

LILY BOND: Welcome, everyone. And thank you so much for joining this webinar entitled "Accessibility at Blackboard." I'm Lily Bond from 3Play Media, and I'll be moderating today. I'm joined today by JoAnna Hunt, the accessibility manager at Blackboard, Scott Ready, the director of customer relations at Blackboard, and Nicolaas Matthijs, the ally product manager at Blackboard.

We have about 45 minutes for their presentation followed by 15 minutes of Q&A. And with that, I will hand it off to JoAnna to start things off.

JOANNA HUNT: Hello. What we want to talk to you guys about today is actually a little bit of an overview about how Blackboard approaches accessibility, and then give you some insights into some of the things that we're actually doing with our products and services.

So I'd like to get started by creating a shared understanding of the global population around accessibility and really talking a little bit about why this matters to education. The World Health Organization has identified that there are approximately one billion people worldwide who have some form of disability. And they generally are classified into these four major groupings of visual impairment, hearing impairment, motor impairment, and by far the most large segment of population, those that are struggling with cognitive disabilities.

And this particular group of individuals often have what can be classified as invisible disabilities, making them the least obvious group to interact with an education market. There are also those students that are least likely to be informing educational institutions that they have disabilities in the first place.

And that's why Blackboard has actually begun to transition our messaging and approach around accessibility towards one that's really about encouraging inclusive learning environments for everyone. When you shift the attention from integrated environments or environments that are focused specifically on one set of disabilities, you can actually create environments that afford additional opportunities to all of the students in the classroom, who may or may not be informing your institutions that they have different learning challenges.

And some of this is centered around rethinking how learning is achieved and understanding the different nuances of the way that students learn, revisiting the content to ensure that it's truly set up for universal consumption, and spending some time to understand how different individuals interact with the tools and technology that you're using in your classroom, and

adjusting where appropriate to make sure that most of your students can be successful without a lot of additional accommodation.

So when we pull back and look at the bigger picture around this, focusing on accessible environments isn't just about focusing on individuals with disabilities. It's about creating an environment that improves everyone's ability to consume this information, which leads to higher quality materials, more usable experiences, and personalized access for everyone, whether they have a permanent disability or are simply experiencing some temporary challenges because of life situations, commuting challenges, accidents that may have happened-- like they've broken their arm or their leg-- or even exciting life changes like having a child and suddenly needing to carry around an infant while you are taking your online classes.

All of these things can impact the way that that individual needs to consume content in that moment in time. And when you take the practices of creating accessible content and apply them to all of the content that you're building, you can create opportunities for all of these students to succeed, regardless of circumstance.

And this leads us into some of the current trends that Blackboard has been watching and paying attention to in higher education over the last several years. One of the biggest changes that we're seeing is an increasing awareness by the learner around their civil right to equal access to education and what this actually means to them in practice.

They're taking a much more active ownership over their own educational experiences. They're working with their universities, with their educator, but they're also going over the heads of universities and higher education institutions to ensure that they do get the same level of access to high quality education as everyone else.

Part of this is due to a lower number of students who are refusing to disclose their disabilities. Anyone suffering from cognitive disabilities like ADHD or autism may be tired of the social ramifications that they've struggled with their entire academic careers and are choosing to no longer tell the universities about these learning challenges that they have. But this does not negate their ability to file formal complaints with organizations like the Office of Civil Rights or the Department of Justice when they do find something to be inaccessible and creating a barrier to their ability to learn.

And the combination of these two trends-- greater awareness of the civil rights and lower numbers of students who are actually disclosing their disabilities to higher education institution-- is actually driving a considerable amount of proactive accessibility efforts in higher education. With lots more institutions than have been doing this in the past, creating strong, solid, maintainable programs around the accessibility of their educational experiences, not just their physical building, but their online and digital environment. And what that proactivity is leading to is a shifting mindset towards inclusion, not thinking specifically about being reactive to the students with obvious disabilities, who report them to the disability services offices or who request specific accommodations on campus.

And this inclusive mindset, this ability to be proactive around the programs related to accessibility in higher education, is increasing the expectation on technology vendors like Blackboard to ensure that the things that we deliver are meeting these needs and that we are truly setting ourselves up to be partners with our education customers to make sure that they can be set up for success.

And this leads to the three-part solution that we want to share with you all today. Accessibility compliance and education has three main factors. One is the technology that you choose to acquire to use to deliver your online instruction or your digital experiences and having some confidence in the accessibility of that technology. The second component to an educational institution's ability to be compliant is the content that you're creating and that you're delivering within those technology platforms. But the third part around this is the policies and processes and programs that you've established in your organization to not only ensure that you can become successful, but that you can maintain that success over time.

