

All right. Hi everyone. Welcome to our sixth webinar of our webinar series. In this webinar, the accessible classroom redefined, we're going to take a look at how all students can benefit from a more inclusive approach in the classroom. To begin, we will introduce everyone.

So my name is Gabriela Smookler,

I'm a Transcription Specialists here at Verbit

and Scott, Scott I think you're on mute-

Hi everybody. Yes.

Welcome to the webinar,

I'm Scott Ready, I'm the Customer Success

and Accessibility Strategist here at Verbit.

But I'd do just a little bit of background. I've been in education and accessibility for over 30 years now. So it gives you a little bit about my age there. I've worked in higher education. I've worked in private practice and corporate government agencies. My parents were both instructors at the Missouri School For The Deaf, so I had a great opportunity to grow up and experience what it was actually live on campus at this school for the deaf. So that's a little bit of my background. John?

Yeah. Hi everybody. Great to be on the webinar today, my name is John Scott. I'm a product manager on the Blackboard Ally team. So I work closely with our development team,

as well as do a lot of work in outreach with our clients.

So I spend a lot of time visiting campuses, learning about their inclusive learning initiatives. Sorry, there's a phone going off in the background. Working on their inclusive learning initiatives, learning how they're taking steps

to become more inclusive.

I have a background, I started in K12

as a special ed teacher.

Then I went and did my doctoral work in education and learning sciences, really focused around how different forms of engagement with different types of texts, different types of media affect student engagement, affect learning, affect cognition, and so I bring that background with me on the Ally team.

Great. Thank you everyone for introducing yourselves. On our agenda today, we will be discussing barriers in higher education, not only for students with disabilities. How technology helps break through those barriers, data insights from Blackboard Ally and the impact on universal design. How to incorporate this data into your learning environment. How AI and machine learning make scaling a possibility, why we can all be excited about upcoming technology enhancements in education. Then at the end, we will have some time for questions and answers, so feel free to write down your questions in the question box and don't worry, we'll get to them at the end. If we don't make it to all of them, we will be able to send out at the end all the questions and answers to those as well. So we'll get to everyone. So shall we begin with Scott.

Fantastic. Well, thank you. Gabriela.

We really want to start this webinar

by sharing that what we're addressing here

is not just meeting the needs

of students with disabilities

or to pigeonhole a specific accommodation for a specific disability. So for example, captioning. How many of you remember when TV shows would include a statement at the end of the show that said, "Captioning provided by whatever company, for the deaf and hard of hearing."? Well, they no longer say that. Because, we all know now that captioning doesn't only meet the needs of the deaf and hard of hearing, but rather it really meets the needs of all of us. A little statistic here. In 2014, over 85 percent of all videos on Facebook

were viewed silently by using captions.

Not to mention places such as restaurants, airports, and other public places that we've all experienced. Captioning has really become an expected way to engage with content. So in this webinar series, we

have focused on how technology is enhancing the engagement with content for all students. John, from your recent travels meeting with institutions all over the world, would you share what the landscape is like in many institutions today?

Yeah. Absolutely.

Gabriela, we want to go to the next slide here.

So when we think about digital accessibility today, as Scott mentioned, traditionally, it's been thought of as focused on students who have disabilities, who used various assistive technologies,

and typically we've tried to support those students

from a very reactive position. So a student has a particular need, they need their content, instructional materials to work with an assistive technology that gets sent over to a disability resource team or media coordinators and they go ahead, they remediate that content. They send it back to the student and they can go about in their coursework. Of course, that makes it really hard to ensure that those students have timely access to their materials, as more students rely on assistive technologies, as they become more a part of our everyday life. I mean our iPhone is an assistive technology, the demands on those teams become more harder to ensure equitable access. It leaves those students very dependent on other people. So they don't feel a real sense of independence or autonomy as a learner, if instructors change a thing last minute, it's hard for them to stay on task. Then we also know that many students don't disclose that they have a disability. Some research suggests upwards of 66 percent of students who may qualify for some accommodation don't disclose for whatever reason, if it's lack of awareness, lack of resources, stigma. So many students who could benefit from accessible content aren't receiving those benefits today. Go to the next slide. So what do those barriers look like and how do they affect learning? Well, here you have a scanned PDF. A scanned PDF, it's just an image, it's completely inaccessible to someone who uses a screen reader, but it's also not a very usable piece of content. Accessibility barriers actually

create usability issues as well.

