Transcript for HyFlex Session 1: Logistics Technology in HyFlex (RRU)
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Facilitators: Lisa Corak & Keith Webster

CLINT LALONDE:
Alright. So, let's get things started here. We're going to get on to our first session. And our first session is going to take a look at the logistics and the technologies involved in HyFlex learning. And I'm very happy to welcome our friends from Royal Roads University, we have Lisa Corak and Keith Webster. Keith, pass it off to you for our first session.

KEITH WEBSTER:
Thanks, Clint. So, as you'll notice, I've put up contact details for Lisa and myself. So, we're happy to receive questions that come up later. Just reach out to us, that'd be great.

I'd like to start off just by acknowledging I'm coming from the Royal Roads campus. So, from the lands of the Esquimalt and Songhees ancestors and families. And this campus has been a meeting place for time immemorial. So, it continues in our imposition on this space, as a place where we gather to learn and to work, and to really enjoy the beautiful environment that we have. I'm coming from inside one of the buildings in our office. But as soon as you step outside, you realize you're in a great place, and you're in awe of the environment that has been stewarded over so many generations.

So, to start off with, I'll just let people know I'm going to be speaking about the different models of HyFlex that we have envisioned here at Royal Roads. We are just getting started with HyFlex here, officially speaking. And Lisa is going to speak to a recent residency that suddenly had to go into a HyFlex mode, Master of Arts in Global Leadership, and her experiences as the coordinator getting that all setup and then actually running through it. And also testing out one of our new modes of supporting HyFlex here at Royal Roads. So, if you go forward a couple of slides. Yeah. OK, and then one more. Thanks.

So, just to put some context here, Royal Roads is a fairly small university. We're located in Colwood, British Columbia. We are 70% online for our teaching. So, that means that we have a fair amount of expertise in-house on how to design for this kind of learning on the kinds of platforms and technologies that we want to be involved in. At the same time, we also really try to have the best quality design, most professional presentation for teaching and learning here. And so as the pandemic hit, we didn't have as far to reach as many institutions did. But we also decided to support fully that transition to the full online time. So, we had our own strains and struggles throughout that time. We're also 70% graduate learning. So, a lot of professional programs, a lot of people who are working and going to school. And we provide a lot of support for instructional design, and for learning technologies in these courses and programs. Onto the next slide.

So, if you teach at Royal Roads University right now, you probably haven't heard much about HyFlex teaching, or what the HyFlex service models might be. If you've heard anything at all, you probably heard about six months ago that we advise that we're not going to do HyFlex because we don't have the capacity to support it being done well. And so that was the direction some time ago. We're going to avoid this because we don't think we have the capacity for it. But we've had to rethink that because of Omicron. And pulling back a bit from our, you know, bold chargeback to on-campus as needed, that we

did have to support this. And, in fact, we had to recognize that there were some places where people were doing this already. And so we decided to set up a few different models.

And the first one is full service, which is I'll talk about in the next few slides. But where our immediate support services staff are able to fully support, be there for the entire session, multiple days, etc, and use spaces that are already set up for this kind of environment.

The next one is a self-service option where we have spaces that are set up to teach with sufficient technology to do HyFlex well, but it is also set up in a way that an instructor can handle maintaining and running that system themselves. The last one is a do-it-yourself or HyFlex light. And this is HyFlex as it can be done today from most of the classrooms on this campus. That lessens the amount of technology that an instructor has and it also has impacts on what the instructor is going to actually do. So, the design of their learning in that kind of environment is going to be even more impacted than it would be for a full service or self-service HyFex environment. On to the next slide.

So, the full-service model involves a space that has a control room where media support services staff can run things like managing the audio in the room, what the sources are, what the levels are managing video feeds in and out. And so currently, we have one place like this, Center For Dialogue. You're in the Learning of Innovation center of Royal Roads, but we do have plans for two more spaces. The new Dogwood Auditorium with a plan to upgrade that to fill off for this service through there, and also through the quarter deck space in another building here at Royal Roads.

