

## **New Pedagogies for Deep Learning: Flourishing in a Complex World**

### **Activate the Learning**

SPEAKER 1: Rola Tibshirani sees NPDL as a way to activate real learning for her grade six students. Rola helps students develop the global competencies, also known as the "six C's," in her inquiry-based classroom. Those six C's are character, citizenship, collaboration, critical thinking, creativity, communication. Rola intentionally builds her classroom conditions and culture with real-life problems. Students learn what they are doing in class needs to make a difference in the classroom, school or world.

SPEAKER 2: When I went to school, I went to first traditional schools. So when I was in the classroom, I didn't want that to happen to my students. I knew there was more than just the book we're reading -- and there is nothing wrong with the reading of the book, as well -- is, how could I make the learning real? So it does take experience. It does take time.

SPEAKER 1: Here the students have partnered with experts in the field to design water filtration systems for First Nations peoples who do not have access to clean water sources. Knowing that they have the ability to affect change, and working in partnership with the University of Ottawa professor, students began designing water filters. Rola uses thinking tools to help students with the design process.

SPEAKER 3: We were stuck for a bit today, so we thought it would be a good idea to do a program model to find the best idea, because there are good ideas, but we need to find the best and efficient idea. So we decided to do it.

SPEAKER 4: So basically, you have two opposing ideas, and you're now trying to find the cons of it, because you could always find something bad about a model. So finding the good points of view, and here we have the main ideas of each model. And after we're going to also do connections, and then we're kind of going to decide, based on the positives that we have, which one would be an advantage for us.

SPEAKER 1: Providing students with this authentic learning experience promotes collaboration, critical thinking and communication skills. Students are building on each other's ideas, and developing empathy for other people's perspectives.

SPEAKER 5: Yeah, it goes here.

SPEAKER 6: Okay, yeah.

SPEAKER 7: It could also be further away.

SPEAKER 8: It's okay if you have to weave through.

SPEAKER 9: Also, a tool that we use in class to connect all our ideas based off our research notes, so the intertwiner ideas, and this is the main factors that cause each of these problems around.

SPEAKER 2: The kids are really developing their learning through that. Being able to communicate, being able to collaborate, being able to really find a solution to any tensions or any problems.

SPEAKER 1: Partners can participate in the learning process. Here, students are receiving feedback from a university professor. Will, a student in Rola Tibshirani's classroom, summarizes how important the feedback is to his work.

SPEAKER 10: We continue to take feedback to improve our work from anywhere, pretty much. We could grab a kid from our class who isn't even in our group, and we would take our feedback, because all we want to do at the end of the day is improve our overall product for the future.

SPEAKER 1: Students come to Rola's classroom as unique individuals. And she sees her job as getting those students to value each other's assets. While learning how to work together as a starting point for the learning culture that works best with her students, they come to see that by incorporating building from diverse ideas makes for better new ideas. Their individual thinking becomes augmented by this collaborative approach.

SPEAKER 2: You really build those skills of listening. What is listening? What is communicating? How do you diverse together? Please tell me more. Can you explain this? So we're not judging; so there's no judgment throughout the day. It's listening carefully. And what am I doing to really accept someone else's idea and build onto that idea?

SPEAKER 1: Students are encouraged to think about how their actions impact on the learning of others.

SPEAKER 2: How do I matter to the class? How am I improving my community as a learner? What gifts do I offer to the class? What actions am I taking to limit some of the action that need to be limited in order to become a better culture in the classroom?

SPEAKER 1: Experimentation and design go hand in hand with problem solving, as students collaborate and leverage digital to discover how to make flight occur using reusable materials.

SPEAKER 11: Right now, me and him are trying to design a plane that will fly higher and fly faster on the [INAUDIBLE]. Right now, we're working on flying faster. We have to try to reach it to 500 miles per hour.

SPEAKER 1: Rola provides instruction, coaching, questions and continuously gives feedback and helps students reflect upon their learning. Students self-assess their own learning, using NPDL rubrics.

SPEAKER 2: We co-construct criteria together. We look at -- so if we're doing a persuasive piece, if you're going to write to the Minister of Finance about should they be purchasing [INAUDIBLE]? So we do the integrative thinking, and then how do we write a letter to the Minister? So there's a lot of criteria, co -constructed criteria together. If we're reading, how do you determine main ideas? How do you summarize a text? So all those little strategies and tools, of course, that are all embedded all the way through our learning.

Reflection is the highlight of students' learning. If you're not reflecting, you're not learning.

SPEAKER 1: Rola sees the impact this type of learning has on her students.

SPEAKER 2: I have students who have come to me really were afraid to speak; they were afraid to collaborate. They were afraid to really have a voice. And the changes are amazing, in the sense that they know that their voice is accountable. They know that their ideas is respected. They know that they have a talent. They have so many talents, the students, that are hidden, and they could really tap into themselves. So what am I expert at? How can I help my group? It's amazing how it's changed the students.

SPEAKER 10: I think the class is more of a thinking class, and of a hard-working class. They don't -- art class doesn't, I think, react well to just a teacher giving us sheets, sheets, sheets, regular working sheets. I think this class does better with when we're thinking, when we're learning and when we're deep learning, because then that goes into the memory, instead of just the short-term.