So with this scanned PDF, for anybody who's trying to read it, the margins are off, it's crooked, the font is blurry, it's very blotchy, I can't interact, I can't highlight things easily, I can't copy and paste, I can't search for key words. So it's a very limiting piece of content. If we go to the next slide, there's some compelling research out there that suggests how usability issues, accessibility issues affect engagements. So here's a study from Schmutz et al, 2017.

They looked at non-disabled user engagement with

more accessible websites and less accessible websites. What they found on those more accessible websites

were those user completed tasks more

quickly and they had improved information retention. So if we apply a finding like that to other types of content, like a scanned PDF or like a video with bad captions, we're ultimately affecting how people, how students engage with that content, ultimately could affect their performance on exams, performance on tests. So this becomes much more than just an accessibility issue. It becomes really a retention issue. If we go to the next slide and if we think about some of the barriers in higher education today, we did a data study. We looked at 21 million course files across 700,000 courses and this is the extent of some of the barriers in content that we saw. So of the PDFs that we saw, nearly 13 percent were those scanned PDFs. Thirty five percent of documents with contrast issues. So contrast, a perfect example of a usability issue. Those instructors that love to have a pink background with the yellow font, it looks pretty, but nobody can read it, ultimately, going to affect those students performance. Nearly 80 percent of images missing a description. So obviously, essential for someone

who uses a screen reader to be able to hear

what those images are in the content,

but also other text to speech technologies, like an MP3 from Ally for example. If it doesn't have image descriptions, we're limiting opportunities for students to engage that content in different ways. We have untagged PDF issues. So lacking the critical navigation structure for how people move around in a document, and 47 percent of documents missing headings. So adding a heading structure helps keep a long document organized, makes it easy to generate an auto table of contents. So these best practices, again, while they create these barriers for students with disabilities, they really create usability issues that affect all students. So if we go to the next slide, that higher landscape today, what we have are these walls around content. We have walls and to get these students over the wall, we're constantly building a new ladder, an individual ladder. So it's not a very scalable process. It's not a very efficient process.

John, I remember back in the day when our physical environment had very similar situation where they were trying to build out or climb out of the wall if you will. Gabriela, if you'll go back to that previous slide there just for a moment.

We're all familiar with the curb cut. I remember municipalities screaming about how much it was going to cost them to actually cut the concrete of the sidewalks

in order to create access from the sidewalk to the street.

Then they would say things like,

"Well, we don't have anybody

in our town that uses a wheelchair,

we don't have a need to have to cut out that concrete." They saw this as having to try and put a ladder and climb out of this huge hole. If we look at the digital accessibility like you just said, that's very similar to where we are today. We feel like we're trying to climb out of a hole, rather than looking at how we can be proactive and moving forward.

Yeah, so if we go to the next slide, that really is the move that we're seeing more institutions start to think about and start to put strategies and resources in place to move from this position of reactive accessibility to proactive inclusion, and really thinking beyond the binary of ability and disability, and starting to think about diversity, starting to think about the diverse needs of 21st century digital learners. We know that the higher education landscape is changing. We have more students that are returning to school to get new skills. So how do we think about those students? Again, not just with visible disabilities but also students with various kinds of cognitive disabilities processing issues, dyslexia. How do we think about mothers? People with families who are returning to school who have work obligations, and parenting obligations. How do we think about international students and second language learners? Again, those aging students who are returning to higher education to get new skills, have particular kinds of needs. Thinking about those mobile learners, more and more students rely on their mobile device to access content. They're accessing it on the go, as they commute, as they are on the train, or on the bus. How do we support those needs? How do we support the needs of students who suffer a temporary disability? Something happens during a semester. Maybe they suffer a concussion, they're not able to read their content or something else happens that really requires some kind of accommodation with their content. So for institutions to remain competitive, for them to recruit and retain these kinds of students, an inclusive approach is going to help benefit them, make sure that they can be successful. We go to the next slide. Really, this is where I think

