

Training Session

Welcome, everyone. Hello, my name is Susan Pennestri and I'm at ITS, and I'm pleased to bring you today's session, Using Hypothesis in Sakai for Reading Annotation presented by Jennifer Beamer, the scholarly communications librarian at the library, and Andrew Wilson, director of research computing and digital scholarship at ITS. So, before we begin the presentation, let me just share a few logistical things with you. Um, this presentation is being recorded and, um, we ask if you could stay muted while the presenters are speaking, but if you have questions, um, you can, you know, obviously, put them through the chat or unmute yourself and speak your question or raise your hand, whatever you, you would like to do. We are a small group, so I'm sure it's just fine. Um, you know, interrupting and asking a question. And then just so you know, we have enabled the captions. So, um, if you do not see the captions and you would like to, you just need to go to the live transcript button on the Zoom toolbar to enable them. So, um, that's...

Can I just ask, um, I'm not tech-savvy at all and I'm putting it mildly. Um, what does it captioning do? It allows people to read what somebody is speaking? Correct. And does it work well in other languages?

I, I believe it does. And it works really great with accents as well. Cause I, you'll see I'm originally from Canada, so you're gonna hear me say, oh, oh, sounds kind of funny. And I think Andrew has been living in Minnesota, but you'll hear his accent as well in a minute. He's got a good mixed one going. Um, but yeah, you should. I think it helps you understand a bit. Of course, with every automated thing it's not perfect, but it should, it should work pretty well. And I, my understanding is it will work with other languages.

All right. And now if I want to see how that works or whether I can make it work on my end, I click on the CC and then, oh, chat, chat. Okay. I went to live transcript. Okay. So live transcript is something else.

There should be a place where it says enable, enable captions on the live transcript. Oh, on the live transcript. Okay. Um, show subtitle view, view full transcript, or subtitle settings?

Should be, I think show subtitles. Okay. I want to click on that one now.

And then as we talk, you should have a running, a running subtitle list. Yeah. I'm going to try a couple of phrases at the end in Spanish and see how they come out. Sure, and I can try it. Okay.

It might not work out the box because I think because Zoom is set up for American, American English. So, it might not show. It might not respond well. I think have we got our housekeeping Susan? Maybe? Yes.

I'll pass it over to you, Jen. Great. So I am, thanks so much, Susan, for introducing and setting us up. Um, again, I'm Jennifer Beamer. I'm, what's called the scholarly communications librarian at the library and really what it means is I help faculty, um, communicate their research. Um, so in addition to working on open projects

like this, um, with Pomona, I also, um, help people post their work in the repository. I can help you with copyright and fair use. I can help you, um, build and curate a scholarly identity, all the things that kind of go in the open digital world. Um, and so, and as well, I have a huge interest in open educational resources and tools like this that we can use, um, to kind of collaborate and have open pedagogy in our classrooms. Um, and so I'm really excited that Pomona has been using this for a couple semesters now, I think in the summer we started, um, and then this fall and, um, I've seen it being used, um, Hypothesis in lots of different ways.

Um, and it's very, it's very exciting to see how students are interacting with faculty and how faculty can interact with students. Um, and so you can contact me, um, and also Andrew as well. Um, and your subject librarian who, if you don't know who that is, I'll refer you to them, um, as well, um, about some of these things. And we all kind of, I think that the difficult part is trying to figure out who can help with the technical part and who can help with the copyright part and who can help with the just getting me the readings part. And, um, but we all work together as a team to kind of guide you through this. So please don't hesitate to reach out to us. And after I think, um, you've seen our presentation. You might have lots of questions too, and you can always reach out to us later, at a later date, as well to ask more.

So, our agenda for today is, uh, is basically this, um, if you haven't seen Hypothesis before, I'm going to quickly show you what it is and maybe some ways you might use it. Um, and then, um, Andrew is gonna show us how to use it in Sakai as well as kind of what are the, there's a couple of small technical requirements, but not difficult ones, um, for getting the documents into Sakai, um, and, um, using them in your classes. Um, and then we're going to let you ask questions and we'll show you how to kind of do all the things, um, throughout the presentation. Please, I'm okay if you ask questions along the way, I may, I might tell you that, um, you, uh, I might, that might be coming, um, and we'll tell you more, or we might just answer them right on the spot. Andrew, do you have anything to add? Did you want to introduce yourself? I just tend to chat along. Sorry about that.

