Podcast Transcript

Assessment Reimagine: Teaching, Learning & Assessment in the age of AI

Host: Zaaid Orrie

Zaaid:

Thank you so much for coming. Welcome to this vodcast. I'm really, really excited to have this conversation. AI or 'A one,' as some people mentioned, have been calling it, is part of our daily lives. ChatGPT arrived 2022, I think, now we're struggling as a university to come to grips with its existence.
Yeah. So, what does this mean for teaching and learning? So, this podcast is to discuss that, and yeah. I have two great guests with me, Sukaina, who is the Director of CILT at UCT and, Professor Francois, who is a contributor to UCT's revised assessment policy. Thank you very much for joining me in this discussion.

Sukaina:

Thank you. It's good to be here.

Zaaid:

Great, awesome. Francois, I'm just going to start off with you. So, when I was younger, when I was in school, our biggest concern in terms of academic integrity was maybe me writing notes in my hand or copy and pasting directly from the textbook, but now we have AI that can generate a full essay, right? How do you define now, academic integrity in this day and age,

Francois:

I think it's a much more complicated thing to define than in the past. In some ways, it's very similar. It's about a set of standards that you uphold, a set of values that you ascribe to in an academic space, and what those values mean. But the advent of AI has just made it so much more difficult to circumscribe, I guess the what, what integrity means, because there are so many other ways that work can be generated, and that is not necessarily your own work. So, integrity in the age of AI is still about academic values. It's still about what you are able to profess as your own work, but it's just much more complicated in terms of circumscribing exactly how we get there and what that means to. to students.

Zaaid:

Yeah, no, as I mentioned before, it's just not part of our daily lives, right? So how, how are we able to integrate this now into our studies? Sukaina, because we have to find that balance between academic

integrity, right? But we also want to enable our students to be able to use AI in their lives and after, after graduation.

Sukaina:
Thanks, Zaaid. I think there's a number of ways you can consider this, if I zoom out of just the AI conversation and say that broadly education, and higher education in particular, has had waves of change or we might call disruptions. So, the internet, Wikipedia, social media, even the calculator, those kinds of technologies have emerged, been accepted societally, as you say, become part of our daily practice. And by and large, higher education has had to adapt, sometimes kicking and screaming, with varying levels of enthusiasm.

But I think we should, first of all, acknowledge the resilience of the higher education system and of universities and that we have very smart students and very smart educators, and we are working it out in terms of how to respond. So, I think that maybe that's just to try and give a bit more of a measured response to some of the panic driven modes of conversation that I often hear. Having said that, I think that it's undoubtedly the case that, as you said, at 2022 the emergence of ChatGPT, in particular, as a specific, specific form of AI and AI is not new. It's been around, you know, for 50 odd years, and specifically, different forms of AI have been used in higher education and all sorts of applications such as online tutoring and analytics and so on.

But there's something that made ChatGPT very accessible. It was the first time that an AI tool was really in the hands of staff and students, and all they had to do was effectively converse with it. First of all, by typing into it like a dialogic but now you can speak into an AI or and all sorts. And so, I think that's been the shift, and how we cope and adapt to it is really, I think, looking at more carefully in the first instance to really see, well, what is, what is the most important? What are the most important things to give attention so we mentioned academic integrity has continues to be a concern, given that many of our traditional assessments can now be completed at least to a passable level by a generative AI. But then on the other side, as you said, to see how we're going to integrate the presence of these types of tools and technologies and what they enable us to do into our curricula, into our teaching and learning practice.

So, it's, we'll be teaching with AI, will be teaching about AI, will be teaching for AI. Maybe, I don't know. AI is the presence, so I think it's, it's it's, it's both.

You know, change is inevitable. Change comes. AI is one of the latest in a line of, of technologies and tools. But also, it is, I think in some ways, we're beginning to understand what a fundamental shift it might mean to some of the very essential aspects of like, what is a university, even in an age of AI? And that seems a dramatic situation, but we, we should be asking, what is a university at any age at any point in time, given that is what a university is about, asking questions.

Zaaid:
For sure. No, I mean universities and learning changes across time worth again, that attached to different technologies and also cultural this cultural changes, and I feel the generative AI and the new AI tools, it's shifting our culture in a certain direction, whether good or bad.
So yes, from a university perspective, Francois, UCT revised this assessment policy to sort of keep up with this new technology. But this new technology is advancing so fast. How do we keep these policies relevant during all this change?

