Diversity and Making: A Podcast and Video Series
A Collaboration of Purdue Libraries and School of Information Studies and
Purdue Asian American and Asian Resource and Cultural Center (AAARCC)

Episode 1: Making as Self Reflection (Release Date: September 30, 2020)

AH: Avneet Hira
SH: Sarah Huber
PS: Pam Sari

AH: Think about: What is it that you can be creating in this world that can make life better?

Intro Music.

PS: Hello, everyone. Welcome to the inaugural episode of Diversity and Making: A Podcast and Video Series. Diversity and Making is a collaboration between Purdue Asian American and Asian Resource and Cultural Center, otherwise known as the AAARCC, and Purdue Libraries and School of Information Studies. I'm Pam Sari, Director of the AAARCC.

SH: And I am Assistant Professor Sarah Huber, and I run the Mobile Making Programming for the Libraries.

PS: In this program, we will engage the diversity of the maker communities through conversations with our guest speakers and making projects for our Purdue community. Our guest today is Dr. Avneet Hira, a Purdue alumni. We say here that once a Boilermaker, always a Boilermaker, so we are really excited for this opportunity to speak with our Boilermaker alumni. Dr. Hira received her Master of Science in Aerospace Engineering and a Ph.D. in Engineering Education, both from Purdue University. Her Ph.D. dissertation was titled "Makerspaces for Education." Currently, she is a research scientist at the Scheller Teacher Education Program at MIT. Thank you for joining us today, Dr. Hira.

AH: Yeah, I'm really excited to be here.

PS: So actually today we would like to start with your story of making. How did you find your path into making and from this path, how would you define making, makers, and also makerspaces?

AH: So let's see. I think maybe it makes sense to go backward from where I am currently. So I'm currently, um… I'm currently, as you mentioned, I'm a research scientist of the Scheller Teacher Education Program and the Education Arcade at MIT. Um, and I work on a project that brings project-based learning to a network of high schools across the United States. To me, project-based learning is one of those teaching and learning enactments of making. Of course, project-based learning is more than just making as you know, PBL people would like to say, but that's one of the reasons I've been interested in PBL. Before that, as you mentioned, I was at Purdue getting my PhD. For about a year and a half, I was at a software company called MathWorks and before Purdue, I got my Bachelor's in Aerospace Engineering from Punjab Engineering College in India.

And I think all of those pieces together kind of define my maker journey up until what I'm doing currently, because when I started off as an aerospace engineer from an undergraduate institution, maybe the big reason that I picked to be an aerospace engineer is because I thought space was cool and I liked building things. Um, and I guess, I suppose I was lucky enough to have good enough grades in math and science to get into that college. Interestingly, just kind of talking about my maker journey and having female idols to look up, perhaps. One of the two Indian astronauts actually went to my undergraduate college, Kalpana Chawla, and we lost her in the Columbia disaster. And that was around the time I was in middle school. And I thought that was... I thought it was just cool, whatever she did. I wanted to go into that college, do aerospace engineering, and when I landed up there, I realized that everything that I was learning in the classes was just so theoretical and it was not what I thought engineering was going to be like, which I know is a sentiment that's echoed by a lot of new engineering students. And that's when I started thinking about what

could I be doing that would still make me feel like an engineer, keep me excited about doing engineering.

And I started building remote controlled airplane models. So we set up a lab along with some of my friends. Now that I think of it, I think other than one person in that lab, uh, Desmond and one else identified as male. And I remember in our back in the day, in India, at least dorms have something called an in-time. That means there's a certain time of the night by what you're supposed to come back. Cause otherwise it's unsafe for you to be out at night. And I remember working with the administrators of the dormitories to make sure that I could have an extended in-time because I wasn't out partying after 8:00 PM, but I was building remote-controlled airplanes in this lab. So that's kind of like one of my fun maker memories from my undergraduate institution.

