LILY BOND: Welcome everyone, and thank you for joining this webinar entitled "10 Tips for Creating Accessible Online Course Content." I'm Lily Bond from 3Play Media and I'll be moderating today. I'm lucky to be joined by Janet Sylvia, who is a web accessibility trainer and has a really informative presentation prepared for you today. We have about 45 minutes prepared for this presentation, and then we'll leave 15 minutes for Q&A at the end. And with that, I will hand it off to Janet.

JANET SYLVIA: Great. So thank you so much, Lily. It's a pleasure to be here with you today. This is the agenda for our discussion. We'll start talking about, in general, accessibility in online learning, and cover a few of the instructor and administrative challenges and solutions. And then we'll focus on 10 tips for creating accessible online course content.

So I'd like to begin with a definition of accessible, and I'll read the text that's on the slide. And the text says, "Accessible means a person with a disability is afforded the opportunity to acquire the same information, engage in the same interactions, and enjoy the same services as a person without a disability in an equally effective and equally integrated manner, with substantially equivalent ease of use. The person with a disability must be able to obtain the information as fully, equally, and independently as a person without a disability."

Now this text is from recent settlement agreements between the US Department of Education Office of Civil Rights and institutes of higher education. These are colleges and universities in the US against which civil rights complaints were filed due to the inaccessibility of web-based content, including academic course content. So this definition helps us understand the expectations for accessibility of our online courses. By online courses, we mean courses delivered fully or partially online, course materials that are made available online, and external websites or any other web-based activities that are associated with an online course.

Now, the growth and popularity of online learning is at an all-time high. Over 60% of institutes of higher education report that online learning is a critical part of their long term planning. Online learning is not limited to higher education. There are also professional development courses online, certification programs, and other training programs delivered online. Worldwide, it's a $35.8 billion industry that's predicted to triple by the end of 2015.

And yet, the legal landscape indicates that many online courses are simply not accessible to students with disabilities. And the question remains-- why not? The legal requirements and

guidelines for making online courses accessible have been in place for many years.

First, we have the Americans with Disabilities Act. It was signed into law in 1990, and it covers places of public accommodation, including the internet. We have Section 504-- it's part of the Rehabilitation Act of 1973-- and it covers programs and services at colleges and universities. So both the ADA and Section 504 are civil rights legislation.

So how do we implement web accessibility? Well, we can use the Section 508 Standards. They are part of the Rehabilitation Act Amendments of 1998, and they cover electronic and information technology, including websites and web-based content.

We also have the Web Content Accessibility Guidelines, and the acronym, WCAG, is pronounced "whi-kayg." This is WCAG 2.0. It was published in 2008. And these are international guidelines for creating accessible web-based content. So the legal requirements have been in place for years. The standards and guidelines, or the how-to instructions, have been in place for many years.

So why, then, are so many online courses not accessible? One of the primary reasons is that web accessibility standards and guidelines-- 508 and WCAG 2.0-- are often understood and implemented by website developers. However, those same requirements are often misunderstood or overlooked by individuals involved in the design, development, and delivery of web-based or online courses.

So why are they misunderstood? One common misunderstanding, in higher education , especially, is the difference between accessibility and disability. So first we have accessibility requirements. These are general requirements, like 508 and WCAG 2.0, for a general population. Instructors and faculty are responsible to follow them.

They include things that we'll talk about during the 10 tips that include alt text for non-text content, descriptive hyperlinks, and semantic structure. Those are all things that instructors and faculty are responsible for.

And then in higher education, we also have disability services. So a disability accommodation is a specific solution for a specific individual. It's provided by disability service providers, and includes things like note takers in class for students who have mobility impairments, extended time for students who have learning or cognitive disabilities, or a sign language interpreter. And so instructors often mistakenly think that the Disability Resource Center on their campus

will make their online course content accessible, and it's just not true. So clarifying the difference will go a long way towards ensuring that instructors on your campus make their online course accessible.

Often overlooked in higher education is web accessibility training that is specifically geared towards instructors and faculty. So first, instructors are provided online course environments. They often receive technology training on the system or learning management system that they'll use to develop their course. But they typically don't receive web accessibility training for the content that they'll put in that online environment.