And a lot of educational technology vendors tend to stop at the gate that is their technology, that is the platform that they build and deliver to you. But Blackboard is now taking this a step further and providing tools and services that can help you get better insight into the accessibility of your digital content that you're placing within our platform and providing consulting opportunities to help you assess the entire ecosystem that surrounds an e-learning student and understand any challenges or barriers that may exist for those students.

With our consulting organization, we can come in and offer you a variety of opportunities to get better insight into what's going on in those areas and build opportunities to improve and succeed. So I'd like to start by actually telling you a little bit more about the platform accessibility of the tools and technology that Blackboard builds and delivers.

And it starts with understanding the commitment that Blackboard is making to the product experiences, that we believe that a mature digital accessibility program means not only paying attention to the technicalities of the standards-- things like the Web Content Accessibility Guidelines and Section 508 and some of the localized international standards that exist in the UK and in European market and other markets around the world-- but also about building strong organizational partnerships with our customers and with advocacy groups around the world to ensure that we're always paying attention to the changing landscape of digital accessibility.

So I'm going to share a little bit of information about four key products that show this commitment in action. Let's start with Blackboard Collaborate, which is Blackboard's web conferencing software. Blackboard Collaborate has been completely redesigned from the ground up to be a fully browser-based experience that no longer requires Java downloads or dependencies on things like the Java access bridge when being used in conjunction with assistive technology like screen readers.

We spent a lot of time ensuring that all of the interactions and workflows within the application provide full keyboard and screen reader support, that we provided global keyboard shortcuts for common actions like turning on and off your audio or video, jumping in and out of the chat in order to respond to messages that are happening in the discussion, but also starting to drive research with partners about how to improve screen reader support for whiteboard activities, consumption of shared content, and different types of interactions that happen in a live session.

We've also provided dedicated live captioning capabilities within that application, and you can run up to five consecutive streams of captions in any given session, allowing you to caption in multiple languages as necessary and all of those captions being automatically included into the [INAUDIBLE].

And with our Blackboard Learn platform, as we've been rethinking and redesigning the experience to provide a much more simplified set of workflows, we've been spending the same amount of time as we did with Blackboard Collaborate focused on the interactions of people using screen reader technology to interact with our products, creating common page structures, providing full support for captions and uploaded media, even making common web technologies like drag and drop for uploading files and reordering content in a learning

management system work as efficiently with a keyboard and a screen reader as they do with a mouse, providing opportunity for instructors to add alternative tags to images and, in many cases, prompting them when they're not doing so.

Similar types of approaches are being taken in our Moodlerooms platform, which is an open source learning management system based on the Moodlecore platform, again providing full support to screen readers, text magnifiers, and speech-to-text solutions, looking at those Google keyboard shortcuts for common actions, making sure that we're paying attention to the compliance with the Americans With Disabilities Act, but also with internationally recognized accessibility requirements, and even building additional plug-ins that improve the accessibility of common features like discussion boards that can be shared back to the Moodle community and installed by anyone running any type of Moodle platform to intentionally improve the experience of challenging workflows like discussions.

And in our K-12, market, we've also been focused on ensuring that our platform technology can create and deliver accessible district and school websites using template-based pages and apps that provide consistent interaction, but allowing for some configuration of templates and providing consistent guidance to our customers as they're making selections to ensure that their district websites are already set up for success, supporting appropriate resizing and scaling of all of the content, and making sure that all of the interactions in the content offering experiences are allowing authors to create website content that is accessible.

Those are just a few of the highlights related to our platform accessibility and the things that we're focused on in our technology. So we believe accessibility goes remarkably beyond the technology that we provide. And so I'd like to turn things over to my colleague, Nicolaas Matthijs, to talk to you a little bit more about how we approach content accessibility.

NICOLAAS

MATTHIJS:

Thank you very much, JoAnna. And so as JoAnna was saying, when we look at the different systems and platforms that institutions make available to their students and their instructors, the accessibility conversation is too often limited to how accessible those platforms or those systems are. And when we look at some of the-- when we look at the sort of user-generated content or the course content, the content that instructors put into those systems, those are most of the time treated as a black box.

And so ultimately, that's really the content that the students are after. It's also where the majority of the accessibility issues exist today. So that's really where-- JoAnna, would you mind

going back a slide? So that's really where Blackboard Ally comes in. So Blackboard Ally is a new product that really focuses on trying to make digital course content more accessible, and so it really tries to open up that black box of the user-generated content that focuses on making that content more accessible.

So with regards to the accessibility of course content, there's a number of longstanding challenges that have existed in this space for quite a while. First of all, there's some challenges that institutions are faced with around this. One of the main challenges is-- you're free to go forward now, JoAnna. Thanks.

So one of the main challenges is that for an institution, it tends to be extremely difficult to understand how they're doing with regards to the accessibility of their course content, and that's because there's lots of course content out there, and there's new content being created all the time by different people.

