

EP 23 Equity and Mathematics

Lawrence DeMaeyer [00:00:11]:

Hello everyone, and welcome to OPC's Leadership Talks podcast. My name is Lawrence DeMaeyer, Professional Learning Consultant at OPC.

Susie Lee-Fernandes [00:00:20]:

And my name is Susie Lee Fernandes, Director of Professional Learning and Engagement.

Lawrence DeMaeyer [00:00:25]:

As co-hosts, we will engage educational leaders in authentic conversations to explore their passions, experiences and expertise in K-12 education. OPC is proud to highlight the diverse journeys and stories of educators and leaders from across this province.

Susie Lee-Fernandes [00:00:42]:

We hope that Leadership Talks will not only provide you with inspiration, joy, and valuable perspectives and strategies that will inform your professional practice, but also enhance the learning and well being of those you serve. Enjoy.

Lawrence DeMaeyer [00:00:59]:

It's good to be back with you again, Susie, for another episode. As usual, really looking forward to today's conversation. We're going to be chatting with Nicole Vernon from the Durham District School Board and we're pretty excited to welcome her here today.

Susie Lee-Fernandes [00:01:14]:

Thanks, Lawrence. Hi Nicole, nice to have you back.

Nicole Vernon [00:01:17]:

Thank you so much. It's lovely to be here again.

Lawrence DeMaeyer [00:01:20]:

So, Nicole, before we sort of jump into your topic that you want to speak about today, wondering if you could share a little bit about yourself and your leadership journey to this point.

Nicole Vernon [00:01:32]:

My name is Nicole Andrée Vernon and I have ten plus years of teaching experience with a BA honours, a BEd from York University, a Master's in Education specialising particularly in the area of curriculum, social justice and cultural studies from the University of Toronto. I have also completed both Part One and Part Two of the Principal's Qualification Program at the University of Toronto last year, and last summer I completed Part One of the Equitable and inclusive Specialist AQ course with ETFO and currently, just the other day, completed the Special Education AQ course for Administrators with OPC. And I've also worked with "at promise youth", (and I love to basically say that they are "at promise" because they're far from being at risk) and have facilitated and had the opportunity to do so at the board, at the Empower Conference, at The Cypher Conference within the Durham District School board. I was also a former TDSB 2018 municipal elections trustee candidate and have received numerous education awards. I was also honoured or recognized as a 100 ABC woman, Accomplished Black Canadian Woman founded by amazing individual, Jean Augustine. I'm also a daughter, mother, a wife and many students' teachers, and recently was appointed, in January of this year, as an acting vice principal and serve the Terry Fox Public School Community.

Susie Lee-Fernandes [00:03:11]:

Nicole, I really like how you've done some reframing with language and thinking about promise versus at risk. Can you tell us a little bit about your kind of your area of passion today, which is mathematics and equity and what that looks like sure.

Nicole Vernon [00:03:29]:

For sure. Yes. I am very particular or conscious of the words that I use, because words are very powerful. They can either bring positivity or negativity, so to speak. But in regards to my passion or my purpose, it focuses on the mathematical experience, my personal mathematical experience, within the system. When I was in elementary school, I had a math teacher, and the environment was very— It didn't allow one to have a voice, so to speak. It was quite negative, to make a longer story short.

Nicole Vernon [00:04:06]:

And so my father was the one who actually taught me, you know, math and began to enjoy it in that aspect of it. And just because of the experiences that I had, you know, experienced in that math classroom, I didn't want that for my son or for the students or for anybody, for that matter. So I decided to delve deeper in terms of, like, what's my angle, no pun intended, as it relates to mathematics, and also brought that into the different classrooms and the schools in terms of what are people's negative and positive experiences where math is concerned. What really spearheaded this all was an article that focused on inquiry as an entry point to equity in the classroom. And so I had mentioned that I had completed the PQP 1 and PQP 2, and I chose to do that for a practicum experience. And so it spiralled out of control in a good way, which involved students, staff members, had the support of the administrative team, had lunch, lead and learn meetings, and presented at our health and wellness night, specifically about overcoming mathematical anxieties. So, specifically, what I would focus on are those four pillars of equity, which were access, achievement, identity, and the culture of power. I find that when

we speak of math, many people try to separate it or think that it's separate from equity, but it's not, and definitely different from equality.

