# Questions and Answers from the [**Online learning for Deaf and hard of hearing students, learnings from COVID-19 webinar**](https://www.adcet.edu.au/resource/10400/adcet-webinar-online-learning-for-deaf-and-hard-of-hearing-students-learnings-from-covid-19/)

**What is the protocol for Deaf or HoH students in regard to English Language listening tests e.g. IELTS tests?**

* Our understanding is they complete the written and reading components and are scored on such.
* The IELTS website is quite clear on this. If a person presents as being unable to lipread or listen and have presented evidence, then they are able to sit the reading and writing sections only. The score they get from these two sections are notionally calculated for the speaking and listening sessions and an "overall IELTS band score" is given. For people who are able to lipread, various accommodation is given such as practice, extra time. For people who are able to use their residual hearing, various accommodation is given such as being allowed to wear hearing aids, being able to use headsets, etc.
* More information here: [https://www.ielts.org/book-a-test/special-requirements/hearing-or-speaking-difficulties](https://protect-au.mimecast.com/s/Hm9eCNLwPnfQD4E2fRSovx?domain=ielts.org)

**What is the greatest obstacle in the learning journey for the Deaf and Hard of Hearing students?**

* Depends on the student. Access is the greatest barrier - one needs to first ask can they successfully access all content? Can they comfortably be a student?
* Accessing audio communications in a different mechanism - captioning or interpreting can be tiring. You are using more energy to 'listen' whether that is by trying to hear, lipread, read captions on a screen and concentrate on who is saying what, why and everything else that is now reduced to captions or Interpreters.
* It takes longer to take notes - as these need to be taken after the class. Even if someone writes notes for the deaf/hard of hearing student - the student has to review these and adjust them so they are their own - either from notes of other students or from transcripts. It is important they do this so they are engaged in all aspects of the learning process it does take more time to do this.
* Interactions with peers can also be more difficult as fellow students are not taught how to interact with a deaf/hard of hearing person and they can be reluctant to join a study team with a deaf student for example. All the little things - just take more energy and needing time out to re-energise can be misinterpreted by others as not wanting to be part of the group.
* Attitudes of others. willingness of participants, teachers and students alike
* Connectivity and technology access to standard needed
* Language levels – Strategies for accessing interpreters.  Etc .. Being able to Pin interpreters. And see them all the time
* Availability and quality of interpreters
* Fear of looking stupid - this is true of all students but I do find that regardless of deaf or hard of hearing, some do prefer to ask questions privately rather than in class in front of their peers. For this reason, it can be helpful if academics are able to set aside some time for the student to present their questions or to seek clarification.

**What are the perceptions of hearing-impaired senior school leavers regarding barriers to university?**

* English language concerns are one shared barrier - prospective students are concerned about their English skills and essay writing skills. Fears that University is too intellectual for their abilities.
* Fears they will not make friends.
* Though I do find many deaf / hard of hearing students are aware of supports at university and there are aspirations to study at university.
* Concerns of the cost of the degree and if it is worthwhile an investment - such concerns are the same if you are deaf or not.
* Interaction, inclusion, isolation – Outside of academic areas and within – Can be multiplied online.
* Griffith University has been supporting [Hear for You](https://www.hearforyou.com.au) for their Brisbane activities - and sometimes we have given guest presentations - all this helps the young kids (aged 13 - 20, generally) to become familiar with campuses, public transport routes, and to break down the "elite" perceptions of university, In addition, GU has a long tradition of providing interpreters at Open Days which again allows potential students and/or their deaf parents to access information and to ask questions.
* Griffith University has been proactive in demystifying university to deaf and hard of hearing young people - we conduct school visits; we invite school groups on a tour of the campus; we support Hear For You activities on several campuses; we have a stall at various events such as Deaf Festivals. For larger events such as Leap into Uni events which can attract around 500 year 6 students (which are fun activities - science, health, creative, sports -  held across 2-3 school days), we arrange interpreters. We try to reach out to the community in various ways which help break down the mystique of university.