Universal Design for Learning

provides a compelling framework

for how we can support those diverse needs and

UDL operates from this mantra of providing multiple means of representation, that is the types of learning content that students interact with, the PDFs, the PowerPoints, the Word documents

that instructors upload into their courses,

multiple means of engagement. So that is, how do students feel connected and motivated to participate in that environment? How do they think about their own learning process? Then action and expression. How do students demonstrate their understanding of concepts in multiple ways? How do we give them opportunities to express their understanding, express their knowledge? So we're going to focus today on this first principle of UDL, representation. Gabriela, if we go to the next slide. CAST refers to this one as the recognition network, the What of Learning. We're really talking about providing diverse opportunities for students to engage with their content. We know that listening to content, or interacting with content, or reading content, it activates different neurological processes in our brain, it changes kind of cognition, and so opening opportunities to combine modalities, to scaffold with different modalities, it can really enhance study practices. I like to make a distinction here between what we call the learner preference in learning styles. Learning styles is a pedagogical theory that's been around for some time. It's really a limiting idea that someone is oriented towards a particular sensory modality. That somebody is only a visual learner, or someone is only an auditory learner. Learner preference is really about making strategic decisions about what is the most appropriate modality or format in the particular learning contexts that I'm in this given moment. We go to the next slide.

For any of those that are participating in this webinar, we have just completed a webinar last month with CAST on the Universal Design for Learning. So I'll put in the chat the location that you can go to view that webinar if you're interested in learning more about Universal Design for Learning.

Yeah, and CAST, that images from the CAST Consortium and they do amazing work in-, and these are really key principles around that multiple representation, and it's located in lots of different learning theory. So as I mentioned cutting edge, neuroscience research, looking at the ways that different kinds of engagement activate different neurological pathways, really strengthening how the brain is processing that information through those multiple modes of representation. Fostering metacognitive awareness. So a lot of times in universities

we focus on teaching the content,

but we also need to think about helping students become more effective learners. How did they navigate these complex digital environments? That metacognitions in executive functioning, so important to becoming a successful learner. We see some of the research around improve retention through multimodal engagement. Being able to read captions and listen to the video at the same time has demonstrated effects. For some students it can be one of the most important interventions to help overcome processing issues. We go to the next slide. I met a student during my tour around to universities, his name is Andrew Phoung. He is a PhD student now at UC Berkeley. He has a Master's degree from Harvard, but he was a failing students in elementary school. So this is a student that seeing success

at some of the most elite institutions in the US

who was a failing student.

It wasn't until he was diagnosed with these processing challenges that he found the most effective intervention for him. For him, it's about being able to read and listen at the same time. That multisensory experience helped him overcome some of his processing challenges, and it's helped him be more successful. But he relies on texts around videos, having those multimodal elements built into it. Otherwise, he's waiting for the Accessibility Resources team to provide that content form, and he's in a highly competitive graduate program, his instructors are changing syllabi,

adding additional resources.

He wants to engage with those freely on his time and not rely on other people. So when learning environments

are more inclusive for him,

it's just usually beneficial. He talks to me about the feeling of being an independent learner. I think that's such an important part. Just mentally feeling empowered to be successful, to have the tools in place to be successful. Just so important. Go to the next slide Gabriela. So there are some challenges

to creating this inclusive environment.

We've talked a lot about what are the benefits of it, but how do we get there? Certainly, addressing those

existing barriers at scale is a challenge. I talked about the extent of the issues that we saw in content. Of course, institutions also have thousands of hours of video that needs to be captioned. How do you think about addressing scale? Such a challenge. How do we support time pressed faculty? For most faculty, there's a lack of awareness about accessibility, best practices, there may be a feeling that it's not my job, it's somebody else's job to do this type of work. How do we help really catalyze a culture shift for instructors? The third thing is how do we provide that kind of personalized learning experience at scale for students? How do we ensure that that student like Andrew has the interventions, the resources in place to learn in the way that works best for them?

