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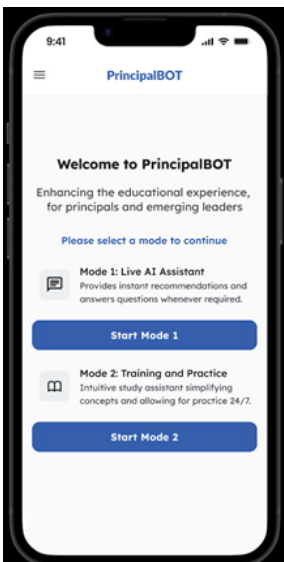
Laurier researchers develop AI chatbot to help principals support students with complex needs

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During their first years of school leadership, new principals often report high stress and feeling under-prepared to support students with complex education needs. There are few existing professional resources to help them learn how to effectively engage underserved and marginalized students.

Together with educators, regional innovation laboratories and principals’ associations, a team of researchers from Wilfrid Laurier University’s Faculty of Education is using generative AI to develop a chatbot that supports principals in their decision-making. PrincipalBot provides quick access to important information, such as school board policies, human rights legislation and community resources, that principals can call upon when needed.

“Although they can consult another principal or a school board superintendent, principals have to make many difficult choices on their own, in the moment,” says [Steve Sider](#), a professor of Education at Laurier who is leading the research project. “Rather than sorting through hundreds of documents on their laptop, a principal could tell the chatbot that they need to know the school board policy for supporting a student with autism who is experiencing a particular need. The app would immediately respond with summaries of the policies they need to be aware of.”



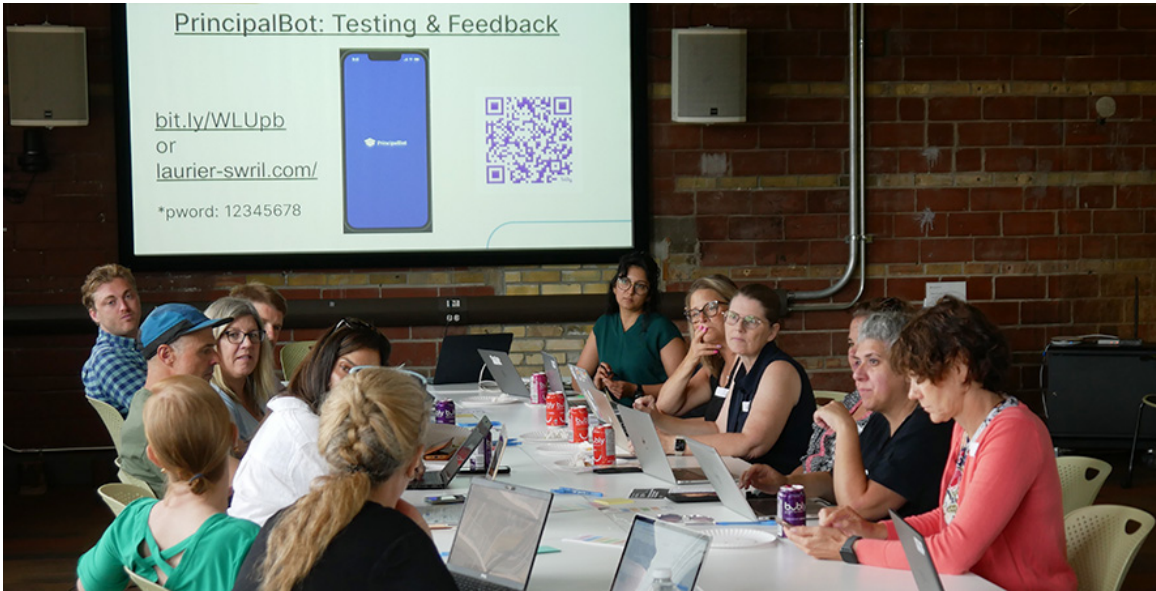
Left: PrincipalBot interface. Right: Steve Sider

PrincipalBot also generates realistic scenarios that principals can engage with to help them better prepare for supporting students. New principals gain real-time experience navigating complex situations before

actually having to participate in them. The chatbot and scenarios are to new principals what flight simulators are to pilots in training.

“We have been feeding solutions to the chatbot so it can give principals feedback on the decisions they make,” says Sider.

With their existing prototypes, the Laurier team is refining the app, evaluating its effectiveness, and scaling the project so that the resources will be available to principals across Canada in both English and French. This is being done in collaboration with two of Canada’s largest principals’ organizations, representing nearly 8,000 principals.



Principals from two Waterloo school boards beta test PrincipalBot at Communitech.

“We are following a human-centered design process, which means that we are responding to a real-world problem and regularly adjusting based on feedback from the principals who will actually be using the solution,” says Sider.

Working groups have already proposed future features for PrincipalBot, expanding its training modules to assist teachers, educational assistants, mental health professionals, and child and youth workers.

“We are seeing a greater diversity of student needs and strengths in our classrooms, so educators need a broader array of strategies and tools,” says Sider. “Together, we are developing a rich, effective buffet of resources.”

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