There's a wide variety of different types of content, and so that makes it difficult to understand as an institution how you're doing. And it makes a number of other things difficult as well and makes it difficult to understand where the problems are. It makes it difficult to understand how things are evolving and makes it difficult to understand what you can do as an institution to further improve things, and in many cases, it makes it difficult to make a case for accessibility at the institution in general.

Most institutions have something along the lines of an alternative media lab or disability services department, where students that have disclosed their disability can put in an explicit request for course materials to be made available to them in a particular alternative accessible format. For those of you that have been involved in this remediation process, you'll know that this tends to be a very manual process, a very labor-intensive, a very time-consuming process. So it can take some time for a document to be remediated and to be made available to a student, which on the one hand, doesn't always work for the student, because they have to wait, while on the other hand, it can be an expensive process for the institution.

And obviously, there are some legal requirements around the accessibility of your course content as well, which-- with things like the 508 refresh, we expect that to get worse as we go along, which sometimes leads to institutions being sued around this, which is unfortunate and expensive.

If we look at some of the challenges that the instructor is faced with-- so we've talked to a lot of

instructors about this. And we've sort of very clearly identified an awareness challenge. So there appears to be a lack of awareness in terms of what the instructor is expected to do around the accessibility of their content, or there appears to be a lack of understanding as well as to how many students accessibility can affect, as well as how it can affect them. And there is also a perceived lack of guidance on how they can improve the accessibility of their course content.

And so most institutions will do things like have organized training around how to create more accessible content, have sections of the website dedicated to how to create more accessible content. One of the challenges there is that tends to be very disconnected from the systems that instructors use and the workflows that they go through to both create as well as share their content with their students. So that disconnect gives rise to the sort of lack of awareness and lack of understanding and that perceived lack of guidance.

Most importantly, if you look at some of the challenges that the students are faced with, so first of all, so as I said, they usually have to put in an explicit request for things to be made available to them in a particular alternative format. Because of how manual that workflow is, it can take a long time for them to receive that, which doesn't always work well with their coursework flow.

A very critical problem, we think, is that this traditional request workflow also tends to exclude quite a few students. It excludes students that aren't aware of this workflow. It excludes students that explicitly choose not to disclose their disability, and there's research that says that there is an increasing number of those.

And then there is also-- but it also excludes students without a recognized disability. And we very strongly believe that there are a lot of things that can be done around the accessibility of content that will ultimately benefit all of the students. And that's really where accessibility touches on the quality and the usability of the course materials. And that's something that we don't want to be excluded from in the picture and something we push heavily through Ally product as well.

So this is kind of where Ally comes in. It's a little bit of background on some of the problems that it's trying to provide help with. And the way in which Ally works, so Ally is not a separate platform or a separate system that people have to explicitly go to. But instead, it's something that very closely and seamlessly integrates into the systems that they already use. So rather

than them having to be aware of yet another system they have to go to, we want to bring our accessibility features into the systems that they already use and use that as a way to increase awareness, increase visibility and so on.

So our primary target right now, or our starting point here, is the learning management system. It's a very important player in all of this. It contains a lot of course content and so on. And so we're currently entirely focused on providing a very close and seamless integration with the learning management system. And one of the things I'm very excited about is that as a company, we're committed to providing Ally to as many students as possible, and so we will be making integrations available with all of the major learning management systems out there.

That's because we believe that that's the right thing to do. We also think there are some very practical benefits here. If you have a department at your institution that uses a different LMS, you can still take a consolidated approach. If you work with other institutions that use a different LMS, you can still take a consolidated approach.

Further down the line, we do see potential for other types of integrations like content management systems, content collaboration systems, and so on. But right now, we're entirely focused on providing a very close integration into the learning management system.

Now a little bit more about how it actually works and what it does. And so the way in which it works-- and this is specifically for the learning management system integration-- is that as an instructor, you go into the learning management system. You go into your course site, and you add some course content. And then at that point, that only uses the native LMS workflows. But at that point, Ally will automatically pick up on it in the background. So as an instructor, you don't have to manually trigger anything.

And then once it's picked up on that, there's a number of different processes it will go through the background. It'll, first of all, check what type of content is this. Is this like a PDF? Is it a Word? Is it a presentation? Is it an image? Is it audio? Is it video? Is it HTML? Is it something else?

And then depending on the type of content that it is, it'll, first of all, run it through an automated accessibility checklist, which will check for common accessibility issues within that type of content. And they can be anything from a number of high-level checks-- for example, is this a scanned document-- down to a number of very fine-grained checks-- for example, contrast checks at the individual character level. So there's a wide range of things that it checks for.

That checklist is based on WCAG 2.0 AA.