And I always say, I probably spent more time making those RC airplanes, then there on blimps and worked on some morphing airplane wing type things, than really in the classroom. And that helped me identify as a maker and as an engineer, because once you're making things and they're out there, no one can question whether you're actually good at a certain thing or not, because it's right there. There's a physical artifact right in front of you. You know, there's no question on whether, Oh, maybe just, you know, the question paper for this exam was hard. That's why I didn't quite get it. Like if you'd get it, you can build it. If you don't get it, it won't work. And that will give you instant feedback that you need to get it better because this isn't flying.

I didn't know that the maker movement was a thing back then- I'm talking about 2009 to 2012 at this point. And then I came to Purdue because I wanted to study Unsteady Aerodynamics deeper. And when I was working at Purdue. I met my PhD advisor, Morgan Hynes, who was setting up a lab at Purdue. He had just started as an assistant professor at that point and he wanted to set up something that he called a maker space. I was like, that sounds kind of cool. It sounds like what I want to do, but what is a maker space? I looked it up and I was like, Oh, these are... it's like all the fabrication labs that I spent so much time in in undergrad, but now we just kind of get to *do* this. And then I spent time with his lab for about a semester, I just worked with him, and then I applied to the Ph.D. program in Engineering Education. And I think it was those four to five years at Purdue that really helped me engage with what making means to me, ask questions around it, and at the same time, introduce making to other people.

 I think we did a lot of great work just at Purdue, because I think Boilermakers would be listening to this. I remember we worked with, uh, PALS, which is the Purdue Athletic Life Success program, which is kind of neat because there were kids who had come in to play sports and in the middle of the afternoon, they would kind of engage with us while they

made things with the 3D printers and other things. And we worked with the Minorities in Engineering program quite a bit, amongst other things. So that was kind of my... And then I, you know, my dissertation was a look at maker spaces as well, which led me to MathWorks, which is interesting because I mean, I think as, as perhaps, you know, a scholar, something that's important is for you to critique your own work and see what's missing. And one of the things that I thought that was missing in the way I was thinking of making and perhaps some other people as well, is that it could often get confused with something that's only crafty. And I think for it to be engineering… for it to be engineering as well, there needs to be some knowledge of physical systems, mathematical modeling, thinking about how that could be used for science or engineering. And that's where I decided to kind of take up the job at MathWorks, because MathWorks was making industry ready tools that students use in open-ended project based settings, including makerspaces.

So yeah, that's kind of my journey and I guess I'll kind of quickly synthesize it. Like to me, someone who's a maker needs to identify as a maker. So I think that's one of the things which is, which is important. I think, I think self identify - there's a lot of thought pieces, articles out there, which, you know, kind of talk about the problem with making. And I agree with a lot of them of this kind of somewhat cultist culture that makerspaces often have or makers often have. And so I think that one, everyone should get their own - should get a chance to define their own maker identity. So my maker identity is often surrounded around why I'm building something or the people I'm building it for, but that doesn't have to be other people's identities. I know people who call themselves makers because they just love playing with certain types of material and seeing what that material could, the kinds of emotions play with that material can evoke in other people. So that's important.

I think it's important for people to get to define their own maker identity and people are makers if they identify to say they're makers themselves. If people don't necessarily, you know, people are more- are happier, more comfortable saying that the people who do craft, they're artists, that's - they're all related, but I think it's extremely important as opposed to trying to put people in a box. I think that's one of the things that, again, research oftentimes I think is that tension with making, because makers want to be out of the box and do all kinds of cool things. And as researchers we're often trying to put things in theoretical frameworks. And so that's kind of like a tension that I often walk as well. I'll stop.

SH: To me, it's like, there's a spark of possibility and it gets people in this space of anything's possible. And I can try these things out. Pam and I are working on this podcast because we don't want it to feel exclusive. We want anyone to experience that feeling of: I want to try something out and I want to prove it works. Like, this is my space where I can just experiment. And that leads me to this next question. I was reading over your

dissertation that you did while at Purdue. And you talk about how the maker environment carries over similar practices of design from engineering, but there's this opportunity for reflective practice. This is a quote from you, "reflective practice and identity formation in the context of educational makerspaces." Can you tell us more about that?

