



REPORT TO

## STUDENT ACHIEVEMENT AND WELL BEING, CATHOLIC EDUCATION AND HUMAN RESOURCES COMMITTEE

### 21ST CENTURY LEARNING 2017 ANNUAL UPDATE

*“The digital world can be an environment rich in humanity;  
A network not of wires but of people.”  
Pope Francis*

Created, Draft	First Tabling	Review
August 28, 2017	September 7, 2017	<a href="#">Click here to enter a date.</a>
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<b>INFORMATION REPORT</b>		

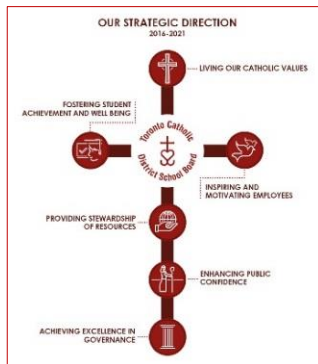
**Vision:**

*At Toronto Catholic we transform the world through witness, faith, innovation and action.*

**Mission:**

*The Toronto Catholic District School Board is an inclusive learning community uniting home, parish and school and rooted in the love of Christ.*

*We educate students to grow in grace and knowledge to lead lives of faith, hope and charity.*



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## **A. EXECUTIVE SUMMARY**

This report will serve as an update of the work being done in the TCDSB around 21<sup>st</sup> Century Learning. As part of an integrated five-year plan, the focus of the TCDSB21C Department in 2016-2017 included:

- i. the competency of Knowledge Construction;
- ii. STEAM Education (Science, Technology, Engineering, Arts and Mathematics);
- iii. the use of Google Suite;
- iv. Maker Education; and
- v. Coding.

In order to integrate NeXt Lesson competencies into the teaching and learning environments of our schools, educators participated in diverse professional learning opportunities to further develop and enrich the six (6) 21<sup>st</sup> Century competencies:

- i. Collaboration
- ii. Knowledge Construction
- iii. Real World Problem Solving
- iv. Skilled Communication
- v. Self-regulation
- vi. Use of ICT for Learning

*The cumulative staff time dedicated to preparing this report was 40 hours.*

## **B. PURPOSE**

1. The 21<sup>st</sup> Century Learning Five-Year Plan (May 2013) requires that an annual progress report be provided for Trustees at the Student Achievement and Well-Being, Catholic Education and Human Resources Committee. At the Board meeting of May 30, 2013, the following motion was approved:

*That the Board approve the TCDSB Five-Year Plan for 21st Century Learning in Appendix A.*

2. This report reviews the progress that has been made in our five-year plan and the success of its implementation.

## **C. BACKGROUND**

1. Over the past few years there has been an abundance of academic focus on the skills and competencies that will be required of today's students as they move into the world of work, and how to address their learning needs for our 21st century world.
2. The 21<sup>st</sup> Century Learning skills and competencies that students need are common throughout the curriculum.
3. The TCDSB 21<sup>st</sup> Century Learning Five-Year Plan was approved in May 2013.
4. Project NeXt and the NeXt Lesson are the framework for 21<sup>st</sup> Century Learning in the TCDSB, and they form the basis of our 21st Century Learning Five-Year Plan.
5. The Ontario Catholic School Graduate Expectations and the Growing Success Learning Skills are an integral part of the NeXt Lesson.
6. This year, the TCDSB21C Department emphasized the following: i) the competency of Knowledge Construction ii) STEAM Education (Science, Technology, Engineering, Arts and Mathematics) iii) the use of Google Suite, (iv) Maker Education v) Coding.
7. The implementation of Google Suite is ongoing as additional functionality is tested and made available. This year Google Sites was made available, which is an easy way to create and share web pages.

## **D. EVIDENCE/RESEARCH/ANALYSIS**

1. TCDSB21C has been involved in promoting 21<sup>st</sup> Century Learning and the NeXt Lesson through various professional learning sessions, presentations and other board initiatives. The detailed description of each TCDSB21C project can viewed in Appendix A. With each detailed description there is also an indicator showing which phase of the 5 year plan that it aligns with and which 21<sup>st</sup> Century Learning competency of the NeXt Lesson that it reinforces.

