Transcript - Transform Learning: Fostering a Sense of Belonging & Instructional Transparency for Every Learner

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NORMA HOLLEBEKE: Welcome to the Every Learner Everywhere Transform Learning webinar series. It's a pleasure to have you with us today. My name is Norma Hollebeke, and I'm the Associate Director for Innovation and Programs with Every Learner Everywhere. Some really quick housekeeping notes. We are recording this session for those of us who cannot join us today. However, throughout today's presentation, we also encourage you and welcome you to add questions in the chat. We will also have the opportunity at the end of the presentation for you to come off mute, ask questions, and engage with the panelists.

Before I introduce our panel moderator, I'd like to take out just a few minutes to tell you a little bit about Every Learner Everywhere and the mission of our network. Every Learner Everywhere is a collaboration of higher education organizations with the expertise in evaluating, implementing, scaling, and measuring the efficacy of education technologies, curriculum and course design strategies, teaching practices, and support services that personalize instruction designed for students in blended and online learning environments.

Every Learner Everywhere is sponsored by the Gates Foundation. Here at Every Learner, our collaborative work to advance access to higher education centers on the transformation of post-secondary teaching and learning. We build capacity in colleges and universities to improve student outcomes with digital learning. Our mission is to partner with institutions to harness digital learning technology, driving innovation in higher education to improve outcomes for every learner.

And now to our moderator. Dr. Christine Latulippe is a visiting assistant professor at Linfield University. Throughout her faculty experience at a public Hispanic-serving institution and at a private liberal arts college, Christine has promoted equity and

worked to advance inclusive excellence, facilitating learning, which applies to and enriches the lives of preservice and in-service teachers alike.

Many students have never known how strong their mathematical skills are because they were never given the permission to share their own strategies and to come to their own understanding of mathematical concepts. Christine strives to change that experience, allowing for student success and opening the doors to populations who may not have yet recognized themselves as a part of the higher education community. Christine?

CHRISTINE LATULIPPE: Thank you, Norma. Can you move to slide five, please, for us? Welcome, everyone, to the first webinar hosted by Transform Learning. This project is focused on digitally enabled teaching and learning as a mechanism for improving mathematics learning across post-secondary institutions.

My role on the project is community manager of the Transform Learning community. The goal of the project, in addition to being a hub for instructional examples, is to engage with the academic community. The recently developed Transform Learning website offers resources and best practices across pedagogy, curriculum, and technology, as well as a growing body of evidence to support the use of technology in the classroom to support learning and improving equity.

Digitally enabled, evidence-based teaching practices refer to instructional approaches that integrate technology, tools, and platforms to enhance and support teaching methods grounded in empirical research and data-driven insights. These practices leverage technology to collect, analyze, and apply evidence to inform and improve the effectiveness of teaching strategies, ultimately leading to more successful learning outcomes for our students.

The eight DEEBTs are-- next slide, please-- active learning. We decrease professor lecture time and increase student participation in learning, assessing and activating prior knowledge, determining what our students already know and integrating their experiences into learning, data-informed instruction, adjusting our instruction based on real-time student data, formative assessment and practice, where we deploy a frequent, low-stakes way to monitor student learning.

There you go. Fostering a sense of belonging through an inclusive learning environment, creating safer and more welcoming spaces for learning, instructional transparency,

sharing the why and how behind our instructional decisions, metacognition and self-regulated learning, helping our students learn how to learn. And our eighth is peer collaboration, creating opportunities for students to support each other's learning.

When we think about these eight DEEBTs, there are some ideas for implementing them. And the first one-- next slide, please-- is really to start anywhere. The practices are not sequential. You can start anywhere. And keeping in mind to take small steps, the practices don't need to be implemented in full to make positive changes for your classes and your students.

We can also be aware that different practices drive different outcomes. So implementing different practices will help you reach specific teaching and learning goals. To this end, we will be joined today by two exceptional mathematics faculty who will lead today's discussion and share insights and strategies for fostering a sense of belonging and instructional transparency.

Dr. Abbe Herzig teaches mathematics at Sarah Lawrence College and at several prisons through the Bard Prison Initiative. She has provided mathematics faculty across the United States with evidence-based professional development on equitable practices, online teaching, creating inclusive classrooms, and mentoring for equity. She advised the American Association for the Advancement of Science on developing tools for academic STEM departments, professional societies, and institutions to assess and address the impacts of their practices and policies on diversity, equity, and inclusion. With Dr. Winger, she is a co-lead of the COME-IN project, Creating Opportunities in Mathematics through Equity and Inclusion, which is a two-year project that trains mathematicians as change agents and supports departments in their DEI initiatives. Dr. Aris Winger is an associate professor of mathematics at Georgia Gwinnett College. His current work centers around creating spaces where marginalized groups feel a sense of belonging in mathematics and STEM.

