

# Leveraging AI to Support Reading Instruction



PROBLEM OF PRACTICE

The problem of practice that this use case aims to solve is how to effectively develop and implement personalized intervention strategies and activities for students based on their reading profiles. After teachers use screeners to gain a deeper understanding of each student's learning needs, they face the challenge of designing effective interventions that target those specific needs. To address this, the use case proposes leveraging AI as a thinking partner to assist educators in generating tailored intervention plans. Patterns in student profiles will be used to see how AI may generate activities that can support student needs. Individual student profiles will not be used to ensure privacy requirements in protecting students. The educators will review and revise the AI generated activities as needed and then test to evaluate their effectiveness in improving student foundational reading skills.



District: **Dufferin-Peel Catholic District School Board**

Province: Ontario

Date: October 2024

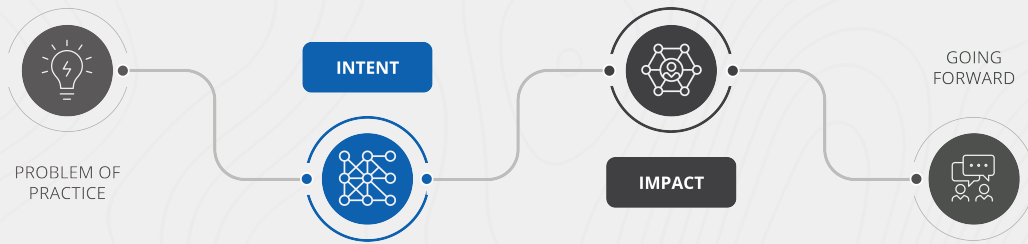
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## AI-Enhanced Literacy Support Dufferin-Peel Catholic District School Board

Integrating AI in Education: Transforming Learning — An AI Use Case Initiative for Canadian Education

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# Intent

Develop a prompting guide for teachers to create a thought-partner AI that collaborates with them in providing personalized literacy support for students.

## Steps for Implementation:

1. **Define Literacy Support Needs:** Identify the specific literacy support needs of students using insights from reading specialists and curriculum experts.
2. **Create Prompting Framework:** Develop a structured guide that outlines the necessary information for AI prompts, including pedagogical knowledge, student needs, and data privacy considerations.
3. **Collaborative Development:** Engage curriculum specialists, technology experts, and reading specialists to co-develop effective AI prompts and ensure they align with district literacy goals.
4. **Test with Multiple AI Text Generators:** Use different AI text generators to test and refine the prompts, ensuring their effectiveness across various platforms.
5. **Pilot and Teacher Training:** Launch the guide with a small group of teachers, offering training on how to utilize the AI prompt personas for literacy support.
6. **Refinement and Expansion:** Collect feedback from the pilot group, make necessary adjustments, and prepare for broader implementation across the district.

“ Our Director is a long standing member of the C21 Canada CEO Academy and attended the launch of C21 Canada’s Future of AI in K-12 Education where she first heard of an amazing Use Case initiative that could help us personalize literacy support for our students. The opportunity to talk with leaders in other systems and the fact that you had an AI coach for your Use Case was fantastic ”

Lisa Buczek, Coordinator of Technology Enabled Learning





# Impact

AI is contributing to the use case by first, providing help in developing the guide, the secondly by acting as a thought partner for teachers, helping to generate personalized suggestions and instructional strategies based on the structured prompts. By leveraging multiple AI text generators, the project creates a versatile solution that can be adapted to various teaching contexts, literacy challenges, and available AI tools.

In this use case, AI significantly enhanced learning by providing targeted reading intervention support for students who did not meet the benchmark in the Acadience screener. The Prompt Persona we created for use in Copilot, Ms. DF Reeds, acted as a valuable thinking partner for teachers, offering tailored suggestions and strategies. During the creation of this persona, we learned that using specific source material is necessary to train the AI to offer useful outputs. Providing educators with specific, targeted prompts to engage in dialogue with the AI helped refine the intervention plan, making it more effective and personalized. This process also demonstrated the importance of educators bringing their expertise in reading instruction to maximize the tool's potential outputs.

## Professional Learning insights

- **Identification of pedagogical approach and curriculum framework:** Once the specific types of strategies and curriculum were provided within the initial prompt, the results were much more aligned with what a reading specialist would provide.
- **Guide for Teachers:** By having a clear process, with a visual flow, the guide allowed educators to clearly engage with the tool even with limited AI experience.
- **Simple and clear is better than more information:** Although we found it critical to pre-load information for the AI, we found that simple and clear was better than multiple long prompts or back and forth.
- **Effective Use of AI as a Thought Partner:** Educators who tested the tool reported that Ms. DF Reeds provided valuable support in identifying and refining strategies. However, clear and structured prompts were essential for guiding the AI to deliver relevant and tailored advice.
- **Refocusing the AI:** By naming the AI and then starting each prompt with “Ms. DF Reeds, “ we found that the AI was less likely to deviate from the role it had been assigned.
- **The Importance of Reflection and Refinement:** The iterative process of discussing strategies with the AI helped teachers refine their instructional approach, enhancing the relevance of the activities for their classrooms. Regular reflection sessions allowed teachers to provide feedback and improve the AI's responses.
- **Building Teacher Confidence:** This AI initiative reduced planning time and allowed teachers to better meet individual student needs. However, initial hesitations about using AI as a teaching tool highlighted the need for comprehensive onboarding and sustained support to build teacher confidence.



# Going Forward

GOING  
FORWARD



The next steps for DPCDSB's AI literacy initiative include:

- **Expansion to More Grades:** Although the project focused on K-2 initially, plans are underway to extend AI-supported literacy strategies to upper elementary grades, focusing on adapting AI prompts for varying literacy needs.
- **Ongoing Professional Development:** Continued support for teachers will focus on building prompt engineering skills and refining the AI interaction process. A series of workshops on AI in literacy instruction will be held to deepen understanding and comfort with the tool.
- **Evaluation of Long-Term Impact:** The board intends to monitor student reading outcomes and teacher feedback to assess the tool's effectiveness over time. A review of the prompt structures and intervention models will also guide further customization of the AI tool to ensure it remains aligned with curriculum standards and instructional goals.

## Resources

- [AI Reading Specialist Flow Chart](#)
- [Structured prompt guide](#) for using Ms. DF Reeds with step-by-step instructions
- [Video overview](#) to use the prompt guide for teachers
- Identified Student Profiles
- Drafts and artifact support for literacy strategies, reviewed and refined with coaching feedback
- Resources on developing prompt personas



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