Francois:
So, I think, one of the interesting things over the last while has been the policy was actually revised just prior to the advent of AI, so it was accepted by Senate and AI soon exploded onto the scene. But what has become apparent over the over the last year or two is that the principles in the policy, I think, cover us for all dimensions of how AI can affect assessment. It's just that those principles need to be applied in ways that are specific to AI, but as of yet, we haven't, we haven't found the need to develop any new principles that are specific to AI.

So I think that that is a positive for the for the assessment policy, that I do think it's still as valid as it was pre AI, and it does give us guidance in the age of AI, but the specific practices, once you get down to the nitty gritty of an assessment, in a course, in a faculty, how you actually apply those principles becomes the important thing, because there are differences, vast differences in assessment practice across different areas of the university. And perhaps that's why the policy is so adaptable, because it had to be written to be able to cover all eventualities across all of the different faculties, all of the different courses.

So the interesting thing, as I say, is that I think that the principles of policy are still really good and cover us for dealing with AI, but it doesn't make it any easier to you know, for a lecturer who's got a class of 400 who used to have a take home exam, who can no longer do that, or can't do that in the way that they did before.

Zaaid:
Yeah, I think, I mean, I think brought up really valid point, also, the fact that every faculty and department also views AI differently. Some, maybe some don't want to use it at all, whereas quite a few of them want to integrate it into their practices.
So, I think that is really important note that these assessment policies are still open, right? So, bias and access, I think, came up during the policy discussion. So how is UCT sort of approaching fairness and equity in the face of this potentially bias AI tools?

Francois:
Yeah, so, I mean, that's that is, that is a really tricky, I think there's two dimensions to that. So, the one is equity issues and fairness issues around access to the different tools. Because the reality is equally, in as much as during the COVID pandemic, we had vast disparities and access of students to technology to the internet. So, we have the same now, where some students are able to buy paid versions of different generative AI tools, whereas other students have to rely on the free versions of those same tools. And there are differences in the performance so different students depending on what they have access to are able to do more and more things in more sophisticated ways than students who don't have access to such a variety of tools.

In terms of the bias, that's baked into these tools, that is a bigger problem. And that is an issue that really comes down to, I think, the idea of critical AI literacies, where students need to understand that there are these biases baked into the tools, and we need to be able to help students to go through, whether we whether we need some sort of self, self-paced course that the students can do, whether it needs to be something in every course in university, but where students are, get to use AI in a way that just exposes the biases that are there. Getting rid of those biases, I don't think is going to be a short-term exercise again, yeah.

Sukaina:
I mean, if I can add? So, the teachers and educators also need to be aware of how these large language models, which is the technology underlying chat, GPT and other generative AI, how where the data has come from, and although it's not completely clear, we know that most of the data is based on what has been published in the Global North or on the Internet, predominantly in the English language. So, that has a particular inherent bias to particular hegemonic perspectives, I suppose. And there's less representation for indigenous or African or global south perspectives in that data, it doesn't mean it isn't there, but the balance of probability. So, you're talking about that. So, as well as awareness of that sort of outputs, you might get skewed towards those. So, you know, if you put in something into a generative AI, such as, give me a picture of a professor, you're likely to get a white male from the global north, just because that is what the data has often said. But you might prompt and say, you know, give me, give me a range of professors from different backgrounds, and then you'll get that. So, a lot of it is in understanding how these models work and how you prompt them, while understanding, understanding where the biases are.

And I think that comes through the critical AI literacy. So, that is training and also, but it's not critical AI literacy in itself, is actually almost like critical thinking. So, like that is what a university education should be doing anyway. Whatever discipline you are in is to not accept things at face value. We have talked about that, about how to use the internet, with social media as well. So, it is also in in how robust our strategies have been in terms of supporting our students as, as thinkers, as knowledge creators, as knowledge makers, rather than students who are rope learners.

I think it fundamentally comes down to actually good sound educational and assessment practice in how we respond to AI, I think that's what you were alluding to in terms of the relevance of the assessment policy. It's still about sound assessment practice.

Zaaid:
And for me, I mean, I think a key point for me is always critical thinking. My biggest concern is, again, my math is not that great, you know, but I've been using a calculator. And I know my mom always used to say, you know, before we had calculators, we still work out things ourselves. So, her brain is a mathematical brain. So, I, one of my concepts of thoughts is, how do you find that balance of, again, sort of embracing or

enabling the students to use this technology, but without losing their critical thinking or encouraging that encouraging Critical Thinking in your studies?