Also, on many campuses, web accessibility efforts and training tend to focus on websites and web designers. Most people think that web accessibility is only about websites, but it's also about online courses and any other content that's delivered over the web.

And also in general, training typically doesn't include an accessibility component. So many instructors and faculty use Word, PowerPoint, or an HTML editor to create their online course content, and most of that general training does not include an accessibility component. So this leaves a significant gap in the accessibility of web-based programs and services at colleges and universities if the training does not include instructors and online courses. And the result is the loss of equivalent academic experience and educational opportunities for individuals with disabilities.

Now, instructors are challenged to meet accessibility requirements on their own, because the design, development, and delivery of online courses is really a team effort. People involved in that team include administrators who establish the guidelines and parameters for developing online programs, instructors who are the content experts and teach the courses. We have website developers who place academic course content on faculty websites. Instructional designers who assist faculty in creating their courses. We have digital media developers and people who create audio podcasts or audio versions of the lectures and post those online.

Information technology teams-- these are people who evaluate the learning management systems that are used for online courses and bring them to campus. And we have procurement personnel who process orders for software products that are used in online courses. And as we mentioned, disability service coordinators.

And so, the administrative challenge is that this is a disparate group. Most of these people work in different colleges and departments at a university or college campus. They have

different supervisors, different administrators, all having different levels of awareness regarding their role in web accessibility. So accessibility compliance requires a coordinated approach. Administrators must provide the much needed leadership, guidance, and resources to ensure that all aspects of web-based programs and services are accessible.

Some solutions for administrators include creating a web accessibility policy. It should have a clearly defined purpose, specifically mention both websites and online courses. And also an implementation plan for web accessibility, because policies are only as good as the plans to implement them.

There is a very comprehensive resource available for administrators from the National Center on Disability and Access to Education. And the link is being provided in the chat now. The link is www.ncdae.org. And there is comprehensive information to develop these solutions if needed.

So in summary, we've talked about a definition of accessibility, legal requirements and guidelines that are available, the responsibility of individuals and teams, some challenges and solutions for instructors, and some administrative challenges and solutions. So if your college or university does not have all of these elements in place, you're still responsible for the accessibility of your online course.

And so today, we're going to cover 10 tips for creating accessible course content. So number one-- provide an accessibility statement. It should be added to your syllabus, your course homepage, a faculty web page. And things to include are an accessibility statement about your course and content, a disability accommodation information, and links to third party or vendor accessibility information.

So this is a sample accessibility statement, and I'll read this to you. You'll probably want to check with your own campus or university-- perhaps the director of online learning or your office of disability services, your equal opportunity office. They may have already consulted with the legal department at your college or university to come up with exact text. But I did want to provide sample text so you'll know what should be included in that statement.

And I'll read this sample statement. It says, "The--" and your college or university name-- "seeks to ensure that online courses are accessible for all students. If you locate content in this course that is not accessible, please contact your instructor. If you're a student with a disability and you would like to register for services, please contact," and then provide the

disability resource information for your college or university.

Also include a statement, "Accessibility information for the software products used in this course can be found at," and you should check for the vendor name, check their [INAUDIBLE] website for accessibility information about that product, and then provide that to your students. And then also provide your instructor email and telephone number.

Number two-- provide semantic structure. It's called styles in Word, or tags in PDF documents. So it is worth noting that HTML is the most accessible document type. Many faculty use Word or PDF documents as well. You can provide structure in all of those document types. One of the most important things to do is to use headings and to use them properly.

Every document should have a Heading 1 for your document title, and there should be only one Heading 1 per document. Have a Heading 2 for all of the section titles in your document, and a Heading 3 for all of your subsection titles. Typically, headings one, two, and three are sufficient. If you have a more complex document, you might need to use heading four, five, or six, and I'm going to demonstrate this in just a moment.

In addition, you should use strong, not bold, and emphasis, not italics. And then provide a table of contents in a Word document, or bookmarks in a PDF document.