You know, it's interesting John you mentioning that, that's one of the leading questions that I have when I work with institutions on captioning. They have archives of videos and they have instructors that are creating lecture capture sessions, and the realistic question is, how do we go about getting all this captioned? One of the wonderful things that we get to do is to work with institutions on putting together a strategic plan, as to how you're going to be able to not only move forward but also take a look back at those archives that are really important that you want to be able to share with students in the future. So yes, this is one of the really pressing challenges right now, creating that inclusive environment.

As we go to that next slide, Ally really takes three parts solution to trying to solve those challenges. I think what Ally represents here

is also three really strong pillars

for moving towards an inclusive learning environment. So the first thing is to leverage machine-learning and artificial intelligence to automatically

generate alternative formats of learning content, to take that PDF and transform it into an MP3, into an ePub, to provide students choices they can make autonomous decisions about how they engage with their learning materials, to provide an institutional report, so robust accessibility data and analytics, to track your progress. To really strategically allocate resources and improve your workflows, improve your processes for again, tackling that thousands of content items, that thousands of videos that live in institutions today. The third part, the instructor feedback. How do we provide workflows for instructors to make it easier, faster for them to build awareness, address accessibility challenges, and really start to prioritize inclusive practice in their course design to really make it part of their pedagogy? So it's not an afterthought or it's not something that's ancillary to their practice but it's really central. It's as important as any aspect



of the course design process.

We go to the next slide to give you a little bit of a sense of Artificial Intelligence and Machine Learning, just why they're so important to scaling these types of solutions. I'll let maybe Scott chime in

about ASR and the work that it does.

Yes. With automated speech recognition that has actually been designed for education, the accuracy is remarkable. Then when you couple the ASR with Artificial Intelligence,

where you're able to actually upload

and feed into the ASR process,

glossaries, documents, syllabus, even digital textbooks, then we're talking about technology

becoming even smarter and providing

that ability to create a much quicker process.

John and I both agree on this and we're going to mention this again. Technology is never going to replace the human. The subject matter expert, the instructor, is never going to be replaced by technology. But how can we work and use technology to enhance that engagement with content so that we can focus more on the content rather than trying to work in being able to engage?

That's exactly right, Scott. If we go to the next slide here, with the alternative formats that Ally generates, so Ally is providing using Machine Learning algorithms to analyze this semantic and structural elements of a document, trying to make some automated accessibility improvements to that document, and then use that data, that source of the document to generate these alternative formats. So right next to their content in the learning management system, the students can click that little Ally A, open up the modal on the right. It's a little bit blurry on the screen here but if it's a scanned PDF that students can access an OCR PDF. They can access a mobile-friendly HTML format, an ePub format where they can annotate

and highlight and adjust the fonts

if they're a student with dyslexia struggling with font.

Generate electronic Braille format and audio format for students to learn on the go, even machine translated formats. So making these available to the student directly, it will take a couple of minutes to process, to generate the alternative format, the first-time will cache that to the next unit that comes along will get an immediate download. If we go to the next slide, Gabriela. We can see again, how we can leverage those different formats to really scaffold the engagement and create better more effective study habits. So it's not about I'm an auditory learner, I'm going to download MP3s and listen to my content all the time, rather it's being a critical, conscious decision-maker. Maybe students starts off

by skimming a tagged PDF on their desktop

getting a high level understanding of the content.

Where do I need to focus my attention, where are the most important parts of this document. Then downloading the ePub, pulling it up on their tablet, adjusting the contrast. Let's say they've been studying all day, they're having eye strain, they want to go to a nice black background with white font, alleviate that eye strain. Now, we're highlighting, annotating

really engaging deep reading comprehension strategies.