This mission has led him to co-authoring a book series advocating for students of color in mathematics and conducting numerous professional learning workshops and consulting around the United States, working with educators and administrators at all levels. With Dr. Herzig, he is a co-lead on the COME-IN project supported by an NSF INCLUDES grant to support a two-year project that trains mathematicians as change

agents and supports departments in DEI initiatives. He currently serves as the Executive Director of the National Association of Mathematics.

Please help me in welcoming Dr. Herzig and Dr. Winger. Thank you.

ARIS WINGER: Thank you so much. OK, great. I don't see you, Abbe, because I was thinking-- so I don't know where you are.

ABBE HERZIG: Well, I'm--

ARIS WINGER: But you're there.

ABBE HERZIG: I'm here. I'm here.

ARIS WINGER: OK, good.

ABBE HERZIG: And I see you.

ARIS WINGER: I'm happy to have you here. You see me? OK. Perfect.

ABBE HERZIG: And it's good to see everybody else. Thank you so much to everyone for joining us for these very important topics. We were asked to talk about two of the EBTs. And we're excited to dive into them with you. But, of course, all eight of those EBTs that Christine reviewed all interact and overlap with one another. So some of the things we'll talk about will be relevant to some of the other areas as well.

And we're going to start with an activity that we're going to ask you all to participate in. So I'll turn it to you, Aris, for that next slide, please.

ARIS WINGER: Absolutely. So we are big on voice. And so before we dig into our thoughts about belonging and transparency, we really want to leverage the expertise we have in this space and to get your thoughts on belonging and transparency.

So we have a Padlet that you can participate in, that we would like for you to participate in, as, again, getting all perspectives allows us to create something larger and more impactful than what we can do by ourselves. So that should be going into the chat.

ABBE HERZIG: And our first transparency practice we will model right now, which is when you're going to engage students with digital tools, it's really important to explicitly take them step by step through the tools. It's generally not sufficient to just throw it at them as we just did to you.

So if you click on the link that's currently in the chat, it will bring you to what you see up on the screen right now. And there's a big prompt in the upper corner that says, "Think of

a time or place when you did not feel you fit in." And there are three questions for you. What did it feel like? And we really want to emphasize the word "feel."

What would have helped you feel differently? And then other thoughts or reflections. And anything you want to share on here-- you can just hit the plus sign underneath that column and type as you'd wish. And all communication here is confidential, or anonymous I should say, rather. So please feel free to share whatever comes to mind as we begin this discussion.

ARIS WINGER: I'm already supremely thankful from what we're getting already in column number one. Appreciate that. Uncomfortable, ashamed, felt incredibly isolating and disappointing. Threatening mentally. Some thoughts of imposter syndrome. Like I wanted to leave.

ABBE HERZIG: Yeah. Intimidated.

ARIS WINGER: And so there's something about the wanting to leave part right? I mean, yeah, I certainly can understand that and that when we think about people who leave, what does it look like for us to imagine that when someone says that I'm out of here or that I'm leaving, that it is very much tied to a lack of belonging.

Thank you for that first column. What would have helped you feel differently? Awareness about those around me that it was possible that their actions were likely alienating and/or excluding some individuals in the room. Now, that is powerful. And so, as was said, we come from the discipline of mathematics. But I'm thankful that we have disciplines from all over joining us on this call and on the webinar.

And so it has me thinking about what this awareness looks like. Because in the discipline of mathematics, we have lots and lots of practitioners who just want to get about the business of getting to the content and not thinking about maybe I need to be attending to belonging. Right?

You can think about it in the chat, whether that's true. Where does this awareness show up in your discipline specifically? That interests me.

ABBE HERZIG: That could even be something you talk about in the other thoughts section on the Padlet itself.

ARIS WINGER: Yes. Yes, yes. How is your discipline tied to the ability to create belonging? Yeah. So, again, we're deep in the STEM space. And because the STEM space, there's a lot of work for us to do. Is that true in English? Is that true in literature?

Is that true when you're teaching bassoon? How is it that we can get-- is it easy or harder? Is it the same? I'm going to mention personal contact with someone, information that I was welcome. So also, there's something about-- in lots of ways, when I see that person, I'm imagining. And part of it is because I'm in a classroom now. But I'm imagining, like, walking into the classroom and just saying, is there someone in here that I can connect to? And the ability to just have that increases the belonging piece a ton, I would imagine.

ABBE HERZIG: There's also one other under the second column, being welcomed and named, which I think is also very powerful. Being named, being seen as who you are.

ARIS WINGER: Yes.

ABBE HERZIG: And we'll talk more about that in a few minutes.

ARIS WINGER: Yeah. No, that is powerful. And I'm thinking of the tension between being welcomed in name in a class of 35, and the class is 45 minutes long. And how do we do that in ways in which students will feel welcome when we have the time crunch and there's so many people in the room? How do we do that?

