A Strategic Approach to a Disability Inclusive Academic Department

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Providing an inclusive and accessible education is a moral and legal obligation. This paper provides a report on a strategic approach to changing practices within learning, teaching and assessments to enhance the experience of disabled students and staff.

CCS CONCEPTS

Applied computing • Education • Learning management systems

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Accessibility, Inclusion, Organizational Change, VLE

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1 Introduction

The Accessibility regulations in the UK, requiring all public facing websites to be accessible came into effect on the 23rd of September 2018 [1]. I joined Goldsmiths in early 2019 as the Deputy Head of the Computing Department. Goldsmiths is based in South London and is a constituent research university of the university of London and offers programmes in arts, design, social sciences, education and technology.

My academic background is in accessibility, assistive technology and research through design. I have worked as a lead in technology enhanced learning at Anglia Ruskin University and have been either Deputy Head or Head of the Computing Department at Goldsmiths for the last three years.

Whilst at Anglia Ruskin University, I led the University in understanding the gaps in providing an accessible experience for students and led on several initiatives that saw an impact on the changes to several if its digital interfaces and thereby student experiences.

I joined Goldsmiths in 2019 and similar to Anglia Ruskin, I identified gaps in its accessible provision to students and have been using my experience at Anglia Ruskin along with changes in the landscape including legal obligations and using the pandemic as an opportunity to accelerate some of these changes.

This paper presents the accessibility challenges faced by students and staff across two Universities and how a strategic approach to intervention has removed barriers and improved experience for all. This is a reflective summary on my work at Goldsmiths, University of London, influenced by the work at Anglia Ruskin University and the work in progress and data from experience and active plans moving forward.

2 My Work at Anglia Ruskin University

I was the Academic lead for Technology Enhanced learning at Anglia Ruskin University from 2014 to 2019 based in a central team that was influential across the University. During this time, I was able to demonstrate gaps in digital accessibility across documents and the Virtual Learning Environment (VLE also known as Learning Management Systems in some regions).

In 2015, the government announced cuts to the Disability Students Allowance and stated that inclusion and accessible education was the responsibility of the educational institution. I used this opportunity to strategically plan changes in technology enhanced learning provision across Anglia Ruskin University. This was timely, as in 2018, the government announced the accessibility criteria that every public institution should meet by September 2019.

I carried out some exploratory work to identify the accessibility work that existed within Anglia Ruskin. There were training sessions delivered by their disability team to staff to help understand Dyslexia but there wasn't any in house expertise or practice in accessibility elsewhere.

I produced Microsoft Word, Power point Templates and guides and worked with IT Services to apply them as the default templates in all networked machines and virtual desktops in the University [2]. An updated version of documents are now available on their website. I ran several workshops online and in person as staff development as part of their annual conference [3].

I trained library staff on making PDFs accessible and produces guides [2].

I revised all University-wide templates for meeting agendas and notes to make them inclusive and provided training to all administrative members of staff.

I worked with Jisc, a non-profit organization that provides digital services and support to all Higher Education Providers in the UK to review the custom VLE that was used which resulted in replacing the VLE with a more accessible one.

3 My Work at Goldsmiths, University of London, Department of Computing

The Department of Computing at Goldsmiths has approximately 1600 students and 70 members of staff. We deliver 7 undergraduate programmes and 16 postgraduate programmes with 138 modules.

3.1 The Pandemic and Exams

In March 2020, with a week's notice, England went into lockdown and Universities had to switch to online delivery of teaching, learning and assessment activities. Exams that traditionally took place in invigilated examination halls were cancelled and staff were asked to assess students online. I was the Exams Officer and Chair of the Board of Examiners for the year 2020-2021 and it my responsibility to resolve examinations due in May for my department.

Usually, exam setting processes consider reasonable adjustments for students with disabilities by way of additional time, large text, different coloured paper, take home paper, separate room, reader, etc. The pandemic presented different contexts where our exams needed to be inclusive:

- We had several students who had returned to their home countries and would be taking the exams from different time zones.
- 2. We had students who had to share internet connections, computers and study spaces in their homes.
- We had students with informal care responsibilities as a result of the pandemic for instance, in the absence of professional carers.
- 4. We had students who were recognized key workers.
- 5. We had students whose mental health was suffering due to the context.

