

Sabbatical Report of David Macleod

Mahurangi College

Term 3 2018

Purpose:

To investigate what I can learn from schools in Canada regarding:

- Strategies to improve student achievement
- Innovative programmes, particularly in the areas of sustainability, wellbeing and construction

Acknowledgements:

- The Board of Trustees and management team at Mahurangi College
- The Superintendents, Principals and teachers I met with in Canada

1. Meeting with Derek O'Brien, Director of Schools, New Brunswick

Derek oversees 74 schools and is based in St Stephen in the Anglophone South District of New Brunswick. Their current areas of focus to improve student achievement are:

1. *Collaboration between schools.*

They have been working in their district with Michael Fullen on improving collaboration between schools and have now formed clusters consisting of 5-8 similar schools which are working together and learning off each other. The principals of these collaborative groupings meet together regularly, sometimes for a full day. They set their own agendas for these meetings and are given a high level of freedom around the collaboration, which the district seeks to support.

At high school level their schools are mainly grade 6-12 (Y7-13) although there are some grade 6-8 (Y7-9) middle schools and grade 9-12 (Y10-13) senior high schools.

2. *Differentiation within the classroom.*

The district has done away with all streaming apart from the natural streaming that happens through subject choice at senior high school, but even then, all classes are available to all students. They are working with teachers on differentiated classrooms – direct instruction is still important, but teachers must not be “teaching to the middle” – they must cater for the learning needs of each student – this requires high level inter-actions so teachers are aware of where each child is at in his/her learning.

3. *High Expectations of all students.*

A strong belief by the teacher in the capacity of each child to achieve is essential. The teacher must also believe in their capacity as a teacher to make a significant difference in the learning of each child. Deficit thinking by teachers leads to poor teaching and learning.

4. *Reporting to parents.*

They are reducing the amount of written reporting to parents, as most parents do not read or even want detailed written reports. Instead they are having much more frequent teacher conversation with parents, including formalised tri-meetings, with the emphasis on the next steps in learning for that child and on the co-construction of individualised learning goals, with the pupils having an active part in this process.

5. Formative assessment.

There has been a strong move in recent years to formative assessment rather than summative testing. They are aiming to build on what students do know and take them to next level. They are now measuring progress against learning levels so teachers can provide clear feedback to students on the next steps they need to take in their learning journey.

6. BYOD.

Schools in New Brunswick have been very wary of BYOD. Some schools have been allowed to explore this pathway and more are moving in this direction. The main concerns are about distraction in class, privacy (including unauthorised photography and video of other students and staff), online bullying, and the negative effects of social media on student physical and emotional wellbeing.

7. Teacher quality.

The new school year started 3 days ago on Tuesday of this week, but he is still looking for 12 suitable teachers to employ across his 74 schools – in the meantime these classes have supply teachers, but there are also very fewer suitable supply teachers available. The shortage also leads to greater transience of teachers as they move positions between schools more frequently, adding to the complexity for employing authorities. All students in Canada have the option of French language immersion teaching and this year he has had to bring in 10 teachers from France and Belgium to cover some of these classes – they are currently inducting these teachers and settling them into the Canadian system, which always creates some issues.

The provinces in Canada each have their own collective teacher employment contracts, so salaries and wages vary between provinces. All provinces are currently experiencing a shortage except for Ontario which can afford to pay much higher salaries and provides an excellent superannuation scheme for teachers.

8. Performance Development.

They have a strong accountability system with formal teacher observations, judgements about teacher performance and grading of teachers through their appraisal process. But there is a move away from this towards teachers taking greater ownership of their own personal development and growth. This is mainly through teacher inquiry where teachers work together in teams in the analysis of their results, research together into these, reflect on their own practice, document the changes they make in their teaching practice, and evaluate the impact of these changes. There is still a long way to go with this before it will be ready to fully replace the traditional system. Currently a blend.

2. Meeting with Greg Ingram, Superintendent of Schools in NE Ontario

The major current initiatives to improve student achievement in NE Ontario schools are:

1. Developing strong *teacher efficacy*.

This draws strongly on the work of NZ researchers, particularly Professor John Hattie but also Vivienne Robinson and Russell Bishop.