And then the second thing that it runs through is also a set of machine learning algorithms that we've developed, which essentially try to extract some of the semantic information that's visually present for our eye, but isn't necessarily there in a machine-readable way. So it'll try to do things like identified reading order or identify where the headings are, what the heading structure is, where the lists are, where the tables are, and so on.

And then it will use that information from both the checklist, as well as the machine learning algorithms, to sort of fuel our three-step approach to trying to make the course content more accessible. And our first step, which is really the user-facing-- the student-facing side of things, is where we-- so the first thing we'll try to do is based on the checklist, based on those algorithms, we will automatically try to generate a number of more accessible alternatives for the instructor's original.

And so our primary format there is semantic HTML based on that version. We also generate an ePub version of the content, an audio version of the content, electronic braille version of the content. If it's a scanned document, we will automatically OCR it. We'll make that available as an alternative format.

We're currently working on a format specifically for people suffering from dyslexia using a very interesting font, and there's some very good research about that. And so this process doesn't take very long. Usually within about a minute, we'll have run through this. If the instructor is adding the original, we'll have run through this process. We'll have generated all of those alternate accessible formats, and we then make them available to the student and the instructor within the LMS. So that's the first part of what Ally does, which is really all about trying to do as much as we can in an automated way to provide a more accessible starting point for the student.

The second part of what Ally does is, again, based on the checklist, based on those algorithms, it also provides a feedback loop back to the instructor, where within the context of the LMS, we'll provide the instructor with feedback on how accessible their content is, what some of the issues are that were identified, as well as very detailed guidance on how they can fix some of those issues.

And so that has a number of different goals, but it's primarily a training goal. It's a sustainability goal, almost. The real goal is-- the long-term goal is to try and embed some of these best

practices into the instructor's workflow, try and almost change the behavior a little bit over time so that next time, when they're preparing some new course content, they can make some of these things part of their workflow, rather than having to revisit after the fact.

So this is really all about trying to create awareness, trying to build in some of these best practices into the instructor's workflow. One of the big advantages that we have here is that we can insert this into a system that they already use, that is already part of their existing workflow. So we have a very good touchpoint with the instructor and a good way to raise some of that awareness and visibility. So that's the second part of what Ally does.

The last part of what it does-- so based on doing this across all of your course content, everything that lives within your learning management system, we also provide a feedback loop back to the institution, where we'll essentially generate a full institutional accessibility report or course content accessibility report, which will provide some very detailed insight into how you're doing as an institution.

It will sort of tell you how accessible your content is on average, how things are evolving over time, what the main issues are, what the most problematic courses are. And so this really tries to shed some light onto something that's currently very difficult to understand and get by. So it gives you an idea of how you're performing, how things are evolving, where the main problems are, and what you can potentially do yourself as an institution to further improve things. So that's the last part of what Ally does.

So just to summarize, so basically, Ally has got three main feature areas. There's the alternative accessible versions, which we'll automatically generate, make available to students and instructors within the learning management systems. There is the instructor feedback that we provide, where we provide both very detailed feedback, as well as detailed guidance on how they can improve the accessibility of their content. And then there's the institutional report, which provides that institution-wide overview and insight into how you're doing as an institution from a course content accessibility point of view.

If this is of interest to you at all, or if you know anyone that this would be of interest to, I would highly recommend you to join our Ally user group. We use it for two different purposes, so it's a way for you to stay informed about developments or news updates and additional developments about Blackboard Ally. But it's also a way in which you can participate in this sort of future development of this product. You can participate in some of our UX research,

some of our usability testing, some of our beta testing, and so on. So if this is of interest, definitely do sign up. I will post the link to the sign-up form in the chat as well.

And then the last thing that I wanted to say is just to sort of summarize-- and this is kind of how I tend to think about the problem-- so I very much think of the accessibility of course content as a very wide spectrum, and as an institution, you sort of land at a certain point on that spectrum. And for many institutions, that is very far down just because of how challenging this problem is to tackle.

And so what Ally does is essentially tries to try to move you up on that spectrum as much as possible. So that's where, first of all, the automatically generated alternative formats come in, which will help you move up on that spectrum quite a bit immediately. And then in order to help close the remaining gap, that's where you do need some engagement from the instructor, as well as the institution. So that's where the instructor feedback comes in next, which gives you a very automated way to distribute some of that training effort and reach a lot of instructors, which will help close that gap a little bit more.

And then the institutional report is essentially there to oversee that entire process and give you a sense of where you are on the spectrum as an institution, as well as what you can potentially do yourself as an institution, again, to further improve things such as help you identify where training could be provided, help you identify who should be targeted for that training, help you identify which software you could license, and maybe even help you identify where you could potentially bring in some external help. And then I'll pass that on to Scott to talk a little bit about that.