This inexhaustive list and any existing disabilities meant we needed to identify an approach to the exams that could be taken at a flexible time, with flexible duration and at the same time be fair and rigorous.

Thus, this examination process had a significant impact not only on students with diverse disabilities but also the diverse contexts they took the examinations from as a result of the pandemic.

Based on my previous experience as Academic Lead for Technology Enhanced Learning at Anglia Ruskin University for five years and work with Jisc on Inclusion and Accessibility initiatives, I drew on my knowledge and experience to identify the best approach.

As a Computing Department, staff were familiar with online tests with formative quizzes including those text-based, programming and mathematics. The standard duration for exams in our department are 2hr and 15 minutes with additional time for any students with special arrangements.

The following principles were used to set the new digital exams:

- Each exam was available to take within a window of 48 hours. This made the exam inclusive of students in
 other countries, had family responsibilities and who would otherwise may not be at the optimum set up to take
 an exam.
- The duration of each exam was set to be three times the duration that would be required. This not only addressed any special arrangements that would have been in place for students with disabilities but also catered any slow internet connections.
- Exams were broken into smaller components. This met the needs of students who needed to take frequent breaks and also split up the time a student needed to occupy the computer and possibly a room for the duration of the exam at home.

The following measures were taken to enhance academic integrity:

- 1. Exams were a combination of multiple choice and long questions, similar to the traditional paper-based exam format. In the digital exam, staff set a large bank of questions and each student would receive a randomly selected questions with randomised answers. No student would receive the same question at the same time and if students spent time discussing the questions and answered, they would lose their own time and at the end of the time, the answers would automatically be submitted. Once submitted, students could not revisit questions.
 - 2. Long questions were set up in open book style.
 - 3. For long answers, students have to scan/take photo and upload their working where relevant.
 - 4. Oral presentations were organised for randomly selected students for every module.
 - 5. If there was suspicion of academic dishonesty, they were dealt with a separate process.

Mental wellbeing at exams:

Similar to the incident form in traditional exam halls, an online problem reporting form was set up so students could report any issues with their computer, internet connection, exam system, and any other extenuating circumstances. Exams were never reopened for students but if the student had experienced extenuating circumstances, they were considered at the board of examiners and offered an opportunity to take uncapped resits in the next opportunity.

Managing Student Experience:

We set up a sample exam for all students to familiarize themselves the new format and had student open meetings where they could raise any concerns and worries about this approach.

Staff Experience:

This format took significantly additional time to set up. However, majority of the marking was automatic and the questions could be reused in the following years.

Learning to write open book style questions was a new experience to many. This was managed with individual conversations and support from more experienced staff.

Student Feedback:

While there was initial apprehension due to the uncertainty and the new format of exams, students responded positively to their exam experience. Feedback ranged from how they appreciated being able to choose their personal best time to, reducing the stress and anxiety they would normally feel in exam halls.

This approach was adopted by thirteen members of staff and the exams were taken by over a thousand students. We received just over hundred incident reports. Concerns raised ranged from students being unsure if their answers were saved to technical problems with their internet or computer. Incidents were summarised and considered at the pre-exam board meeting. Majority of the reported concerns from students were dealt with by email, confirming that the examiner had received their responses. Only two students had significant technical problems had to retake the exams in late summer.

Our external examiners commended our approach and staff and students would like this approach to exams continue.

Moving forward:

Our experience was overwhelmingly positive and we have decided to keep our future exams online with some changes. Due to scheduling availability and the fact all of our students have now returned to in personal learning activities, we have reduced the exam window from 48 hours to 36 hours.

We have had challenges with making the exam questions and answers available for external examiner scrutiny in the same format. We are working out ways of improving this with our technical experts.

As there is limited publication on assessments as a response to the pandemic, I cannot say for certain if similar approaches have been practices elsewhere. This was an approach original to the Department of Computing and Goldsmiths, University of London.

3.2 Exploratory Work

Exams amid a pandemic is only a single aspect of digital provision that needs to be made inclusive and accessible. Anecdotally, I was aware that there were other pockets of Goldsmiths where accessibility initiatives being taken. Therefore, I decided to investigate for initiatives across Goldsmiths.