So I'd like to show you what this looks like in Word. The image on the screen is a screenshot of a Word document. And the menu ribbon across the top-- I have a circle with a line through it indicating do not use the font style, the font size, bold, or italics to create the visual appearance of structure in your document, because that won't be accessible to assistive technologies. Instead, equally easy to use are the styles from the styles menu on the Word ribbon bar.

Now typically, visually, there are four buttons immediately available. There's also a drop down arrow. And when you select that, it will expand the styles list. You'll have all the styles you need to make your document accessible.

And how do you do this? Whether you are remediating an existing document or creating a new document, you simply highlight the title of your document, and then select the button for Heading 1. Then go through your document, and everywhere that you have a section title, highlight that text and select Heading 2. For every subsection title, highlight that text and select Heading 3.

In your course content, anywhere that you previously used italics, highlight that text and select the style for emphasis. Anywhere you previously would use bold, highlight that text and select the style for strong. This screen shows the difference between using visual indicators like a larger font size, bold, or italics versus semantic structure.

So the first image on this page is run-on text, because there's no structure. And this is how assistive technology would access your content if you only use visual indicators. But when you use semantic structure or styles in Word, it creates an underlying structure to the document. So if an individual is using, say, a screen reader, which reads aloud the content for individuals who can't see it visually, the screen reader would say Heading 1 and read the document title.

And then it would say there are seven Heading 2, there are five Heading 3s, and the student will immediately know the structure of your document. It will also indicate where content is listed in strong or bold or emphasis.

Another benefit of using the styles in Word is that you can automatically create a table of contents, which is beneficial for navigation in your Word documents. It's very easy to create. After you create your Word document using your styles, select the References tab, and then Table of Contents, and select the option to create a table of contents.

This will create an automated table of contents. And here I have my Heading 2s, and indented are all the Heading 3s in my document. Again, the Heading 2 is out and all the Heading 3s are indented. All of these headings are also hyperlinked to that title within the document itself. So it also acts as a navigation aid. In addition, when faculty update their documents, they can simply come back to References, Table of Contents, select Update, and it will also automatically update their table of contents.

Number three-- use true lists, true columns, and true tables. You want to use your software product's built-in functionality to create lists, a bulleted list when the order of the content doesn't matter, a numbered list when the order does matter, true columns, and true tables. Instructors need to avoid using the space bar or tab, which do not create structure. They simply create the visual appearance of structure.

So in this example, I have two images. And the first image is not accessible, and this is the visual appearance of columns created using space bar or Tab. The arrows on this page indicate the reading order that assistive technology will follow when reading this content.

Because the first example was not created using structure or the built-in columns functionality, screen reader will read the first line of text in the first column, followed by the first line of text in the second column, and read the entire document in this manner.

There will be no way to comprehend the content that's been provided. So instead, for your online course content, to make it accessible, use true columns. And when you do, the assistive technology will read from top to bottom on the first column, and it will jump to the top of the second column and read down to the bottom. It will also read tables properly and lists properly as well.

Number four-- readability. Divide large blocks of text in your documents into smaller, more manageable sections for students who have cognitive or learning disabilities. Also, avoid overly complex sentences. And this is sometimes, in online courses, there may be an individual one sentence that takes an entire paragraph. So you want to break that up and avoid overly complex sentences.

And also, use a sans serif font at approximately 12 points. Now about sans serif font-- you can conduct an internet search for sans serif font list and locate a list of all the fonts that are sans serif. The reason this is important is for students who use screen magnifiers. If the font is serif, then the font will break apart when it's magnified. So you want to be sure you use a sans serif font. If the font you're currently using is not on the sans serif font list, you can go to, for example, your Word document, select all, and then change the font to a sans serif font.

Number five-- provide text equivalents for all non-text content. This is done through the use of what's called alt text. Alt text is required for all images, a chart, a graph-- anything that is not text by nature.

Now alt text is a clear, concise description-- about 120 characters or less-- that conveys the meaning or the purpose of the image. The way you add your alt text is on your image, right-click and select Format Picture or Image Properties, depending on your software. And when you open the properties, then you will find a tab for alt, and that's where you add your alt text.