Then moving to the MP3, listening to the content, engaging in different sensory modality. So you really scaffolded the process here of learning in a really important way. Of course then, video comes into play, you're reading and listening to your captioned video as augmenting that experience and so really creating a holistic form of cognition for students. If we go to the next slide, Gabriela. We can see the benefits to students like this student here. She's a mother, she's commuting a long distance to campus every day, she's at Chico State University in California. For her, downloading the MP3, listening to that content back and forth on her drive to school, it's giving her an extra hour, hour and a half every day to review her contents so that when she gets home, she can focus on her child and not have to worry about falling behind in her schoolwork. She tells us you gave me part of my life back and it's so encouraging to hear this because again, this is not somebody that has a disability or somebody who has a life circumstance. Somebody who can benefit for having some options in how they engage with their content. You can imagine that student riding the train back and forth. Noisy train rides, it's going to be hard to hear that lecture video. Having the captions available is so important for this student

who wants to engage that content on the go

in the midst of their busy lives.

We want to go to the next slide here. You can see a little bit of the impact. So since we started tracking alternative formats usage around March of 2018, over two million downloads of these alternative formats. So over two million times students making an independent autonomous choice in how they engage their learning materials. So it's really encouraging to see this happening, to see students really taking advantage of this opportunity. If we go to the next slide, Gabriela. As we mentioned, when Scott was talking about Machine Learning Artificial Intelligence, it only takes us so far. There's still a lot of work in accessibility

that requires human intervention,

that requires the expertise of a subject matter expert. Adding descriptions to images, adding a heading structure, these really can't be automated. So Ally really tries to provide that feedback to instructors through these little gauges, a constant reminder, built-in tutorials, so that they can make some of these simple fixes

and have a big impact on the usability of their content

as well as the quality of those alternative formats. So it's a nice example of how artificial intelligence

and people are working together

to tackle these issues to create the conditions

for a more inclusive learning experience.

We go to the next slide. Just a little sense of the impact so far. So over 400,000 files that have been fixed by instructors through that feedback, 37 percent of the time that an instructor clicks on the little indicator next to a file, they actually proceed to try to make a fix, and 83 percent of the time that fix results in improved score. So it's really encouraging to see instructors making this part of their process, making accessibility a priority, and having some success seeing that they can improve their scores and they can start to take those steps to be more inclusive. Four hundred thousand files that are more accessible today than they were yesterday. So really encouraging to see that. Those instructors are still going to need some help, they're still going to need some support, so I mentioned that institutional report. We live in a data-age today. Having access to analytics for strategic decision-making is so important for driving scalable impact. Again, if you're dealing with video archives, you're dealing with thousands of PDFs in learning management system, you need robust analytics, robust feedback to tackle those issues. If we just go to the next slide, I have a couple of screenshots of our institutional reporting being able to drill

down at the issue level, at the course level, monitor your progress over time, see that breakdown of the types of content that you have in a system being able to see how many videos, how many PowerPoint, how many PDFs really put the resources in place to help those time pressed faculty. There's some accessibility issues that are more challenging than others. Having that strategic approach really bringing everyone around in a campus together. Scott, I know this is something that you have seen a lot in your work where accessibility inclusion really brings so many elements of a campus together.

Exactly. Time and time again, we sit down and what initially was identified as silos start coming together and they start saying that there's a common goal, a common universal inclusiveness that everybody wants to see achieved. They just didn't realize that that was a goal throughout the campus. By bringing these people together, the various departments together, they're able to make such a larger impact for that student rather than it being just individual silos or individual faculty members.

If we go to the next slide,

just to give a sense of how we're operating at scale.

Ally has now checked over 620 million content items for accessibility. So when we talk about machine learning, when we talk about scale, when you're analyzing content at this level, this size,

it's really improving how those algorithms work.

I think in the context that caption certainly when you're focusing on an education market, you're improving how those machine-learning algorithms are evolving, improving their accuracy. So these things are only going to get better and as humans play that role in it, we really see that ecosystem

I think coming together to really create

that more inclusive learning experience for all students.

It's really interesting.

We've been talking a lot about technology and about data.

Now Gabriela, you can go ahead and go to the next one. Great. Thank you.

