



ONTARIO PUBLIC
SCHOOL BOARDS'
ASSOCIATION

Leading Education's Advocates

EFFECTIVE PRACTICES IN ELEMENTARY MATHEMATICS EDUCATION

School Board - Hamilton Wentworth District School Board

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Name of Program/Initiative/Strategy _____

Hyperlinks to Documents or Website(s) Describing this Program/Initiative/Strategy _____

Description of Program/Initiative/Strategy)

The focus is on exemplary mathematics practices that excite, engage and increase student confidence and achievement. In the brief description please provide answers to the following questions: Where the program/initiative/strategy is delivered (school/board locations)? Who is responsible for delivering and monitoring the program/initiative/strategy? Who is the target audience? Are there any community partnerships involved? Are there any staffing or budget implications? Are there any special resources required? What are your indicators of success, etc.?

In 2016, the Hamilton Wentworth District School Board (HWDSB) began integrating a Mathematics Strategy Initiative with the technology component of our Board's Transforming Learning Everywhere (TLE) focus. This initiative was supported through 5 sessions which included large group sessions at the Education Centre, small group sessions at the school, and co-teaching in the classroom. All Grade 4 teachers were issued an iPad and their classrooms received a kit of six iPads for student use.

Each iPad included access to the HWDSB app catalogue. Differentiated sessions, facilitated by 21st Century Learning Consultants and Instructional Coaches, were offered to teachers to build capacity using the iPad and a variety of apps. Specifically, the app Explain Everything was used for teachers and students to document their learning and make their thinking visible.

HWDSB is collaborating with three post-secondary institutions who are supporting with the collection and analysis of data collected from teachers and students as part of our TLE evaluation.

Special resources included the use of HWDSB's online learning environment, The Hub, and the use of Apple T.V.

Indicators of success were how teachers developed a deeper understanding of mathematical content and used technology for pedagogical documentation. Artifacts of both student work and student thinking were brought to each session.

What has been the impact on Student Learning?

Through consultation with Dr. Carol Campbell, one of Premier Wynne's key education advisors and an expert in whole system reform and large-scale change strategies, HWDSB developed a framework to describe changes we expect to see as we implement TLE. We expect to see changes in student engagement and student achievement after changes in teachers' behaviours and engagement.

Teachers developed a deeper understanding of pedagogical documentation and the triangulation of data. Observations, conversations and products were documented and used as discussion points with teachers. This was used to develop timely feedback for students and inform instructional next best steps.

At HWDSB we were intentional about gathering teacher voice around the types and structures of professional development that we provided for all Grade 4 teachers in the system. For example, we gathered feedback from teachers to inform subsequent sessions.

Common student errors and misconceptions were gathered from student diagnostics on fractions. A student survey was administered to gather student voice around their learning experiences involving fractions. Both of these sources of data were shared with teachers and used to inform instruction.

The following address links to the website that was created to house the resources used in the integration of technology and Mathematics Strategy Initiative. The site continues to act as a repository of resources to support the transformation within classrooms.

<https://tle.commonshwdsb.on.ca>