That's no problem. So yeah, I'm Andrew Wilson. I am the director of research computing and digital scholarship over in ITS. And as Jen says, I've got a mixed accent a little bit. So, I've got a UK accent from, from Liverpool. So, the subtitling doesn't always react very well with me. So, if you do have questions of what I'm saying, just, yeah, whenever I'm speaking, just ask me out and I will, yeah, definitely help. And yeah, I'll pass it back to Jen.

Cool, great. I know I like that you're from Liverpool. Cause when I talk to you, I feel like I'm talking to the Beatles or something like that. Right. Cool. Cool. So, let's take a look at this tool called Hypothesis and you'll see some of us write it without that dot, but that's basically where you can find it. If you need to Google more information, um, you can do Hypothes.is um, and essentially what it does is it's a tool that gets added on to documents to make reading very active. And we're kind of giving you some like shots here of, of what it looks like. We'll, we'll show you a better shot in a moment. Um, but basically, oh, sorry. I keep hitting touch. It's too sensitive. Um, basically what it does is it really makes the reading quite active. And also, I think it's, um, it's a little bit more fun for students as well then just getting the reading and reading it and maybe making notes. They now have to make kind of notes in the public, in your classroom, so with other students. They can make the notes private to themselves, but in, for the most part, they would touch a reading. And then the, um, comments which you can see are going on here, they can even add images in or links or, um, uh, you know, anything they really,

that they really want. Um, they can add into these comments and make this sort of like running conversation together. So really becomes this kind of active, um, reading exercise. It also makes, um, the reading very visible so that you can see what the students have read and also, they can see what they've read. And if I decide to share it amongst the whole class, they can see what their other students and their peers thought was, was, um, worthy of highlighting and worthy of reading and commenting on.

And you can see we'll show you again, um, what that looks like, uh, in a moment as you, sorry, as, um, as students highlight things, that highlight is persistent, um, and is connected to their comments later. And so, it's really helpful for, I think, faculty to see what's going on. What are students really focusing in on? The other thing that this does, is it really kinds of makes it social. And right now, the situation that we are in, our only kind of social engagement, sometimes we can't be live online together all the time. And so, um, with Hypothesis this tool, um, what we, what we find is that students sort of have this conversation going together. And, and don't get me wrong, this isn't actually new. Of course, we've had like bulletin boards in our Sakai, and we've had, you know, people make blogs and Wikipedia and these kinds of comments of conversation, but this is really a conversation that focuses around a reading that you assign.

And so, um, you can do all kinds of things. Um, not just tell students, read this and comment, but you can also comment as a faculty too, and sort of guide students, highlight parts that say, what do you think about this paragraph that's been written by, here we have Christopher Columbus, maybe not the greatest, but a great conversation piece, right after you're, um, talking to students about any kind of theme. So, you can actually guide them by putting your comments into the work as well. Um, and it also, I think this, this person, um, this faculty member, um, oh, actually student, sorry, who has commented, um, says, you know, this is actually a really great tool because it makes her feel like she's part of something else. And I think that's the one thing that Hypothesis really does, is it kind of builds this community within your classroom while you're not really in your classroom.

And I'm hearing that feedback from lots of faculty at Pomona, who are using Hypothesis, um, to work on readings with students is that this kind of creates this sort of conversational community, um, that students are really enjoying, um, there, as they start to learn how to, um, use Hypothesis and as faculty start to learn how to sort of create these markers for them, um, with their comments, uh, then they really sort of get into this kind of helping each other out, commenting, having this conversation, um, with text on, on the sides of their readings. And so essentially, um, what Hypothesis does is it's a little plugin, um, that sits on a page. You can actually use it outside of Sakai if you wanted to. Um, but it's quite nice when it's embedded in Sakai because students don't have to, sorry, don't have to sign into it.