And does that mean that we stand by the door and say hello? Hello, Amanda. Hello, Norma. Hello, Samir, as they come in. Be at the door, as Carole is saying. Be at the door.

ABBE HERZIG: We have a-- excuse me-- a colleague who teaches large lecture courses of calculus with 150 students. And he spends the summer memorizing everybody's names so that when they come into class he actually knows who's who. That's perhaps a really heavy lift that most people can't engage with. But it's an interesting model that he goes to that degree of effort. And he talks about how impactful that is for the students' willingness to participate in class.

ARIS WINGER: This third column here, teaching-- OK. Creating an open-- looking back, I wonder how many people felt just like me and, if not many, why I felt so out of place when I'm usually so confident. That is powerful. Wow.

And so in part this exercise, when we-- hopefully, when we feel it this way, then we can start to think about. And it galvanizes us to really attend to these things as we are passing this on to our students. Really, we appreciate your contributions. Go ahead.

ABBE HERZIG: This tool, Padlet, can be a very powerful thing to use in a classroom. We've used it in many different ways. This is one example where people can really make contributions anonymously. So at times when we've talked about sensitive issues about

DEI, people have been able to open up about things that they might not have felt comfortable to share publicly if they were identified.

We've also used it for brainstorming like this. It can be a way to give people an opportunity to think about their response. You don't have to worry about that issue of who's hand went up first and trying to wait for the other people to also respond, because it gives people time to interact. So this is one nice tool that can support digital interaction in the classroom synchronously or asynchronously.

Should we move on to the next slide, Aris?

ARIS WINGER: Yeah, let's do it. Yeah.

ABBE HERZIG: OK. Next slide, please. So this is how we are thinking about transparency, and belonging, and inclusion. Transparency we think of as being there's an explicit definition of what it means to succeed and how you will know if you're succeeding. And that definition is made very, very clear that here's what you need to know. Here are the things you need to do, and that there's no mystery involved. And we'll talk about that, of course, in some detail.

For belonging and inclusion, those words are used very often, particularly in STEM and, I imagine, in many of your other disciplines as well. Without a very clear definition of what it means to belong, even though I think many of us-- as we saw in the Padlet, we know when we feel it and when we don't feel it.

So we think for the purposes of this discussion as belonging and inclusion as being you can be successful and be your true self at the same time. You do not need to surrender parts of your identity or your self in order to interact successfully in that environment.

Next slide, please.

So we'll start by talking about transparency. And the notion of the picture that we're showing you is that we've really identified the goal. There's that beautiful end product at the end, that glowing light really appreciating the beauty of a discipline and its ideas. And there's a somewhat circuitous path to it, but we're defining what the path is. And yet at the same time, there are a lot of side routes you can take off of this as you're going along toward the goal.

Not everybody learns the same way. Some people are going to step off the path and smell the flowers or pick some flowers. Some people may wander a little too far away, in which case, we are there with them and pulling them back toward directing themselves

toward that end goal. And they understand why they're being asked to do the things that they're doing.

ARIS WINGER: And it's something about transparency where, if you set up a path, or a multiple paths, or the possibility for your students to achieve success, and you do it deliberately, and you set out the plan, that's one of the ways in which you get to show your students that you care.

And so oftentimes we all are in different places about how we display to our students that we care about them and that we want them to be successful. What I found is that when I go up and I say, here are the multiple routes to success, and here's what I envision for you, that's for free almost one of the ways that a student can say, well, wait, he took this time to spell this out to me, to make this path. This person wants me to succeed.

ABBE HERZIG: Can you click, please? So here are some strategies or things to think about in building transparency in your own instruction. The first one we'll talk about is that assignments should be aligned both in and out-of-class assignments with clearly stated learning goals. Students should understand what they're being asked to learn. That was part of stating what the measure of success is. But they should also understand why this assignment is going to help move them in that direction.

I had a situation once where my fifth-grade child was asked to do an assignment that, as an educator, looked ridiculous to me. So I just emailed the teacher and asked, what's the learning goal here so I can support him? And the teacher wrote back and said, oh, I don't know. It just seemed like a fun thing to do. Well, that's a good way to lose the trust of students.

If you're giving them work to do that doesn't serve a goal that they understand, then you're asking them to engage with something that appears to them as a waste of time. If it's not a waste of time, and you have a principled reason for asking students to do that, then that really helps them engage because they understand what they're trying to do.

Next bullet. While digital tools are there to enhance learning and they're very, very powerful, don't hide behind the technology. You still need to be humanly present. They still need to know they're not in that website, or in that utility, or in that app all on their own. Notice that when we were doing the Padlet, Aris was talking to you through the

whole thing. And he was there. You weren't just brainstorming with each other without any guidance. It's really important for student engagement that they understand that there's a human being interacting with all of this with them. And that's true even for asynchronous learning. There are tools for the teacher to have a teacher present, even if they're not in the platform at the same time.