In his district, they are using Jenni Donohoo to provide training for their school leaders in strengthening teacher' efficacy. Her book is essential reading: "*Collective Efficacy – How Educators' Beliefs Impact Student Learning*", by Jenni Donohoo (*refer 3 below*).

2. A strong emphasis on teacher **professional learning**.

Their district goals are for principal learning, teacher learning and improved student achievement. Increasing student achievement is only the 3rd priority because if 1 and 2 are done well, 3 will follow. Schools in his district all have 5 full staff PLD days per year (additional to the admin days at start of each semester). He arranges monthly training for all Vice Principals in the district and they in turn coordinate the professional learning programmes for staff in their schools.

3. **Growing instructional leadership.**

Heads of Department are now referred to as “Lead Teachers” and their Job Descriptions have been amended accordingly, making instructional leadership their prime responsibility. Strong classroom teachers have been recognised with appointments as inquiry group leaders and given training in how to do this effectively within their schools, including how to themselves model best practice for staff.

4. **A focus on Health and Wellbeing.**

This was the number one concern of parents in their community consultation and is the number one area of focus (out of six) in the education district strategic plan:

[Kawartha Pine Ridge District School Board](#)



Strategic Planning

As an organization committed to continuous improvement, we believe it is critical to take time periodically to pause, reflect, and consider how best to move forward toward greater success, For our students and staff.

To that end, every four years we ask ourselves, and the parents and public we serve, what are the most crucial needs in public education today, and tomorrow. Living, Learning and Leading in a Changing World 2015-2018 is a culmination of a 10-month journey of consultation, dialogue and realization that began in 2015.

LIVING IN A CHANGING WORLD	
AREA OF FOCUS	WE ARE COMMITTED TO:
Health and Well-being	<ul style="list-style-type: none">– Creating conditions for social and emotional well-being and supporting positive mental health;– Enhancing supports for physical activity and healthy living; and– Providing interventions, programs and supports responsive to the needs of students and staff.

5. **Support for collaboration between schools.**

He meets with groups of principals of like schools in his region at the District Education office on a bi-monthly basis and he meets with the vice principals monthly. Emphasis on working together between schools to improve quality of education for all students. No sense of competition between schools. They have opened up school buses, so students can travel between school boundaries, provided there is room on the buses, as it is recognised by all that various schools have strengths in different areas. This has resulted in some schools losing favour with their communities, leading to the closure of some schools, but this is in the best interests of the students affected and the district provides them with bus transport to their new school.

1. Support for **teacher inquiry**.

The district provides 3 consultants plus 2 retired Vice Principals to work with Professional Learning Groups of teachers in their region, supporting them in their approach to inquiry. These PLGs can be up to 13 teachers, but within them they often have several sub-groups working together on different joint inquiries. **They have identified 10 high yield strategies which they encourage groups of teachers to implement and inquire into in their PLGs.**

Teachers are also strongly encouraged to investigate, trial and evaluate new and innovative teaching ideas and approaches. Breaking down teachers' defensiveness about their teaching is essential so that they are open to new learning and keen to develop their teaching practice. Associated with this, the breaking down of the silo mentality between classrooms is also essential, with teachers now expected to regularly visit each other and learn from each other.

Schools in the Peterborough District of Ontario are well-funded (from state taxes), with excellent facilities and highly motivated staff. Classrooms and major items of equipment are provided by each local education district to schools, rather than purchased by individual school boards. Schools in Ontario do have BYOD but only about 25% uptake from students – it is not compulsory for equity reasons and due to some resistance by teachers and parents. Each school is provided with a suite/suites of computers which teachers can book and use with their classes when required.

3. Notes from:

“Collective Efficacy – How Educators’ Beliefs Impact Student Learning”
by Jenni Donohoo, Corwin Publishing 2017

The level of collective efficacy is how strongly the staff of a particular school believe that they as teachers make a difference in their students' learning.

