National Academies of Sciences, Engineering, and Medicine

Leading Practices for Improving Accessibility and Inclusion in Field, Laboratory, and Computational

Science – A Conversation Series

Transcript of keynote talk by Dr. Feranmi Okanlami.

NOTE: This is an unedited transcript of a keynote presentation prepared for the Accessibility and Inclusion in STEM conversation Series held on December 16, 2021. The transcript was prepared by Katalyn Voss and is not an official report of National Academies of Sciences, Engineering and Medicine. Opinions and statements included in the transcript are solely those of the individual speakers at the Accessibility and Inclusion in STEM conversation, and are not necessarily adopted or endorsed or verified as accurate by the National Academies.

Good afternoon, my name is Feranmi Okanlami and I use he/him/his pronouns.

I am a young black man with brown skin, short black hair. I'm wearing glasses and wearing a bow tie, a blue sweater and a blue blazer. In my background, you can see some shelves and a plant with an American flag and some plaques.

I identify as an individual with a disability and you can't see but I'm seated in a manual wheelchair.

It is my distinct pleasure to be able to deliver this keynote for the National Academies of Sciences, Engineering and Medicine entitled, "Disabusing Disability", hoping to demonstrate that disability is not inability.

Now, I tell people that I don't like giving talks and anyone that knows me well knows that that's a bold faced lie, because you love talking.

Now, I said I don't like giving talks. I never said I don't like to talk, so what I'm hoping that this will eventually be is a conversation.

Because I will then talk for this next sort of period of time, and I know we're afterwards going to be able to engage in a conversation about these things. Because if my voice is the only one contributing to this conversation, I feel as though I've done a disservice to all of you.

Because, whether you know it or not, each of you has a perspective or an opinion on this topic, whether you have engaged in this conversation or not.

So the hope today is to have a conversation about disability.

But to then show you how disability is a unique thread that actually cuts across much of society to then talk about what it is that we can do to be more accessible, more equitable, and more inclusive.

So I tell people that I also identify as a black man, a Nigerian, a Christian man, a physician, a father, and I tell people that it is all of these identities wrapped into one that contribute to the lived experience that I have and my perspectives on the world.

And therefore I want to be very clear that I am not the first or the best or the only. I am merely an "N" of one sharing my own lived experience and perspectives to add to the chorus of voices to engage in this conversation.

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Because we are all much more similar than we are different, that we can learn from our differences, instead of separating ourselves because of that.

So, I always give credit to some of my students and staff that have assisted me in putting the initial iteration of these slides together. And without further ado, let us begin.

So, I often start with this image. Now, to assist those that may not be able to see it on this slide: it is split into two halves.

It's an image that many people have probably seen before, with three individuals, the same three individuals on both half of the screen, and they're attempting to watch what looks like a baseball game, on the other side of the fence.

Now, on one side, these three individuals, I like to call them tall, medium, and short, each of them is standing on one box.

With that one box, the tall individual can see the game, the medium individual can see the game as well, but then the short individual cannot see through the fence to the game and underneath that it says "equality".

Now, on the other half of the slide the same three individuals - tall, medium, and short - are trying to watch the same game, but now the boxes have been moved.

The boxes have been moved such that the tall individual is no longer on any box and he can see, that medium individual is still on one box and can see, but now this short individual stands on two boxes and can now see.

Under that image it says "equity".

Now, a lot of people have used this slide for many, many different reasons, and I usually ask people what is the situation in which you have seen this slide used.

And people talk about diversity, equity, and inclusion conversations; people talk about team building; people talk about conversations about how equity and equality are not the same thing; and how equality is giving everyone the same thing, whereas equity is giving people what they need.

Now, very often, when I give this presentation, people will speak about this as a positive slide.

Yet there was one time, where I posted the slides online after my talk and someone who did not speak up during the presentation made a comment that went, such as this, but said, "why don't those - insert a racial slur here - buy tickets, like everyone else, and watch the game from the inside."

I will repeat that.