Nicole Vernon [00:05:44]:

And the best way that I can possibly explain that is that with equality, that, let's say, you know, administrators are looking for particular programs or teacher educators are looking to teach their students math. However, equity is making it specific to the needs of the students and taking in all these different things as it relates to even marginalisation. And so when I speak of marginalisation in terms of race, in terms of dominant language, in terms of socioeconomic background, gender, all these different things became really a fascination for me. So questions that I basically had were when we examined these kind of things, like, what are some of the wonderings that we have, you know, as administrators and as teacher educators, and what are some of the things that we can commit to as it relates to equity for our students. And, you know, what would that look like in terms of modelling the equity in the classroom and how to ensure that every student feels comfortable bringing their whole selves to their mathematical classes? And so that was very interesting because there's always a stigmatisation in terms of math or in terms of boys are better at math as opposed to girls, or, you know, they despise it or having anxiety. So really had the voices of the students, and as I had mentioned, in terms of that wellness night, overcoming mathematical anxieties, having the parents involved, and learning that many of the parents had some math anxieties that they believed they transferred onto their child. So we were looking at the different ways that we could basically resort to many different things to help to promote the voices of our students, the parents and the guardians in our mathematical programs in their classrooms, to ensure that everyone is being set up for success and not just existing in our mathematical classrooms, but thriving. And so, again, it was just really great because of the fact that the SCC were also involved and the students were involved, and the parents and the guardians and the entire school community was involved in the sense where I had put in a request for a certain amount of money and it was honoured.

Nicole Vernon [00:07:59]:

And so the students actually chose math picture books that were related to the math strands. And where we further developed, you know, a program to have with learning buddies so that these students can take them home with their parents and their parents can read the book that are on the basis of the different math strands, but in a format of a story and, you know, answering questions in terms of things that are related to the math. So those are some of the passions and the purpose, a short version of it, in terms of, you know, the difference between equality and equity and inquiry, and looking at assessment in the curriculum and the silenced dialogue I forgot to mention because of the fact of these anxieties where math was concerned, or just those different areas where I was speaking to in terms of access, achievement, identity and power as it relates to the dimensions of the equity framework where math is concerned, it just allowed us to become more empowered, educated and elevated to promote better dialogue as it relates to the new math curriculum. Something else that speaks to the passion and where this mathematical journey or story is concerned is we have something in Durham District School Board that speaks to the multi year strategic plan and also the DDSB black students compendium, indigenous students and things of that nature that not only focuses on success,

but equity, wellbeing, engagement, leadership and innovation. And so just all of those opportunities to, you know, support the success of our marginalised students in our mathematical classrooms and also at an institutional level, I find that it's, you know, like, even in our meetings amongst the administrators and things of that nature, these are some of the things that we are looking more delving more deeper into and having more courageous conversations as it relates to that and just looking at, you know, cultural responsive pedagogy, how it should remain as the foundation to our practices.

Lawrence DeMaeyer [00:10:15]:

So thanks for that, Nicole. I mean, I really love how you are reframing the conversation about mathematics and maybe even achievement in general, and positioning that as not being separate from equity. And I love the focus on this connecting piece of moving, perhaps from focusing on mathematics itself, to the experience of the learner in that, in that situation. So I'm wondering if you could talk a little bit about how, you know, student experience as a, maybe like a data point or, you know, a frame of reference for teachers, how you've worked with teachers to kind of shift from thinking about just the mechanics of mathematics or even the traditional forms of data like test results, etcetera, and focusing more on how students are experiencing their math learning.

Nicole Vernon [00:11:17]:

Thank you so much for that. So if I may go back to... I know that you were speaking in terms of achievement, and, you know, the interesting thing is that when I had first shared this with the staff a lot, everyone was quite silent and was thinking that they're not doing this. But once we had the conversations, we were learning that, you know, that all of these different things as it relates to equity in math is happening. So in terms of achievement, maybe measured by participation, you know, maybe doing a scan of the room, are we seeing who's participating here and who's not participating here, and why is that? And so when we find that studies show that when students are encouraged to create or generate and then develop their own knowledge, then confidence rises in doing math. Hence the reason as to why I said that I had — all of this had happened, because I just wanted the students to do more than exist, but to thrive and to get excited about math, because math is everywhere. So just positive participation in student mathematical classrooms in terms of the access inviting that participation, and us just asking ourselves, so how do our students succeed in the current and equitable system? And when students are given, again, the opportunity to be active participants, then they're again given an access point to learn, as you were speaking about, because they are given a chance to provide explanation and justification of thinking, of their thinking. So it could be something on the lines of having math groups.