So, eventually, we would like to have three spaces where we can do this sort of full-service support of HyFlex learning. And this means that largely the instructor does not have to worry about what is seen, what video feeds are coming or going, whether the audio is working or not. They need to keep their microphone in front of their face, and they need to plan their session properly. Now, this model here, we had already because we do a lot of online teaching and learning. We have a lot of events that are both on-campus and out on the World Wide Web. So, on to the next slide.

So, here's an example. One of the campus speakers series, the University President is talking with Gwynne Dyer here. We've had a series of these where ideally it would have been say in the auditorium with three or 400 people, but also connected out to the internet. And here it is in the Center for Dialogue. I think maybe there were a dozen people in front of them. But, you know, quite an audience online. And because of that full support system, we were able to pipe in the video feed. President Steenkamp is able to have a conversation with someone who visually appears to be right there. And also bring in questions from people in the audience, even though they're online. And though I don't think it's done the research sessions, also to do things like breakout groups, do polling, that sort of stuff. But it is very resource-dependent. So, a session like this is going to take two staff likely. It is going to take this one space that we have right now that can handle this. And so it's not really an option for many schools needing to do HyFlex for specific classes, or for large events like residencies. Onto the next slide.

And so the next option is a self-service option. And this is something where it's a lot of equipment and technology that can improve the HyFlex experience, but designed to be used by the instructor and moderated by the instructor. So, this means that we have a couple of cameras that can be pointed with presets. So, typically the classroom would have one camera pointed at the instructor, one camera pointed back out to the students. We have audio in a number of ways. In this session, in this room right here, the Center for dialogue, we have a few ceiling microphones, we have many wireless handheld

microphones and lavaliers. But this is actually a model that we're starting to reach out with. So, we have budgeted for next year to add a couple of rooms like this on campus, and they will have a significant array of ceiling microphones, podium and handheld microphones to manage the audio. Two, video cameras, computer at the podium and the Crestron controller which many of you are familiar with that or another brand found usually the front of the classroom that controls things like the projector, those kinds of things within the classroom. And the Crestron controller programmed for the easiest, most effective way for the instructor to manage the technologies that are in that room without it becoming so overwhelming that necessarily distracts from teaching and learning in that space.

So, this is something where we're talking about a bell curve of comfort level with using technology when you're teaching. And the idea is that these self-serve rooms will bring more capability in but by using the Crestron controller also make it fairly straightforward to manage this technology. That said, this is still something I think people are going to need a quick workshop tutorial through the gear, what's possible, what isn't possible before they step into it. And some people might never really be comfortable managing all of this themselves. So, I don't think even with the self-serve system you're ever going to get 100% of people who teach within a program feeling good about using the system to teach. Onto the next slide.

And so that's a close-up of the Crestron controller interface. It is fairly intuitive, but is, you can see right in front of you, there are a lot of options. And if you are in between activities that you're teaching live to a portion of students in your classroom, glancing back to this may not give you the exact information you need for what button it is you need to push next. Next slide, please.

And so the next option first of all that we are recognizing is already happening. And then also realizing we need a model to support, is the do-it-yourself HyFlex or HyFlex Light. So, an instructor feels that they need to be able to do HyFlex for this lesson, and they know they've got a certain classroom booked, they know it's got some gear, and they're going to go and get set up and run with what they've got. Sometimes, this is by design, more often this is in reaction to something. So, what's most recently happened is we've had classes where international students, some of them could not make it to Canada. And so they want to include them by using this HyFlex Light model. In other cases, we also have instructors who had several students sick with COVID and wanted to be able to include them. And so when you're doing that kind of reactionary thing, it's not that you have planned I do HyFlex and you want to have the best most professional presentation of that mode. It is something has happened and you are reacting. You're wanting to make the best possible experience for the people who just can't make it for one reason or another.

And so the HyFlex light model includes being able to get advice from media support services from a learning technologist or instructional designer about what it is they can do with the room they have, what alterations they're going to need to make to their plan for learning in that space. Some activities just aren't going to translate well to the online portion of HyFlex. Next slide, please.