Now if the alt text alone is insufficient to convey meaning-- typically a chart or graph needs a longer description than 120 characters-- we need to provide what's called a long description. It can be provided in the text surrounding the image or in a separate accessible document. And then, if the image you're using is just purely for decoration, you should use what's called the national symbol for null text, and this is a begin quote and an end quote. This is the universal

symbol that indicates that a screen reader technology or other assistive technology should avoid that image.

So here I have an example of alt text for an image of flowers. Now, the alt text that you choose depends on the context in which you're using your image. So you might have the same image used by different faculty and different online courses, and they might use different alt text. So first, if a faculty instructor is using the image for a story about tulips, then one choice might be alt="Yellow tulips blooming in the Spring," and that describes the image that's currently on the screen.

But what if you're a horticulture professor? Maybe you have an online horticulture class and you want your students to learn to identify flowers and plants by their scientific name. In that case, that faculty member might use alt="Tulipa gesneriana."

And the third example is you might use this just as a decorative image-- maybe on a course syllabus. In that case, you would want the assistive technology to skip reading the image description. And so to do so, you would use the universal symbol for null text, which is alt="".

Number six-- avoid color coding. We need to ensure that color is not the sole means of conveying important information. So I've provided an example, and this was actually used in an online course where I was helping the faculty remediate their course for accessibility. For online courses, instructors and faculty often break the students into teams and they identify those teams by colors.

And in this case, the faculty used red team and green team, follow follow the office hours provided below. And on the screen, there's an image of a box, and it has a brown-gray background. And the text says, "Monday to Wednesday, 12:00 to 1:00 PM." Below that, there's another box with gold text that says "Tuesday to Thursday, 3:00 to 4:00 PM."

So if you're on the red team, which office hours do you follow? Well, if a student is red-green colorblind, they won't be able to tell, because in this case, the faculty member used color as the sole means of conveying important information. So what could make this accessible?

Well, it was actually very simple to remediate this. You would simply add the words "red team" and "green team" to the text for the office hours. So is it OK to use color in your online courses? Absolutely. But what we can't do is use color coding where color is the only means of conveying important information.

Another frequent use of color in online courses is highlighting, and highlighting is not accessible. So the example I have on the screen shows eight bulleted items. And in these eight bulleted items, there are three places where the text is highlighted yellow, three places where the text is highlighted pink, two places are highlighted blue, and three places are highlighted green.

Now, students who are visual learners or students who have learning or cognitive disabilities would like the color because it would help them read the content and pull out the important points. However, students who are visually impaired or blind would not have access to the color at all. So this is not accessible for all students.

There are a number of different ways that you could remediate this. What we did in this case was there was a reason-- and this is not the actual text. I'm just using this as an example. They had each of the colors represent a reason or a purpose. And so, what we did was we created a collection of bulleted lists.

And so, in this example-- say, everything yellow is regarding the syllabus. So the title was syllabus, and then under the bulleted list was every item that was highlighted yellow. And then a second bulleted list for software, and everything under that was what's highlighted pink, and so forth. And that's just one way to remediate this.

Number seven-- sufficient color contrast. Be sure to provide sufficient contrast between your foreground or your text color and your background colors. Also, ensure that the background design does not overpower the text. Now, this is common in PowerPoint or Keynote slides, or sometimes on instructor web pages.

This is an example of what is not accessible. Again, it's a true example of a style that was used in an online course. And in this case, the instructor used a background, and I'll describe it.

It looks like leaves in the fall. There's orange and brown and lighter yellow, and it's a very busy background design. The text that they used was blue, and then they used subtitle text that was green.

So the two problems with this slide scheme was first, the background overpowers the text. And second, there's not enough contrast between the color of the text and the background. How would you remediate this? To make those slides accessible, what we did was change the background to a solid brown color and change the text color to white or off-white.

Now we can't and shouldn't rely on our visual acuity to determine if text and backgrounds meet our contrast requirements for accessibility. So there's a link that's being provided in the chat now for the color contrast analyzer. It's a free tool. It's available for both Mac and PC, and the tool is accessible by both keyboard and mouse. So this is a great way to check your color contrast.

So I'll share with you how this tool works. Select the eyedropper for your foreground color, which is your text, and then you'll go over to your PowerPoint slides. Using the actual tool, it will magnify the text so you can click on the color and it will place the color in your foreground color box.