It said, "why don't those - insert racial slurs here - buy tickets, like everyone else, and watch the game from the inside", now I say this not to be jarring or controversial, but I say it, because we often fail to recognize that, when we see an image, different people may be looking at the same thing and seeing something very different.

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That when we look at this, people often talk about how we need to remove the fence. People talk about a third slide that says justice with no fence whatsoever. And people looked at the slide trying to see this as a positive thing, as to how we can strive for equity or equality or both.

But we don't recognize at times that people look at this and they see a completely different problem.

Now, I am not assigning any sort of good or bad to those different perspectives, I merely bring them up, because if we don't recognize that people are not always on the same page when they start in a conversation we're never going to get to the point where we come to a conclusion that is going to be satisfactory for all.

Similarly, I showed this slide and at one point, there was a softball player, the they raise their hand and said, "you know, we didn't put the fence there to keep people out, we actually had the fence there to keep things in."

If we didn't have a fence we wouldn't know what a home run is, if we didn't have a fence and there's a busy road, on the other side of the fence, we put ourselves in harm's way, each time we have to run across that road.

And so, in fact, if we knew that there were people trying to access this game, we would absolutely try to figure out how to accommodate them. We want people to watch our games.

And so, therefore, when we have conversations with people on both sides of the fence, when we acknowledge and address what the barriers may actually be, then we can come to a conclusion that's going to fit for everyone.

Now, I start off with this cartoon because it's much easier to talk about these things with a cartoon rather than real people. People don't get uncomfortable when you talk about it in this way, especially when the reality of our world is more like this.

I've now added additional panel of this slide which has a third segment.

In this third segment those same people are there, except in this one, the tall individual is standing on many, many boxes well above the field that can see the game.

That medium individual is still on one box, it can see the game, and now the short individual is standing in a box sized hole.

Under that image it now says reality.

So when we talk about resources, when we talk about how we allocate resources, this is what the reality tends to be.

And if we then can have a conversation about how we can reallocate resources to make sure that everyone has what they need, then this conversation gets even trickier.

Because often when you show this slide someone will say, "why does the tall individual have to give this up for the short one?"

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Or they will say, "we don't know what that short individual did to then dig themselves into the hole that they're currently standing, and it is not my responsibility to provide something to support that person."

But once again, as I said, I use this slide to open up conversations to discuss what equality, what equity, what reality are and how we can work together to then provide what everyone needs.

Because, who knows what happened to that individual in that hole.

That hole may have been put there long before they arrived. That hole can be one of the systemic injustices of sexism or racism or ableism that they did not create.

And in that same vein, all of those boxes that the tall individual is standing on may be privileges that they did not do anything to create themselves.

And so, therefore, when we have conversations about how we allocate resources without taking into consideration the privileges or the prejudices and the systemic injustices that may have led to the situation that people are, we missed the conversation entirely.

And so I'm sure at this point, someone out there is wondering, "when is this conversation going to center around disability?"

And it is because I want to then lay this foundation, before I get to this slide this image now, which I hope to use to sort of encapsulate this entire conversation and then lead us into the discussion that we need to have.

Because in that first slide, but I didn't mention but that those of you who are sighted could see, is that the individuals in the first few slides could have been considered people of color.

There's something else that some people make an assumption about in those first few slides, and it is that all of the individuals identify as male gender.

And then, additionally, based on the look of the image it is something that people can say, "we cannot directly see disability represented", even though I remind people that not all of disabilities are visible.

And so I then use this slide to drive the point home and have the conversation to say if we truly want to include everyone, if we truly want to make a world that is inclusive and accessible, we need to identify and recognize those that are not in the picture, those that do not have a seat at the table, identify what their needs may be, and provide them with the resources that they need to be successful and have access.

So with this new image, we have individuals that have different skin tones.

Based on the hair and the clothing, we can make assumptions about the fact that we are trying to now have more than one gender represented.

Additionally, there's an individual sitting in a wheelchair that I used to then say we're going to represent disability in this conversation, and I will admit that, at the end of this, it took me quite some time until I saw this myself.

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But I then reflect on the rainbow and the top corner on the image then represents the LGBTQ population as well.