“Collective teacher efficacy is beyond three times more powerful and predictive than socioeconomic status. It is also greater than three times more likely to influence student achievement than student motivation, concentration, persistence, and engagement.” (p.5)

Table 1. Factors Influencing Student Achievement and Their Effect Size

Influence	Effect Size
Collective Teacher Efficacy	1.57
Self-Report Grades/Student Expectations	1.44
Feedback	0.75
Teacher-student relationships	0.72
Prior achievement	0.65
Socio economic status	0.52
Home environment	0.52
Parental involvement	0.49
Motivation	0.48
Concentration/persistence/engagement	0.48
Homework	0.29

SOURCE: HATTIE, J. VISIBLE LEARNING FOR TEACHERS: MAXIMIZING IMPACT ON LEARNING. (2016, JULY).

“When efficacy is high, teachers are more accepting of change and more likely to try new teaching approaches.” (p.15)

There are **four sources** which develop high teacher efficacy in a teaching staff:

1. Mastery Experiences

Success breeds success. *“When teams experience success and attribute that success to causes within their control, collective efficacy increases and teams come to expect that effective performances can be repeated.”* (Goddard, Hoy and Woolfolk, *Collective Efficacy Beliefs*, 2004)

2. Vicarious Experiences

When teams of educators observe success in school environments similar to their own. This can occur through site visits to other schools, by networking with other similar schools or within subject associations, via video, or by reading about it.

3. Social Persuasion

This is when groups of educators are encouraged by learning leaders within their organisation to innovate and refine their practice in a responsive manner to the learning needs of their students.

4. Affective States

This is the level of excitement and passion teachers feel towards their teaching and the influence they are having on their students.

There are **four characteristics** of a school with strong collective efficacy:

1. High Teacher Expectations

Teachers in a school with strong collective efficacy will have higher expectations of their students and will create in their students the belief that they can excel in their learning.

In chapter 2 Donohoo discusses how teacher expectations become self-fulfilling prophecies. In 1963 Rosenthal and Jacobson informed staff in a selection of schools that certain pupils had scored highly on the *“Harvard Test of Inflected Acquisition”* so could be expected to show surprising intellectual gains in the year ahead. In fact, this test did not exist and the chosen students had just been randomly selected. Eight months later those randomly selected students showed significantly greater gains in their achievement tests than their peers. Many studies have confirmed this since.

According to Hattie (2012), teacher expectations also have a reverse effect - where they are low they become a significant barrier to success for students, in their learning but also in attendance, engagement and behaviour. Teacher expectations have a huge impact on the individual student’s own beliefs about their capability, their academic goal setting and aspiration, and their own expectations of success at school. A teacher’s low expectations can be conveyed in many ways, including affective displays, communications of pity, short wait times for answers, offering unsolicited help and support, and even rewarding of incorrect answers. Low expectations can be seen in a classroom with few challenging tasks, slow pace and little opportunity for mastery learning. Refer: *“The Water is Wide: A Memoir”*, Pat Conroy (2009).

2. Consensus on School Goals

Teachers within a school with high efficacy will most likely have a high level of commitment and ownership of school goals and targets for the year ahead.

Reaching consensus on goals not only increases collective efficacy, it also has a direct and measurable impact on student achievement. (Robinson, Hohepa, & Lloyd, 2009)

Figure 6: How Effective Goal Setting Works



Source: Robinson, Hohepa, and Llyod (2009)

“Kurz and Knight (2003) found that consensus on school goals was a significant predictor of collective efficacy.” (p.30)

3. Distributed Instructional Leadership

Instructional leadership within a school with high efficacy will typically be widely distributed across teams of staff.

“The provision of time and formation of teams however, do not guarantee that collaboration will result in a sense of collective efficacy.” (p.36)

For collaboration to be successful in increasing collective efficacy, and ultimately in higher levels of student achievement, the teams need to be empowered by school leaders so that academic targets, professional learning and school improvement strategies come from and are led by teachers within the school.