Construct activities that explicitly teach students to use the digital tools. So, for example, I might use a Padlet like that on the first day of class, maybe even in a circumstance where I don't need the Padlet to teach the mathematics I'm trying to get across. But I want them to become fluent in how to use it, or using VoiceThread, which is a nice digital tool for getting students to be able to have asynchronous discussions but by voice and by video to give them something to do in that platform that takes them through all the different features and functionalities of that platform so that they can get fluent at using it in a low-stakes activity.

One of the key parts of transparency is that students understand that the choices you're making as an instructor are intentional, that there's a reason why you're asking them to do certain things. There's a reason why you're lecturing about something versus asking them to engage with each other. There's a reason why you're asking them to solve problems on their own without your help health initially. And helping them to understand what those real reasons are is a key part to that notion of transparency and having students buy into what you're asking of them and where they should be putting their attention.

ARIS WINGER: And I think that one in particular resonates with me, because I'm also thinking about having those intentions. And it's already baked in, but just, again, being transparent and explicit that the intentions that you have are very much tied to their success. The whole thing is about their success.

ABBE HERZIG: And that leads into what Patty said in the chat about particularly in STEM. It's not uncommon in big lecture classes where students come in and the teacher says, half of you, look to your left. Look to your right. By the end of the semester, only half of you will be left.

That is a-- I guess that is a form of transparency. But it very clearly communicates that you are not invested in their success, whereas telling them instead, here's what it takes

to succeed, and here are the tools I'm giving you to help you succeed, and at every step, even with someone who's struggling to give them feedback that's not of the form of, oh, I guess you're not cut out for this, but rather of the form of here's what you need to do to succeed at the next step, and let me help you, is a very powerful, powerful tool for motivating students and making them feel that they belong, which we'll talk about more explicitly next.

Being very clear about expectations and goals so that they know what they're trying to do, providing rubrics when you can, telling them exactly what your criteria are for grading. And part about being clear about expectations is being clear with yourself. A lot of times, we as instructors use strategies that we do just because we've always done them and we don't know why-- for example, really strict deadlines on assignments. Sometimes there's a good reason to have a strict deadline. Sometimes there isn't. Sometimes it's just because we're accustomed to providing deadlines. And if we try to have compassion for the fact that our students have lives that are just as complex as our own, we might find that there are times where we want to insert some flexibility in that, along with boundaries, whatever makes sense within the situation. But to really think about all of the requirements that we're stating for our students and making sure we understand for ourselves first and then communicate to our students why we're doing what we're doing and why we're requiring what we're requiring.

And, Aris, I think this one is you.

ARIS WINGER: Yes. It's clearly identifying expectations and strategies to achieve success is a powerful way to support student learning, enhance their belonging, and let them know you care about their success. So these were-- I mentioned this kind of earlier, that in doing this you can get across to your students that, oh, this person cares. I was working on a project where I had-- we were doing-- there were some people we were onboarding. And I had set up a process for them to be onboarded. And one of my teammates was just like, oh, you've laid this out carefully. This really shows that you care. And in my mind at the time, I was just like, no, I wasn't even thinking about caring so much about them as much as I was just like they deserve to have a process in which it is easy for them to at least understand what they need to know in order to be successful. Like, we owe that to them in lots of ways. But then at the same time, on the other end, it comes off as if we care, which is also great as well.

ABBE HERZIG: And caring is not only about just being a nice person. It's really a critical to student engagement and to their progress for them to understand that you care about their success, you care about their experiences in your classroom and in their academic program overall, and that you really see them.

As we talked about earlier, in online platforms, in digital tools overall, one thing that we can pay attention to in helping that happen is that things are really easy to navigate. It's clear how they need to navigate to do the things you're asking them to do. They know how to reach you. It's not three clicks deep for them to find out how to send you a message.

There have been some recent research that has shown that in some digital environments, if it's too much labor for students to figure out what's going on and it takes them too much time-- and let's be clear here-- time in an online platform or on any digital tool is measured in seconds, not minutes. So this research has shown that students are likely to assume that the professor does not care about them but even more so to think the professor is not competent because they're not providing a usable learning environment for them.

Do you want to take this one, Aris?

ARIS WINGER: Sure. So when thinking about belonging, we have some frameworks here. We have a framework here to say that, well, wait-- if I belong in this space, then, as we said earlier, I should be able to be my true self. I should be able to come in and not minimally at least have to pretend to be someone who is not. Right? Or say things in ways that I wouldn't normally say them.