So when we talk about the resources, we can go back to the initial slide to see that, when we look at how many resources were needed for equality and equity, it was the same number of boxes, it merely took a redistribution of those resources to then provide equity, as opposed to equality.

But I tell people that as a wheelchair user, and a proud wheelchair user myself, that no number of boxes that you provide me with give me access.

And therefore, if we use the same words that we have to build that box and instead we build a ramp, it will be providing that access that an individual, like me, may need.

And one of the phrases that I use is that everyone can use the ramp while not everyone can use the stairs.

So why don't we build more ramps to provide access for individuals in science, technology, engineering and math instead of assuming that everyone can be given access by the boxes that you're used to giving?

Now, depending on how intricate some people look at these slides they'll say, "Oh well, Dr. Okanlami, by the looks of this, it takes a lot more wood to make that ramp than it does to give the box."

I tell people that sometimes that is the case and if we're going to say that because of the resource needs that we're not going to provide the access that someone deserves, that just because one person has a different need that they no longer deserve to be included, they no longer deserve to have access.

Because that is not the case, especially when it comes to the laws that we even have.

Now 31 years after the Americans with Disabilities Act, which was hoping to try to clearly just make the floor for what accessibility can be, we still have spaces that are not accessible or inclusive. And we need to then provide the resources to at least fill the hole upon which some of our marginalized groups are sitting in which does not even fully address the lack of accessibility in most of our spaces.

So I tell people that when I experienced these slides, and when I think about how we can apply this to the real world, I recognize the fact that I use racism and ableism justice, two things that I've experienced, to try to then continue the thread of this conversation.

When we talk about racism, people think that we are pointing a finger at an individual and saying that "you are racist and you are the problem".

One of the things I tell people is that the past may not be your fault, but that the future will be.

Because if we don't recognize that our society, our country, and our world at times, was built upon a framework that had the haves and the have nots that clearly then determined who was worthy and who was not, a place in which, in this country that previously I was not even considered 100% human, where you were permitted to then hang me, to end my life, to enslave me, to own me as property.

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So this is not dwelling in the past, it's really reflecting on the past, that was the foundation upon which our nation was built, and so, while we have come a long way, we still have a long way to go.

And racism is a systemic framework, it is not necessarily something that points fingers at individuals unless those individuals are not doing anything to dismantle those structures.

So, similarly ableism is that same thing. It's the recognition that our world was not created with a disabled body in mind.

There're so many things that are still in accessible in this world and we don't recognize those things until we ourselves need some form of accessibility.

I go on to this next slide to show what my life had used to be. I told people that I was born to two Nigerian physician parents, we moved to this country for my parents to do their residency training.

And then we went to Indiana, where they took their faculty positions. I went to private schools most of my life. I went to boarding school at Deerfield Academy in Massachusetts.

I played all sorts of sports, I sing, I danced, I acted, I was a leader of class teams, I was the President of my class, and I was involved in many things. I say this not to pat myself on the back, but I had a diversity of experience of opportunities, and those are the types of things that I thought gave my life value.

The images that I'm showing here are of me during my Stanford college days, running track and field, triple jumping into the sand.

After being an Academic All-American Athlete that was considering taking time to go into the Olympics.

I went straight to Medical School at the University of Michigan where I then completed all four years and then matched to the orthopedic surgery residency at Yale.

I have an image of my family here who have supported me throughout, my family of physicians and PhDs and lawyers.

And it was these things that I thought gave me a value, until in my third year of orthopedic surgery residency, I experienced a spinal cord injury, which then left me paralyzed from the chest down with minimal use of my upper extremities.

And I will admit that, at that point, I asked myself, "what value do I now have if I'm no longer able to be an orthopedic surgeon, if I'm no longer able to be this athlete that is jumping through the air and into the sand, what is my value now?"

Now I will tell you that, despite being a physician that took care of individuals with disabilities myself, I did not see the inaccessibility of the world in which I live.