AH: Yeah, thanks Sarah. So I think it kind of comes down to what we were talking about earlier that making is - making is more of a personal or communal act, as opposed to in, in my understanding, um, as opposed to engineering or technology where, you know, one has to be meeting certain standards or solving certain things in certain ways. And so I think because it is, so to me, the knowledge in making is that it is so personal and people can engage with it in impersonal ways. So even if you look at different examples, like as watching reruns of the Making It show, the one with, uh, Amy Poehler and they offer them, uh, and, uh, they had the same prompts but people make different things. And the reason people make different things is because making is personal to them. And, you know, like if you give each one of us, the three of us the same prompt, I'm sure we will make very different things. And when you, to me, it's so it's difficult, but it's only important to not lose that when we bring that into a formal education setting. Because that, that to me is what makes it, I'll say it again, because it's so important to me, it makes it so different from engineering or technology. And so now that we have brought it into a formal setting, something that's extremely important in formal settings is assessment. And by that I don't necessarily mean kind of traditional forms of assessment. Like I think there are new fun ways that, you know, assessment is done these days or at least there's research for it.

So I think that if one can assess things, if there's a way to assess notes or in a way put in a portfolio, things that are actually personally interesting to the individual. So the assessment also needs to be personally meaningful, I guess that that's kind of, if I have to put it in a statement that that's what I would say. And so I take an example of a course that I was, I taught at Purdue for a semester- it was Introduction to Engineering Practice. And, uh, one of the things that we were just, it was a learning community course. And one of the things we were discussing, I remember at one of those like lunch tables, was what every, when there's the Industrial Roundtable, all of you in four or five years will have the same degree from Purdue. But what is it that's going to make you different when you walk up to a future employer, to someone who you really want to work with? Or other similar settings, when you graduate, what, what are you going to say beyond you have a degree from Purdue, which is great, right? Like, as someone who has two degrees from Purdue, people really enjoy knowing that about you. They look at you in a different light, which is great, but, but what beyond that, and I think that's where this identity and reflection piece can, can help and comes in because it's recording history, recording your thought process, more personal, which, which is important.

SH: Yeah. I think, you know, speaking to what you said about the roundtable, when that question gets asked of you, we want for our students to answer that from a genuine place of self discovery, right. It can become a pressure, but we want it to be, I explored these different things. And so what I'm expressing is unique to me, and that's what I love about makerspaces. We see all these kids coming from K through 12 or our different schools, we're possibly - there's a real process, a real linear process to learning and teaching to the test. You come here and it's like, okay, be innovative, be creative! Uh, okay. You know, the pressure is kind of intense and I love makerspaces for that. Come here, play, tinker with your community, by yourself - and start learning about that. How to answer that question. What makes me unique?

AH: I absolutely agree with that. I think it's really, it can become really daunting, especially, you know, when you're at school or in a community of people who are really smart, make really cool things. And you're like, how do I become innovative? These words kind of get thrown around, right. How to become innovative. How do I become entrepreneurial? Like to me that the truth comes in creating right? And creating in this way, I'm using perhaps anonymous with making, like you would only be, you can be truly innovative, but not by meditating on the word innovation, but by creating.

SH: I totally agree. Totally agree.

PS: So in your statement earlier, you brought in IR and also I read in your dissertation that you spoke with people who are both engineers and makers. So there is an overlap between the two. How is making valid? And what does making versus theory bring to engineering?

AH: Yeah. Thanks. Thanks for that question. So I think, so I think there's a lot of overlap, but there are also things that are very, uh, unique to engineering and making, right. So I think the overlap is in engineering or even in, you know, in design or the engineering design process in particular, we talk about this time of, um, emergent thinking or divergent thinking, and then we'll converge later. And that's the time when you're, you know, making sure that you're considering all the possibilities, playing with the different pieces of information that you have, being curious, trying to try to come up with new things. And that is similar to making. Of course, I think in engineering or any kind of a professional practice, you then need to go on and need to make sure that you ascribe to professional standards, code of ethics. They are people that you're working with, every organization kind of has their own goals and aims and, you know, ways of being, and other things like safety, resilience. There's so many things that one needs to consider in engineering. Things that perhaps are not as necessary or needed unless the maker deems so to be considered in making. So I think that, that in that initial, or sometimes I guess if you're going in cycles, it will come back to like when you're, when you're thinking in more open-ended ways,