If I'm feeling like I belong, then I'm appreciated at some point. There's something about me that is worth valuing in this space. At a very fundamental level, if I belong, then I feel safe to belong. That's tied to Maslow's hierarchy of needs. And if I belong, then I'm treated justly. And so this comes out in a couple of ways.

So here's some pragmatic ways, right? So we can learn how to spell and pronounce students' names. So we're going back again. Someone in the Padlet said that I am named, right? And so what people's names are is important. And it's kind of tied-- when we think about these, we can go back to the framework and say, well, wait-- that can be tied I'm appreciated or I'm feeling safe, if you want to know students' names.

ABBE HERZIG: And I can be my true self.

ARIS WINGER: Yeah. You can highlight-- go ahead.

ABBE HERZIG: Yeah. So highlighting unconventional solution strategies and investigating them mathematically is a wonderful way to honor different ways of mathematical thinking. Rather than communicating you need to think like me and produce this work the way that I produce it, when someone has an unconventional approach, that's a wonderful opportunity for everyone in the class to learn a different way to think about or look at this content.

Even if there's something flawed about what's being presented, you can still investigate it mathematically, or artistically, or musically, or whatever your discipline is. And it's a great learning opportunity for everybody and communicates to the individual who proposed that point of view that they're being valued and appreciated.

ARIS WINGER: Yeah, that's the appreciation piece. And if that is like an opportunity, whenever you get an alternative opinion or a different way of thinking about things, for me, it's like my heart lights up because it's just the perfect time to hit the appreciation piece.

And so usually with all questions at the end of that or at the end of any question that I get-- or I should say at the beginning-- I say thank you for your question. And at the end of that, after the end of whatever my explanation is, then I say, I appreciate that. I appreciate your question.

ABBE HERZIG: And it's appreciation for the individual. And it's also great learning for everybody else because, as someone mentioned in the chat, you're modeling respectful communication. And you're also exposing them to ideas that you might not have otherwise thought to bring into the classroom discourse. I have this happen all the time in math classes.

Every class I teach, there's always something new I learn because a student does something away where I have to say, what? Explain that. And many times it's correct, and valid, and really interesting. So we talked about making the navigation transparent a moment ago. So maybe we want to go on to the next bullet.

In the pandemic, when everyone sort of suddenly and in a panic had to switch to online learning, people just in many cases, for lack of knowing what else to do, just threw all their stuff on their Blackboard or Canvas site or whatever.

But when we have the time to really be thoughtful about the use of digital platforms, we have to design all the materials specific to that platform. It isn't always the best idea to just put up a Word document that contains the assignment that you might be handing out in class but to really integrate what you're trying to communicate to the students into whatever the structure of the platform is so that it's easy for them to use, easy for them to understand, and shows them, again, it's that caring that I want this to be accessible to you so you know what you're expected to do.

ARIS WINGER: Yes. So for me, in terms of the syllabi, I'm always thinking about alternative presentations of the syllabi. So, again, there's this tension between, yes, we want our students to be able to read a 4, 5, 15-page document that is tied to their success. That's true. And so they should certainly do that.

And the other side of that is how is it again that we can take that document, which at times may feel just bureaucratic, and turn it into something that allows for them to engage with it way better and so that they continue to know what they need to do in order to be successful.

ABBE HERZIG: And one thing that happens to many of us, I think, is we put something either on paper or in a digital tool that we think is really clear, that named an expectation of an assignment or something like that. And then students are surprised when they say, where were we supposed to do that? I didn't know we were supposed to do that.

And I think my impulse when I first hear those things used to be they weren't reading or paying attention. And now my impulse is to say I did not communicate that in a way that was helpful for that student. And so I need to rethink the communication of my expectations in a way that it is much less likely that they're going to miss something that's important.

ARIS WINGER: Yeah. No. It took me a while to actually come to this conclusion because when something feels obvious to you, when something feels right, then-- right? So what Abbe just modeled for me is this stepping out of my own perception of what I think is obvious, right? To understanding that-- wait. What does it look like to be on the receiving end of this thing?

In that saying that, oh, there's apparently some things that I don't know about how this is coming out to students.

ABBE HERZIG: I was teaching online in Blackboard for many years before I actually took an online course in Blackboard. And the course that I took was so obtuse to find what I needed to find. And even things like the fonts were all wonky. And it was hard to read the screen and so many things that it was a fabulous learning experience for me because I went back to my classes and then really worked a lot harder on not what I see but on trying to understand what the students see and even communicating to them, look, I think I've created this environment in a way that's really usable. And my goal is for you to be able to do your work easily within this environment.

Please let me know if there's something that's not working for you so that we can address that. Giving them that respect of I value your feedback as well can be really empowering. And it helps us be better teachers.