SCOTT READY: Fantastic. Thank you so much, Nicolaas. I'm Scott Ready, director of customer relations and principal strategist with accessibility. I'm in my 13th year with Blackboard, having come from higher ed, where I oversaw e-learning as well as filling the role as a faculty member and department chair. Prior to e-learning, my career was associated with many facets of accessibility. I jokingly say that I was born into accessibility, as I was the primary communications bridge between my parents and their friends to the hearing world.

I've had the opportunity to professionally participate in the evolution of accessibility over the past 35 years working within state government, on federal projects, as well as in the private and corporate sector. Providing knowledge and a framework to approach accessibility makes up the third part of our e-learning accessibility solution for institutions and organizations.

Our consulting is platform-agnostic, meaning that we provide consulting with educational providers regardless of the platform they use. As we explore the e-learning environment, we believe that it includes much more than just the classroom. Learners enrolled in online, hybrid, and blended programs require more than technology-enabled courses. They anticipate and expect a holistic learning experience that is focused on their success.

We believe that for the learners to have a fully inclusive environment, accessibility must be addressed throughout the entire educational lifecycle. Since 60% to 80% of undergraduates in higher ed and over 40% of employees in the workforce choose not to disclose their disability, common barriers need to be identified and removed. Research shows that when learning environments are made accessible, it creates a better learning environment for all.

An example of this is the great work Oregon State University's e-campus research unit and 3Play Media conducted on closed captioning. In their research, they discovered that 98% of all students found captions to be helpful. This provides another way for ESL students to obtain the information, in addition to being able to listen to the speakers.

For students with attention deficits, captions provide a way to better focus on what is being covered. In this one example, you can see how what is typically considered to be an accommodation for deaf or hard of hearing students truly creates a more successful learning experience for all students.

Now I remember what it was like prior to curb cuts. And many of you might ask, what are curb cuts? Well, prior to Americans with Disabilities Act in 1990, when sidewalks met a street intersection, there was a curb. And with ADA, it was required that all curbs be cut out and a ramp created to provide access to cross the street for those who rode in a wheelchair.

What was originally directed at people with disabilities has now shown to benefit every user of public spaces-- individuals pushing a stroller, pulling a cart or a wagon, riding a bicycle, and skateboards. No longer do we transition from a sidewalk to a street and think of a curb cut as an accommodation. It's just part of the normal environment.

How many of you realize that the electric toothbrush was originally created as an accommodation? An accommodation for individuals with a motor impairment. We could all agree that it would be ridiculous to force an individual who rode in a wheelchair to sit outside a building watching others pass by until someone could build a ramp over the steps granting the

individual access to the building. Yet often in the e-learning environment, a similar scenario is considered acceptable-- making some students wait for videos to be closed captioned or for alternative documents that Nicolaas just spoke about so they may read the content provided and be an active participant in class while the rest of the class moves forward.

I personally look forward to the day when barriers in our educational environment are removed, much like those curb cuts that I just spoke about, and are considered just a normal part of the educational ecosystem. Rather than trying to address accessibility as a reactionary one-off, the rulings and litigations that have been handed down over the past several years expect there to be a plan in place, a plan as to how an institution is addressing and sustaining accessibility.

With this engagement applying WCAG 2.0 standards, we provide the expertise needed to come in and review the e-learning environment from the e-learning learner's perspective, and through partnering with the institution, develop a sustainable plan for an inclusive educational experience. This plan also includes remediation recommendations to address the barriers that were identified. Eve Hill, who's the Deputy Assistant Attorney General for Civil Rights at the US Department of Justice, was quoted saying, "Institutions that have an accessibility policy and dedicated resources and who are acting in good faith are less likely to be sued. Institutions that are not implementing policy are vulnerable."

None of us have to look very far to read about an institution that has been investigated due to an accessibility complaint or the tremendous amount of money that the investigation ended up costing. We also conduct an accessibility review at the course level, examining all content items and also reviewing areas such as pedagogical approaches. There are barriers that are unknowingly created in areas such as assignments that, with a minor adjustment, can be made accessible to learners with varying abilities.

With this, each course review results in a findings and remediation recommendation report, as well as an institutional trends report covering all the courses reviewed. The trends report is commonly used to identify areas needing to be covered in future trainings. A workshop is also provided with this engagement as an opportunity to transfer knowledge to the primary content creators.

So before we move in to our question and answer time, I hope we clearly communicated that accessibility is an imperative with us, that we partner with individuals and organizations to fully

understand and act upon the needs not only to provide accessibility, but to provide usability, and that we are delivering on this imperative. And with that, Lily, I'd like to stop and see if there are questions that have been asked in the chat area.

LILY BOND: Thank you so much, Scott, as well as Nicolaas and JoAnna, for a wonderful presentation. We have lots of questions coming in. So to start us off, someone is asking, "We use a lot of embedded documents and media using HTML and iframe embed codes in our courses. How would Ally interact with that content?"