making comes in. So, and I think when there are fewer risks in, and that's when one can think about, about making and those overlaps, and one of the things that I will often quote from one of the participants of the research that I did at Purdue, and this person is a professional designer, but also identified as a maker. And she shared with me that, you know, to me, the designer is the person who has to get up every morning and go to work. This is before pandemic. So she was still going to work. I hope she's working on her laptop now. Um, and, but she still has to at least put on a nice shirt, even if she's in shorts or something and to sit in front of a computer and do her work. But the maker, she said, I mean, I hope I'm quoting her the right way. The maker, she said is like the little kid who go to her mother and say, could I have, you know, a few extra bucks to like go buy something to like, make something for myself. And so I think the risk, right, I think the risk and the responsibility, I'm not trying to imply that making can be irresponsible, but I think that you owe responsibilities to different people and in making you mostly owe it only to yourself, unless you've decided to make with other people and for other people.

PS: And also, it's fun. I mean the idea that it's fun and versus a work, is more responsibility, more, you have to concentrate and thus, you know, work can be fun, but if you, if you compare work and play, I would definitely go to the idea of a play. So how would you, how would you, can you comment on the idea of work versus play?

AH: You know, it's a difficult question to answer for me, cause I actually - but I'm glad you asked it. 'Cause I like, as someone who, so very honestly, that day I defended my dissertation at Purdue, I told everyone close to me that I did not want to hear the word 'makerspaces' for six months. 'Cause I was just so done writing that word and talking about it and defending it and not because I had anything and I wanted to like, perhaps keep creating things on the side. Like I was probably doing laying there. Like I'll, I'll make things that, that I don't even realize that I'm actually making per se, but I guess it's just who I am, but I did not want to, because I was moving to Massachusetts and I remember my friends were like, "Oh, you know, the Boston area is so great for makerspaces. That's where Artisan's Asylum is." I was like, I don't think I'm going to walk into a maker space for a minimum six months. 'Cause I just, I just couldn't then for me, I think that's, that had reached a place where the boundary between work and play had been completely blurred and, you know, let alone, I mean, if you try to, if you write a PhD dissertation on anything, you probably want to break from it at least for a few months and then you can get back into it. But I mean, I'm not saying that I was done with it. I think after six months I was happy, engaging with the word Makerspace and what not. I also started making myself- we actually got a 3D printer for our home. That's how much we missed making, not having access to the lab that I did in Purdue the way I had back in the day. Um, so I think, I think those, those boundaries are for, for people to make themselves. And I don't think one thing that works for someone will look for another person.

So I'll talk about a friend of mine who went to design school and you know, and he perhaps had a great job. He's like an engineer by training then went to design school and um, he had a great job and he just kind of quit everything. 'Cause he was like, I don't want to think of the thing that makes me money as a job. I want to keep making and if that helps me make money, that's great. Otherwise I'll find something else which doesn't suck up eight to nine hours a day. 'Cause so, so he said, the person I'm talking about in this case doesn't want to make that distinction. He wants to, he wants to keep making and he wants to let that, you know, feed him. He wants that to pay the bills. I feel if I end up, you know, and that's just how you are as people. Like, I feel like if I, if all day I'm just, "just making," I kind of - I'm doing air quotes here for people who are listening - I would at some point be like, what did I, what did I do to like pay the bills or feed my cat? That really is my only responsibility as of now in life. Like I want to make sure that there's food on the table for my cat, but I think that's a very, it's a very personal thing. And one needs to figure out what is, what works for them. But at the same time, like warning for people, and this happens all the time and you hear it with people who started their own enterprises as well, right. There's something that you're so passionate about. And then you like kind of get into the nitty gritty, especially from a research perspective, you start theorizing things and you kind of sometimes forget where it was coming from. I actually have biweekly reminders on my phone that, remind me, why were you doing this in the first place that take me back to like the larger purpose to like find I use the adjectives of space and warmth, like find the place of space and warmth. And once I find the place of space and warmth in here, um, and that's kind of how I like to think about why I do what I do professionally, but when I'm in it, I might not feel like I'm playing all the time, but that's, but that's good for me. 'Cause I need to feel like I'm working.