**Ways to Increase participation in Zoom workshops where deaf student does not use Auslan and Live captioning is in place.**

* Set Participation protocols. Make as many of these as visual as you can - "thumbs up" 👍 means you understand and agree and are right to keep going
* Make everyone follow same protocols.
* Hands up before speak 🤚.
* Type questions in Chat pod - so everyone can read and can not ask questions or elaborate on such till they have it in Chat pod - this allows deaf student to have an idea what is being spoken about first.
* Share the PowerPoint prior to lesson - give deaf student information on how lesson will be structured - so they are aware beforehand.
* Pause. Have 1 or 2 minutes silence/pause every now and then - thinking time (and do not allow chat or other things in this time - Deaf person can scroll through chats missed and so forth and catch up a bit). The pause can be beneficial for all.
* When you need to have larger discussion - think about if these can be done in Break out rooms - with prepared leaders who will follow protocols - so less people to watch and follow and less talking over one another - also allows more opportunity for discussion involvement for all students.
* Watch captions yourself where you can to check they are keeping pace with you and slow down if need be. (this can be hard when captions are delivered in Separate app - as the captions entered in Zoom when this happens are considerably behind compared to the 1CapApp - I tend to prefer captions in one format for this reason as one is slowed down or delayed.
* Inform all student captions are available - as they can help many students and other students can help with terminology when wrong at times!
* **Coming to Zoom:** Zoom is currently trialling live transcripts using [Otter.Ai](https://protect-au.mimecast.com/s/C3j5CQnzVqtKM035S9EqLX?domain=otter.ai" \t "_blank) with Zoom - Auto captioning in Zoom - it is being trialled in a few locations, and I assume may not be long before rolled out in Zoom across the board. I have not heard of Australian trial but they are trialling this in US at moment, perhaps other places also.

**Partial deaf strategies**

* Partially deaf means Hard of Hearing. All the strategies talked about apply to hard of hearing and deaf. Though it is important to remember not all hard of hearing persons are the same. Everyone is different - even with the same audiograms students will hear differently, have differing needs. Some can hear better with hearing aids, some can not. Actually, my ability to 'hear' can even vary from one day to the next, from one class to the next.
* Caption what you can. Record classes where you can for review.
* Make sure hard of hearing student knows how to use the technology.
* Coach the student on how to set up equipment - two screens if needed and how raise hand, type in chat and so forth
* Review with student - if they do not understanding - check why. Captioning is reading, and tests reading skills more than 'listening' skills. Sometimes new terminology is hard for a hard of hearing student to repeat - they may need assistance with pronunciations.
* Many partial deaf do well with auto captioning as they have the phonetic background to be able to work out the errors. they can listen in and use the auto captioning and a sound cue .. So when not sure what has been said they can look at the captioning.
* Could benefit from Bluetooth technology, where sound can go straight to hearing aids and minimise background noise and distractions. Using technology like Roger Pens etc to assist with listening.

**Other options for live captioning services, best practice guides for academics and recording lectures?**

* If captioning is needed there are no other options - captioning needs to be provided. **Auto Caption** **apps** are your **fall back** when for some reason captioning fails.
* MS Translator
* LiveScribe
* Webcaptioner
* [Otter.Ai](https://protect-au.mimecast.com/s/C3j5CQnzVqtKM035S9EqLX?domain=otter.ai" \t "_blank)
* There are new Auto caption options entering market all the time. There are also many new Captioning services entering the market - be wary as some do utilise Auto captioning and 'tidy up' auto captions only, even though they say they are real human captions - they are not generated as such and often generated or tidied up overseas in dubious set ups. Our own IT Security has not been happy with some services we have trialled with the aim to find cheaper solutions. Make sure you know what you are signing up for.
* Turn on captions - always. Turn on Auto captions where you can - more that they are used the better then become as they are corrected and improved.
* Know how to use captions.
* Set everything up prior to start of classes - start earlier for this reason - let your deaf and hard of hearing students know you are doing this so they too can sign in earlier and set up their own access and needs.
* Record with captions where you can. Download Transcripts (not from Collaborate - as this can be over 200 pages - many many repeated lines) and remove timecodes by using [HappyScribe](https://protect-au.mimecast.com/s/v9UlCROAWrhpj2RAU0dKiz?domain=happyscribe.co/" \o "https://www.happyscribe.co/" \t "_blank)
* Echo360 has ASR - this is good for captioned Collaborate recording as then you can access Transcript that is near accurate with ASR in our experience.
* Don't leave recordings there for a day only - students need to review. We know of academics that remove recordings after a short time frame as a way of forcing participation in tutorials - this just makes it harder for deaf or hard of hearing students to review lecturers when they have full study loads or access notes.