[INTERPOSING VOICES]

NICOLAAS
MATTHIJS: Yeah, apologies for that. I was on mute. So the intent is for Ally to pick up on as much of that content as possible. So right now, it picks up on any content that's uploaded within the native learning management system tools. We are working on expanding that to include all of the content that's created through WYSIWYG editor as well. So that should be there very soon.

The next step after that will be to look at some of the sort of external content that's referenced from within those native LMS tools. So if there's links out, or if there's things like embedded YouTube videos, for example, then at that point, those would be included as well. And the same would be true for like iframe, iframe embedded content.

The one exception to this or the one challenge for all of this is LTI tools that are brought in to the LMS, because they are essentially a black box for us as well. So if we want to pick up on some of the content that they bring in, then we'd have to look at some sort of custom integration or look at it on a case by case basis. So right now, we sort of focus on-- so we already picked up on anything that's uploaded within the course. And then we've got a roadmap to picking up more of that content, including some of the external content that's being used.

LILY BOND: Thanks, Nicolaas. Another question here. "Does Blackboard have any plans to integrate closed captioning for media into the Learn product?"

JOANNA HUNT: This is JoAnna. I can take that question. There's been several conversations and research around that, and we are working with partners, including 3Play Media, to figure out ways that we can potentially accommodate that and create connections between lots of the valuable captioning services that already exist and the way that content is being created and managed inside of the learning management system.

We don't have anything definitive yet. We're still in very early research phases around that, but I would highly encourage you to submit suggestions to the Blackboard team about what kinds of things you would like to see along those lines. Or if you're already working with a particular video creation platform like Kaltura or a particular captioning partner like 3Play, definitely talk to your reps on those ends as well, as we do have a lot of partnerships around that. And we're all working together to get to the right place for the market.

LILY BOND: Thanks, JoAnna. Another question here-- "When will Ally be available for other LMS platforms, and will it work the same way regardless of the LMS that you're using?"

**NICOLAAS
MATTHIJS:** Yes. So Ally will officially be launched, or will officially become available, for Learn 9.1, Moodlerooms, and Instructor Canvas in April of this year, so it's very close by now. And then further in the year, that will be followed with the standalone Moodle integration, as well as the Learn Ultra integration, as well as the D2L integration. And there will be no differences between any of those integrations, so the intent is for all of those to work in exactly the same way.

LILY BOND: Thanks. Another question here-- "Who does the live captioning in Blackboard Collaborate?"

JOANNA HUNT: Blackboard Collaborate is actually set up to allow for any captioning service that you use to integrate with it. So it does rely on the institution having hired a captioner, but any individual participant in the session can be designated as a captioner. And it will actually support the use of CART services as well for the entry of captions. So it really is at the discretion of the institution.

We do have a couple of partners that we, Blackboard, work with regularly for our own webinars on our own captioning requirements. And we're happy to share contact information for those partners with anyone who's interested.

LILY BOND: Thanks, JoAnna. Another question here-- "Does Blackboard offer an in-house video management option?"

JOANNA HUNT: We currently do not.

LILY BOND: Thanks. Another Ally question-- "Does Ally work with third party content like MyLabs by Pearson?"

NICOLAAS So this relates back a little bit to the previous questions in that-- so currently, it primarily looks

MATTHIJS: at the content that's stored within the learning management system for third party content that isn't linked directly from the native LMS tools. So these are mostly things like LTI tools and so on.

For those, those aren't included by default, and we'd have to sort of look at them on a case by case basis and see what we can do. But by default, those would not be included.

LILY BOND: Thanks.

JOANNA HUNT: We are also having conversations with our publisher partners like Pearson and McGraw-Hill and others about ways that we can look at expanding the Ally technology to their services to give you all some confidence in the accessibility of that third party content when it's being used within your learning management system. Again, in very early research phase conversations around those things, but we are engaging those third party content developers in the future development of Ally as well.

LILY BOND: Thank you both. Someone else is asking, "Does Ally detect whether a video has captions? And if so, whether they're automatic captions or post-produced captions?"

NICOLAAS
MATTHIJS: So this is actually-- this is work that's in progress right now. So we're building out explicitly for this to check if there's captions available. There's a few things that we're doing to try and pick up on auto-captioning as well, and there's things like if it's a YouTube video, for example, it actually doesn't flag it as captioned if it is auto-captioned.

So it's easier for those that-- for other types of video, there's things that we're looking at like spellchecking, spellchecking, what comes out of it, and actually looking at a ratio of how many errors are in there, just to try and catch with as much sort of confidence as possible whether or not it's auto-captioned. So it's something that's in very, very active development right now.

LILY BOND: Thanks. Someone else is asking, "Can you explain more about how Ally integrates with Blackboard Learn?"