Then select the eyedropper for your background color. Click on the background in your PowerPoint slide. It will place that color in the background box, and the tool will automatically check your contrast ratio. So what you're looking for is that you have four check marks and that you passed all areas of accessibility requirements.

If you don't have four check marks and one of them is an X, meaning it does not pass, typically the best way to remediate is to either make a darker background color or use a lighter foreground color for your text. And typically, then you'll be able to remediate your PowerPoint slides.

Number eight-- descriptive hyperlinks. The link texts that you use for your hyperlinks should make sense when they're read out of context, because assistive technologies and tools will pull all the links out of a page and read them off as a list for individuals who can't see that page. So the link text should make sense when it's read out of context.

Describe the destination, the document title or the website that they'll visit, and it should also be unique for all unique destinations. We want to avoid vague terms like click here or email me, and avoid using the actual URL-- http://www, et cetera-- because the URL text is not descriptive.

So on this slide, I have an example of how an assistive technology tool has aggregated the links outside of the document. And so, the links on this particular document-- the first said "Instructor Contact Information." That was fine. And then there were two links that said "Click here," "Click here."

What will we locate when we follow those links? We don't know. This text is not descriptive. To remediate this, you would replace "Click here" with the title of the document or the title of the website that people will visit when they select the link.

The next two links said "Assignment 1-- Plants and Biology," "Assignment 2-- Don't Bug Me." Both of those were accessible. And then there were four links for "Homework," "Homework," "Homework," "Homework." So those are not accessible because they're not descriptive. And to remediate those you could simply put "Homework 1," "Homework 2," "Homework 3," or "Homework 4."

Number nine-- use accessibility checkers. You should always use your software's built-in accessibility checker, and then follow the recommendations to fix those errors. All of the software have different accessibility checkers built in. Many faculty or instructors in online courses use Microsoft Office. You can go to File, Check For Issues, Check Accessibility, and it will give you an accessibility report.

Now, automatic checkers have some limitations. And so, in addition to doing that, you should also conduct manual checks. And in the text now in the chat box, we're sending out the link for the US Department of Health and Human Services-- has a collection of checklists that are called the HHS Section 508 Checklists. And they have them available for Word, PowerPoint, PDF, HTML, multimedia-- lots of different options.

And the reason that I like these checklists so much is they're very thorough, and they cover any possible way that an instructor might be using Word or PowerPoint, and it gives them some ideas of what they're doing is accessible or not. And once instructors or faculty use these manual checks, they start getting used to what they're doing wrong, automatically remediate that, and then they don't need the checklists anymore.

And number 10-- multimedia. If an online course has audio only-- a podcast, an audio lecture-- provide a text transcript, which is a text document of the spoken word. If it's video only, provide a video description, which is a text document of the key visual elements in the video that are required for comprehension or learning. And if the media is audio plus video, provide closed captions, the text transcript, and the video description.

I'd also like to mention accessible synchronous activities, which are very common in online courses. If you use any type of technology-- it might be a webinar technology, an online classroom technology-- you do need to ensure that that technology is accessible. You can

provide the vendor's accessibility information in your accessibility statement, as I mentioned earlier. You can visit the vendor's website, search for accessibility, and find the helpful information for individuals who utilize assistive technologies with that product and provide that link in your accessibility statement on your syllabus or your course homepage to make it easy to access.

Some additional considerations include provide closed captions, verbally describe or speak all of the text on your slides, and describe images for individuals who are attending who are not able to see the images. Follow accessibility guidelines for whatever type of content that you're creating. If it's a webinar and you're using a PowerPoint presentation, you should follow accessibility guidelines [INAUDIBLE] PowerPoint presentation as well.

And avoid timed response activities. Typically, in, say, a webinar technology, the chat is accessible. But how the chat is used in online courses sometimes makes that activity inaccessible. So for example, it's common in some online courses for instructors to use the chat to ask a question about something they've taught, and the first person who answers gets five extra points on their next exam.

Well, that's a timed activity, and individuals who have mobility impairments will not be able to respond as quickly as others. So avoid using timed response activities in the chat. Be sure that you use a poll feature. Keep it on the screen long enough for all of the students to answer.