Francois:
So, I think this is one of the big challenges with generative AI is and we've been having this conversation. So, in the project that Sukaina is leading on AI and assessment, we've been having conversations around how we respond in assessment terms to generative AI. And one of the, one of the, the ideas that we're working with at the moment is that, although so let's take critical thinking, for example, you, you would want a student to be able to read a range of sources, to synthesize the ideas, to be able to critique the ideas, and not just take them, as Sukaina was saying, at face value. But the reality is that no students, I don't think, in this day and age is going to take 10 papers, read them, synthesize them and come to tutorial with the, with the output of that process.

If they can put those 10 papers into a generative AI and get that synthesis, and these days a critical synthesis, of those papers. Does that mean that critical thinking is no longer important? Absolutely not. But I think what it does mean is that our route to getting students to critical thinking, or to whichever outcomes are core to our various programs. The route to those outcomes is going to be different, and we are we have to rethink how we get there. So, it's not about abandoning what our core outcomes for university education but understanding that we can no longer get there in the way we used to, and we have to take a different route. What that route looks like? That's, you know, I think that is a question for the moment that academics across the university are grappling with.

Zaaid:
Yeah. I mean, Sukaina, you touched on that. Again, a really good point, also highlighting that good teaching practices. I think that's the core right with new technology in this, in this, in this higher education space, we still need a good teaching practices, and that will enable students or provide them with at least guidelines and sort of frameworks to use these tools effectively again without losing.

Sukaina:

Maybe I'll just clarify as well a little bit around rethinking, like what we might consider good teaching practices. So, as Francois saying, I don't know if students ever read a whole book, or, you know, three or four verses ever before, because there's just not enough time in the curriculum. And now we know that they might be using generative AI for summaries. And yes, I think that in some ways, that is a loss or a learning opportunity, because there is a real skill in being able to read a long form text and synthesize it, and analyze it and think it through and so on and, and part of me feels that that is the ideal, and we should strive towards that, and that Gen AI is potentially allowing well not potentially, its allowing students to circumvent that.
On the other hand, we have to adapt to these new realities, not only because they are there and we have to adapt to them, but there may be some real opportunities for different type of learning or critical thinking that emerges from interaction with these new technologies that have been created by humans. You know, they're, they've, they're off, they're all from the human world, even though they might feel like Alien presences. And so, you know, you know the technologies, you know, we've shaped these technologies now, they're shaping us. Okay? So, we're now in this almost era of co-intelligence, co-presence, co-collaboration with AI. That makes people very uncomfortable in some ways, because you're kind of, you've introduced another agent or an actor in the relationship between teachers, peers, students. But I don't think we can shy away from thinking about what the implications of that are, so maybe grounding it very simply.

Will our conception of writing change? Would it be as important? I mean, I think we've, I've, I think we've, we no longer judge people so much on like spelling and grammar as we might have, because we have spell check and tools and things that kind of you can offload that to it. What else might we be happy to offload to AI in the education environment while still maintaining what is really important that students learn. So, either students can do by quote, by themselves, without an AI, or what students can do in an augmented sense with AI that they may not have been able to do themselves.

And so those are really kind of interesting educational problems, actually, and things that we have to apply our minds to when we think about what it means to teach something in a particular field of discipline, now that AI is not only in the university, but it's also out there in the workplace, in labs, in research institutes, and it's getting better all the time.

Zaaid:

Yeah, so I just want to bring back the bring it back to the higher education space and how universities are sort of grappling with this. So, UCT and Stellenbosch, we hosted a really awesome symposium recently, the 'Assessment in the Age of AI Symposium,' and that brought voices from lectures and from students. So, it was really, really interesting to see, and quite a few things that came up there.
Sukaina, what were a few things that stood out from that symposium?

Sukaina:
So, I think one of the really interesting things about the symposium was when we sent out the call, we sent out an expression of interest in the first instance, and we asked, 'What are the three things that you are most interested in engaging with around the in the symposium?' And we got a really good response rate, you know, something like 130 140 responses. And we collated them, and we, and we analyzed them, and it was very broad what people wanted to discuss. But effectively it was around policy. You know, people wanted some kind of guidance and rules around what to do, having engaged with these technologies for 18 months or so. The second one was, like practices. What is like happening in the classroom? How, how can I share? And then the third theme, broadly, was innovation. So, like, what's the future? Where is this going?