ARIS WINGER: Yeah. No, I am thinking about what it looks like to go into-- we use D2L, but then to just say to have a little text box or a link to a feedback. Like, is this clear? And businesses do this all the time. If you do something, it's like, how is that process? And, yeah, I could do that easily at different points of the explanation or the map to just have something that says, is what you just read clear? If not, click here and tell me how we can make it better. I love that.

ABBE HERZIG: So the next two bullets go together, modeling and enforcing respectful communication and teaching students how to work together effectively. It just doesn't usually work its best to throw students in groups and say, go to it. You need to-- many students are not accustomed to working together, depending on the discipline and what their backgrounds are.

Students come to your classroom, whether physically or digitally, from different backgrounds, with different communication styles and different expectations. And you really need to teach them how to communicate with one another, how to listen to one another, creating structures where everyone's voice is heard.

For example, I was once moderating a discussion in groups about something that was very controversial and difficult. And we asked the participants to start by whoever's last name came first in the alphabet got to speak first. And that person had one timed minute to respond to the prompt of the discussion.

And when the minute was over, it moved to their right. And that person was supposed to say, what I heard Aris say is, and paraphrase. And then they got to say their piece for a minute and went around the circle before interaction happened. That was one very specific structured model that we implemented in that case because we were afraid-- because of the controversial nature of the topic, that some people might not have their voices heard but to really help students know how to communicate and being sensitive to the idea that not everybody is comfortable communicating in the same ways.

I've had students say things to me when I've pulled them aside and say, hey, I'd love to hear from you more. I've had students say, I'm already way past my comfort zone in terms of how much I'm interacting. I'm engaged. I'm listening, or I have a student that I'm dealing with now who's always doodling. And he looks like he's not engaged. And I asked him about it, and he said, that's how I engage. That's what I need to do.

Just really trying to understand those kinds of differences in where people are coming from and what they need to be effective. Another one that's been very powerful for me to think about is in math there's been such a huge movement over the past two decades or so to really get students to question things.

Don't believe what I say because I'm the teacher. Question me, and make sure you know it's true and that I'm not the judge of what's correct. You are the judge of what makes sense. And we'll do that in conversation. Some students come from backgrounds, especially when you're dealing with children, where you question an adult and there are some very serious consequences.

And that's a very uncomfortable model for them. They might not be comfortable doing it, or if they learn to do it and take it home, they might suffer some consequences there. We obviously can't know everything about every one of our students. But these are the sorts of things we need to know to try to keep our eyes open for to help them, again, to help them succeed in the way that works for them.

And then the last bullet there, defining errors as important learning opportunities and celebrate them-- I think we've addressed that before. Someone makes a mistake, and we say, oh, that's so cool. Let's look at that. Why did you think that worked? And why doesn't it work? And that's something really, really interesting. And to make it something

exciting of, oh, we all learn something new from trying this approach to this situation, even if it didn't lead us where we wanted to go.

ARIS WINGER: Yeah. And this is particularly true in the STEM fields but just in general because there's always this initial feeling of, oh, I messed up. Right? And if we unpack, oh, I messed up, then lots of times, particularly young people will get that confused with, oh, I am a mess-up. There's something wrong with me.

And the quicker we can be excited about their contribution, the more we can stem that from happening.

ABBE HERZIG: Right. There's such a fear of mistakes, a real fear and trauma in mathematics in particular. And to really work against that and say we welcome mistakes-- we make mistakes all the time-- and I make mistakes on the board all the time. And I don't try to hide them. Student will say, why is that 7 there? And I'll say, oh, because it's actually supposed to be a 6. Sorry about that.

And so there's research at all levels of math education and education and other fields as well, from the earliest levels up through college and post-graduate education, that students who have a sense of belonging in their classrooms and in their environment are much more likely to succeed. They're more likely to engage. They're more likely to trust themselves, to trust other members of the environment, and really to learn effectively.

And what we've tried to communicate with the information here is that it's one thing to say I want my students to belong and another thing to really think about what are the specific things that we can do that can really help them develop that sense of belonging. Greet them at the door. That's a really big one. And then what once they're inside the door?

I think we're ready for the next slide, which is the scenario.

ARIS WINGER: We have the scenario. We'll use this as a Padlet as well. Jamyll is a student in your precalculus class or one of your classes, if you're in a different discipline. They're often on the outskirts of discussions and rarely participate or complete assignments. How would we take the next steps?

The link should be coming in the chat. Looks like it's there. I appreciate you.

ABBE HERZIG: And, again, if you hit the little plus sign under the question "what would you es you can enter your thoughts about that and any other thoughts or reflections that you want to contribute to the discussion. Everybody's had at least 100 students that fit that description.

ARIS WINGER: Yes.

ABBE HERZIG: And given the things that we've discussed here today, what are some of the things you can do when you notice this student who seems completely disengaged?

