

New Pedagogies for Deep Learning: Flourishing in a Complex World

Deep Learning in Grade 3

SPEAKER 1: I want to give you a minute to do something that you feel your body needs to get yourself into the green zone. So identify what zone you might be in right now, okay? I don't think anyone's in the blue zone, but there might be some people in the yellow zone right now. So take a minute, get your mind and body ready into your learning stance. And we're ready to begin.

SPEAKER 2: Mary Ann McCuen and Kelly Brownrigg, both grade three teachers at St. Cecilia, an elementary school in the Ottawa Catholic School Board, see NPDL as a way of delivering the ways and means by which their grade three students learn. New Pedagogies for Deep Learning provides precise tools and frameworks that help teachers to develop student competencies in the areas of character, citizenship, collaboration, critical thinking, creativity and communication. By focusing on two of the C's, collaboration and critical thinking, their students actively investigate and co-learn about geometry in a 40-minute lesson.

SPEAKER 3: All right. So today, you need 12 meters of fencing for our garden. We would like you to draw a quadrilateral with a perimeter of 12 meters. That's your first challenge. Go ahead.

SPEAKER 2: Inclusion is a big part of the classroom experience for these grade three students. Each student belongs and is accepted for the gifts they bring to the group's learning. Kelly and Mary Ann promote a culture of respect, risk-taking and wondering in their students.

SPEAKER 3: Three things that we really talked about is respect for one another, respect for yourself and respect for the environment. It's okay to disagree with one another, but you need to be respectful of that. Your classroom has to be a spot where students can disagree politely, where they can ask questions, where they can go where they need to go to increase their learning.

I think within our classroom, a growth mind set is very important. I think as educators, we facilitate that within our knowledge-building circles and our learning conversations. I think asking the students to be in their thinking stance, which means they're like this, and giving every student the opportunity to think. Some students don't take very long, and they already have an idea. So for those students, we kind of encourage them, can they think of something else? And they may do this.

SPEAKER 2: Kelly and Mary Ann see teaching as a craft, which grows year by year. As they respond to the needs of their students, they use a variety of strategies to reach their students, and to build their thinking.

SPEAKER 4: I like the teacher, because it really organizes everything. One would be 25 cents, and you could add all of that up before, so you know how much money it is to buy the fence.

SPEAKER 5: I agree.

SPEAKER 4: So I really like the teacher.

SPEAKER 6: I agree. Yeah.

SPEAKER 3: Any of the strategies that we use intentionally, the students have been taught. So it takes a while to -- what does turn and talk look like? What does it feel like? What does it sound like? What does gallery walk look like, feel like and sound like? And turn and talk is very important, because it gives every single student the responsibility of being able to have to think, have to focus, have to be responsible for what they're doing.

SPEAKER 1: All right, so it sounds like you are ready to head off to your gallery walk. And I know some of you had some other ideas to share. When we come back, we'll have a little more time for sharing.

So on your gallery walk, what do you see that's the same as yours? What do you see that's different? Any interesting math strategies? Any new ones that you picked up on?

SPEAKER 3: And any questions?

SPEAKER 1: And any questions you might have?

SPEAKER 3: Gallery walks aren't done all the time, but it always does depend upon what the intention of our lesson is at the time. Where are the students on the journey of whatever it is they're supposed to be learning?

SPEAKER 2: In this segment, teachers provide direct and explicit instruction to build knowledge, clear up misconceptions and give the students time to add or adapt their thinking.

SPEAKER 3: So my question to you is, do you think that this makes the thinking clearer to a reader that didn't write it, that's just reading it, or the way you did it?

SPEAKER 7: Yeah, it's helping.

SPEAKER 2: Accountable talk assists students in having voice and choice in the classroom.

SPEAKER 1: We talked to them about accountable talk, so defending their positions we give them the opportunity to politely disagree with each other's opinions. If they do politely disagree with someone's opinion, they know that it's their job to also defend their position and explain why they politely disagree with someone else's thinking. So it's a very safe and inclusive place. Students know making what we call "beautiful oopses," mistakes, is a part of the learning process. And we know that when someone does make a beautiful oops, it's not only them that's learning, that the people around them are learning as well.

SPEAKER 3: And I think as a staff, we've really worked hard this year on what we would call math talk, on asking questions and allowing the students to really have to verbally communicate their thinking. When you can verbally communicate it, you can then write it.