And now, as I see worlds on both sides of the stethoscope, as I like to call it, I experienced these things with a perspective that allows me to recognize the systemic inequities that I was unintentionally perpetuated myself.

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I did not intentionally live in a world that was complicit to the ableism that still created this inaccessible world.

But it wasn't until I that saw that for myself that I recognized it.

And while I mentioned that the past may not be our fault, but the future will be, I didn't ask what it is that we are going to do to make someone's tomorrow better than their yesterday.

Because when I was there in that hospital bed asking myself, "what, what purpose I then had and what impact I could still make on the world?", I recognize that I was looking at this through a lens of an ableist framework that made me feel as though I wasn't going to be able to accomplish as much.

And, unfortunately, the reality of our spaces that because of the inaccessibility of our lived experiences and the environment we are in, it is the unfortunate reality that many things may be more difficult for individuals with disabilities, because we're not providing that access.

Now, once again, when we say that everyone can use the ramp, but not everyone can use the stairs, I tell people that too often we see disability as this small minority population and that we are not going to provide resources for this small group of individuals in exchange for the masses.

But once again, when we see that some of the small things that we can do are actually going to provide access for all, and not just access for one, who will no longer prohibit individuals from being able to then actively engage? And in communities we will no longer see someone with a disability and say that they cannot be a doctor or an engineer or a scientist in some way just because we haven't seen someone do it before.

Because what is important to recognize is that even with disability, disability is not the inability. Disability is not a negative no more than my black skin is a problem. Disability should not be seen as a problem either.

The reality of it is, is that the reason that disability and blackness are seen as negatives, is because of the way that we treat individuals in those communities.

So it is the society that needs to change, it is those structures that need to be more accessible and inclusive and we need to stop perpetuating this belief that disabled bodies and minds are the things that need to be fixed.

Because if we recognize the diversity of thought and of experience that exists in every single one of us, if we see that disability is just another identity that I have that does not define my entire being, if we see that the fact that I wear glasses or use a wheelchair, is no more special than the fact that I am a certain height or a certain weight or a certain religion or certain gender, and the goal should be to recognize that a diverse set of thoughts and experiences and perspectives are actually going to make all of the work we do better.

We're going to then recognize the shared humanity and everyone that we interact with and see the importance of different sets of opinions and thoughts and experiences.

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And, especially in the work that we do, a homogenous group of individuals is not going to lead to best outcomes and best ideas, and so if we recognize that the disability community actually cuts through every one.

Disability is the one thing that every single one of us may or will encounter at some point in their lives, whether they then identify as being disabled, whether it's a temporary or permanent disability, so therefore we need to create structures and programs and policies that recognize the shared humanity in all of us.

And if we center some of the STEM work that we do, the educational work that we do, around disability, we will see that the accessibility created for that is that going to make all of our work better.

This pandemic has demonstrated that we are able to shift at the drop of a hat and create new ways of doing things.

And many, many of my disabled colleagues over the past year and a half, have been recognizing that the things that the disability community has been asking for for a long time are now the things that are being implemented for the masses, despite the fact that the minority had been asking for it.

None of this is meant to be critical, but it's meant to say that we should not return to the status quo as we hopefully start to emerge out of this pandemic.

Instead, we should take notes and see the fact that we can recognize the ability to do things differently.

We do see that there's flexibility in our ability to then work in a variety of ways, and hopefully we now see that some of the things that we were so rigid about not being able to change, we can actually change them to make sure that everyone is included.

Whether it has been the fact that people needed to work remotely for health reasons, to take care of their family, to take care of their children, we now see that we can flex our workspaces, we can change the way that things are done in order to accommodate individuals.

Now, once again, this is a framework that if we had centered around disability prior to this, we would have already seen that we have the ability to do these things.

And so once again using disability is that example of what it is that we can do and how we can view the world through the lens of disability is going to be exceedingly helpful.

Now I tell people that despite feeling like that in that hospital bed, I was afforded opportunities, based on the resources that were provided to me.

Now, in this image I show a standing frame wheelchair and on one side I'm standing at a slide looking at a microscope to diagnose a woman who had ruptured her membranes of the obstetrics and gynecology word.