Um, and so they just enter through Sakai, and they can automatically comment, but essentially what happens is you put your reading in Sakai, students can highlight, and this little box pops up where they can simply highlight, or they can click on annotate. And when they click on annotate a sidebar, pops out at them, and what they can do is then write comments in a little field that pop-up, and then the next student can come along and respond, or they can also highlight and put their information in. So, it's kind of a simplistic idea. Um, but yeah, it works really great. And, uh, and students can just carry on this running conversation. As a faculty member, you can see this running conversation as well, which is great, um, or contribute to it as well. And so, for the materials that you can use, of course, you can use, um, some portions of library

materials, for example, um, you'll note that some of the e-books that we subscribed to, you can download a chapter of an eBook and move that over to Sakai.

Or of course, you can use a downloaded library journal article, if that's something you would like to use, um, or you can use your own materials by scanning them as well. So, let's say you've been collecting readings, um, in your paper file, which I do. Um, uh, and then you would like students to read them, or perhaps they're ones that the library doesn't carry. Um, you can also scan those in as well. So, the one thing though, that's the kind of technical part is that you have to be able to highlight the text. You have to be able to just like when you go onto the web, you have to be able to right-click, uh, on my Mac and you have to be able to highlight the text in order to use the materials. And with that, I'm going to have this technical part over to Andrew. Um, and Andrew, I probably want to stop share here so you can share.

So, yeah, as Jen was saying, the only thing on Hypothesis is the computer needs to be able to read the text on the intext. And there's a process called OCR, which is optical character recognition, which allows the computer to scan a document and then make it readable and accessible by PDF readers by, and by Hypothesis. So, there's some considerations you need to have, especially if you're scanning your own documents, as well as a bunch of considerations, you need to make sure that the OCR results are 300 dots per inch. The brightness is also set as well. And then you also need to make sure that the document is straight. And if you make me the old documents, you might need to scan them in, in RGB, which is scanning them in color rather than black and white, because with the old documents, especially I think I've got examples, especially with like documents like this, when you scan them in and they're not in color, the background will get faded out and it will, they will bleed through.

So, it's something, those are the things to consider as well. If you are scanning texts published before 1850, they're probably not going to be compatible with OCR techniques, especially modern OCR techniques, the cause with the font as well. So, it could process, for example here, you can see there's a few, a couple of different examples of font, print font. If they're anything like the far side, the far-right one where there's a lot of texts, there's a big capital letter, the computer really struggles with trying to OCR that type of document. You can scan it in and then go through yourself and manually edit it, but it will take you a very long time. And so, yeah, if you got better copies of that, that document then I'd recommend using them or newer versions or newer prints of that document. Then it's better to use them.

The recommendation right now is to use Adobe Acrobat DS, and this is available from the creative cloud. All faculty have access to the creative cloud through Pomona. Students don't. Students have to request special access. So, but you could, as a faculty, you can just go into the creative cloud. You can just download the whole Adobe suite. We did run a workshop a couple of weeks ago on OCR, which is recorded and on our RITG website. So, if you want a more detailed view of how-to OCR your documents then I would suggest going onto the RITG sites as well. It also does support different languages and different fonts and scripts. So Arabic, Korean, Japanese, and Chinese, different, like the different font sets are available when you scan the documents. And once it's scanned, once it's highlightable, you can use that in Hypothesis as well.

So, you don't have to use English or Latin fonts for Hypothesis. And again, just to clarify that some of the best practices for the OCR, consider that, the use type, obviously if you're going to use it for Hypothesis, then make sure it's readable by the students and that the font, the computer understands that the font as well, uh, the format PDF is the standard now. And obviously, Hypothesis is, works much better with

PDFs. You can use images and HTML documents as well, but if you're looking for an article then PDF is definitely the way to go. And then you can, if you do scan it yourself, you can go through the document and you can correct words if you want to go through it. Nice thing about Adobe, which is one of the reasons why we suggest it, is it will highlight in red any errors in words that it doesn't understand that. And then you just go through and update that document as well and say, okay, so now this is wrong. This is this word instead. I think I said to, in the presentation before I said, like computer has issues with double F's, F and I, and a couple of combinations of letters together, and OCR doesn't quite understand how they work together.