We we've talked a lot about how all of that is coming

together to give us insight to be able to help the engagement for students with the content, with the student experience and institutions, it's interesting. I go back to a famous quote by Henry Ford the inventor of automobiles that says, "If I had asked people what they wanted, they would have said faster horses." But the truth of the matter

really is that he identified a need,

not just of a few people,

but how do a solution could actually meet

the needs of many throughout the world. So through design thinking, and much of what we've been talking about

so far in this webinar roots back into

design thinking methodology of understanding any evolving day-to-day approach of our students in education. We're able to enhance

the educational experience with technology.

Technology like I said, will never replace the subject matter expert,

or instructors.

But with technology such as artificial intelligence, automatic speech recognition,

and all the features that John just shared with us,

the goals of enhancing student engagement with our content proactively,

rather than reactively can be achieved.

Personalized learning as John mentioned can be realized. There are many items

that are still in the developmental stages

that are focused on proactively

creating open access for all students.

As I mentioned John has been traveling the world meeting with students, faculty, and institutional administrators. John, what are some of the areas that you see that can give us a glimpse into what might be the next up-and-coming?

Well, definitely virtual reality is such a hot topic, it's a hot technology. Everybody wants to see

what are the pedagogical implications in use cases for VR,

and I think that it's slowly evolving. I think sometimes it's the shiny new toy

as opposed to something

that's really driving learning benefits.

But it's also going to create an interesting new challenges around accessibility. Currently, people that had any kind of vision issues are going to struggle inside of that environment. I'm not just talking about blindness, I'm talking about the myopia things like that, being able to be in that environment

and it can be really taxing on the eyes,

and so it's a really interesting

opportunity for exploring.

Thinking about augmented reality. I mean we're seeing it more and more and supporting people who have disabilities. I just saw a blind engineer invented a walking cane that has the Google Maps built into it. So mapping the environment, making our physical environment more responsive, more intelligent. It really is the wave of the future. I think this moment in time where inclusive design, universal design is such a part of the design vernacular

that hopefully will start to build these technologies

with that idea of inclusion from the start, and those experiences and those tools

are going to be really beneficial.

I think the potential impact is enormous. I think that it's really about bringing together not just the technologists, but the pedagogy people, the design folks, the people who are thinking about inclusive education, bringing them all around the table

and having them design these solutions

to really impact our education experience,

because we know when we open up

opportunities for diverse people to participate

and innovate and contribute, it drives new kinds of innovation, it expands how well products are made, and how well products perform in the market. So now that that's becoming a value, I think it's going to really improve hopefully the world all around it. I think we can look at it through some rose-colored lenses there.

Excellent.

I think there's some technology

or some approaches out there

that still need further definition

within the academic environment.

For example, audio description. It's very easy to take a movie and to audio describe the important parts that are taking place within a movie.

But now to take audio description and apply it to an academic setting, that's a very different approach. It really requires the contents specialists, the subject matter expert

to identify the pedagogical purpose

of using that video segment or being able to describe

what's important in that video segment

related to the content of that course.

So I think areas like that still need further research and definition for the educational environment. I look forward to seeing how this continues to evolve in the next couple of years. John, thank you so much. What we'd love to do right now is really take a transition into a time of questions and answers. I know that there's been a lot of you that have been participating. So I would like to first of all ask Gabriela if there's been any questions that have come in through the question panel, and for those of you that are have questions, please feel free to start putting them in there now, if you haven't already, and we'll take a look at some of those questions.

Gabriela?

Yeah, I haven't seen questions yet. So we're waiting for you all, keep them coming. So I guess we'll wait a few moments to give you guys some time to think questions.

That's right. Well, I must mean that John was so thorough in all of his information that all the questions were answered. I am sure there are a lot of practitioners on this call

and are going to be watching the recording

that have a lot of experience in this area, that have looked at how to create a more inclusive learning environment, a more inclusive academic environment. So even if you don't have questions, if you just have comments that you'd like to add, that would enhance what was already said in this session, please feel free to do that so that you can also add to the experiences that you've had that would benefit everybody.

We also we got some questions coming in. So one of them is you mentioned that translation was coming to Ally. What languages will be available to translate?