Most rooms have already a projector, a webcam, wireless handheld microphone, or wireless lavalier microphone often both podium microphone, one or two projectors or flat panel displays, and again, a Crestron controller. But this, in this case, we're talking about a Crestron that set up for face to face. So, it's not going to give you a clear route to everything you want to do in HyFlex. But it still is the basics there and many instructors have taught using that kind of setup already.

Onto the next slide.

OK. So, actually just back one, please. So, I'll just pause here and see if anybody has any questions.

CLINT LALONDE:
Hey, Keith, there are two questions in the chat here. The first one came from Julianne. And Rosario has also sort of reemphasized that as well. Just wondering about costs, ballpark costs for actually delivering this model.

KEITH WEBSTER:
Yeah. So, in budgeting for the next fiscal year, and we're going to make one regular classroom into a self serve, we've ballparked it at about 25,000. Is what is going to cost to upgrade that room. And that is close to the most that we will spend because we're considering that we may be converting out more rooms going forward. We're trying to be ready for people that request, but we're not going to jump and make a dozen rooms self-serve HyFlex without being clear that there's the demand. So, yeah, that's about the price that we're looking at here.

CLINT LALONDE:
David also had a question, what are the options for students that don't have the ability to attend live due to internet speeds, device ages, personal obligations?

KEITH WEBSTER:
Well, to start with, I mean, the options are if you have a well-designed course, there are ways to imagine and then develop, deliver an asynchronous model for it. At Royal Roads, most courses have a lot of asynchronous components. And so we are typically not far from being able to offer some stop big gap asynchronous supports for any lesson. Now, there are going to be some courses and porting residencies where that is much more challenging than others. But we do have many programs that offer a face-to-face and an online version, and the online version would be asynchronous. And so there have been opportunities where somebody couldn't make it for a week or two to serve in or to hand over materials that have that asynchronous approach to the same learning outcomes. So, and, you know, that's probably something that got done quite a bit in the last two years. I don't want to speak for any particular school and say that they're going to step forward and do that tomorrow. Because I'm the Associate Director for Learning Technologies. I'm not the person who has to do the heavy lifting when it comes to that kind of flexibility. But at Royal Roads, we have an advantage that we have so many courses where we already have that in place.

CLINT LALONDE:
Alright. There's lots of questions coming in the chat. So, Keith, maybe when Lisa is speaking, you can just pop into the chat, just review the chat a little bit and see if you can answer some of those questions. But I know that we want to move on and keep on schedule here.

KEITH WEBSTER:
So, let's pop forward. And I've got a couple of questions in a poll. And so if you just go to slido.com and there's the code. 719464. There's two questions on the poll.

So, this is Slido, which is a tool that can be used both in the classroom and with online students. So, it's an example of something you could be using in a HyFlex model. And you notice the QR code in the upper

left corner. Always great to have that quick option for people who are using a phone or a tablet to just grab that and move right into your poll.

OK. So, I think it looks like there's a lot of people who feel technology is a barrier to HyFlex of their institution. Is it possible to slip to the second question?

Yeah, and I certainly agree. I think I find support is the more important barrier for HyFlex than technology, especially after two years of this pandemic. So many instructors, you know, have the tools, the technological tools. But the support for doing something as complex as HyFlex is difficult. And it is so much easier with one other pair of hands at a pair of eyes.

OK, thanks. I'm going to pop into the chat and answer some more questions. And Lisa is going to take you through her adventure.

LISA CORAK:
Thanks, Keith. Hello, I'm Lisa Corak and I'm a Program Coordinator for the Global Leadership Programs in the School of Leadership Studies at Royal Roads University. I acknowledge I'm a settler on the lands of the Xwsepsum and Lekwungen speaking ancestors and families. And I'd also like to gratefully acknowledge the photos you will see in this presentation have received consent from the participants.