I learnt from the IT Services unit, that they have published accessibility guidelines for those using Microsoft Word format. Our Disability and Wellbeing team focuses on Students' diagnosis and recommending reasonable adjustments to the departments. I also had conversations with our Library, Employability, Legal teams who were aware of gaps and the need to improve digital access.

This provided a clear landscape of the opportunity and receptiveness for change. I planned actions for three academic years to make the department of Computing the most inclusive and accessible one in Goldsmiths, University of London and use that as a case study to extend good practice across Goldsmiths. Year 1 (2020/2021) to be exploratory work, setting up classroom and VLE structures and providing staff development within the Computing department; Year 2 (2021/2022) to carry out an assessment and audit of effectiveness of actions and apply any action and Year 3 (2022/2023) to reach and impact across the institution and influence the digital strategy.

3.3 Classroom Practice

First, I produced some general guidance on making the classroom environment inclusive and accessible. These was drawn from the guidance at Anglia Ruskin University [5]. Please see Appendix A.1 for the guide.

3.4 Virtual Learning Environment (VLE)

One of the key issues raised by our students was the inconsistency of our module level VLE pages.

I used my knowledge and experience from Anglia Ruskin University to propose a template for the VLE and worked with our central learning and teaching teams to implement this. I also consulted our staff and students on the structure and expected experience (please see Appendix A.2 for the template).

One question that kept coming up in the consultations was why each of these components of the template mattered. Therefore, I also compiled the checklist along with a rationale for each of the items (please see Appendix A.3 for the VLE Checklist). These were rolled out ahead of the academic year 2021-2022.

As with similar initiatives, providing documents does not mean it will be followed through. Therefore, I organized two workshops where staff brought their materials for the following academic year and populated their VLE module pages using the template and checklist. A member of the learning and teaching team was also present to provide any support required by staff.

3.5 Staff Development

Over the consultations on the VLE templates and guidance, it also became apparent that over the years, we have assumed and expected that all staff members should somehow understand and know how to support students with disabilities.

I worked with our Disability team to identify specialists and delivered sessions on understanding disability, Dyslexia, Neurodiversity, Mental Health, and Assistive Technology to academic staff in the department of Computing. These were attended by up to 30 members of staff per session who found it useful and practical.

3.6 Student Feedback

At the end of the first term following the usage of VLE templates, I surveyed students who were in their second and third years as they would have experienced the previous versions of the VLE pages as well. Forty-two students responded to the survey. A summary of findings are as follows:

- The structure of the VLE was rated inclusive and accessible by 88% of the students who responded.
- 62% of the students thought the VLE had improved since their previous year of study at Goldsmiths.
- In their free text, they said the structure of the VLE was easy to navigate and the module pages were neater.
- They flagged 3 specific modules that were not following the templates which we were able to address immediately.
- Students said the way Panopto (https://www.panopto.com/) displayed recordings of lectures was messy. As a response, we produced guidance on how to structure recorded videos to staff. Please see Appendix A.4 for guidance to use within the local interface drawing from Panopto's own accessibility guidance [6].

I ran two workshops for the second term to include that came from student feedback. The survey is still open and the responses are still rolling in. One qualitative response says:

"....what I found annoying in previous years was that most modules have the same 'assessments', 'grades', 'forums' and 'resources' sections but they would be in completely different locations within the pages for different modules. Now that's been made consistent, so students know where to find those things.

Likewise, this year most module pages have had headings for each week of term, with the resources and materials relevant to that week underneath. Whilst that was how most module leaders used it previously anyhow, some weren't organising it that way before this year so I'm grateful for the consistency. It makes it much easier and faster to locate materials when I want to refer to them. You wouldn't believe the time I've wasted in previous years ..."

3.7 Monitoring systems

I have allocated time and responsibility to two designated members of staff for checking that the VLE template has been followed across modules during the induction week when students look at their VLE pages to find out what their modules are about and again around week 3 of the term to check if members of staff are following the guidance to have material available before and after a lecture.

In the first term of checking, we identified 9 out of 138 modules that hadn't followed the guidelines and were able to rectify them. In the second term, except for some components in a handful of VLE pages, all module pages had followed guidance.

3.8 Staff needs

Our monitoring process of VLE pages also showed that some of our staff members may have their own challenges. I sent an open invitation to staff to complete a survey or email me directly if they needed any workplace adjustments.

