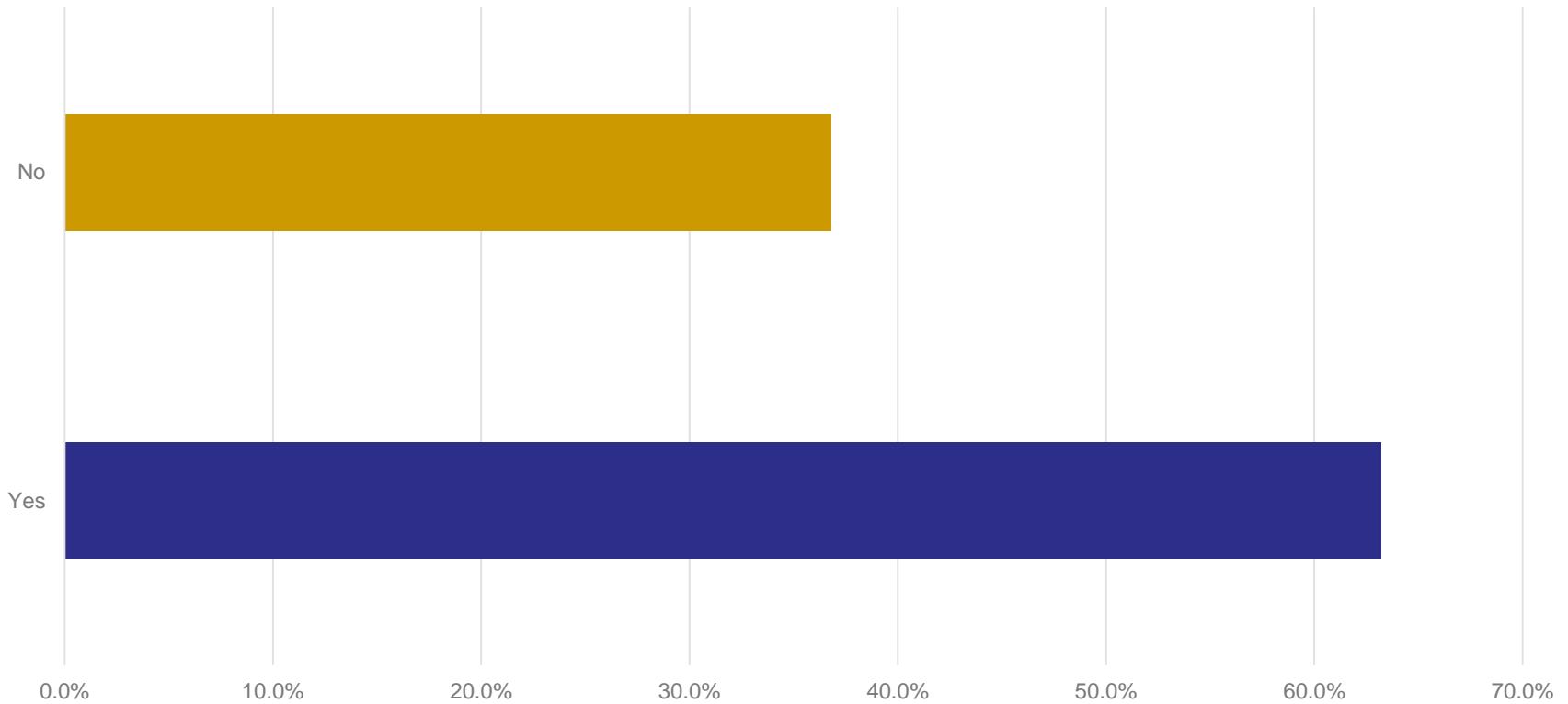
- *[Captions] made a big difference to me in terms on understanding and retaining what was said in the lectures. I am not sure that many students would realise this unless they actually used the captions.*

- *I found it much easier to follow what was being said in the recorded lectures and I also found that they helped stay focussed and not become distracted from the lecture.*

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- *It is difficult enough to track who listens to lectures at all, let alone who might be using the captions, or have found these helpful. I would like to think that not only those with hearing impairments, but also ESL students and even people who find listening to and taking in the recording difficult for other reasons, might have benefitted.*

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- *One student has given me positive feedback via comments on the [discussion board].*

- *One has reported that it helps with retention and with times when speech is soft or garbled. I suspect it helps mediate my accent and pitch!*

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- *I was not aware of the implementation of closed captioning.*

- *As I was unaware that CC was being implemented, I cannot comment on this.*

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- *There have been some glitches within the iLecture system with identifying the correct lecture and some issues with audio quality. There is also a time delay as it takes up to a week for the captions to become available.*

- *I find the location of Transcripts in the iLecture system is not user friendly and many students have difficulty finding where they are.*

- *I'm aware that the EchoCenter is not necessarily the most intuitive of interfaces to use.*

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- *Any technology that can assist in making lectures more accessible is useful, particularly in OUA [online] courses.*

- *It would be a good example of Universal Design as it would make the lecture content more accessible for students with disabilities as well as students with other equity needs.*

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- *YES – it benefits all students. I personally find that I understand and my attention is held more by captioned content.*

- *It certainly makes my role easier as it allows effective access to recorded lectures. Captioning allows full access as every word is accessible as opposed to note taking which is not verbatim.*

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- Lack of awareness of captions availability

- Lack of awareness of training module provided

- Those who were aware or used them found them helpful

- This was across the cohort – not just students with a disability or from and ESL background

- The system interface could be better at highlighting the captions availability (maybe have them turned on by default)

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- *Because the captioning is once-off, it means I can't re-record the lectures where there was a failure in technology as the new versions would not be captioned.*

- *A bit cautious about the transcript as there may be problems with students copying that content and also with not viewing the lectures thinking the transcripts are sufficient.*

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- *In the main I just feel [captions are] important for accessibility and equity in general. Why should people have to request captions? Recorded lecture content should be available to all students, in whatever way they find it most easy (or possible) to engage.*

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- *Hi All, In one of my units last semester we were lucky enough to have captions on the recorded lectures. They were immensely helpful for a number of reasons. I really hope they might become available to us in this unit. I think Mike Kent was the name of the Curtin person who organised them. If Carol or Paul think we might get them I'd be a super happy camper!*

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Future Directions and Implications

- Moving towards Universal Design

- Increasing reach of global regulations in media and education

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