**Managing live captioning in MS Teams for participants who can't afford access to the full Teams capability**

* MS Teams has no live captioning capacity - only Auto Captioning at this point, Only a MS Teams Event allows live human entered captions. The institution can arrange captioning access through a captioning service using a browser link to captions. The student will need to have Teams open and a browser with captions to access both at the same time. You can use a combination of computer and phone - with what the student feels is need on larger screen - captions or class and the smaller screen for the other. Or split screens if two screens are not an option - two screens (dual monitor screens) can be disconcerting a eye are watching elsewhere and away from what may be happening on the class / teaching screen.
* Must keep in mind teaching is not like a meeting - you really do need to see the teaching screen at all times - hence why many students will prefer captions directly in the app the teaching is happening in (Zoom, teams or???)
* We never make students pay for accessibility. We have provided access to MS Suite for students free - so they have full access. We pay for all captioning needs. Griffith has a number of deaf and hard of hearing students and can spend in excess of $500,000 on captioning / calendar year.

**How to prepare students when you are rolling out IT projects that will impact them?**

* Make sure they know how to use the technology. Run training sessions. We have set up one-on-one trial of Teams sessions with interpreter so students know how to use this prior to a live class.
* Do not assume they will know how to use the technology. If the student has been absent for a while they may need a refresher also.
* Set up clear step by step instructions - pictorial if you can and video instructions as well.
* Check their connectivity and technology – ensure it is to required level – Nothing worse than logging in and finding connectivity is insufficient.

**How can we make MS Teams more accessible to Deaf Students?**

* If you use MS Teams for meetings - edit your recordings where you can. Why edit? the more editing and correcting you do of recordings the better the AI behind the auto captioning gets and thus captions become more and more correct.
* Slow your pace slightly - use microphone to enter your speech. this gives better quality sound and the captions also improve
* Pronounce your words correctly
* [Feedback to MS](https://protect-au.mimecast.com/s/aXAaCVAG1yhENG5Dirfmg3?domain=microsoft.com" \o "https://www.microsoft.com/en-us/accessibility/feedback" \t "_blank) what is good and not they are constantly looking to improve - tell them you want a live real time captioning option in MS Teams for meetings and classes, not just Auto Captions.
* Protocols for classes - hands up before speaking
* Use typed chat where can
* Share PowerPoints and notes prior to lesson
* Check in with Deaf/ Hard of hearing students regularly.
* It’s a team effort – All be aware of everyone’s needs and adjusting accordingly, not over talking people,  tight control, one at a time, gate keeping and opening – Be aware Deaf student will be slightly behind  others – Give them opportunities to  be involved in discussions.

**General tips on hosting MS Teams meetings with people who are deaf and/or hard of hearing, with Auslan Interpreters**

* Protocols for participation
* Regular short pauses
* Share PowerPoints and notes prior to lesson
* Slow pace slightly - so Interpreters can maintain pace
* Pin Interpreters - or use separate app Zoom for Interpreting and Teams for PowerPoint? Need work out what is best for the teaching need.
* Share Terminology with Interpreters and Students prior to classes
* Start the classes slightly earlier if possible for Interpreters and Student can establish own protocols and signs
* Check in with your Deaf students - don't assume that because an interpreter was there they had equal access - as they may only have been able to watch the interpreter not the chat and may have missed some content - so check in and help them fill in the gaps.
* Control discussions tightly, don’t let more than one speak at a time, give interpreter time to catch up before moving on.
* Think about allowing the Teams meeting to be recorded - this will enable the student to review and take notes
* If having Teams meetings between an academic and a student **without** having an interpreter present - the best way is to schedule this meeting in Teams calendar. This way the auto captions can be enabled. The academic's spoken content can be converted into auto-text and there is the chat column as a back up. The student can either speak if their speech is legible (not recommended as their speech will also be auto-captioned - it just looks bad) or type back to the academic.

**Are there any recommended transparent masks that users are finding helpful?**

* [Soundfair](https://protect-au.mimecast.com/s/D08jCWLJ2zfQRJPAfBGzXe?domain=soundfair.bigcartel.com" \o "https://soundfair.bigcartel.com/product/large-elastic-style-accessible-protective-face-mask" \t "_blank) make transparent masks for a reasonable cost. The trick is everyone else needs to wear these masks. The Transparent masks are less breathable and thus for long term usage they are not as comfortable as cloth masks for the wearer. All masks will also 'muffle' the sound of speech - thus adding more complexity.
* Ai Apps ready for use is good step to help as no one has to touch your phone you can turn it on and both have a conversation using [MS translator](https://protect-au.mimecast.com/s/dTchCXLK3AfgVwqxtxV-jG?domain=facebook.com" \o "https://www.facebook.com/watch/?v=1782267665125743" \t "_blank) for example
* This [Leaf mask](https://protect-au.mimecast.com/s/16DnCYWL4BsvErNzirGcZc?domain=indiegogo.com/" \o "https://www.indiegogo.com/projects/leaf-mask-world-s-first-fda-uv-c-n99-clear-mask#/" \t "_blank) is on my list as being more accessible and breathable with filters. It is not in production as yet and not in Australia - but something to watch.
* Reflection off the plastic does impede lipreading, mask wearer will need to reposition themselves to remove any reflection.