Two members of staff emailed me to say that they are Dyslexic and regularly share their experience and support mechanisms with their students regularly.

One member of staff reached out to me about progressive hearing impairment. I worked with IT Services and Estates Teams to survey the hearing technology in the classrooms. I have now made a portable microphone and Personal Audio (PA) kit that can be collected by any member of staff, should they need it. I have also raised awareness of transcription and other accessibility features in Microsoft Teams. Please see Appendix A.5 for guidance. Further, all classrooms across Goldsmiths have now been surveyed and 11 classrooms have hearing loop systems in place.

One member of staff raised mental health issues and aspects of ADHD they are struggling with. I am exploring how best to support these members of staff by making adjustments to work spaces.

I have made discussions of disability, neurodiversity part of workload conversations so staff have an opportunity to discuss any challenges and strengths relating to their disability or neurodiversity.

I have also provided guidelines on how to run meetings in an inclusive and accessible way (please see Appendix A.5).

4 Next steps

I have started collaborating with AbilityNet (https://abilitynet.org.uk/), a charity that specializes in digital accessibility and services for all. I have worked with them to improve accessibility of the department's recruitment material and interview processes. I have had agreements from across Goldsmiths from Head of IT Services, Head of Learning and Teaching, HR consultant, Head of Disability, Head of School and all seven Heads of Departments in our School to participate in this collaboration going forward.

Within the next few months, AbilityNet will carry out an institutional gap analysis on recruitment, induction, performance and promotion and deliver training workshops. They will also review the work we have carried out in making our VLE accessible and help us prioritise further work.

To ensure the practice doesn't stop, this process has been incorporated as part of the departmental calendar to hold VLE set up workshops at the start of every term and HR have undertaken responsibility to deliver the disability information workshops across Goldsmiths annually.

The work on being disability inclusive will never be complete but I have led change in changing the practice and experience of one department which is now spreading to seven other departments in our school with University level stakeholders.

REFERENCES

APPENDICES

These guides and templates may lack references as they are constantly being revised with every cycle of consultation with staff and students at Goldsmiths, University of London.

A.1 Classroom Practice (influenced by [5] but widely consulted).

Requirement	Benefit
- Read Reasonable Adjustments for Study and	It is our legal and moral obligation to support students with
Assessments (RASA) requirements	RASAs in place. Starting 2021-2022, we now have an
- Make note of any considerations for your lessons	improved new RASA system in place.
Teaching Prep	
- Clearly state which learning outcome is being addressed.	Helps the teacher and learners be clear of learning
	outcomes
- If the broad learning outcome within the module specs	- Helps the teacher and learners be clear of structure of
needs to be broken down, please say you are doing this	lesson

 Make this learning outcome (or part of it) relevant to students' assessments and/or employability 	- Helps the teacher evaluate why they are delivering the particular lesson - Helps learners joint the dots between learning — assessment- readiness for employability
- Ensure your lesson starts from more descriptive content and builds towards the level of learning outcome, eg. critical thinking - Bridge students' existing knowledge with the new	- Helps the brain gradually build ideas
- Ensure there is an overview and summary to top and tail the lesson	- Repetition and summary are always beneficial
Classroom (physical environment)	
On your first, introductory day - Check lighting levels - distance between you and students - any external distractions - room design fit for your class - Students needing hearing loop - Do you need a microphone? - What would be a plan for breaks and physical movement If you use white board/flip chart to write on during the class, how do you share this material with the class? - Share a photo of this (is your writing legible?) - If this is part of your classroom recording, please refer to it	- If all digital work you have prepared is accessible only to be let down by the classroom setting. It'll be good to prepare for them - Record of what was explained in class
Humour, inferencing, colloquialisms and slang - They can all be inclusive practice but ensure appropriate explanations are included so not to exclude anyone - Learners with cultural differences and autism spectrum may not understand them. Group work	- Learners won't feel excluded - Learners who don't understand the humour could learn something new
 Provide clear descriptions of roles Embed compassion skills (https://compassioninhe.wordpress.com/) 	

A.2 Virtual Learning Environment Module Pages Template

'General'