NICOLAAS
MATTHIJS: Sure. And I can probably fill the remainder of this webinar with that question. So basically-- so as an instructor, when you add some content to the learning management system, you just do what you do today. You add your content. Ally will pick up on it. And then once it's run through all of its processes, the way in which it will be exposed-- first of all, from a student point of view, whenever they-- so we always keep the instructor's original content as the kind of

default. That will always remain available. We don't change or alter that. But every time that the instructor's original is available to the students, there will be a way right next to it, usually within like a context menu, to get to the available alternative formats that we generated.

So it's a very consistent, very simple workflow, where just every time the content is being used, the students will be offered a way to get to those alternative formats. From an instructor point of view, in terms of some of the feedback that we provide to them, also very similar in that every time that content's being used within the learning management system, we'll provide a little indicator for the instructor and that will give them an ID of how accessible their item is.

And then they can engage with an indicator, and they will bring up our instructor feedback, which will-- maybe we should have put a screenshot in the presentation-- which will essentially tell you how accessible your item is, what the most impactful changes that you can make, and then there's a whole bunch of feedback. There's a whole bunch of guidance and documentation that's woven into that to help them understand why it matters, how it impacts students. Very detailed guidance on how you can fix it, with various options and so on.

And so that's, again, very similar. Every time the content is being used, they'll get that indicator, and they can engage with that. The institutional report itself is an administrator feature. That's something that's available from the administrator workspace as an administrator.

LILY BOND: Thanks, Nicolaas. A lot of people are asking if you could clarify which Blackboard products Ally will be available for.

**NICOLAAS
MATTHIJS:** So as of April of this year, we'll be launching it officially for Blackboard's Learn 9.1, which is the version of Learn, the major LMS, that will be-- sorry. That's the release that will be going out in April of this year. So as of that release, Ally will be officially available as well.

So we're integrating it into Blackboard Learn. We're integrating it into Moodlerooms, which is a Blackboard product as well. And then we'll also be integrating it into Learn Ultra, which is the sort of next generation learning management system that Blackboard's building out right now. And then that integration, the last integration is coming further or later in 2017.

LILY BOND: Thank you.

JOANNA HUNT: And just for a little bit of clarity, the Blackboard Ally integration with the Learn 9.1 experience will be available for self-hosted, managed hosted, or stacked customers, as long as they

upgrade to the latest release of the Blackboard software. So in the initial launch, we won't be backporting Ally to make it available to previous versions of Learn, although we are considering that for a little bit later in 2017. But it will be available for all deployment methods.

LILY BOND: Thank you both. Someone else is asking, "Does Blackboard have open source software allowing developers to roll up a staged Blackboard environment to develop in?"

JOANNA HUNT: So our learning management system technology that is really about the open source technology is our instance of Moodlerooms, which is a hosted version of the Moodle platform. We don't currently have open source technology around the Blackboard Learn platform, but we do offer a very comprehensive developer's program, where you can build LTI extensions, or what we call building blocks, to extend functionality on the Blackboard Learn system.

Any Blackboard customer can have a test or a development instance of Blackboard products available to them to do this type of external development, but there's no open source access to modify the core code of the Blackboard Learn learning management system or the Blackboard Collaborate web conferencing system, only the Moodleroom technology.

LILY BOND: Thank you. Someone else is asking, "We have several faculty members who use old scanned documents that have been converted to PDF. Can Ally provide alternative access versions for those types of documents?"

NICOLAAS MATTHIJS: Yes. So one of the things Ally checks for when it picks up on a new piece of content is it will actually-- one of the checks that it runs is, is this a scanned document? And then if it is, first of all, it'll flag it. That'll become available within the institutional report. That'll become available as feedback we provide to the instructor. But then there's a number of things that we do to that scanned PDF to try and make it more accessible. And so the first thing that we'll do is we'll automatically OCR it. We use an integration with ABBYY FineReader, which is all included as part of the service.

So we will-- and then that OCR version is made available to the student as an alternative format. And we also feed that OCR version into some of our algorithms to try and identify some of the semantic information. And so we'll also generate semantic HTML version, ePub version, audio version, and so on based on that OCR version.

Now just to be just to be very transparent or very clear, in terms of accuracy of those conversions, your mileage will vary based on the quality of the original. If you have a very

poor-quality scan with maybe some handwriting on top of it, then the OCR result might-- which also means that some of the things that follow from it might not be great. Having said that, if you have a scan that's of reasonable quality, then it actually can do a fairly good job at it. And the integration that we use with ABBYY FineReader is definitely sort of state-of-the-art OCR technology.

So your mileage will vary depending on the quality of the original, but there's a lot of things that we try to do to provide a-- or to at least try to make that item more accessible.