ARIS WINGER: And I'll say, as people are filling this out, I mean, this is part of my transformation as an educator. There's no doubt about that, that my success when I think about my success is tied to these students who are going through this when it used to be how many superstars-- how many, quote, great students do I have? And where did they go? And my success was tied to them.

And over time, as I started to really dig into what it means for me to be of service, it is really tied to what is it that I need to do to be supporting individuals who are going through what Jamyll is going through. It could be, and in part because Jamyll in lots of ways is going through something potentially that doesn't have anything to do with my class.

And so, yes, although I am trying to help Jamyll be successful in this class, there's something about helping Jamyll out in life that is also happening. And so when I read the scenario, even though we made it so content-driven, there's something about helping.

So I think that photo in the slide is helpful because someone has their head down. I'm not thinking about necessarily they're having their head down in my class. They have their head down in life. And what does it look like for us to serve that person in life?

ABBE HERZIG: And I just want to reflect on another issue of transparency, that when Aris and I were working this scenario, we talked about the name that we were giving this student. And we wanted to be careful that it was a name that was ideally not gender-specific, ideally not directly associated with a particular ethnicity one way or another.

If you want students to feel that they belong, we also need to pay attention to all the different identities that we put in front of them and vary them so that students see that

we're not thinking of just one stereotypic individual in all the different scholarship we talk about.

ARIS WINGER: Yeah. Now we're getting some great responses. And lots of them are having a common theme in the left-hand column about what does it look like to have a conversation with Jamyll. And this conversation that we're going to have with Jamyll-- we can also maybe put in the right-hand column what are some elements of this conversation. What will we say has to be said, has to come across in this conversation as we prepare?

For this conversation with Jamyll tomorrow in our office or maybe somewhere else, what are the types of things that we want to get across so that Jamyll starts to turn around, feel like they belong, and start moving? I would set aside time to speak with Jamyll one on one, provide them with resources, maybe share personal stories, struggle, and encourage or offer to go with them to get extra support. I appreciate that.

ABBE HERZIG: There's also the word listen to them instead of making assumptions. I really resonate to that, the ability to just listen. What's going on with you? Is there something I can do to help you?

ARIS WINGER: Yes. But I think that's superbly helpful and absolutely crucial. Like, what does it look like to let Jamyll start the conversation? And that you start by listening and adjust to that, because if you've set up the right space and Jamyll is starting and Jamyll is pouring out, then you get to hear and then use your expertise to figure out what the issue is and the type of support that Jamyll needs.

ABBE HERZIG: And when we think about what we would talk with them about, particularly specific to today's topics of belonging and transparency, some of the things we might want to address in that conversation include the social aspects of what's going on and also the transparency issue of does Jamyll know what's being expected. Do they understand that the way that they're presenting themselves in class is not really consistent with what's going to help them be successful?

So transparency is a part of this as well as belonging. And the issue for Jamyll may be neither of those. It might be something else entirely, but we can be mindful of those as well.

ARIS WINGER: Yeah. And there's a comment under other thoughts or reflections that says, "Somehow I need to ensure that Jamyll understands that I really care." Now, we

only have 30 or 40 minutes today, right? So we can spend-- this is something we talk about in our workshops and professional development for educational institutions a lot.

But there's something there about-- we don't get that for free. And that Jamyll's identity and how Jamyll navigates the world, how we navigate the world, and how we interact with each other impacts whether Jamyll understands that we really care.

But the thing that we do in the short term and the pragmatic term is that after-- so as we envision this conversation, after we let Jamyll-- or maybe even before, there's this notion of prefacing. Like, how is it that we make sure at the beginning that Jamyll understands that this conversation in its entirety is simply to figure out how to support Jamyll and that this is not a conversation we're having to punish, to indict, to point at you and say, you're not doing well?

The point of this conversation is to support Jamyll and what Jamyll needs. Now, I don't mind that. Usually, I try and do that first before I just turn it over to Jamyll and say, take me where you want to take me. What's going on? The first thing is just to make sure in this space, you understand that we're here to support you.

ABBE HERZIG: Right. It's to understand and then to offer help. And I think, given the time, we need to return back to the slides, unfortunately. We could do this all afternoon.

ARIS WINGER: I know, right?

[LAUGHTER]

ABBE HERZIG: So the big takeaway message that we hope you'll all think about is that students need to know where they are and that they are a part of this learning community and where they're expected to go in order for them to achieve excellence in mathematics or in any other field.

And our emails are there at the bottom of the screen. As you heard in our introductions, we co-direct a program called COME-IN, Creating Opportunities in Mathematics for Equity and Inclusion. And we'd be delighted to talk with you more about any of these ideas, which also, of course, apply outside of mathematics, even though that's our home discipline.

Thank you all so much for listening to us. And I think there's an opportunity for people to ask questions. Christine?