- Lecture schedule [1 or 2 lines of text/numbers]
- If using pre-recorded lectures, say
- o Pre-recorded lectures available every week on: [eg. Fridays 5pm]
- To be watched by: [eg.Tuesdays 5pm] (give students atleast 48hrs to watch)
- Welcome message [text or video]
- Module Leader [with image on the right side]
- Office Hours [1 line of text/numbers]
- Module specifications [downloadable file]
- Module Feedback [link]

'Learning Outcomes':

• [copy over from module specs (max 5 lines) and provide a simplified description and/any additional information eg. Specific software names if applicable (max 3 lines]

'Assessments':

- The assessments for this module include [eg. In class assessment 20%; presentation 40% and exam 40%]. Include breakdown for sub assessments, if applicable.
- Provide ALL submission links with name of assignment, deadline (date and time)
- Template for assessments are provided, please use them.
- Information on late submissions and deferrals link

'Resources':

• Reading list

'Week #: [Subject title]'

- [Lecture Slides or notes available in editable version if Word/PowerPoint]
- [Link to Recording] please see Talic guidance on accessible lecture recording
- It's a 10 week Term + Reading week. So number the weeks: Weeks 1-5, Reading Week and then weeks 6-10.

A.3 Virtual Learning Environment Checklist

Requirement	Benefit
 Heading styles should be used to provide structure Text should be left aligned and not right justified Any Web links (URLs) should have a meaningful text label Ensure font type is either Arial or similar Sans Serif font If using colour text, ensure they meet the contrast and colour blindness needs 	 -Helps everyone with structure and finding information easily - Helps stop the words 'swim' for readers with particular types of dyslexia - Provides meaningful text rather than a lengthy URL. - Several readers with Dyslexia will find certain types of fonts difficult to read.
By Week 0 of each term, populate	[these are now built into module templates]
'General' Section with:	- Learners know what to expect
- Lecture schedule	- Learners are not surprised or worried when they see blank
- Welcome message	pages
- Module Leader (It is also important for staff to demonstrate/normalise the clarification of pronouns. So	- Learners have time to check and report if they don't have access
ideally colleagues should introduce themselves on their VLE pages and stipulate the pronouns.	- Learners will know where to find the same information for every module
- Office Hours	- Consistent student experience
- Module specifications	
Module Feedback	
- 'Learning Outcomes':	
- List them (copy them over from module specs).	
- Write 2-3 line explaining them in simple language.	
'Assessments' Section with:	
Assessments overview (i.e types over assessments and %)Submission links with [name of assignment, deadline (date and time)]	
- Create template for assessments	
- Provide link/information on late submissions/deferrals	
(link to student page).	
'Resources' Section with:	

- Reading list	
48hrs before each lecture:	
- Week #: [Title] of section is made available - Ideally your complete Power Point slides/any other format of file but it's available to students, the editable version. As a minimum requirement, at least a lecture structure with breakdown of topics covered should be available	- Learners being able to type notes into the slides notes section - Learners who prefer to print and write on them have time to do so - Learners with any visual impairments can zoom in or adjust colour to suit their needs - It will help provide learners with a structure - Learners with language barriers can find translations easily
Immediately after the lecture:	
 If already not made available, full editable version of slides/notes are made available Recording of lectures must be made available on the VLE within the relevant week, clearly named Each week's slide must start with Week # followed by a meaningful title (not eg. Lecture 3). Repeat naming convention consistently every week When using images and Tables on the VLE pages, Images should have alternative text descriptions (Alt text) if of significance to context. If it is only for decorative purpose, please declare it in the description. Ensure that significant information is not communicated solely via images (eg. audio description, caption, or description) 	- Learners with any visual impairments can zoom in or adjust colour to suit their needs - Learners who struggles with accent, those who don't make it to lectures, those who need it for revision can use them - Those who learn better when listening can simply play the recording - Readers who struggle with visual communication and prefer descriptive text will have an option
Forums - Use a single Announcements forum to disseminate module information - Any discussion forums should be set to 'auto' subscription and the purpose clearly explained. Inclusive of Race and gender - If you are using images of people or contexts, if possible (based on subject matter), include more diverse visuals of people, places and gender - Check your reading lists/resources to see if you could include resources from different race and gender	 Forums are great for interaction but too many can be confusing. Can support learners struggling with applying literature/theory in essays/verbally as scaffolding/formative. Supports learners with identifying themselves with pioneers in the subject and case studies wherever possible to encourage them

A.4 Guide to Inclusive and Accessible Lecture Recording using Panopto [6]

Please use Panopto as the primary recording tool. If it is a meeting or a live teaching session scheduled via MS Teams, please use MS Teams to record and upload it to Panopto before sharing.