So, I'm gonna try and go pretty quick here. The Global Leadership program typically offers an intensive two-week residency on campus in mid-January, which has a mandatory attendance due to be experiential aspect. Last year, we ran this residency fully online. This year, we had been prepared with a hybrid HyFlex Light scenario for one or two students who may be unwell with COVID and unable to attend class. But the news of suspending on-campus classes until mid-February due to the Omicron variant spike put our program into a bit of a bind. We had international students who had overcome immense challenges to come to our city and campus and didn't want to be online, as well as both domestic and international students who faced a number of accessibility challenges or travel restrictions, which prevented them from coming to campus. So, we had seven days, seven business days to pivot to what we now call a HyFlex model. I'll just repeat that again, seven days. Next slide, please.

So, what students will be where? We quickly ran a Doodle poll to determine who wanted to participate online and who wanted to participate on-campus given the Omicron situation. We ended up with approximately 10 Students requesting online and 20 students requesting on-campus. The support team. Collaborative practices thankfully are norm at Royal Roads University, so we were able to quickly meet with Keith and our media support service team in term of what technology and team we had and what the experience for the students might be. Because it was very quiet, there was no one on campus. It was an ideal time to try this pilot.

I acted as a liaison between the technical team, students, the admin team and the faculty to ensure we had clear understandings of what this experience would look like. And my admin staff colleagues were not only an additional support but also acted as our testers. And testers cannot be underrated. We ran a mock session with colleagues in the classroom, our tech team and colleagues online and Zoom. Finding the best camera angles and the best sound were the result of this practice session. Our colleagues on Zoom emphasized the importance of audio clarity over visuals in terms of their online experience, and what supported their best learning. However, the tech team also saw in this session, a second camera angle would enhance the experience and so they added one. And the space. Because no one was on

campus, we were able to secure for the duration of the two-week residency, our Center for dialogue space, which Keith described as our most technically supported space. And with so many people's familiarity with Zoom, this was our natural choice for our online students. And what is HyFlex culture, and how do we support building it? This thought was constantly in our minds, and I will offer some thoughts from the logistical side as we go along. Next slide, please.

So, we will pause just a moment here to show our tech setup. And I'm not a Visio wizard and this is not to scale. This is the Center for Dialogue. It's the room on the right. Obviously, tables and chairs filled the room. We had the zoomable camera at the center back, which was great for zooming in on flip chart demonstrations. And there was also a large confidence monitor there. We had a rotatable camera at the console on the sort of bottom right of the picture. Both cameras were easily switched within the Zoom video icon. And I've called the two projection screens at the front pseudo monitors. Because as you will see in the next pictures, how people related to each other between the two spaces of online and on-campus was interesting and unique. Next slide, please.

So, these photos show what our setup looks like in reality. My favourite photo was the top left because when we begin to think of logistically supporting HyFlex culture, we need to remember everyone gravitates towards different things.

In this photo, the faculty team, the tech support, myself, we're all looking at a screen or monitor that made sense to us. Depending on which camera we had chosen online, students would either see the front of an instructor's face from the central back camera or see the instructor interacting between the class, students and screen from the rotating camera at the console. And both had a place.

The two following photos there on the left demonstrate this a bit more clearly. In the middle photo on the left, we see an instructor facing the rotating console camera which also captures their interaction with the screen and the class. This was beneficial in dialogue sessions. The bottom photo on the left, we see a group of instructors facing the zoomable camera at the back, which could be more useful for content delivery sessions.

And the photo on the right is of a webinar we did within the session with Adrian Lucas, and it demonstrates an important element we decided on to enhance the connectivity culture of the on-campus group. And that was to always dedicate a screen to showing our online students in gallery view. In this webinar case, it was minimalized to focus on our guest speaker. And you can see that sort of in the left screen there. But for the duration, you will see in all the photos gallery view of our online colleagues. And you can see that demonstrated in the two bottom photos on the left there. Next slide, please.

So, this is the online perspective. These photos were taken by our online instructor on this day who was co-presenting with an on-campus instructor. This demonstrates, for the most part, the class view from the rotatable camera near the console was more beneficial for the online students in dialogue-based conversations. The central zoomable camera, as mentioned, was good to zoom in on graphics being drawn on a flip chart, or the wider zoom angle when an instructor was pointing at things in their PowerPoint presentation on the screen. Yes. So next slide, please.