So now I'm just going to walk you through how to use Hypothesis in Sakai. I'm going to jump out to my presentation a minute and I'm going to change the screen share. And so, you've probably all seen Sakai. This is my test site. It's aptly named test site, and you've all seen the Sakai pages. The recommendation for using Hypothesis is to make sure that it's on the lessons resources. So, the lessons section here. If you haven't got the lessons structure set up in Hypothesis, I can zoom in as well for you guys

See, yeah, it's probably better. If you haven't set up lessons before, if you go to site information here, you can go to manage tools. And if you scroll down, you can see here lessons. And what this does is it puts us at the sidebar here for lessons. Here you can set it up so you can have each week or each day or each region. It depends on how you to do it, each class. For Hypothesis to have multiple readings, you have to just set it up this way, because it's an external tool. So, you go to, if I add the weeks in, and we go to week one, go to week two, actually, and then add in content, you want to add an external tool. So, it's this is this one at the very bottom. And then you get a selection of the available external tools. So, we want the Hypothesis, CMC, and pump. Once you click on that, it will bring up this tool tip, this box. So, the tool tip is what you want this to be called, what the text is called. So, I always say, call it whatever the paper is or whatever the section is you're looking at. So, I'm going to call this stone, stone. If I can spell. Stonehenge. And again, Stonehenge. You can set a custom icon here as well. So, I do, just do book for this one. So that's always a nice icon to have. And then once you press, you press save. So, this will add the Hypothesis tool to week two of the class. Then when you click on Stonehenge, now it will bring up the Hypothesis tool. So, this is where you enter in what document you want the students to be able to annotate. So, you can enter in a URL of a webpage or a PDF. You can also use Google Drive. If you have Google Drive integration, where you can just select the PDF directly from Google Drive. So, I'm just gonna go to the URL. And I'm going to get the example here from...

May I ask a question? Yeah certainly. Um, so I noticed you're linking the PDF from Box. I mean, so in my class, what if I upload the PDF to like resources on Sakai? Can I grab the URL of that PDF there and put it in, or...?

Unfortunately, not. No, that, there's be a, it has to be a publicly available PDF. So, you can't, for whatever weird reason. So, we are working with Hypothesis to try and get the resources folder available in Sakai, but it's not right now, it's not available. It has to be, uh, a document available to the internet.

Oh. So, can I follow up on that? Um, when I used Hypothesis last semester in my courses, I didn't know about the Sakai integration and I created a group for my, um, students to join, um, through Hypothesis. And so, it was named after my course. Um, so all my PDFs were in resources, and they would open their PDF in the browser, like on Chrome, they would activate the Hypothesis and annotate under the group that I created in Hypothesis. Um, is that a more cumbersome, like process than what you're

suggesting, where like, where you have to kind of go into lessons and add a tool and lessons, and then add a PDF through a tool and lessons.

So, the, it's the same, it's the same tool. So, Hypothesis on the web, then the way you're using it is the same tool as Hypothesis. This is just the Sakai integration. So, it's integrated directly into Sakai. It adds a couple of features. Like you're able to grade students on their annotations, but the tool itself is the same tool.

This might be jumping ahead, but I could see the identity of the student who, um, made annotation. Right? Um, because they had all joined my group that I had created a Hypothesis. Yeah. So, in Sakai they won't have their, would their identity just be automatically attached to their annotation as well?

So yeah, that's what they log in through. Cause they look into Sakai using the single sign-on, it knows who they are. And then when they annotate in Sakai it knows who they are as well. So, it will have, I can show you an example. Now, once I had someone sign and take this as well, it will have the, the link in there as well. Okay. You'll have the names in there, sorry. And it will show you, you can also select all of that student's annotations in Sakai, which also makes it nice and accessible. So, so, so you are saying that in order to do it this way, um, adding Hypothesis as a tool with within lessons, um, the document will have to be on Box and cannot be in resources under Sakai, is that right?