Yes, so currently with our machine translation. We use a third party engine that does the translations and



will translate it into 50 different languages. I can follow up with the full list, or you can actually find that too on Blackboard Ally help site.

But it's a list of 50 languages. There are some non Latin based characters in there. So some East Asian languages and things like that. It is one of our top providers that does translation work. Again, like we've talked about machine translation depending on the nature of the content, the nature of language, there can be some accuracy issues, but what we see as a great use case is second-language learners being able to work side-by-side with the content in the language of the institution in their native language, just as a guide, as a way to go back and forth when they're struggling with a particular word or vocabulary, having it as a reference point.

Thank you John. Another question is in an educational setting, where should a college start in creating an inclusive educational environment for nontraditional students?

Excellent. I'll take that. Really, you start with your strategic goals. How is the institution viewing this, and being able to strategically look at building in those plans into your institutional strategic goals? It has to start by looking at a holistic picture. We can do little packets. We can do initiatives in various departments. But if you really want to create an inclusive environment for all of your students, then starting with your strategic institutional goals is where you should start. Then from there, take a look at some great needs that you have. Various institutions are heavy. Some institutions are very heavy on lecture capture, some institutions are very heavy on using video type content. So really taking a look at your institution, the culture within your institution,

and drawing that change management plan

and out accordingly.

Great. Thank you. Another question. Would you say that the current state of accessibility

is as much of a question of intuitive design?

John, would you like to address that?

Yeah. I mean, I definitely think when we're talking about this relationship between accessibility and

usability, intuitive design plays a role in that, making sure that a user experience is readable. That there are different ways to interact with that UI, having audio options as well as click-through options. So I do think that when we design for everybody, when we design for the margins we are making that experience more intuitive, more accessible for everyone. So I do think that there's

definitely a relationship there,

and it's something that we'll continue to move towards. But certainly we also have to consider some of the complexities that come with intuitive design. When we stir up things down too simply, are we still making sure that it works for everybody. So it's definitely a delicate balancing act as most design work is.

Great. What type of assist tech seems to be most effective in working with students on the autism spectrum?

The autism spectrum is called the spectrum because it's so varied and so it's hard to say that there's a specific kind of intervention

that works across that entire spectrum,

it's really about assessing the unique needs of that student, where they live on the spectrum, what particular kinds of challenges that they may experience. Certainly for some students being able to hear something and read it at the same time, it's going to be effective for them but, it can also be more distracting for other experiences. So when we think about the autism spectrum, it really is about having good diagnosis, and I think that's even in the case like this student Andrew that I pointed out, it's really about working with professionals to understand those unique needs, what are the best kinds of interventions for those students and then putting those in place. Then providing environments that are flexible enough and adaptive enough to meet those needs, I think that's the key that we're thinking about experiences that can meet the needs even as they're changing, students evolve, students grow, their learning needs grow, that ability to be responsive and adaptive, it's just so important.

It's funny, I remember the day when we used to have traditional and non-traditional students, and we classified non-traditional students as those that worked while they were in school or had families while they were in school, and the traditional students were those students that were in the dormitory as well, as we all know that are in education, those lines have very much blurred. The students have evolved, many students are working now days even if they're living in the dormitories. So the terminology of traditional and non-traditional is pretty much gone to the wayside, and have we stayed up in current with how students are learning? How students are engaging? How students are experiencing that academic

life cycle, and making sure that we're providing that technology that enables them to engage with everything else that's going on in their life.

Great. This is a bit longer question. Our department is in a very reactive position

and we depend on instructors to

submit materials to us for captioning,

something they usually don't do

until they find out they have

a deaf or hard of hearing student in an upcoming class. We try to encourage them to submit materials preemptively, but we're not sure how to get the word out and overcome the reluctance of some instructors to do so. What in your experience can improve buy-in from faculty when it comes to accessibility services?