And just one quick note about breakout rooms. If you're using closed captioning in a webinar or online classroom, typically the closed captioning is only available in the main room. So if you use breakout rooms, typically that captioning won't be available. And also, provide handouts 48 hours in advance.

Consider individuals who are watching the closed captioning. Maybe they have a hearing impairment. Then they need to focus on the closed captioning. If you provide the handouts ahead of time, they have an opportunity to comprehend the content that's being delivered, since they have to take their eyes off the closed captioning to look at the slides.

So in summary, for our 10 tips-- provide your accessibility statement on your syllabus, your course homepage. Use semantic structure-- in Word, they're called styles, in PDF it's called tags. It's all the same. Provide true bulleted or numbered lists. Use true columns and true tables.

Ensure the readability of your content. Use text equivalence for all the non-text elements. Avoid color coding and ensure sufficient color contrast. Provide descriptive hyperlinks. Always use the software's built-in accessibility checkers and conduct manual checks. And, for multimedia, follow the multimedia requirements and ensure your synchronous activities are accessible as well.

So now, that's the end of the presentation. We're ready for questions.

LILY BOND: Thank you, Janet. That was just a wonderful presentation, very well received. People have a lot of questions. So we are going to dive into those. As I compile them, please feel free to continue to ask questions.

I wanted to let you know about a few upcoming webinars we have. One is later this month on understanding closed captioning standards. And then in November and December, we have implementing universal design for online learning accessibility-- how to implement accessible lecture capture and a quick start to captioning. So you can register for any of those free webinars at our website, 3playmedia.com/webinars.

So, Janet, I have a first question here for you. How do you suggest faculty get started with web accessibility using these 10 tips?

JANET SYLVIA: Well, first, I think everyone can and should add that accessibility statement to your syllabus and your course homepage. This opens the door for communication with faculty and potential students about any possible concerns of accessibility in your online course content. And then, go through the list, or even the Section 508 checklist we talked about, and select the easiest things to accomplish.

Now, this will vary by instructor and content. For some, it might be descriptive hyperlinks. For others, it might be adding heading structure to their Word documents. But either way, begin with what's easiest for you.

And then most of the techniques are fairly simple to learn. But if you begin with what's easiest for you, then it helps build new habits. And in a short time, it allows you to stay motivated and also continue with web accessibility.

LILY BOND: Great, thank you. So another question here is, do you have any recommendations for working with faculty who insist that it is not their job to make their courses accessible?

JANET SYLVIA: That does happen frequently. And what may work for you best is to refer the faculty member to the administrators, and ask them, contact your director of equal opportunity office, who may be the Section 508 coordinator. They may also be the ADA coordinator. Or ask the faculty to contact the disability resource center.

They'll receive the message from other administrators, and then you can let them know that you're there to help them implement accessibility once they recognize they do indeed need to do this. You can also send them links to accessibility statements that might be available on your campus or your college homepage, or for your university system as well.

LILY BOND: Great, thank you. Something along those lines, someone is asking who should be ultimately responsible for ADA compliance?

JANET SYLVIA: So, ADA compliance is different. ADA requirements and following them are different than Section 508. And so, for the ADA on a campus, it tends to be an equal opportunity director or someone at an administrative level who's an ADA coordinator. And then sometimes that same person is a Section 508 coordinator. And sometimes a campus may not have a 508 coordinator, and it's something that people need to do on their own.

LILY BOND: Great. A few people wanted clarification about Microsoft Word and whether they should use the H1 style instead of the title style.

JANET SYLVIA: Yes, definitely use the H1 heading for your document title. Because even though Word provides many styles, it doesn't mean all of them should be used for accessibility. So for example, when you check the styles menu in Word, you'll notice there's emphasis, there's intense emphasis, and there's subtle emphasis. The only one that you should use is emphasis.

And so sometimes there may be styles in there that you really shouldn't use. So stick with the Heading 1 for your document title.

LILY BOND: Great. That was a great clarification. Someone is asking, for decorative images, I was told to use alt text that read something like "decorative image, yellow tulips." Is the null tag better?