Yeah. It can be on Box. It can be on the, it could be a PDF on the internet as well. So, you can have, you have a link to the original PDF. You can also put that into the link as well into this box as well. You can also connect it to Google Drive. If you have anything on Google Drive, you can connect it directly through, from Google Drive. So, I just cut and pasted the, the PDF link.

I, I just have a, uh, just want to make sure that I'm understanding. I think because the documents that I work with, or I want the students to read and I would want them to unless, I started different, um, group there, they're in resources also. So, we can not use Hypothesis with the documents, the PDFs that we have scanned and made while they're in resources. Correct?

That's correct. Yeah. So, the way, the way the resources work in Sakai, it's not accessible to Hypothesis. So, you'd have to download... It'd have to be put into the lesson? We have to create the lesson, um, tool and then put them in there. Okay. Thank you.

Yeah, unfortunately, so Hypothesis is working with us to try to figure that out, but originally, um, so this applies too, to library resources. If you're just providing your students with that permalink to something that the library has, because you want the library to get the notification that the students are using it, and then we keep purchasing it. Um, cause everybody's clicking on it, then we know, yay, everybody's using it. But the thing is, is that, um, originally

Hypothesis was, is based on open source. So, uh, before they made the Sakai plugin, you could actually only annotate things that were openly accessible on the web. So, the Sakai plugin kind of adds this extra layer. I know all your resources are in your resources folder, but I think you could, you could take those, put them in a box, it would be an extra step for you and then go back and do the, you know, organize them by week and the lessons or however you want it to have the students read them. Um, but the thing about that is it also creates, putting the readings back in Sakai, um, creates this really great thing under fair use for us, which means you can use quite a lot of texts. Whereas if it's freely available on the web, you can't really use a lot of texts because

there's a chance, you're breaking copyright but keeping it in a locked system that only students can sign into and use is kind of a good, is a good protection.

So, so there's advantages and disadvantages and, and certainly one too, we hear students say a lot, especially I know what the library is I can't figure out my name and password for this thing that I signed into. Having them just go into Sakai, they don't have to set up another Hypothesis account, um, Dr. Chu so that they would, you know, so that it's just a single sign-on for them. So, I know it kind of takes a bit of work to get the things out of resources, somewhere else, and then back in. But I think for the long term, because you can republish that Sakai site again, next semester, it might just be a one-time thing that you would have to kind of deal with. But again, I think, you know, best what your workload and how you could set it, set this up. So... Thank you. Yeah. Great questions. Really great questions.

Yeah, so as Jen was saying, you put a static link from box into the URL. You can put normal URL pages in there as well. So, you can, if you found an article on the New York Times and you wanted the students to annotate the New York Times, you can just put a URL directly in here as well and have them annotate webpages, it doesn't have to be a PDF. So, they can annotate other objects as well. So, I'll just click submit on this one. And what that will do is fire up Hypothesis, load the PDF. And um, here's my Stonehenge article. And you can see on the side, there's no, you guys over the side, there's currently no annotations available. And all I need to do then is just select the section of the documents I'm interested in and then I can highlight it, or I can annotate it. So, if I annotate, it will say my name straight away. So, it will say, yeah, Andrew Wilson. And then the section of text I've annotated. And then here is the, is a free text box. I can write things in here. <inaudible>

And I can, yeah, I can bold it. Anything you can do in a normal rich text box. I can bold it. I can use like, italicize it. I can put in pictures. I can also, you can also use LaTeX as well. If you want, if you use LaTeX, you can add in LaTeX into the document, into the comment. You can also add tags as well. So, you can search for tags. So, a student, they, if students are working together in a group, they can tag a section on like, it could be called like intro and that might be an intro tag to that. So, you can...