SPEAKER 8: We used the T-chart.

SPEAKER 9: That was our strategy. And our quadrilateral was a rectangle, because we knew that the quadrilateral that we had to use had to have different size sides. So we chose the rectangle, because that has two different sizes of lines.

SPEAKER 2: In this segment, grade three students taken an active role, supporting and developing each other's learning. They respectfully provide feedback, and ask questions to clarify their thinking.

SPEAKER 10: In the pod beside us, they couldn't really explain it. They just gave the [INAUDIBLE] idea to critically think to get more ideas.

SPEAKER 11: My group noticed that -- we noticed that we didn't really use math strategies, so we were using critical thinking.

SPEAKER 2: Assessment is ongoing as Mary Ann and Kelly make observations, document the learning and share it back with their students.

SPEAKER 3: Every day we're assessing for learning. We're looking at, where are the students right now? Which students are where? Where do we need to go tomorrow? Where do we even need to go in the next three minutes, sometimes? I always reflect upon 30 years ago when we did those -- we could plan for two weeks at a time, and we knew where we were going. It's not like that anymore. The students are the vehicles; they're the ones that take you where they need you to take them.

So as a teacher, you really need to give what we would call specific feedback in order for students to grow. Students need to be able to understand that feedback. They need to be able to set their own plan for that feedback. Our students look at the feedback. They write a goal on whatever they're doing next in that subject area. Then they have to prove to us that they have followed that goal. Sometimes it takes a lot of practice for some students, some students -- they can do it and they can keep it within their mind set every time they go to do a piece of work. So if, in fact, your feedback is not specific, students won't know where to go.

One of the things I've heard a lot of people say today is that when they were looking around, sometimes it was hard to read or follow the tracks of their friends' thinking, and that some way of organizing math really might be helpful. My question is, what did you see that we could clarify again makes the organization of our math helpful for the reader to follow the tracks of our thinking?

SPEAKER 2: Kelly and Mary Ann use their documentation, student outcome data, to plan their next instructional moves.

SPEAKER 10: The information was everywhere, so it was not really clear for the reader.

SPEAKER 1: So Dilke, what I hear you saying is that you observed that some people would benefit from feedback about organizing their math thinking?

SPEAKER 10: Yeah.

SPEAKER 2: They use a student's understandings and thinking to reinforce the math concepts, clear misconceptions and to provide new instruction to students.

SPEAKER 1: What do you notice about the relationship between what they did here and what's in the T-chart? Do you see a relationship?

SPEAKER 12: They were, like -- they kept on adding. Like, they kept on adding data under the [INAUDIBLE].

SPEAKER 2: Students are explicitly taught the global competencies, also known as the six C's. Here they are being taught about critical thinking and collaboration.

Students develop new schema, and new learning is connected to previous thinking to help students connect their understandings.

SPEAKER 1: So now we have to think critically. What do you know about quarters? So?

SPEAKER 9: We can count by 25's.

SPEAKER 1: Okay. What do you think about that, Kailee? Is that a good idea?

SPEAKER 9: Yeah. And then we can count -- we have to count 12 25's.

SPEAKER 1: Is there a strategy that would work for that?

SPEAKER 13: Oh, we could --

SPEAKER 1: Go back into your schema. One meter is 25 cents. I'm wondering if there's a strategy we've used for other questions that you could use in this question.

What was really important is us explicitly teaching the progressions that go with the global competencies. That's what's enabled students to name the C's that they feel they are using during the rich learning tasks.

SPEAKER 14: My group was using creativity when we were thinking of different shapes, and it had to equal 12 meters. So we were thinking of different ways to make it 12 meters.

SPEAKER 3: We really do model what collaboration, what critical thinking, what communication -- we model that every single day. And I don't think we noticed how important it was until we kept hearing it from the students.

SPEAKER 1: What I hear you saying, Mia, is that you were thinking of a strategy that we used in other strands of math that you thought could help you with this learning inquiry. Do you agree?

SPEAKER 2: Mary Ann and Kelly have discovered that their partnership and using the six C's has helped enhance their experience of teaching.

SPEAKER 3: Every day we stop -- and I'm saying "we" because I co-teach -- but we stop, we reflect upon what we've done. And we ask ourselves, what do we now need to do to move those students forward? And even sometimes to move ourselves forward in the way that we are teaching.

I think we've seen that students, when they're able to look at things and reflect, they learn more deeply.