Preparing for recording

- Please see Classroom Practice checklist
- If using slides, ensure all slides have titles

Recording

• When recording, if using PowerPoint or keynote, you can select "record powerpoint" or "record keynote". The titles on the slides will be used to index / create 'contents'. This also means you don't have to create shorter

- clips as navigation and topics will be clear. Views will also be able to use thumbnails of the sides to directly index your video.
- Select your main camera and microphone as primary source and the screen that you will be displaying slides (or other visuals) on as the secondary source
- Name the session meaningfully as it will become the file name (it can be renamed later as well): Week #:
 Subject (and number subject if multiple)

After the recording has been processed,

- Change name of file if you haven't done it when recording
- As default, captions should have been created automatically. Please do a quick check of 'Captions' (bottom left of the panopto video page) to ensure technical terms are correct. If there are hearing impaired students in the class or large proportion of international students with language barriers, this will be very helpful.
- Contents are auto generated using the 'headings' of your slides. If you have slides that don't have titles, headings will be auto generated, and you will have to go to contents and amend them.
- If your recording didn't include slides, you can manually add table of contents entries to aid navigation eg.
 Recording of meetings.

Once it is stored with all recordings,

- Go to folder settings > order > click 'set the display order for the folder' and ensure it's in the right order.
- Make available: use the link from 'share' but name on VLE with a meaningful title similar to the video title.

A.5 Guide to Inclusive and Accessible Microsoft Teams Lectures and Meetings [4]

Please use MS Teams for meetings and teaching sessions scheduled via MS Teams. For all other sessions, please use Panopto and see guide to accessible Panopto.

When sending out meeting invitations

- 1. Say what consideration you have made to accessibility. eg. you will be recording the lecture / meeting with transcription and providing slides / handouts 48 hrs before the session. Request that participants email you (or a designated email eg. Student office) with any additional specific accessibility requirements before the session.
 - 2. Attach handout / slides or say when/where it would be available.
- 3. If there are participants who lip read, please wear a top with a contrasting colour to your skin tone so it doesn't blend with lighting.
 - 4. Here is a sample text to go in your calendar invites:

Accessibility considerations we will be making at this lecture are as follows:

- Slides will be made available 48 hrs before the lecture
- A recording will be made available with transcription within 48 hrs after the lecture on the VLE

Should you require additional assistance, please contact computing@gold.ac.uk

Starting the session

- 5. If this is a lecture, please see Classroom practice guidelines
- 6. Use the screenshare feature to share specific windows
- 7. Announce how often you will stop to check for raised hands and questions in chat or whatever your protocol is.
- 8. If using **breakout groups**, let students know how this works **and** the expected role of participants. This will help ASD students working in groups.

Alternative text

- 9. **Real time Captions** will transcribe what is being spoken live with speaker attribution. It will benefit participants with hearing impairments and those who prefer text instead of speech (for specific ability, accent difficulties, etc.). These captions won't be recorded.
 - 10. If you would like the captions recorded, please turn **transcription** on.
 - 11. **Record** session this will help note takers, revision, those with language barriers, etc.

Reducing distractions (and privacy)

12. If you don't wish to receive notifications from other chats or meetings, set your profile to 'do not disturb'

- 13. **Reduce background noise** select profile picture > Settings > Devices. Under 'noise suppression' choose the level.
- 14. **Blur background** this is to reduce distractions in the background *Managing your screen*
- 15. To adjust a video of a participant that is appearing cropped, right click/control + click on image and click 'fit to frame'.
- 16. Raise hand to interrupt a conversation. The participants view will number the participants in the order they raised their hands.

Managing your bandwidth

- 17. If you think your bandwidth is struggling, you can switch your video off and also switch incoming video off. *After your lecture*
- 18. If you had pressed record, the link to the recording will appear after the lecture (may take up to a few hours). Open this in OneDrive, download and upload to Panopto to share. This will ensure that the recordings can be accessed easily and won't be deleted after a certain period of time.
 - 19. Once in Panopto, you can edit the session to manually add table of contents entries (to aid navigation)