2. Below is a list of the titles for each project in which the TCDSB21C team has been involved in 2016-2017. Next to each title is a summary of who was involved and how many people it directly impacted. In Appendix A are description details for each of the following projects:

- **Digital Learning Day:** Approximately 150 Teachers
- **Growing Success Elementary Report for Elementary Teachers:** Approx. 1 Teacher rep per school = 170 people
- **21C Innovators Professional Learning Sessions with Lead Learners:** 3 sessions x 8 Teachers and 16 Vice Principals
- **21C Innovators:** Approximately 200 Teachers x 3 full days = 600 Teacher PD Sessions
- **Voices That Challenge:** 1 session x 20 Students
- **New Teacher Induction Program: Growing Success Elementary Report:** 2 sessions x 20=40 Teachers
- **Mobile Device Management: for Principals and Volunteer Teachers to facilitate the purchase and deployment of apps on the iPads** (4 sessions x 15=60 Staff)
- **English Language Learners Initiative:** 25 Teachers x 4 Days = 100 Teachers PD Sessions
- **Coding Quest: The Learning Partnership:** Approximately 43 Teachers were in-serviced; 36 schools, and approximately 150 Students participated
- **Exploring Grade 5 Mathematics and Coding Professional Learning Sessions:** 70 Teachers x 2 days = 140 Teacher PD Sessions
- **The Third Teacher - Changing the Learning Environment:** support as requested from schools and presentations/ discussions as part of the 21C Innovators
- **Geographical Information System (GIS) Professional Learning Sessions:** 10 Teachers X 2 days = 20 Teacher
- **3D Printing – TCDSB21C and Arts:** 30 Grade 7 Students and 15 Grade 7 Teachers
- **I<sup>3</sup>: Investigate! Invent! Innovate!:** The Learning Partnership: Approximately 13 Teachers were in-serviced, and 13 schools participated
- **EAP - Entrepreneurial Adventure Program & Dragon's Nest: The Learning Partnership** Approximately 15 Teachers were in-serviced, 29 Teachers from 26 schools participated
- **Hour of Code:** Approximately 6564 Students & Teacher/Admin Participants

- **TCDSB21C working with York University Faculty of Education:** 120 Future Teachers
  - **Makey Makey:** 15 Grade 4 and 5 Students and 15 Grade 4 and 5 Teachers
  - **Day eLearning Professional Learning:** 12 Teachers x 2 days = 24 Teachers
  - **L4T - Laptops for Teachers:** 100 Teachers x (1 after school session, 4 online modules and 1 full day of PD)
  - **TCDSB 21Camp:** approximately 175 Teachers/Admin
  - **21Camp Planning Team Workshop:** 17 Teachers, 1 Admin
  - **Mini Special Olympics:** Approximately 800 Student Participants
  - **Google Suite (G Suite): Additional Functionality:** Approximately 250 Teachers and 1500-2000 Students
  - **Literacy Initiative:** 25 Teachers x 2 Days = 50 Teachers
  - **FIRST Robotics – Secondary:** 14 Teachers, 7 Schools, Approximately 70 students
  - **Be a Game Changer 2.0:** 71 Teachers enrolled in this eCommunity
  - **Exploring Grade 5 Mathematics with Windows 10 Cloudbooks and Minecraft Education Edition:** 2 sessions x 12 Teachers, 1 session included 8 students from participating schools
  - **February 13<sup>th</sup> Professional Development Day for Secondary Teachers – LOYOL:** 30 Teachers x 5 Sessions = 150 Teachers
  - **Collaboration with TCDSB Technical Services Department:** Image Testing: Regular and Ongoing Support, Weekly Consultations
  - **Preliminary Investigations for a Potential Parent Portal:** TCDSB21C, ICT Trillium/Student Services, Technical Services, Computer Services and the Communications Department
  - **School Community Engagement Apps – Digital Alternatives to the Traditional School Agenda Book:** TCDSB21C, Technical Services, Federation Representatives, School Administrators and Materials Management
  - **School Cash Suite:** TCDSB21C, Finance, Computer Services, Technical Services, Materials Management and ICT Trillium/Student Services Departments
3. The TCDSB21C department has more demand for workshops on the integration of technology than it can provide. With many of the programs there is more interest than there is space and available supporting resources, as evidenced in the following data:

- a. The Laptops 4 Teachers (L4T) program has received very positive feedback as shown below in Section E #7. This was year 3 for this program. In year one, there were 295 computers available with 726 teachers interested in being a part of the program. In year two, there were 100 computers available with 527 teachers interested in being a part of the program. This year in year 3, there were 514 teachers interested in the program, with 100 computers available. To date TCDSB21C has been able to offer intensive professional learning to 495 teachers who received laptops for classroom use.
  - b. The 3D Printing workshop has received very positive feedback as shown below in Section E #8. This program has been aimed at Grade 7 with space for 15 teachers, who can each bring 2 students with them to the workshop. This year was the second year for this program. In year one, there were 56 teachers interested and this year, in year two there were 46 teachers interested in participating in the program.
  - c. Coding and Electronics workshops have received very positive feedback as shown below in Section E #9. This program has been aimed at Grade 5 with space for 15 teachers, who can each bring 2 students with them to the workshop. This year was the second year for this program. In year one, there were 27 teachers interested in Arduino and this year, in year two, there were 72 teachers interested in Makey Makey.
4. The 21C team has been identifying opportunities to build capacity, and has forged strong relationships with many K-12 Teachers. Evidence of this was seen recently when a vacancy opened in the department as a result of a staff member being promoted to Vice Principal, and there were 15 applicants for the position. In the past there has been an average of about 4 applicants. We believe that this is the result of growing awareness of 21st Century Learning and of the department's efforts in engaging in collaborative professionalism with many TCDSB K-12 educators.
  5. Background to consider given increasing interest in 21C programs:
    - a. The TCDSB21C Department was started in September 2012, when a new Superintendency was created to bring system focus to the changing needs of our education system so that the TCDSB can prepare students for a changing world.

- b. In September 2012, the Academic Information and Communications Department (AICT), which consisted of a Program Coordinator (Principal), an eLearning Coordinator (Vice Principal) and 7 resource teachers were moved from Curriculum & Accountability to the 21<sup>st</sup> Century Learning Department. The total number of staff dedicated to 21C was 10.
- c. Prior to September 2012, the work of the department was to support technology use through providing workshops for teachers on how to use specific pieces of technology or system applications and to work with the Technical Services Department to ensure applications and technology supported teacher and student needs.
- d. In September of 2012, the focus of the AICT team began to evolve in order to help raise awareness of the need to address 21<sup>st</sup> Century Learning Skills. The department began to raise awareness about what 21<sup>st</sup> Century Learning meant, and how to change practice to begin addressing the various competencies. The department moved away from its previous technology only focus.
- e. With the total number of staff dedicated to 21st Century Learning, staff were able to continue supporting technology use but also began providing more than one-off workshops. The new focus was about 21st Century pedagogy and also began addressing the need for the appropriate tool at the appropriate time. Teachers showed great interest in learning more about 21<sup>st</sup> century learning competencies and how they could move their practices further along a spectrum of 21C integration.
- f. In June of 2015, 5 teachers were declared surplus to the department, and the Program Coordinator position was removed. In June of 2016, the Superintendent had additional portfolios added and as a result is no longer solely dedicated to 21st Century Learning. Working full time in the area of 21<sup>st</sup> Century learning now, there are 2 resource teachers and the Technology Enabled Learning and Teaching Contact (formerly eLearning Coordinator, name change to this Ministry funded position).
- g. Since 2012, the TCDSB21C department has taken a train-the-trainer approach to ensure that we have many advocates of 21st Century Learning in the system. In the last 5 years, the interest from staff, in particular teachers, has grown significantly and as a result the demand for more in-servicing has increased substantially.
- h. The other notable change that has occurred through the transition from AICT to TCDSB21C, is the influx of funds for 21C related professional learning and technology investments, from the Council of Ontario Directors of Education. As a result, with the infusion of these additional funds there have been some very significant technology rollouts for the TCDSB.



- i. Funding from CODE is expected to diminish for the coming year, with no promise for continued funding beyond next year.

## **E. METRICS AND ACCOUNTABILITY**

1. This year, the TCDSB continues to contribute at a national and global level in the following:
  - a. C21 Canada, a national not for profit organization that advocates for 21st Century models of learning in education. The Director of Education continues to sit on C21 Canada's CEO Academy along with 20 other educational leaders from throughout Canada.
  - b. The Learning Partnership is a national charitable organization dedicated to building stakeholder partnerships to support, promote and advance publicly funded education in Canada. The Director of Education, was a member of the Learning Partnership's Board of Directors.
2. Feedback from the TCDSB21C Innovators Program:
  - 20% of the 200 participants responded to the survey.