Quick question. Can the student decide whether to make it public or keep it, uh, private so only the professor would see it? They can, yeah, so this once you're ready to post this, this dropdown here called posts, and there's a little arrow dropdown menu. You click on there and you can click only me, or you can click test sites. So, test site is the name of the Sakai site that I'm posting to. So, if I push post to the normal page. So now it's available in here. And then I can go back in, and I can edit that document. I can also jump through, and I can view that page as a student and go back to here. That's terrific. So now, I'm student Andrew, rather than admin Andrew, and I can see my post here that someone's posted. I can reply to this post directly. So, this is not me adding a new annotation. I'm just replying to the annotation. And then I can post that as well. So now that's posted as a reply, but I can also then, yeah, select all this text here and annotate that.

All right. Thank you. But then, then the beauty of the Sakai integration over the web-based one is if I jump back to me as an instructor, I then have this section, this section up here now where I can go through the students and I can go, oh, I want to see what Andrew wrote. And so, I can jump there, and it'll show me just what that one student has written on all what they've highlighted and what they've wrote in how they've replied. You can also submit the grade at this point as well. So, you can grade

their Hypothesis annotations. So, you could say, so it allows you to add, ah, an assessment on, yeah. Like a reading assessment on their annotations.

Can I ask a question? Sure. Um, in order for that grade, for you to submit that grade, do you have to have already created, uh, an entry in the gradebook, uh, for that assignment, or does it just automatically create one when you submit a grade?

I think once you submit a grade it will create the entry into the gradebook. It doesn't automatically create one.

I think the only thing you have to check, Dr. Chu, is that, um, you, you go into that grade list and you decide whether it's visible to students or not, or whether it's part of, you know, how you have to check in Sakai, this is part of their final grade, uh, or part of the, you know, the weighted grade. You have to set those things up. But I, as Andrew said, it's automatic, I think after you first grade the first student. I see. Okay, thanks.

So that's it. So, then you can yeah, you can just wave through it. The nice thing about the tags, is, yeah, you can view things based on tags, you can go through and see all the annotations and then you can view individual students' annotations as well. So, if students, uh, work on specific documents, you can go through and see what they've annotated. I think, let me jump back to my PowerPoint. Just to check that I covered everything. So, yeah, is there any questions on like the Hypothesis, the Hypothesis Sakai integration? Sorry.

Um, this may be a silly question. Um, you see how, like on the screen right now, we're seeing the PDF as like within Sakai, like we have the Sakai menu, you know, along the side on the top. Um, is there any way to have a different view where it's like a full-screen view, um, and you don't have to see all that Sakai stuff when you're reading it?

There's not, no, it's because it's integrated into Sakai you are restricted to the Sakai yeah, the Sakai overlay. And then you got this section. You can get rid of this, this Hypothesis sidebar. So are, we have spoken to them about the, the Hypothesis sidebar and making it sizeable and stuff as well to small screen sizes to make that more possible to be you on a, on a smaller screen. Any other questions about like the integration or how you... Alright. So yeah, the other thing I said, I said as well is, which is very nice is you can, you can link websites and things, so it doesn't have to be a PDF. So, you could yeah, set a reading of a website or a news article or a webpage, and have the students do the same process of annotating each page as well. I'm going to jump screens again and jump back into the presentation. So again, Hypothesis itself does have a lot of guides and things available on their website. So, you can go through and click on these links once that, once the PowerPoint presentation is available. And it will give you instructions of how to set up using Sakai in Hypothesis or using Hypothesis in Sakai, I should say. And also, yeah, there's student guides on using Hypothesis in the LMS and more information on there as well. Then I'll jump back to the slide of... Any questions or anything we can help you with or work you through?

Useful. But at least Pauline, I'm not asking anything because I don't have the time to set all these up before, uh, the semester begins because I've never done it before. So... Yeah, and I think again, um, you can, you can think about how this might look and, and over time, if you want to test one, you can reach out to us. Um, I think something I always think about too, I got really excited at first. I, because I used Hypothesis before I was a librarian. I'm a, I'm a textile scientist, which is really weird, but a science, a science person. And I remember getting really excited about this and I put lots of stuff in for students. Like every week they had lots and lots of readings and eventually, they told me like, Ms. Beamer, this is just too much. Like we can't, we can't

annotate all of these. And I could tell, I was just getting like little, you know, little, tiny, like this, this looks good, or this is interesting or little comments like that.