SH: Say that again? Find the space of what?

AH: Find a place of space and warmth. So I think I can pull up my phone, but the reminder says something like, remember the bigger purpose, like, remember why you got into this in the first place, especially these days. Like it's so easy to get bogged down. And so I was just talking yesterday with a friend. I was like, I know people often complain about their jobs, but I actually kind of like my job. And is it okay that I really liked my job? Because I'm able to like go back to think about, I introduce a lot of kids to making, which I find extremely exciting. I work with teachers who introduce their students to making, open-ended thinking like all of those things that are really exciting to me. Those are the work things. When I'm playing on my own on the side, that's different, but related.

SH: You make a good point. Some people like the distinction, keep it separate. That feeds them in a certain way, but you are someone that's worked it into your job. So I was just wondering if, you know, students are enjoying making, you know, they could be

engineering students, they could be dance students, you know, any, anywhere on campus, do you have recommendations for steps they can take towards moving that into their professional life, moving Making into their professional life? Maybe not the whole thing, but parts or any advice?

AH: So I think one of the things that I found helpful, I wish I could do more of is, uh, while you're in college at Purdue, whenever you have an opportunity - make. Like, make more. It's one of those things that you can't, you can't think you can't just keep thinking and then not make it. Then you're thinking, which is great in its own way. Like lots of people have great jobs because they think really well. And that's great. But if we're talking about, you know, people who are creating artifacts, physical or virtual or anywhere, I think it's important to kind of throw yourself in there. Like, you know, just walk into a place where you have the tools to make and make, um, whether those, you know, if you're a painter, you're probably your tools would look different from someone who is say doing woodworking, but make sure you put yourself in there often enough. So that's one of the things that I would say.

The other thing that I would say is become familiar with others around you. Um, whether they're physically in the same location or otherwise virtually who are also making, because I think community, well, it would be an understatement if I said, if I say I find community really helpful, it encourages - to me, it always boils down to a community. Having like these people whom I'm talking about they're, the two people who have already spoken about they live in different continents right now, but I know of their maker journeys. Someone else I know, she works with people who have had a history of addiction, and now she helps them make things with their hands to kind of make them feel more resilient and build up their self esteem. Right. And, and I think these are things that I wouldn't have thought of myself, but they're just such great things to know. And they've made you feel so good inside, like going back to that space and warmth, seeing how your making can improve someone else's life and I think that's important. I think that's important genuinely these days to feel good, feel like, especially cause it physically away from a lot of the people that we love and care for. Are there things that you can, other things that you can make to make other people's lives better? Think about what is it that you can be creating in this world that can make life better, or at least can bring in some form of entertainment. You know, some amount of flow like when we're engaging with something, with all our consciousness, we always, we end up not thinking about things that are worrying us. So maybe think about things that can engage you in that feeling of flow.

SH: Brings some joy.

PS: Yes.

SH: Bring some heart. Enjoy engagement. We need it now.

AH: So the other thing I would recommend in addition to showing yourself in there making is become familiar with other people's work. Kind of the corporate tone of this would be like, make those connections, make that network. But I like to think about it as a community, right? Make sure you have that community that can inspire you and you know, people that you can fall back on. Like I have, I also write poetry and I have some friends, whom I started to reach out to recently and I was talking about how I just haven't been able to write in the lockdown. 'Cause it's just so hard to put words to paper, but I have this community to talk with about that. And the last thing I'd say is that: know where your making can overlap with your professional aspiration and where it doesn't and it's okay. It's okay if all of it doesn't overlap, but there are places that it would most certainly overlap and know where those places are and kind of enjoy them for what they are. I think that that's another, like, for example, for me, like when I'm doing, when I'm making research designs, when I'm thinking about new interventions in the classroom or other informal settings, those are the important, like exciting parts where there's overlap. 'Cause I'm creating something new and I'm imagining what's new. I don't think there's anything necessarily creative about, you know, sitting down and making video recordings or doing data collection. Right. Which has its own - like as a researcher, I enjoy that, but that's not an overlap, but it's - they feed each other, right. So, so that.