LILY BOND: Thanks, Nicolaas. Several people have been asking if there will be any additional licensing fees for Ally.

NICOLAAS
MATTHIJS: So the short answer is yes. So Ally is a separate product that will have its own license fee. And there's a number of sort of implementation services that will be included in the license fee like helping with setting it up, running you through the institutional report, and so on. We're trying very, very hard to keep that license fee as reasonable and as modest as possible.

LILY BOND: Thanks, Nicolaas. Someone is asking if you're doing pilots of Ally and if you could talk about how contracts will be built into Blackboard.

NICOLAAS
MATTHIJS: So we-- so the answer is yes. So we are doing pilots. I think if you're interested in a pilot, the best next steps forward would be to get in touch with your sales rep. And then we can talk about the details of what it would look like to set up a pilot and what some of those practicalities are. But in general, we do allow Ally to be piloted.

LILY BOND: Thank you. Someone else is asking whether you'll update Ally to reference WCAG 2.1 when it becomes available.

NICOLAAS
MATTHIJS: Absolutely. We'll try. We'll do anything we need to do to make sure that it's as up to date as possible. So that's entirely part of the plan.

LILY BOND: Thank you. Someone else is asking, "How long does it take Ally to go through course content?"

NICOLAAS
MATTHIJS: Yeah. Great question. So when Ally is enabled for a particular learning management instance, when it's initially enabled, the first thing it'll do is it'll actually go through all of the historical content, all of the courses and content that was already in there before Ally was enabled.

And in terms of how long that takes, that really depends on the size of your learning management system, how many courses are in there, how many items were already in there. And so we're seeing a variety there. So if you're a small institution, this is usually not more than a few hours. If you're in very large institutions with millions of content items, it can take several days.

So we just finished one, which had about 10 million content items inside of it. That one took about five days to do all the initial churning through. So that's kind of the-- that's a one-off. That only needs to happen when you enable it for the first time. Going from there, it'll basically scan anything that's being added and generate those alternate formats.

And every time that something new is being added, it'll do that on demand every time. Something new is being added-- but that in itself doesn't take very long. So in terms of we usually finish processing an item within a minute of the original being added. There's a few exceptions to that. So if you, for example, have a 600-page PDF with a lot of complexity, they can take-- I think the longest we've seen something take is around 10 to 15 minutes. But that's for the exceptionally large documents.

So in general, first, let's say a few days to work through everything that you have already. And then it's usually within a minute of the original.

LILY BOND: Thank you. Someone else is asking, "Do you have documentation on how to access the existing accessibility features of Collaborate?"

JOANNA HUNT: Yeah, absolutely. If you go to help.blackboard.com/accessibility, there is an Accessibility in our Product section that has a great deal of information there about the accessibility features in all of our products, and you can drill down into some very comprehensive, detailed information about Blackboard Collaborate.

LILY BOND: Thank you. Someone else is asking, "Does Ally only scan all the courses, or can you specify which courses you want to scan?"

NICOLAAS MATTHIJS: That's a great question. So we sort of provide quite a bit of flexibility there. So in terms of-- so for each of the different features or the instructor feedback and situational reports and alternative accessible formats, you as an institution can determine whether or not that feature should be enabled-- should be rolled out to all courses at once, or whether it should be limited to a subset of courses. So you can make that call for each of the different features.

What we usually see in some of our pilots, for example, is that pretty much all institutions will do the institutional report on all courses, because that doesn't really have any user-facing consequences. And it gives you a more comprehensive, more complete report and better trends and so on. In terms of the alternative accessible formats and the instructor feedback, we usually see about a 50/50 split between institutions that roll it out to all of their courses straight away, which is because the user interface impact of Ally is fairly limited. They seem comfortable doing that. About half of the institutions choose to very closely manage how many courses they have access to at first.

So long story short, you basically have control over which courses to enable it for each of the different features separately.

LILY BOND: Thanks, Nicolaas. Someone else is asking, "What does Ally specifically scan for in the HTML code? Does it detect inconsistent and/or excessive or unnecessary coding, which may wreak havoc on screen readers?"

**NICOLAAS
MATTHIJS:** I believe it does, and maybe the best way to answer that-- so we have a document that contains all of the different things that Ally checks for in content, including everything it checks for in HTML content. So we could-- I don't know if there's a way to share some additional documents after this call, but we could definitely make that available.

LILY BOND: Thank you. I think that's about all for the questions coming in. Thank you so much for your comprehensive answers. People are super excited about Ally, and I appreciate all three of you being on the line.

JOANNA HUNT: Thanks for having us, Lily.

SCOTT READY: Yes, thank you.

LILY BOND: So I want to thank everyone for joining today. And a reminder that you will receive an email tomorrow with a link to view the recording and the slide deck. And I hope that everyone has a great rest of the day.