That is a great question and we see that quite often. One of the first steps that I usually recommend for institutions is, at the beginning of the semester to find out what students that need that kind of an accommodation, and then proactively go to those faculty members and collect that content that's going to be used throughout the semester and create those captionings prior to the student making that request. That's one small step of moving it a little bit more proactive rather than waiting for the student to request it or for the faculty member to submit it. The best result is always going to be putting in place a plan that's going to have all the video content and all of your courses captioned. But. As a next step, we all have to eat the elephant one bite at a time, being able to identify that student and then collect that content prior to the beginning of the semester, would really help to be a little more proactive and also save you a lot of last minute scurry around trying to get everything met.

Okay.

Does Ally work with the entire LMS

such as discussion boards?

So Ally at first, it's only going to check the instructor uploaded content in materials, so anything that students are doing in the discussion forums, Ally is currently not going to check. It's actually something

that comes up quite a bit as institutions really want to get aggressive about inclusion and as learning experiences, become more peer to peer oriented, we do want students to create and share accessible content that's going to work for all of their peers. It creates in complexities and some scale challenges for us. Instructor content is a small slice compared to all of the student content that we would check. But in those other areas of blackboard, when an instructor is building out the discussion of the post part like how they're organizing the questions or things like that, Ally is checking that WYSIWYG content for accessibility and I just mentioned it in one of the chats here in response to high priority road map item for 2019 for Ally to provide feedback about the WYSIWYG content to instructors, currently that WYSIWYG content is scored in the institutional report. We're going to be working on providing real-time feedback as they're editing the HTML, creating that WYSIWYG content feedback about the accessibility of how they're doing there.

Great, thank you. Does anyone else have any more questions? Feel free to write it in the chat box, the question and answer box, we could definitely get to them. We'll give you a moment to do that if there are any last questions.

I do see one. Does Ally have limitation regarding the types of materials that cannot be converted into different accessible media formats? So there is, so currently a PDF Power-point, Word document, HTML files, or what we can convert into the different alternative formats. We're not doing anything right now like converting audio into a transcription file, that's something that's more on the Verbit side of the house, and providers that are doing that auto speech recognition work. There are some limitations with like I works files, so key notes and pages, documents use a proprietary datas that's difficult to process, and so there are some limitations there, but we continue to try to prioritize and expand what content we can convert to alternative formats.

We got one more question. It appears the best accessibility would support a lock-down model for online courses, do you guys agree on that?

There's a happy balance there, when you lock it down too much and then you have instructors that say, "Where's their academic freedom?" There's a balance there. We want this student experience best practices say that, we want students to have a consistent experience throughout all of their courses so that they don't have a course like John described earlier with that beautiful pink background, and font, and butterflies, and flowers, and things that just really aren't relevant to the content. But yet, how much do you lock down? How much of that do you use for that user experience and accessibility? So those are difficult questions and a lot of times those are questions that really depend on the culture of your institution and the type of institution that you are. But all that said, the more of the navigational types of areas that you can lock down, that you can provide a consistent experience, the better experience that's

going to be for your students. John, do you have anything you wanted to add to that?

Yes, I think that makes sense to me. Lock-down to me it just sad, the idea of shutting things off when we're thinking about accessibility and opening up access, and so, I do think that there's a collaborative work there to be done, as we instructional designers play more of a role in collaborating with instructors to design courses that are both pedagogically rich and also well-designed. I think that's going to be an important model moving forward, So it also speaks of this idea that inaccessible piece of content has to be a boring content and that's a stigma that I think that we want to move beyond and instead thinking about it as good design practices that you can use rich colors, you can check using a tool like color.reviews, simple way to just check whether or not that contrast meets those width x standards. So yeah, I think it's important to fight against the stigma that we have to be restrictive or not creative and instead just use that as parameters for guiding the kinds of practices that we engage in our teaching.

Very well put.

Good. Thank you guys for answering the questions and thank you to the attendees for your questions. We really appreciate you joining our webinar and I hope you enjoyed it. After this, we'll be sending you a link with the transcribed version of the webinar, so feel free to look over that, share it with whomever you would like and definitely keep an eye out for details on our 7th webinar we would love for you all to join us as well. Thank you again and hope you all have an amazing day following this, bye.

Thanks everyone.