PS: Can you tell us what you see makers doing in the time of pandemic, where we have to be physically distanced, right, from each other and cannot be in the same physical makerspaces?

AH: Yeah. That's yeah. That's a good question. I think one way of looking at it and I was playing with this idea a little bit, is that more people I think are making than ever before, because they're all making our masks. We're all making, we're all finding. Or most of us are making, shouldn't make that statement, but most, a lot of people are making their own masks or at least thinking about where they could be sourcing their masks from. People are coming up with ingenious ways of just opening doors and how to meet people and how to like, even if you're meeting friends in the park, how do you make sure that food gets to everyone without, you know, you're getting germs on it and things like that. So, so I think in, in such times, like in these like really hard times when possible, people's creativity, we might not think of it as creativity 'cause a way to think of it would be there's no other option, but I think one way, the other way of thinking about the same act might be that this is our inherent creativity, resilience, resourcefulness as individuals is coming out. So there's this idea. In Hindi there's a word called *juggaar* (or *jugaad)* and I know that it has a similar… um, there are similar words in at least, uh, Portuguese and say Mandarin. I mean,

I'll stop naming, but I think I am aware of the fact that other than English, there are other languages that have similar words like *juggaar*, which basically means the resourcefulness and making do with whatever you have and coming up with a solution really quickly in this crappy way, but like coming up with something that that's needed in that moment. And I think this has kind of these times are kind of, you know, like really I'm being careful to like say the word, like opportunity with these times are anything but opportune, but that's what these times have called for. Right. So people are making things on their own. I think mask making, like we would often talk about democratization of making as one of the things that in the making community people would talk about. And I think the way mask making has democratized making - nothing else has at least like, you know, in my memory. One, something else that I might say is, and it's something that I've thought about myself as well as if you are to make order to enjoy making things, how can you make your making relevant in these times? Is there something that you could be making? Is there something that you could be designing that could be helpful for other people? I know of friends whose families have stitched masks for them and kind of, you know, send them around. And I know there's some pretty interesting, uh, robotic state things that people have done around delivering medicines and food for people. And the other thing which honestly has been most helpful for my own mental health in this lockdown is the creative people who are making amazing internet content, I don't know, I don't know if others would... maybe some people listening to this podcast resonate with it. Like there's amazing internet content all the way from comics to videos, to just really interesting and fun written articles that are making quarantine life, lock down life a little more bearable. And it has made me, it has made me respect the arts and creators in a completely different way and just the absolute necessity for the world to, you know, be nicer and, you know, pay for that next thing, which you could otherwise get for free, especially when a creator has made it. I think it's important to be safe while making, you know, like oftentimes makerspaces they'll have manuals around safety and you know, you have safety glasses and gloves and things like that. And if you're trying to make things at home, make sure you're only making things that are safe to be made at home. Make sure you're only making things that your parents or landlords are okay with you making at home. Make sure you don't get the fuse out at, in your building and things like that. And, I think I already kind of alluded to this, is the last thing that I'd say is that it is so important more than ever before to support other maker's work. So if you're, if you're buying something, look at, is there someone locally who's making something or even get on something like Etsy or some of these other places like people are making things with... One of the teachers that I work with in my project at MIT, he makes things in his garage and he has been making more these days that he's, he has been sending them out and people that he's in Tennessee kind of lives in the foothills. The Appalachian is very proud of that, but like he makes some really interesting things of the things that he finds and just, I think the joy that that means for him, but also for someone who receives it, it's wonderful. You're supporting an individual person you're supporting

their craft. They feel better. And so maybe if you do have resources to spend, maybe try spending them on, things made by individuals as opposed to things that have been mass produced.