CHRISTINE LATULIPPE: Yes. I think we have time for a couple of questions, and we'll see what else populates into the chat. But I have noticed one, and I was curious to know and one of our listeners as well. You gave a lot of examples of transparency and where it could show up in our course elements. So anywhere from the syllabus to explaining how to use that Padlet, as a great example there.

And if we're thinking about taking small steps in our teaching, what area might you advise faculty to begin their work or commit to making their teaching have greater transparency for students? Is there one best place to start perhaps?

ARIS WINGER: For me, it's in the norms. I think we just take norms for granted. And so what are the guidelines that we have in this space that allow everybody to thrive? What are the guidelines that we have in this space that allow everybody to thrive?

And so for you to come in, and you bring six, and then have them think about the other four-- right? And they'll be uncomfortable because so often educational spaces are ones in which there's a dictator. And so they won't even know how to deal with the option to have freedom to pick norms or to contribute to norms.

But early on in the semester, how you decide as a community what the rules of the space are so that everybody thrives is one way to get transparency across that I really, really like.

ABBE HERZIG: Yeah. I agree with that, that setting those norms, I write them in my syllabus. And then we talk about them in class and what they mean. And the other thing that I think is a very easy first step is to review all of your course requirements and make it clear to students why those requirements are there.

We are going to read this book because. I'm going to ask you to write this essay because, or when you write this essay, I'm looking for you to achieve these five things and--

ARIS WINGER: Because.

ABBE HERZIG: Because. Right.

ARIS WINGER: Yes, yes.

ABBE HERZIG: And to just make it clear and start with one assignment. Is it clear to my students what I am looking for in this assignment? And if we're honest with ourselves,

we're often going to find assignments that we're not even clear with ourselves what we're looking for.

ARIS WINGER: Right. Yeah. And I think at the high level, stepping back, my whole life changed once I started for each class to realize here's what I think is the philosophical reason and big idea behind this class.

And that for itself has guided me every time I walk into precalculus, or college algebra, or whatever. It's like, OK, remember this class is about functions. And so now remember we want to do this. We want to do this. And it just guides me. And then they also know. And then at some point I'll say it, and then I'll leave out the last part of it. It's like, what is this class about again? And they say this class is about functions. And it's like, OK, we know why we're here. And even when we get into the weeds of all these details, domains and ranges, I can just always come back and say, remember, this class is about-- and so really giving purpose to the class at every level in lots of ways.

This is what Abbe and I are saying, that when we're talking about transparency, we're giving purpose to every single thing that we're doing.

ABBE HERZIG: And, again, that's a great example, Christine, for your-- start with small steps. Just pick one class activity, and everyone can do this. What day of the week is this? This is Thursday? Pick something that you're doing in your class next week and just examine it before class. Do you really have a clear vision for yourself of why you're doing it? And then make that vision clear to your students.

CHRISTINE LATULIPPE: Wonderful. Thank you both so much for that response, that thoughtful response, and also such a wonderful and enlightening conversation and presentation. I think at this time we are about-- [CHUCKLES] Carole, I don't know if you can, but next week is a fresh start as well, I think.

ARIS WINGER: Well, no. And what I'll say super fast is that, Carol, you can also be transparent and say, I went to this thing last week, and I'm going to try something different because I want to make this space better. And you deserve that.

CHRISTINE LATULIPPE: Absolutely. What a great way to show your students you care enough to be thinking about them, even when you're not sitting in class with them.

ARIS WINGER: Yes, that's right. Thank you.

CHRISTINE LATULIPPE: So I would like to encourage you to visit the Transform Learning website and consider submitting an example of your own teaching practices that

illustrate one or more of the eight evidence-based teaching practices that we've discussed today.

We also invite you to join our community of practice, which will focus on digitally enabled teaching and learning practices in gateway courses in college mathematics. I'm going to turn things back over to Norma now. Thank you again, Dr. Winger and Dr. Herzig.

NORMA HOLLEBEKE: Thank you, all three of you, very much for moderating, Christine, and for Dr. Herzig and Dr. Winger for such wonderful advice to our audience. We do encourage you all to join that community of practice. Our next Transform Learning webinar will be on May 8 and will feature Dr. Jennifer Reed in conversation with Dr. Heidi Echols and with Dr. Latulippe about active learning and peer collaboration. So two more of the evidence-based teaching practices.

You can register for the link that is being-- you can register for that webinar with the link that's being put in the chat. For our audience, we do ask you to take just a couple of minutes out of your time right now and complete today's survey for the webinar using the link.

If you have something else going on right away, don't worry. We will send you the survey in a follow-through email within the next couple of days. With that said, thank you to our speakers. Thank you to our audience. And we look forward to engaging with you all over the next several months.

Thank you all again.

ABBE HERZIG: Happy teaching.

ARIS WINGER: Thank you.