Using my standing frame wheelchair, I was still able to access the microscope and then the next image I'm fully gowned and gloved about to access someone's heart vessels through a catheterization. It was this chair that gave me the access to be able to do what I was still able to do.

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And so what people did in the setting was they assumed the competence, rather than limiting me or judging me based on what they thought I couldn't do, they worked directly with me to allow me to demonstrate what it was that I could.

And while the boxes or the ramp or whatever it was that I needed at this situation was a standing frame wheelchair.

Had it not been for someone who knew that these things existed and provided me with that basic access, I would have not known and those working with me would have not known that these things were possible.

How many more things are out there that we are not familiar with?

How many more ways can we find them provide the access that people need?

It reminds me of a story that I was told when I returned to my orthopedic surgery residency and was doing rounds there.

One of my orthopedic faculty said to me, "you know, this is a story that I want to share, about something that I think is similar". His son was colorblind and was in kindergarten or first grade and his homework said color the circle blue.

And this father, you know, was racking his brain, day in and day out, not sure how his young son, who was color blind, was getting his homework done when it said color the circle blue.

And then one day he finally asked to son and said, "Son, how are you getting your work done and you're colorblind and it says to color the circle blue?"

And his son looked at him with this perplexity look and said, "Dad, I never use crayons that aren't labeled."

Now I tell this story to then reflect on the fact that sometimes a barrier that we may perceive is not as difficult to the person that experiences it. And the solution that we may come up with is one that could be very simple that that person has already identified themselves or that someone else has already created something to address it.

And so, when we then see an individual with a disability and we automatically think that they're not going to be able to do X, Y or Z.

But we engage in conversation with that individual to see how we can accommodate them in the lab, how it is that we can make sure that their workspace is accessible, what the things are that we can do to then still allow this person to have the access.

And one of the roles that I play now is I direct the students' accessibility and accommodation services at University of Michigan, and one of those things is there are testing accommodation centers and our services for students with disabilities.

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And too often there are people that feel as though by providing accommodations we are lowering the bar for these individuals in their work.

And too often people that say, "you know, science or engineering or medicine, are very difficult fields and not everyone is equipped to be in them, so perhaps you should then find some other type of field or work that you should be. We're really doing this for you and we just don't want you to have a difficult time."

Now I do think that some of those people are well intentioned, and what they are saying and it might merely be because they're not familiar with some of the resources that exist, the standing wheelchair or the crayons with labels.

And so, how many labeled crayons are there that we have not identified yet?

What resources, have we not untapped to be able to provide everyone with equitable access to those same opportunities?

Because once again I tell people that providing access does not guarantee success and giving these accommodations is not an unfair advantage, it is not eliminating the need for this student or this employee to then work hard and do their work.

It is merely providing the same access that individuals need to have these equitable opportunities and then each one of us is still responsible for putting our time into that to make sure that we can then be successful.

Now I tell people that what does that look like because I like to then leave people with real, tangible things that they could do.

Because too often we have these conversations about diversity, equity, inclusion, about accessibility, yet we don't know what we can do in our day to day lives to then make change.

Now, what I am trying to do and what we are trying to do in our work is we're trying to conceptualize what some of these equitable opportunities are.

And then, this image here, you will see a combination of images of individuals with and without disabilities participating in different sporting activities.

And so, as a physician, as an athlete, as an educator, I believe that the power of sport can truly be an educational tool, it can allow people to then build teamwork skills and resilience and hard work.

And so, therefore, one of the pillars that we use here is trying to provide equitable opportunities through sport.

Because health and wellness and fitness are rights that everybody should have access to and the ability to then play sports or engage in fitness is something that disability should not exclude you from.

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And so, therefore, what we do is we are trying to demonstrate that, while adaptive sports to some are seen as sports for people with disabilities, we actually pitch this as adaptive sport are sports that everyone can participate in together, regardless of the disability.

And so, that is just one example of the things that we can do, and here we've got our example of the Wheelchair Tennis National Championships last year. And our University Michigan program came in second place in our first year of competition.