SH: We're curious what you think about what the future of making is personally. I could, it's fine with me if it takes another name, if it keeps morphing into a new space. Um, so, I'm curious what you think in your articles and writing and work. You focus on assessment and making and integrating making into curriculum. Some might say it's a passing fad. What do you think?

AH: The name could change. Actually, I'd be pretty certain the name will change. I don't…., but I'm not too concerned about it. As long as we don't write off all the work that has been done while we call it making, and then we decide to call it something else in a couple of years and then forget that someone had already done work in this space. So I think what we call - like making, in itself, has roots - purely from an engineering perspective - it has roots in fabrication labs, you know, otherwise it has in arts, it has roots of the studio spaces. Um, and they would call it different things 10, 15 years, you know, before the current time. And they would probably be called something else in the future. But I think that the ideas and the values that are underlying, are evergreen and by those ideas, I mean the experience of creating something new, learning things by making mistakes, seeing personal meaning in physical or virtual artifacts that you were creating, this is a thing that I made. Like the feeling of saying that I made a thing is just a really special feeling. And there's plenty of research frameworks that support why that feels so good as well. But the point is that whether we call it making or creating or fabricating it, that at some point becomes immaterial. I think the underlying values are important and those are here to stay because I think that they have battled and overlapped with what is inherent to the human spirit. I think human beings will always make new things. Like we made fire at one point and so we will keep making things and I'm sure we're going to make other really cool, I dunno, moon colonies in the future, but we're going to keep creating things like, it's just so close to how we identify ourselves as, as human beings. And so you can call it something else. It doesn't, it doesn't matter to matter to me too much. I think the, I think the assessment in a more and more, I think we're kind of going towards more individualized assessment models and, you know, the more we go away from at least add in more standardized assessment models, add things that are more individual that speak for individual students, um, speak to individual learners, that in itself is enough. Cause makers are gonna make, whether you decide to give them, they makers are making. And that's when education researchers are like, Oh, this is kind of cool. And this is educationally interesting. Let's see what they're doing. Like there was no one, no one made a research study to help them start making. They've always been making. And I think they'll keep making.

SH: Well, thank you listeners for tuning into our inaugural episode of Diversity and Making: A Podcast and Video series with Dr. Avneet Hira. Thank you for joining us. This has been very interesting. It's been great to hear about your journey as a woman in making, talking about the reflective practice of making. What makes making unique, how we can use it to help others. We have a project designed by Avneet. We want you to check out and try and meet. Avneet, can you say a little something about it?

AH: Um, yeah, sure. So, um, so when I was thinking about what, what could be something that Boilermakers could make in these times, as we say. I w as thinking about how we are often around other people, but switching contexts, just because of what we're seeing on our computer screen. So you could be going from class, you're playing a video game to, you know, chatting with a friend or family all by looking at the same computer screen. And you could also be going through different moods and emotions throughout the day, throughout the week. And I thought it would be kind of cool if people could make some sort of a physical avatar along with a mood or emotion that represents how they're feeling currently. I was inspired by an exercise in mindfulness actually to come up with this, which is, we will often say if you're checking in with someone, whether it's a call at work or otherwise, maybe ask them how the weather has been, how the weather has been in their minds lately. So it's kind of, it's kind of sunny in the morning. Then it kind of got overcast late in the afternoon, and now they're now, they're in thunderstorms or something, something like that. So I was trying to put those kind of ideas together, but at the same time, find a way to communicate with others, how you're doing in shared spaces. So that's what the project is based on.

SH: Thank you. Below the podcast on our webpage is a how to video and directions to, to prompt you to do this project. We also have 25 kits with materials available to make the project. You can pick up a kit at the AAARCC. It is open Monday through Friday, eight to four, give it a shot. It's an opportunity to play and tinker with an idea in the comfort of your own home. Then we want to see what you made. Submit an image of what you made on our podcast website. At the top of the page, there's a link to submit. We'll be dropping another pod in October, so please keep your eye out on our website and social media. We'll be talking with Kristina Mok from Makers Making Change about makers making assistive devices. Until next time. Thank you, Avneet. We greatly appreciate this conversation with you. Keep on making!

PS: And Boiler up!