So, that was really interesting, because it was, it was, as you said, quite a diverse range of voices. And so, while people want policy and guidance, they also want to think, think more about it. And after we've been discussing, I think Francois, you might want to add a bit more. We felt that while there was this diversity, we're also a little bit interested and concerned about this gap, maybe between practitioners and theory around this area, and it's something we've been kind of applying our minds to what does this mean?

Francois:
Yeah, so, it's quite interesting that there's quite a rapid evolution in thinking. So, the symposium that we hosted was actually a follow up to a symposium that Stellenbosch hosted last year, and just a plug, that UWC will be hosting a third one in the series. But there was a distinct shift from the first and second symposium in terms of the, I guess, the range of practices that we were seeing from academics on the ground, but also the very big shift in thinking from researchers in terms of the level and the depth that people were trying to make sense of how we engage with, with generative AI in an assessment space. And it was really stopped the sort of the space, I guess, between the practitioners who are grappling with very practical

concerns in their day-to-day practice, and then the, the sort of theorists, if you will, of trying to trying to make sense of it at a different level.

And how do we keep those two things connected, that we don't just end up in a theoretical space that is feeding off itself, I suppose, but that we actually have a dynamic linkage between those two components that is going to enhance the practice and help us make sense of what is going on. Because, although we're seeing a to some extent, I guess, maybe not a maturation yet, in terms of how people are using generative AI, but we're seeing some very interesting practice. We are far from a place where we could claim any level of stability in where things stand. Because, I mean, these technologies are just evolving so rapidly. So, it's really interesting to see a shift within it, within the space in a few months. Yeah, but then keeping it, keeping it connected. Because the real, you know, it's the practitioners who have to design and run these assessments who are struggling. It's the students who are struggling on the on the other end of those assessments.

Zaaid:
Just in terms of, first, I mentioned that there's obviously lecture and teacher voices, but the student voices. Did you feel during that symposium that they were vastly different, or were they things that were sort of intertwined and connected?

Sukaina:
So, I really enjoyed the student perspectives. And one of the things we did was the students really kicked off the symposium we had. We started with the student panel first, and there were, I think, seven or eight students from UCT and Stellenbosch who were on the stage discussing their experiences and their thoughts around the use of generative AI in the Teaching, Learning Assessment space. And there were very variable views among students. There isn't one student voice there. And, you know, you really, when you hear from the students, you get away from that all students are cheating with AI, because they're not, you know. They there were very thoughtful considerations around if I keep using this, I'm going to, you know, I'm not going to be able to do what I really need to do, or I'm using this for a really good reason, because it helps me do this and this, and I think we need more of that kind of conversation. I think it was really powerful that we started

with the students and with the educators, listening to them, and then we started the rest of the symposium with the presentations, with the lecturers and so on.

So yes, there were what were wildly divergent views in the sense of people's familiarity, comfort and or discomfort with these tools. But what was good is they had turned up to listen and engage and learn. And I think, when we were looking through some of the end of the day workshop and reflection, one thing that's come out a lot is the notion of community, that at the end of the day, these things are very difficult for people, but there is a community of people around them that can help. And I think for me, that was a very powerful motivator to keep going with this kind of work, because even arranging these symposiums, it's really a lot of work, and not quite our day job.

Zaaid:
It's an event, you're planning an event.

Sukaina:
And, but, it was really heartening to see the turnout, and also the kind of level of engagements. If you want to add…

Francois:
No, I mean, it was, it really was the, you know, the, the engagement and the conversations after each of the presentations was really great because people were there. They were, you know, they weren't just there. Sometimes at a conference like depression, someone's in that session just to present, but the people were there, they were listening, they were questioning. They were grappling with, what does this mean? How do I use it? Yeah, and so that really was great to see

Zaaid:
You mentioned something interesting, Sukaina. Students, especially, I mean, those students who attended that conference, and other students generally, not all of them are cheating and using it to cheat. Do you feel like they are also really aware that maybe there are lecturers and educators that have that belief, so maybe

that's also a concern that's hanging on their shoulders, like, Oh, are they going to accuse me of cheating or using AI to produce all my text? Do you think that creates anxiety for the students and that maybe…

Sukaina:

The reason we're nodding to each other because, we've been doing student focus groups as to research with students for a little while now, and that's absolutely what is happening in this and bolstered by other literature as well from other, other institutions, is that it's a rate, unregulated environment in many universities in the sense that it's not clear to students, always, or consistently whether they are allowed to use these tools or they're not allowed to use these tools, and it's often not made clear and then. But then they are sometimes penalized, and they don't know why. So, I think there's that level of discomfort for students, and one of the things we have been keen to stress in our staff development activities in CILT is to be upfront and transparent with students in your assessment instructions and in your course instructions as well around that, because I think it does create unnecessary concern.