*The following questions used a rating scale of 1 to 5, with 5 being the highest rating; average responses are shown:*

- a. How important is PD to you? **Average response 4.7 / 5 = 96%**
- b. As a result of being involved in 21C Innovators, how would you now rate your comfort level in applying the NeXt Lesson framework to your lesson planning? **Average response 3.75 / 5 = 75%**
- c. Taking into consideration other formats of PD in which you have been involved, how would you rate 21C Innovators as a structure for professional learning. **Average response 4.3 / 5 = 86%**
- d. How important is it to you that PD be similar to the 21C innovators continue? **Average response 4.55 / 5 = 91%**



3. Feedback from the Day eLearning Professional Learning Sessions:
- 90% of the 13 participants responded to the survey.

*The following questions used a rating scale of 1 to 5, with 5 being the highest rating; average responses are shown:*

- a. How important is PD to you? **Average response 5 / 5 = 100%**
- b. Taking into consideration other formats of PD in which you have been involved, how would you rate Day eLearning professional learning opportunities as a structure for professional learning.  
**Average response 5 / 5 = 100%**

4. Sample Teacher Feedback from Hour of Code event:

- a. From a teacher at St. Matthew: Second year participating for some of my students and they love it! Some are continuing with Code Academy, etc.
- b. From a teacher at Precious Blood: Students enjoyed the challenges of creating their own minecraft game. A coding club is being investigated by the Junior Division of teachers, so that those students who are interested in coding can continue their quest.
- c. From a teacher at St. Rene Goupil: Students were engaged during this learning activity and thoroughly enjoyed the experience of learning to code.
- d. From a teacher at Blessed Pier Giorgio Frassati: The hour of code is an amazing experience for our students. And they always remember being a part of it every year.
- e. From a teacher at St Kateri Tekakwitha: This was the first time my students were exposed to coding. They were very focused and interested as it was about their favourite game, Minecraft. The 4 Gr. 8 students were there to take on the leadership to guide the 18 Gr. 2/3's. At the end, my class went home to continue doing more coding and all have asked me to do this with them again. My students learned to plan ahead and to "fine-tune" their codes when it doesn't run properly. My next step for them is to learn how to use the least code to perform the same task. I'm looking forward to code with them again.

5. Sample Teacher Feedback from 21C Innovators:

I felt that there was an excellent balance of learning and time to explore and share with other educators. Time for discussion and feedback throughout the process.

6. Sample Tweet from Digital Learning Day:

Q: How are you activating student voice? Tweet from @MrDaCosta8, teacher from D'Arcy McGee: #TCDSB21C #DLDay With Classroom I've seen my students take initiative in their own edu/learning #Collaboration #Communication

7. Sample Teacher Feedback from Laptops 4 Teachers:

- a. Excellent format and great resources. Has really helped my comfort level with using tech in the classroom and getting my class involved as well.
- b. Having an online and in-person learning community was amazing. It was great to hear how people are using technology in their classrooms and to share with others what I am using in mine. I think these type of learning opportunities result in more meaningful and impactful classroom experiences for our all our students because we now feel more comfortable using technology in our classrooms.
- c. I was so impressed with how every component of the Laptops for teachers program was so well curated. I learned both 21c skills as well as skills that supported my growth as a teacher in general. In particular I really loved the information demonstrating moving learning from entry level to transformation. WELL DONE!

8. Sample Teacher Feedback from Exploring 3D Printing Session:

From a teacher at St. Simon: Fantastic workshop. Thank you Russo, Cucchi, Belcastro, Stamegna. Students very excited and eager to share knowledge back at St Simon.

9. Sample Teacher Feedback from Makey Makey Session:

- a. From a teacher at Santa Maria: The children and I thank you for an amazing day! It truly was inspirational and heart warming to see all our children hard at work creating and collaborating! Trevyon and Lucas expressed to me that today was an amazing day for them!
- b. From a teacher at St. Brendan: Overall a great day. Good day for collaboration as I am walking away with more items for my teacher tool box.

**F. CONCLUDING STATEMENT**

This report is for the consideration of the Board.