So, this is a photo of that same session, but in this perspective, I wanted to draw attention to the HyFlex jamboard experience. As our on-campus students could not access the jamboard, most of them didn't

have laptops with them. As students online actually volunteered in real time to document the spoken comments by the on-campus students to provide that integrated representation in the online tool. And this demonstrates this evolving HyFlex culture. I just wanted to briefly touch on a few more bits here.

So, for microphones, we used three handheld mics to enhance the PVM mics that were on the ceiling. In reaction to our tester colleagues pushed for that audio clarity for our Zoom participants. On-campus faculty and students became seamless in sensing the flow of transferring the mics around to those talking without any direction. One faculty was commemorated at the end for his quick sprints to the speaking students with the mic. And this injection of humour created some fun for everyone online and on-campus.

Cameras, I gradually began to look after the main console after shadowing our tech team. However, if I miss changing the camera angle, I had some cheerful texts from my online colleagues to keep me on point. I also spike-marked the floor or taped it to show faculty where the camera angles stopped and started so that they could stay within the camera view. Signage, we had used out the one peacock part signage for social distancing, but we also had to add a notice that private conversations may be hurt due to the sensitivity of the PCM mics on the ceiling. We tried for the most part to mute ourselves on Zoom during breaks. But it was something important to remember for all and it strangely contributed to the culture in that students in both spaces were constantly aware of each other.

The Zoom chat, we decided not to show the online chat in Zoom, and encourage students to put their hands up if they had a question. Faculty also created a culture for asking for a response from someone in class, someone online, in class, etc. And their language became inclusive of both groups. Support. For this pilot, we created a text schedule for our tech team and admin team. After shadowing the tech console, I was able to do most of the basic texts such as choosing which camera angle, bringing up PowerPoints and YouTubes, and muting mics at breaks. However, we did have one admin staff and sometimes faculty always online who were able to build a sub-community with the online students and advocate or just be there for them. It was this admin staff who would move the online students into breakouts when needed while the on-campus students broke into their physical space. Moving forward, one person would be able to do all of this from the console.

And then Teams, to add a little more context around how we did Teams. As mentioned, for small plenary breakouts, the online students would breakout through random Zoom teams and the in-person group in the class. However, for two assignments and presentations, the groups were mixed. They were tasked with working out how to work out how to work together. And in their final presentations, they spoke as a team somewhat seamlessly moving between someone on screen and someone in class. Next slide, please.

So, to recap a few thoughts, preparation. Meet with your team, know your space and equipment. Think through your experience of Zoom and in-person learning, and how to integrate those groups. Create a schedule highlighting when you may need assistance. Create some time to practice with your team and equipment. Ask your tech team what can go wrong and how to fix it.

So, for example, what is feedback and how can you fix it? Send Zoom tips to your online students so they are comfortable to share screens and videos, raise their hands, etc, and hold a Zoom orientation for them if they feel they would benefit. Practice. Even if you know Zoom and are comfortable with your HyFlex equipment, have someone pop online with you to see through their eyes and vice versa. Try to

practice with the presentation videos, someone sharing from online to ensure your screen, cameras, mics and presentations are set up, and the online experience and in-class experience is optimal. It always seems different when it is in real-time. Practice looking into a camera and speaking into a mic, if needed, in addition to looking around the room. Have someone online help you figure out the camera view and tape off the floor, and move the desks to accommodate the best view for online students.

In practice, if your equipment setup is complex, shout to your tech team for a day. That's what I did over two days, actually. Initially, I watched everything they did, then had them watch me do what it was. And then it just built my confidence to continue. And give yourself time to allow the learning and technical culture to flow and grow. And it may be different in your next HyFlex offering. And just quickly some reflections, ask for real-time feedback. We asked a fair at various points during the residency if there was any feedback on the experience and gave the students multiple options to offer. Received great feedback. Near the beginning, our setup had the Zoom gallery on the left, as you can see in this photo, and the presentations were on the right. Students on the right side of the room wanted to see the Zoom gallery when there wasn't a presentation. So, we ensured we copied the gallery screen to the other screen when there wasn't a presentation.