Now that's not to put the blame on the teachers, because they're also working it out and not sure how these tools work, but I do think it has created a culture of mistrust between students and staff. And if you want to talk about the detector issue as well.

Francois:

Yeah, and so in you know, going back to the sort of integrity question that you started with, back in the pre generative AI days, being able to use a plagiarism detector was a tool that you had, quite high degree of confidence that okay, these tracks and texts have been obtained from these different sources. And how much is the student used, and how is the student integrated or not integrated?

And I guess the academics are longing for that certainty to be able to get a report with an orange piece of text that comes from this source and a green piece of text that comes from that source, and 3% here, and 8% there, and the overall is 34% and we've attached a meaning to that. But the reality is that the generative AI technologies are just out running all of these detector tools, and the only thing we can be certain of is that these tools are completely unreliable. We can give no credence to the scores that are coming out of these detector tools.

And unfortunately, academics have longed for, I guess, a tool that can give them certainty. Has this been generated by AI or not, but, and the tool gives the facade, I guess, of certainty, and is marketed in a way that creates that facade of certainty. Where it's, it's, it's, it's a miss. Yes, it's not, it's not there. And so, the Senate Teaching and Learning committee has taken the position that the while the detected, these detector tools are still going to be active. Other institutions have switched them all weaker that the scores may not be used in any punitive way when engaging with students. So, at most they can be used to initiate a conversation with the student about the possibility that generative AI has been used.

But even that is problematic, because these tools detect when it has been used, sometimes they falsely detect that it has been used when it hasn't, they miss the use of generative AI when it has been used. And so, by having a conversation with the student about a high, high AI detector score, you are singling out that student on grounds that are very shaky, because other students who've used the tools may not have been picked up.

Yeah, the other problem, again, coming back to, to where we started with equity considerations, is that potentially, students who have access to 2, 3, 5, paid tools are able to filter a piece of work through, through those various tools, and in that way, avoid detection where a student who only has access to free tools doesn't have such sophisticated abilities to manipulate the product, and so may get detected. Where a student has got access to more tools, doesn’t.

So, again, there's just these almost built in inequity, who might be flagged for a conversation and who is not called in for conversation, having used these tools very extensively. So, these detector tools, I don't mean it in a sort of a pejorative way, but it's almost like a comfort blankie for academics. You know, you wish that it was, yeah, that it meant something that, unfortunately, it doesn't whether we'll ever get there with the rate these tools are evolving, I don't know.

Sukaina:
I think essentially, you're trying to use AI to detect AI, which then gets better at not being able to detect. You know, it's almost but it's also like the waste of energy in trying to detect text, whereas I think that energy should be put towards something else. And again, we'll come back to what does this mean for the future of teaching, learning and assessment? And essentially, we're going to have to rethink and how we design assessment altogether.

Some assessments that we do now. Yes, we can put students into an invigilated observable environment where they can't access AI and they might have to hand write something, or they have a lockdown browser. And I can understand and sympathize with those strategies right now, because it's very difficult sometimes for teaching staff to think about anything else right now, but in the medium to longer term, what is in the best interests of the students in the discipline that you want to promote and create knowledge in which is what the purpose of the university is. And we cannot assess all students under invigilated conditions for everything. That would make that would, that would be inauthentic, and it would make many of those assessments not valid as and they're not really measuring what you're trying to measure.

Francois:
And, you know, I think the truth is as well, that to some extent, generative AI is challenging our assessment practices in a good way, because I think a lot of assessments have been done in a particular way, because it's that's the way it's been done, or it's a convenient way to run an assessment. And I think there are some assessments where if you really have to go and interrogate the assessment, you're not getting the, the information to allow you to make the decisions you are making if you really dig into what's, what's happening. So again, I also sympathize with, with colleagues who are grappling with making meaning of assessment data and what does what does it mean if a student achieves a pass mark with having done these particular set of assignments? But I do think that generative AI, in some ways, is has a beneficial effect in getting people to really step back and think about, what is it that we value? What is it that that assessment needs to tell us to be able to decide that a student has achieved confidence in a in a particular field or a course.