JANET SYLVIA: Yes, absolutely. Because individuals who use read aloud software or screen reader software, they frequently experience what's called audio fatigue. And so, you want to limit what information they have to listen to. So if an image is purely decorative, it should be skipped completely.

And so, in that way, if you are using HTML or PDF, you use the begin quote, end quote for null text. I will mention that in Word, you typically should leave the description field blank instead of using the begin-end quote, only because Word will read it out as "begin quote, end quote," and they'll have to listen to it. They'll know what that means, but they'll have to listen to that as well. But absolutely, do not use the word decorative as your alt text.

LILY BOND: Great, thank you. You noted that videos using audio should have captions, a transcript, and a video description. Is this a best practice recommendation or are all three required by law?

JANET SYLVIA: All three are part of the Section 508 requirements and WCAG 2.0. And so, yes, all three are required.

LILY BOND: Great. Someone else is asking, in a math class, we have a lot of equations in graphs. On a test, if we describe a graph, we have technically answered the question. What would I need to do here?

JANET SYLVIA: Right. And so in that case, what you would do is describe the visual appearance of the chart or the graph without interpreting the results. And you can find good examples of this on-- there's one great resource, and it's the Diagram Center at diagramcenter.org. And right when you visit their page-- right on the home page, there's information about a document that they just recently released that gives great information about describing charts and graphs.

But the difference is if you're using a chart or a graph, maybe on a web page, or maybe just as a learning experience, you may want to provide an interpretation of the data so students will learn how to interpret. But if it's on a quiz or a homework assignment, you only want to describe the visual appearance of the chart or the graph so that the student can draw inference themselves.

LILY BOND: Great, thank you. Someone else is asking, how do you recommend instructional technologists reach faculty to discuss accessibility? It's not the hottest topic for a workshop.

JANET SYLVIA: Well, that can be true. But if you offer a workshop, people will come. And especially what I've noticed, specifically with faculty on a university campus, is once they understand the difference between accessibility and disability, and that accessibility is their responsibility, they're often devastated that they haven't been doing it. Because faculty, by nature, want to share information and give information to students so they can go on further in their educational or in

their professional careers.

And so once they realize that it is their responsibility in what they need to do, faculty have always been very open and receptive. So I would start with the individuals who are most receptive, and that helps you build a base of individuals who are willing to implement accessibility. And then they can also become a champion or a hero among their peers.

LILY BOND: It's a good point. Thank you, Janet. Another question here-- what is your take on tables?

JANET SYLVIA: Tables can be made accessible. And again, I mentioned the Diagram Center, and they have great ways to describe your tables. Depending on the technology you use or the software you use to create the table, tables should be used for data.

And in Word, they should be very simple, because Word, you cannot program them correctly. You should have row headers and column headers, but Word does not allow you to provide column headers. So you should only use very simple tables.

But you can create accessible tables using HTML. If you use a learning management system, it has an HTML editor. You can create accessible tables that way as well. You can create them in PDF.

In general, you should not have nested tables, which is like a table within a table. You should break them up into several smaller tables or individual tables instead of a complicated table that's nested.

LILY BOND: Great, thank you. Someone else is asking, would you not use videos if closed captioning is not available at your institution?

JANET SYLVIA: There is a document that's called the Distance Education Accessibility Guidelines that's published by the California Community College System. And it might be helpful to read information in that document-- I'll share with you what it says-- and then share that document with administrators at your university to see what applies in California applies to you as well.

And this is what they say. If you have an online course, if it's a password protected environment, there is no need for captioning. Meaning you have provided an accessibility statement and no student has responded saying that they need captioning. And also, if the video will only be used for a single semester-- not repeated use, but only a single semester-- then, for California, you don't have to provide captioning.

So what we've done is take that to our local universities, and they agreed with that as well. So I'm not saying it's OK at your particular university, but you may not have to provide captioning if it meets those guidelines. Now at the same time, if a student registers late and they request captioning, you'll have to provide captioning for that content in a timely manner.

Some faculty have found video databases online-- I'm not sure if you're familiar with the library resource called Galileo-- and they have a video on demand service. Those videos are already captioned. And also, lynda.com has videos that are captioned. So it's possible that if you don't have the funding to provide captioning, that you might be able to locate video that you can use that's already been captioned.