So, I, the following semester, I just put in two readings and then the students really got into those readings, but later in the class. So, they kind of like, they kind of like, it was, they had more knowledge, they were able to comment. So, you could, uh, I mean, that's another thing you could always try later in, in the process too, and see what it looks like for you, but there is labor involved obviously. And, um, and uh, if you, if you do have a lot of things already set up, sometimes it's, you know, it's, you've got to figure out what, but, but certainly, we're more than willing to help you if you want to test something or, um, and see if it works for you as well.

Thank you. I might, yeah. Try to choose document for later on and then try to get help either from you, or from Andrew.

Yeah, yeah. Yeah, and certainly Ashley too is first in this. If she, if there's a document you need her to get for you as well, we can work together too, so. Yeah. Alright.

Um, if I may, I think I'm just on the fence about the Sakai integration. Um, cause like I had a way I was doing it before, you know, where I could just keep the PDFs in resources, have them open up in resources, and activate Hypothesis on their browser. Um, and then annotate that way. And so now... But then it's true that they have to set up an account and that's annoying. Um, so I'm kind of on the fence on this integration and, but you recommended it? Like you think it's better?

I do, because I think the amount of, I think the content that can be put into Sakai, uh, you're not so limited by having this kind of like, oh, like you're not leaving yourself open. Now I advise on copyright and fair use, and I'm not a lawyer, and I'm not your lawyer, and I'm not the library's lawyer, but I would say based on all that I know, um, you know, you're, you have a bit more leeway with the materials you can use if they're in this system that students have to sign into that are, your protected a bit more than if the documents are freely available on the web. And let's say, they're not supposed to be like, if you were using something, a chapter of a textbook. Chances are, it's not going to be out of copyright, but you could use that whole chapter of the textbook or even dare I say, in theory, you could put a whole textbook in Sakai if you wanted. It would be miserable for students to read the whole, annotate a whole textbook, if you're, I don't know what your field is, Dr. Chu, but if you were like chemistry or something and you gave them this whole textbook to read, it would be awful.

I'm sure. Cause it's so, they're so, you know, a chemistry textbook is huge, but um, but you could certainly put a bit more into Sakai and use more library resources in Sakai than you could, that are freely available on the web. So, so that's one advantage, I would say in addition to this signing in integrating. But it does work. I see. Um, one more kind of technical-ish question. So, on Sakai uh, so you've been, we, we go into lessons. We, so we add the tool every time, for every PDF that we want to, them to annotate. Is that right? Like, okay. Andrew's was Stonehenge and then so the next reading would be, I don't know Bath or something and like you just enter, you insert the tool every time. Right? Okay.

That's correct. Yeah. So, the way they set it up originally was, yeah, in the sidebar and it was like only allowed one, one document to be done, but you have, you do the lessons. That's why I recommended the lessons because on the lessons, you can have multiple external tools. So, you can have multiple readings, which then has multiple iterations of Hypothesis. Just going back to the, what makes a difference as well, the, the Sakai version is like fully supported by Hypothesis. So, if we need help or

something breaks or we, we can support it much better at ITS, then we can contact Hypothesis as well and support you. And that does add that bit of, yeah, as well to that overall Hypothesis.

Thank you. I think you are persuading me. Thank you. It is. It is. I do know. I do know like the workload of like OCR and text and going through everything that way is, is you know, but once it's there, it's there and that's the beauty of it. Once you can organize it and sort it out you can, because it is Sakai as well, like yeah, next term, and the term after you can just press go with that point and it will transfer over. And it'll transfer all the links over and all the readings over and keep out all the annotations and stuff. So, we can just transfer it across, which is, yeah. The front-load is a lot, but then make maintenance of it is lighter. So... Thank you. I appreciate it. Thank you.

Yes. Thanks for coming. Bye bye.