Nicole Vernon [00:12:52]:

And it was quite interesting to see because I had a vision. I love to observe and you can see who has areas of growth and who have strengthen in certain areas. But it was nice to have the conversation or to see the conversations with the students about how to solve or to arrive at a particular mathematical equation. And, you know, and if some didn't agree, then, you know, they were able to speak about that in those math groups. They have also created, you know, different

math activities that included the entire school in terms of using the Google Docs and things of that nature and creating their own tally chart, so to speak, creating their own questions and correlating information. So just thinking of the different varieties of ways that math could be learned as opposed to just having paper and pencil. Oh, sorry, paper and pencil. Yes.

Nicole Vernon [00:13:47]:

Even incorporating different mathematical videos because of the fact that we know our students learn differently and that differentiated learning is very important. So having that computer, having the videos, even songs that they could create something else that the teachers had shared as well, too, is also in the classrooms. And even because I'm still also a teacher as well, although I am aVP as well, but having the opportunity to teach the math, they thoroughly enjoyed being the math teacher. After the concepts were taught, they would create their own math test with the answers as well, or teach a particular concept and choose and then speak about their modes of thinking, thinking of their thinking, so to speak, as to how they arrived at that particular equation and the great thing about that is that in the classroom, it was this safe and fun environment which made it very conducive to learning. Something else. Identity. We can be more conscious of the balance between, or the harmonisation, we could say, between self and society and the ways that our students are racialized or gendered and classed, and we can think of engagement shifts in mathematical identity, just as how every month we have, like, you know, different amazing people that we celebrate or that we learn about, we can also research about the different identities as it relates to math and focusing more on those particular formulas. And then lastly, I would say in terms for the teachers to be very cognizant of power, the transition of knowledge.

Nicole Vernon [00:15:36]:

And as you had mentioned, also the instructor's main role is not a problem solver, but as an expert participant that guides the students.

Susie Lee-Fernandes [00:15:49]:

So, Nicole, obviously you have a lot of passion and you've brought forward clearly some tangible practices to show how students are included, as well as, I think, maybe some different ways that they can see themselves within the learning itself. So when I think about leadership moves and your role, from what I'm hearing you're teaching and you're also a vice principal, what are some of the, the last kind of messages you would want to leave for our audience to say, "these were helpful in moving this forward, engaging in the conversations with other leaders and educators to really make this shift.

Nicole Vernon [00:16:32]:

What I would basically say is just, if we could just keep in mind or bear in mind how we analyse, I guess, data, how it's collected, how we implement it, and how it's being programmed. And, you know, continuously ask questions like, what is this data telling us? Are we finding that, you know, certain grades are doing better than others, boys doing better than girls, how are we going to basically organise this information to ensure that everyone is successful? And, but more importantly, how are you going to also include our parents and our guardians, you know, in

terms of encouraging them to have more engagement and involvement in an area that was kind of stigmatised by anxieties, and then keeping in mind in terms of the four dimensions of equity, as I discussed, and then using those data to basically inform and guide your curriculum programs. But more importantly for me, which is very important, lastly, is building relationships and developing not only our students, but our staffs, the parents, the guardians and the entire school community as leaders, as authentic leaders, just to be aware of and include the perspectives of those who, like when we're addressing equity in mathematics and of course, in every area, but I know we're speaking about mathematics and to understand that it's multilayered. And I think it's at a opportune time because, you know, education has been transformed. We are having many different dialogues, courageous conversations, to ensure that we're moving in the right direction. So I think that together with all of that, we can continuously consider not only the classrooms, but the system, the issues from an equity, diversity and inclusive lens. And just to keep that in mind.

Lawrence DeMaeyer [00:18:26]:

Well, Nicole, I really want to thank you for providing us with such a rich set of considerations and strategies to think about. As you said, I think, you know, this is very relevant to the teaching of mathematics, but certainly is much broader in scope and relevance to all areas of teaching and learning. So we really want to thank you today for bringing your passion, your thoughts about how equity and pedagogy really do come together to create a positive experience and an inclusive environment for all students. Thank you so much for being with us today.

Nicole Vernon [00:19:04]:

Thank you for having me. It was an absolute pleasure. I'm most honoured and humbled.

Susie Lee-Fernandes [00:19:10]:

We hope that you have enjoyed this episode of the Leadership Talks podcast where we engage in authentic conversations with school leaders please share with your friends and colleagues and we hope you will join us again.

Lawrence DeMaeyer [00:19:22]:

If you have a passion or story to share as an educational leader or would like to find out more about the other amazing professional learning opportunities offered by the OPC, please visit our website by clicking on the link in the show notes.