LILY BOND: Great, thank you. Similar along those lines, someone is asking, captioning and audio description can be expensive to produce. How do you prioritize them?

JANET SYLVIA: Right, they can be expensive and they should be professionally done. I would like to just mention in the recent Harvard and MIT lawsuit with the National Association of the Deaf, one of the concerns with captions for their online course content was they were inaccurate. And so, you need to be sure that when you do have captioning done, that it is done by professionals or individuals who are professionally trained, so that the captions are indeed accurate.

Now, one thing that we've done with funding is that whenever a faculty member receives grant funding for a project, you can ask them to write in a line item to ensure that all the content created under that grant is captioned and made accessible, so you could cover the captioning costs that way as well. To prioritize what needs to be captioned, you would typically check the most recent access to that video itself.

I worked with a faculty member who said he had 100 videos that needed to be captioned, and we went to look at the access statistics, and they had not been accessed in almost 10 years. And so, there was no need to prioritize, and definitely not make an irreversible financial decision of starting to caption things that you later discover people aren't actually using. So you can prioritize by need-- whichever video needs to be captioned first. And you can also prioritize by access records and statistics.

LILY BOND: Great, thank you. Someone else is asking if you have any accessibility recommendations for people using Google Docs, Slides, Sheets, Sites, et cetera.

JANET SYLVIA: No. There was a situation with Penn State and-- I believe it was Penn State. I might be wrong

on that. But they were using Google Docs for education and the content was not accessible.

And Google worked to make some of that accessible so it would be available for education. And as of last year, about half of the apps of Google products were accessible and the other half were not. If it's not accessible, it should not be used.

LILY BOND: Great, thank you. Someone else is asking, should faculty have some working knowledge of HTML code when designing courses, or should they rely on tech support?

JANET SYLVIA: Many of the online course environments-- and I'll just say like Desire2Learn for example, because I've used this and I've actually taught this-- they have a built-in HTML editor that's very simple to use. And for, say, a faculty member, it's almost like just simply creating a Word document, and that HTML editor is putting the code in for them.

And so it might be possible to use an HTML editor within their online course system depending on what they're using to create accessible content. I think they do need some way to access an HTML editor in order to make the content accessible via HTML.

LILY BOND: Great, thank you. I think we have time for a couple more questions here. Someone is asking, does an institution have a responsibility to require students to create accessible documents if the instructor is going to use peer review?

JANET SYLVIA: There have been some guidelines on student materials, and I would have to look this up. The information is available through an internet search. I guess it depends on what kind of content they're creating.

I didn't ask that question. I was assuming audio/video type projects because what we worked on was a film class. But is the content the person's talking about multimedia or documents?

LILY BOND: They just say accessible documents.

JANET SYLVIA: The documents themselves. I would just say it would be a wonderful learning experience to teach those students how to create accessible documents. It isn't that difficult. We actually have faculty at a university I worked at that they were teaching future instructional technologists, and included in their program an accessibility component. So when they get out in the real world, they have that experience with them.

And the same could be true for students in your class. You could provide them with the

Section 508 checklist, for example, and require them to create accessible content. It would be a great learning experience and help to ensure that individuals going out into the world after their degree have experience with accessibility.

LILY BOND: Thank you. I think we have time for one more question, and someone is asking, what if you teach in a program where students are required to have sight and hearing by law? Would these courses also need to be made accessible?

JANET SYLVIA: So on that, I think I would defer that question to your university. I would ask the equal opportunity director, legal affairs at your university. Since it's a legal question, I don't think it's something I should comment on.

LILY BOND: Fair enough. Well, Janet, thank you so much. That was just a really valuable presentation to so many people, and we really appreciate you taking the time to do it.

JANET SYLVIA: Great, thank you. It's wonderful to be here.

LILY BOND: Thank you to everyone who attended. A reminder that we have recorded this presentation and we will be sending out an email tomorrow with a link to view the recording, slide deck, handout, links, et cetera. And you're welcome to share that as long as you provide proper attribution.

And with that, I hope that everyone has a great rest of the day. Thank you.