District School Board of Niagara – Project 1: 2014 - 2015

Project Title	Earn a Device
Description	Teachers from all grade levels and schools were invited to participate in the Earn-A-Device program. Participants were selected based on school and/or area initiatives. Criteria for selection was developed by the area superintendents and aimed at the "novice" level technology user.
Context	*Number of students*: 3750 *Number of teachers*: 150 *Number of schools*: 105 *Grades/Program*: Grades K to 12
Impact on Students	Increasing the comfort level of teachers to use technology in the classroom directly relates to student engagement, achievement, 21st Century Competencies, and learning partnerships as technology implementation provides an increase of relevant learning strategies for our students. Students can produce learning examples in a variety of formats and when done in a digital nature, teachers can also provide more rich, personal assessments and evaluations on a more regular basis.
Impact on Instruction	Teachers learned to work more efficiently with regards to collaboration between themselves and students and between students and other students in the class and how they were assessing and evaluating student products during the creation process and after completion. By providing ongoing feedback, student production increased in quality and complexity. Teachers also became more comfortable in sharing their strategies and ideas during the EAD sessions, creating complex assignments with differentiated learning outcomes and strategies for all.
Impact on System	The EAD project has changed how technology for teachers is being handled in the DSBN. Rather than giving out laptops, iPads, or Chromebooks for teachers, they are earning their devices by learning how to use them in the classroom with their students. Training and support is a large, up front need [of teachers] for support by the IT4 Learning Technology Training Team in the DSBN, but the creation of a collaborative environment for sharing resources and pedagogy regarding the implementation of technology in the classroom will offset the continued need for support. EAD participants will become technology integration leaders in their school as they become more comfortable with the tools that they have been provided. They know where to access more centrally shared strategies and supports because of the courses that they have completed.

NOTE: Information in the summary is taken directly from the data contained in the final project report.

Project Title	**Connect**
Description	CONNECT 2015 offered professional learning opportunities for all types of educators and education leaders, including teachers of every discipline, tech coordinators, administrators, superintendents, teacher educators and media specialists. Attendees received: • Access to more than 180 sessions and learning opportunities. • Entry to an interactive exhibit hall featuring more than 100 companies. • Two thought-provoking keynotes. • Opportunities to connect and network with more than 1500 fellow educators and education leaders.
Context	*Number of students*: 150 *Number of teachers*: 110 *Number of schools*: 105 *Grades/Program*: Grades 6-10
Impact on Students	• Students were given the opportunity to create an augmented reality and digital media project. • Students had the opportunity to attend information sessions. • Students were able to connect technology with the curriculum. • Increased collaboration with the Microsoft O365.
Impact on Instruction	Educators had the opportunity to attend a wide array of educational sessions and hands-on learning environments, to build their content knowledge while learning new strategies, and to gain exposure to the most timely and relevant topics and trends in educational technology. They are provided with tangible resources and hands-on teaching strategies that can be implemented right away. This rich learning experience also equipped them with valuable knowledge they can share with their colleagues as technology ambassadors. By passing on the information and resources they gather, they become leaders in the development of digital age learners.
Impact on System	• This is part of our board strategic and improvement plan. It forms the basis of the school ITS operational plan for hardware purchases, software purchases and professional development. • This conference connects all stakeholders to improve student achievement. It allows teachers, principals and superintendents (and their professional associations) to identify and share effective and innovative teaching practices that include the use of technology.

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District School Board of Niagara

Project Title	**DreamBox**
Description	The project is designed to meet the individual mathematics needs of students in our system through a computer based program called DreamBox. DreamBox is an adaptive mathematics computer program which responds to the individual needs of each student as they work through the activities and lessons in the program. DreamBox adapts to the developmental needs of each student, and while it generally aligns with our curriculum, it is more focused on aligning with the current needs of each student. The technology provides students with contexts and links to models which enables students to make sense of the mathematics they are learning. The program gathers and reports student performance in relation to curriculum expectations, which provides teachers another assessment tool to track student achievement. This data allows the teacher to further identify the strengths and needs of their students, both through in-class instruction and through this computer program.
Context	*Number of students*: 18 960 *Number of teachers*: 672 *Number of schools*: 85 *Grades/Program*: Grades K to 6
Impact on Students	Students have gained confidence and perseverance in their abilities to solve problems, as they now have more strategies which allow them to be more flexible when solving problems (increased flexibility is increasing confidence). Students also use more models to think through problems which they don't know how to solve when they first get to the problem (the models are encouraging them to persevere). Both of these benefits have also created a richer dialogue in classrooms where students are better able to represent their flexible thinking and share during problem solving tasks and classroom discussions. In all classrooms where DreamBox has been used significantly, DreamBox has added knowledge of strategies and models to students, regardless of the experiences in regular classroom instruction.
Impact on Instruction	Teachers have gained confidence and perseverance in their abilities to teach mathematics. They now have more strategies which encourage them to be more flexible when teaching students through problem solving (increased flexibility in understanding of developmental landscapes of learning concepts is increasing teacher confidence). They also use more models to represent student thinking or think through problems themselves, which they may not know how to solve when they first get to the problem (the models are influencing them to persevere). Both of these benefits have also created a richer dialogue in classrooms where teachers have an increased mathematics for teaching knowledge (which allows them to better identify the strengths and next steps a student needs at a given time, and ask questions and/or make visible the

	thinking that students are struggling with). Teachers have also improved their understanding of the great gains that can be made for struggling students when they use assessment from classroom instruction, and the data from DreamBox to provide additional support in areas needed. This improved teacher understanding has also resulted in an increase in teacher efficacy in providing more appropriate support for students who face challenges in mathematics. These gains were all extremely more evident in classrooms where the instruction aligned with the research-based approaches that are suggested in the curriculum, and supported by resources we have been working with over the last many years. In classrooms where this teaching is not frequently implemented, DreamBox has added knowledge of strategies and models to students and as a result, to teachers who may have been previously unaware of the variety of strategies and models that can be used to more flexibly solve various problems and to give contexts and models to operations and problems.
Impact on System	System scaling is significantly impacted by many aspects. We have focused this year on the following actions: deepening our understanding and awareness of the curriculum, deepening our mathematics for teaching knowledge, and deepening our awareness and use of research-based resources. DreamBox has supported the individual needs of our students, while at the same time, supported our educators in relation to these goals. System scaling of this initiative will also require more focused efforts across the system. Administrators play a key role in the focus and usage of the program in their schools. Where administrators have made this a priority, student achievement has increased (as evidenced by increased time on the program and increased gains across the curriculum as measured by the program). We have a significant number of students who demonstrate that mathematics is challenging for them. Alongside all of the effective strategies that we will continue to implement within the classroom setting, and in sessions with LRTs, DreamBox provides a supplemental support for students who are struggling in mathematics. Increasing our focus on this group of students in relation to DreamBox is a further need within our system. As well, DreamBox provides additional practice and support for all students and can provide a challenge for students who are doing well with regular classroom instruction, to persevere and problem solve their way through new learning opportunities (sometimes before are presented through regular classroom instruction).

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