And that this program is meant to then describe and show to the rest of our institution through having students that are getting their education in kinesiology, studying medicine epidemiology, social work that we can then be that example for what disability can be in our community.

Because oftentimes people say that you cannot be what you cannot see and at other times, people say that representation matters.

And while I agree with those sentiments, I also think that, at times, there needs to be that first person who is going to be something that others have never seen.

Because I tell you, I come into this conversation with some humility to recognize that I did not know certain things about disability before.

And now, this is the reason why I am passionate about doing this work, and I must admit that I don't know that I would have had this same passion for it had it not been for my lived experience.

But I tell people that not every single one of you can be a young disabled Black Nigerian Christian athlete male.

And therefore, there should be a way that you can then recognize the inaccessibility, the inefficiency, the inadequacy, of the world we live in, based on allowing individuals that may not have the same lived experiences you.

To have a seat at the table and to actually listen to their voice and to recognize what are the things that we haven't been doing to then provide access for more.

Because disability is still very much stigmatized in our world.

And I've spent a lot of time talking about the physical visible disabilities that people see and not as much time talking about the non-apparent or invisible disabilities.

But if you can start to understand the barriers that have literally and figuratively been put in my way as a Black physician with a wheelchair, then you may be able to imagine the individual with dyslexia or anxiety or bipolar or depression or any other disability that other people cannot see.

Because when we do not create access for the more obvious things that people can see are needed, the message that we are giving is that we do not want individuals with disabilities at our spaces, or we do not think that there are individuals with disabilities already in our spaces.

And therefore, while some people are very comfortable speaking up and advocating for themselves.

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As the great Judy Huemann said in "Crip Camp", she is sick and tired of being grateful for accessible bathrooms.

And so, what are we going to do to then make sure that each of us within our own spheres of influence are going to do something to then improve the accessibility of the spaces that we are in?

Because you don't have to have that same lived experience yourself to then appreciate the accessibility of the world that we are in.

And perhaps by then recognizing now that each one of us can learn from someone else and engage in conversation to then see what inefficiencies inadequacies, what things are still missing, perhaps, then we can move forward together to address the ways that we could create a society that is better tomorrow than it was yesterday.

So this slide that we close with really just shows some of the things that we have been doing to try to demonstrate that. Here, we've got different competitive sports between wheelchair basketball, wheelchair tennis, ambulatory track and field that students can participate in.

And we are also embedding adaptive sports into the curriculum of the programs of sixth graders and Ann Arbor public schools.

And that is through the Adaptive Sports and Inclusive Recreation Initiative. And then we're encouraging clinicians within the health system to then be more familiar with adaptive sport opportunities through our permission to play grant initiative as well.

And so I get this is not to focus on sport, but it is using sports health and wellness, it's using disability, as this vehicle to recognize that whether it is ableism or racism or sexism or homophobia that there are individuals within our communities that have historically been marginalized and left out.

And that the STEM fields, in particular, have a lot that they can do to be able to recognize that all of us still have the ability to contribute to the spaces.

And even if we may not, at the beginning, be able to recognize what resources needed to then provide better accommodation.

But all we need to do is include people in these spaces, ask the questions of what barriers they have experienced and then start to make these changes that once again will benefit all and not just one.

So, therefore, I appreciate the opportunity that the National Academies of Sciences, Engineering, and Medicine, have been provided to engage in these conversations.

I hope that then we will have opportunities to continue these conversations beyond the time that we are here together.

And I once again come to you humbly to say that I am just an "N" of one, the experience that I have is just the experience that I have.

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And I tell people that when you have met one person with a disability, you have met one person with a disability.

And, similarly, when you have met one Black man you've met one Black man, and so therefore I encourage you not to take the things I have said, and then apply them directly to the next Black man, you see the next disabled man, you see but rather to recognize that this is just going to add to the context of the conversations that I hope you will continue to have.

And perhaps you will start to learn some perspectives from people that you have not seen before, so thank you for this opportunity to engage and share with you and Go Blue.