**Is there a way, other than using ai apps on the phone, to have automatic captioning in Collaborate in Blackboard?**

* [Webcaptioner](https://webcaptioner.com/) - in browser works. You will just have to resize your browsers to manage on one screen. And set up of your computer audio need tweaking - I have yet to find one that will access the computer audio well through a browser - accessing audio from alternate browser page - bit tricky. This is same for Live Scribe and MS Translator - using Browsers to access audio when using Browser to access Collaborate is tricky and I am yet to find a good solution that works in ALL cases. Also **MS Translator is being discontinued as a Web App** (disappointing that Microsoft is doing this - we have requested they maintain this, but they have dropped this for service and future upgrades - though continuing with Phone app and developing that more).
* Why are you relying on auto option - real captioning is needed and auto option is a back-up - the back-up works best when it is on a separate platform - phone / tablet - or different browser set to receive audio from the computer

**Does Griffith University have a subscription to Happyscribe?**

* No, we use the free version online - there are no limits.

**Can deaf students claim NDIS funding for top notch internet access to avoid these issues (e.g. pixellations, etc)?**

* Talk to an NDIS planner and prepare a case - it is not necessarily top notch internet but the number of users online also. I have really good internet at home but still get pixelation when the number of users online is huge - like early in COVID-19 impacts across country and areas where many are in lockdown and hence all online.
* There are cases, particularly in rural areas, where interpreters and communication support is provided almost exclusively online. The NDIS has sometimes subsidised Internet connections, so that the Deaf person can pay the standard. And they will pay the difference to a more efficient internet connection. Needs good reports from therapist (Audiologist, Speechies etc) To outline the likely ramifications of not having a good connection and highlighting the cost difference between standard and top of the range. This can include some of the technology that is required as well to improve audio and receive quality feed. Comes down to the report and justifications. Decision making in this area is not consistent. (The trick is to show it is cost of disability)

**We understand how important it is for Interpreters and Live Captioners to have information beforehand - what is a reasonable time frame before the event and how much time should be charged for their preparation per hour?**

* At Griffith we try and give Interpreters access to Blackboard sites so they can access information - not always work and will chase up lecturers for this info as early as it can be available. Some Interpreters will read through night before, some prior to Interpreting session.
* It depends on the university's appetite if they are willing to pay for prep time - we were previously paying our interpreters a three hour minimum, which allowed opportunity for reading and preparing. However, the three hour min and casual engagement was not in step with our EBA where all the other casuals in a great variety of roles were being paid two hour minimum. It was a difficult decision to roll this back and as a result we lost a few interpreters (but some have come back, the 13/18 week employment that we offer is still valued and offers regularity to both interpreters and students). All our staff interpreters are enrolled in Griffith courses at an instructor level which means they are able to see teaching materials ahead of these being released to students. If not staff, we try to access ourselves to pass on to non-staff interpreters.
* This is a tricky one. Perhaps if universities are already in the practice of paying their academic casual staff for reading and prep time outside of actual class hours, then that might be a useful precedent.

**When there are many people speaking (over each other) in tutorials, what is the best way to ask them to speak one at a time without having to self-identify to other students?**

* Set Ground rules at start - explain they can not speak over each other - this is good teaching practice. If you need to do group work, look at break out rooms. But rules still apply - no speaking over each other.
* Set rules - hands up when want speak - leader/teacher to say who is next to speak - "*John you have your hand up.*." Protocols will make this easier for everyone not just deaf and hard of hearing individuals. For example:
	+ Hands up to speak
	+ Questions in Chat
	+ Thumbs up if understand and all is good and so forth - all these protocols are able to be visually followed and make it easier for all
	+ Be mindful and respectful of everyone.
	+ Use techniques like gate closing and gate opening et

## General tips

Think about assessment timeframes for each course or unit - hearing students have access to recorded content almost straight away. Deaf/hh students have to wait 4 days or longer for the same content due to captioning arrangements. Think about the cumulative impact as a result - eg in-class quizzes, mid-semester exams, and so forth that might be held within very tight timeframes. This may have to be addressed on a case by case basis and the student will have to be encouraged to put their hand up and notify their Disabiity Advisor that XYZ course has particular timeframes that aren't being met by captioning or other support arrangements within the same timeframe.