We also produced an anonymous survey right after the HyFlex residency with a high percentage of response. The feedback was generally very positive although it was acknowledged it was a learning curve for some. Some key points that we learned from the survey was online students wanted more verbal permission to turn off the cameras occasionally. With our learning from running an online residency, we thought we had been clear and encouraging for online students to take screen breaks. But understood in this particular situation, there was comfort in us explicitly mentioning it. Some students wanted more opportunities to mix. Some students found it challenging to be mixed in their teams, especially as some online students were in different time zones. And there were suggestions to put online students into breakout rooms over lunch and breaks so they could chat. We had done that during our online residency but hadn't thought to do that for this one. And next slide, please.

So, while not fully perfect, we knew our HyFlex culture had evolved on its own when we engaged the group in the HyFlex celebratory event around their presentations. In a much smaller venue with two mics and one small webcam on a stand, the students naturally stepped up and ensured the camera and mics were capturing the faculty and students when they were speaking at this event. So, the online students were included. And as you can see here, we did a combined class Momento photo. And next slide, please.

The last day. I think this photo says so much about the synergy between the two groups, as well as the various ways of interactions with various cameras. I think it really shows a HyFlex culture evolved. And final slide, please.

Sorry, I love that picture and I will like forever. Why HyFlex has a future with global leadership? First, I just wanted to take a moment here to acknowledge and thank everyone involved in this pilot, Keith and others as advocated and made it happen. Our tech team, especially Keith and Neil, our incredible faculty team that just ran with it, our admin team that kept things rolling in the background, and our incredible students who embraced the challenge. It truly was a phenomenal team effort.

And so why HyFlex has a future with global leadership? I'm not an instructor, but I'm an advocate for accessibility and HyFlex is an accessible model. And our program supports values of EDI and the removal

of barriers, in addition to supporting the need for greater global connection, especially in extraordinary times. And I think HyFlex supports these values. Thank you.

CLINT LALONDE:
Thank you, Lisa. OK. So, we have a decision to make here. Now, I know we have some breakout rooms planned, but we also only have seven minutes left. So, I don't know if we want to go to breakouts or there's some great questions coming in. I think we could probably just, you know, do five minutes here for the questions if you feel more comfortable doing that. Keith, Lisa, what do you think?

KEITH WEBSTER:
I think that would be the way to go.

LISA CORAK:
Sure.

KEITH WEBSTER:
Yeah. So, maybe, let's just say I'll make the commitment that I'll get to questions in the chat over the next half hour or so, 'cause there's a lot. But if anybody wants to grab the mic and ask a question. Or I'll just pick some that are in here.

A couple of questions about digital equity. And we've recognized this at Royal Roads because we have many programs that work with people in the Canadian North, and even places not that far north that are challenged with the Internet. And then when the pandemic hit as well, we were working with students in China with different connection speeds. And so to start with, traditionally we've always been asynchronous for online. And asynchronous is much more suitable for different kinds of bandwidth connections. But similarly, we've also evaluated synchronous tools as we took them on. And so Collaborate, which we use for years and years, is actually pretty tolerant of very low bandwidth. But also Zoom, there are strategies that we can advise students to use to connect with much lower bandwidth.

But it's also a consideration that we advise program staff and instructors about, that if they are eager to include mandatory synchronous online sessions that it's quite possible you're going to have some learners who can't participate fully. So, we encourage you to make them optional, make them recorded, so accessible later, and to use configurations that maybe make it easier for someone to join and just participate with audio and text.

CLINT LALONDE:
There's an interesting question from Willa there about students and the technologies that they use to connect to HyFlex. And I'm just wondering if you can speak to this. Did you know how students connected? Did they use mobile phones or were they primarily using laptop computers? And did that make a difference in the HyFlex learning experience?

LISA CORAK:
I can pop in here. Sure. All of our students in particular used laptops. But most were wired connections... Sorry, they were internet connections, not wired. And it worked perfectly. We didn't have anybody I think at any moment join us by iPad or phone, but that has happened in the past in other sessions.