Zaaid:
And not just really think about like, is the student cheating? That shouldn't be number one on the list. Are they learning? Yeah. Are they learning? Oh, for sure. That's what we assessing, right?

Francois:
As Sukaina said, I mean, we have, in some interactions, we have asked students to, you know, are you comfortable sharing with us? And you know, are you aware of students who have used it to cheat, and have

you perhaps used it in in ways to sort of bypass the requirements of an assignment. And my sense is that we're getting a lot more authentic stories about how students are using these tools to try to make sense of what is an assignment actually require of me not to write the assignment, but to understand what exactly is it that the lecturer wants from me in this assignment, and gets that from the generative AI. Ah, okay, now I see. And off they go. And they actually then do the assignment. They don't get the generative AI to write this, yeah, to create whatever the, the artifact is that is going to be marked.

So, yes, it's, you know, it's, it's, I suppose, I suppose there are, there are many people who do use it in ways to, you know, to bypass, to bypass the requirements. And one of, one of my mentors used to, used to say that students are of the species homo economicus, they will find the, you know, the, the way to do something that requires the least energy under all circumstances.

Zaaid:
That's pretty much me as well.

Sukaina:
It's part of the human condition, yeah, acting in a very human way.

Francois:
Students are, we've had some really thoughtful responses from students about what generative AI means, how it can help them productively, and how to not as you, as you've said earlier. It's going to be undermined by the by the availability of these tools.

Sukaina:
I think it's a multi-pronged effect, strategy as we go forward is to continue the community and the dialog, include students in the conversations around what we do all the time. Because I think there's a real value in kind of student, staff collaboration and partnerships. The staff do not have all the understanding of generative AI, nobody does really in the in the kind of broader field. The students have a lot of experience of use. And I think that if we want to get away from the kind of mistrust and the distrust that could form and is already

there because of, of the fear of detectives and so on, that we actually have to start building a different type of teaching, community, Teaching and Learning Community, together with staff and students. And I've so we've seen the power of that in some areas. It's how we can, we can bolster and shape that.

Zaaid:
Yeah, and as we mentioned, like building a community, getting all different voices, including students, because obviously their voice in the past, at least, I'm sure at any places they are not it right?
One final thing I have to bring this up. There was really dramatic Daily Maverick article entitled, sorry, 'CheatGPT.' Sukaina you were quoted there, along with Jonathan Shock, was very dramatic.
It's pretty much describing the higher education space as being in a chaotic time due to this AI is, is it as chaotic as it sounds? I know we're grappling with many issues, but…

Sukaina:
You know, so I think the only article you're referring to, kind of made the claim that many universities are not really caught up or fully acknowledging the seriousness of the issue around that. My response would be sure but, that's pretty much every university in the world right now, not just in South Africa. Nobody has a very clear-cut policy or way of implementing a policy that means that students do not use ChatGPT or means that you can detect it.

I think you have to put that article into context. But it, you know, it had some very interesting perspectives from a lot of different universities around what they are doing. And I think it was, it's fair to say that the technologies are moving very quickly. The uptake is very fast. You know, it's not only students who are using these tool staff are using them in universities, in their daily practices.

And policy within universities hasn't really caught up already, or has had a chance, really, to be formulated. So, it's, I think it's just a kind of moment in time for that, that article to have surfaced. And in fact, what I have seen is that quite a few follow up articles in the in the Daily Maverick of people on the ground talking about their experiences. So, in the spirit of community, I'm very happy that that, you know, we have the opportunity to engage more broadly, because AI is not an academic issue. It's not a theoretical issue. It's, it's in our daily

lives, in people's emerging, lived experiences. So, I think if, if there's opportunity to talk about it with the with the media, I welcome it.

Zaaid:
Awesome.
Well, thank you so much for both of you for your time. Really interesting discussion, and that sounds like, while we have ways to go, I think we had a good standing now. And, from what I kind of pick up is bringing people together, educators, students and everyone else. So yeah, I really appreciate your time. Thank you so much.

Sukaina:
Thank you.