KEITH WEBSTER:
Yeah. And I think this is very demographic-specific. The graduate programs, these are professionals, they

are not just at a high school. They do have a laptop. We had other programs, especially one of the programs in China where the students went into lockdown with a few hours' notice. And so we had entire cohorts that just had their cell phone, and had to work through the rest of their course in Moodle and collaborate with that technology. And so that became an immediate important technology or design issue that we needed to make sure everything was accessible that way.

CLINT LALONDE:
There's a really good question from Carrie in Observation really about, I'll just read this, I'm feeling a resistance to the idea of very interactive courses by design are suitable for both synchronous and asynchronous attendance. I can easily see how interactions between synchronous and face-to-face happen in this sort of class, but resisting how you would incorporate asynchronous only students and I'm curious to understand more.

KEITH WEBSTER:
I think this... Lisa, did you wanna say anything to that?

LISA CORAK:
I just thought in this particular, the example that I offered, the students were very aware they had to be there. It was a mandatory attendance. And what we were planning to do if there was somebody who was ill and couldn't attend was record. But the support structure of the cohort model, you know, many students, even if they had to pop away, were connected by whatsapp with their student colleagues and we're being kept up with that piece in real time as well.

KEITH WEBSTER:
Yeah, I think it's difficult. I mean, if you've designed for synchronous, whether it be face to face or online, to then make an equivalent in the asynchronous is going to be difficult. And it's especially depending on the prior experiences of your students, some people who have, let's say immersed themselves in online learning have that experience and for whom they can participate in a forum chat, say, or a forum discussion, and really get from it what they might have gotten from a live synchronous discussion. Those students who will do fine with that asynchronous alternative, but others might not. And maybe groups of others who haven't had that experience aren't going to get the same kind of depth from the asynchronous experience unless you start from that and you design for asynchronous, and you work up your cohort to be able to get that kind of learning in the asynchronous environment.

CLINT LALONDE:
OK. Since we're grounded in technology here, I just want to go back to one technology question. It was something Tanis had earlier about, do you record every session that you do? And in terms of storage, have you found you've had to upgrade your storage requirements or any other upgrades that the institution has to do to take that into consideration?

KEITH WEBSTER:
Yeah. So, recording is it's the program, the instructor. So, at least I don't know. Did you record many or all? No? OK.

LISA CORAK:
No, we had a plan if somebody was ill. But with everybody in attendance, there is no need to record.

KEITH WEBSTER:
Yeah. And so storage here at Royal Roads is, you know, the evolving nightmare that most institutions have been facing that we saw our storage on Kaltura on our various web conferencing platforms just grow through the roof during the pandemic. And we are in the midst of moving from the UPC Kaltura onto the cloud-based where it's no longer the sky is the limit. And so we have a strategy around curating video, is what we're talking about mostly here, to keep this hopefully in a manageable realm. But at the same time, we have had pretty good buy-in in the administration to say that this is something we're gonna have to pay for going forward. And so we need to allocate budget for it. And certainly, the solutions we are working with right now are pretty reasonable for cost, but it is something we have to manage. It's not like the old UBC-based Kaltura where they said that you can upload any size of file you want forever, and there will never be any limit. Always thought in the back of my head, you know, one day that's not going to be true.

CLINT LALONDE:
Yeah, for sure. OK, we've hit our time here. So, we're gonna stop for break. Lisa, Keith, thank you so much. I want to remind everybody, there was a great chat going on, that you can download the chat too, and refer to that later on. So, I know Keith was in there answering questions. If you go down to the bottom right in the three ellipses, there's a way to download that chat and keep that chat. And don't worry, we'll have lots of opportunities for breakout rooms as we continue on. The other question that was asked too was about slides. Yes, we will be collecting and sharing all the slides and all the videos, recordings of the session as we go along. So, Keith, Lisa, thank you. Oh, go ahead. Yep.

KEITH WEBSTER:
I was just gonna say if this kind of discussion is really interesting to you, maybe head over to ETUG.ca. We have a Slack and this kind of stuff gets bounced around all the time.

CLINT LALONDE:
Wonderful. Thank you, Keith.