“The feeling of empowerment that comes from successful influence not only enhances efficacy, but it also results in increased engagement and a desire to be involved.” (p.43)

“School teams can overcome the gap between their school’s current situation and desired future. A key to their success is in establishing and maintaining high expectations for all students.” (p.46)

4. Collaborative Teacher Inquiry

Teams of educators coming together to examine their own professional practices, with a focus on students’ learning needs. It involves teacher leadership (rather than top down) and teachers taking charge of their own professional learning.

Katz et al, (2009) suggest that formal leaders “distribute leadership, identifying those teacher leaders who are in the position to lead in a focus area because of their expertise”. (p.75)

Inquiries arise out of student achievement data and success is measured in terms of student achievement data. Hunches are shared, researched, trialled and evaluated in the inquiry team. A willingness to reflect on one’s own practice and to share these reflections within the team is essential. Through active involvement in this inquiry process, teachers are more likely to make lasting changes in their practice that will have a positive impact on student learning and achievement.

4. Visit to the sustainability programme for Grade 11-12 high school students at Trent University

The Youth Leadership and Sustainability (YLS) Programme arose out of the deep passion and vision of Cam Douglas, a teacher from Kenner Collegiate:



The YSL programme is run on site at Trent University and draws students from 7 of the 12 public high schools in the Peterborough area. Students gain credits towards their high school graduation (the Ontario Secondary School Diploma) and towards their first year of university study. It offers credits equivalent to 4 regular high school courses: world issues, environment and resource management, sustainability leadership, and English — contemporary Aboriginal voice. These are integrated around the theme of sustainability. Students also do their Maths and English credits as part of the course.



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Overview

Youth Leadership in Sustainability (YLS) is a new and innovative program based in Peterborough, Ontario that will prepare grade 11 and 12 students for leadership roles in local and global sustainability initiatives at the local and global levels. The one semester program is launching September 2018 and is open to students from any KPR, PVNC, private or home school, provided they can get themselves to Trent University on school days.

YLS represents a partnership program with Kenner Collegiate, Trent University, the Kawartha World Issues Centre (KWIC) and Fleming College. The YLS classroom is on Trent University campus but the program will take us into our forests, communities, and the larger region!

YLS will be taught as an integrated 4 credit package that will give us much flexibility in our day for **extended field trips and outdoor exploration**. Our learning experiences outside and within the traditional classroom will be rich and incorporate teachings from Indigenous and global perspectives.



On the day I attended, the special guest was Jasmine Sturgeon, whose ancestral name in her first nation Ojibway language is Michi-saagig Anishinaabe. Much of the learning on this course will take place in a tepee, which has been constructed outside the classroom. The ancestral ownership of this land by the Ojibway people was acknowledged and Jasmine led a cleansing ceremony where those who wished to participate could gently waft smoke from the fire over themselves and pray silently in their own way for cleansing of their thinking, seeing, hearing and speaking. The dean of Education at Trent, Adrian Ash, and a trustee, Julie, also attended.

After Jasmine had spoken and led the cleansing ceremony, each student explained why they had chosen to take this course and Cam outlined the first module, which will investigate best practices in sustainable community-based agriculture, renewable energy production, transportation and urban design.

The course aims to support the goals of the UN Global Action Plan for Sustainable Development and will have a range of field trips looking at best sustainable practice throughout the southern Ontario region. It will include the students spending time with surrounding First Nation communities, including the following day being involved in traditional wild rice harvesting at the nearby Hiawatha First Nation reserve.

5. Visit to the Skilled Trades Faculty at Kenner Collegiate Vocational Institute

Students study 6 subjects in the senior school – Maths and English for 4 * 75 minute periods per week, all other subjects for 3 * 75 minute periods per week, a total of 20 * 75 minute periods = 25 hours per week. All teachers each teach 3 * 75 minute periods per day, including the Departmental Heads.

The Lead Teacher (HOD) for Technologies is Frank Moloney. He teaches Transportation Auto in a fully equipped automotive workshop where students work on live projects, cars brought in from the community for repair or service, including teachers' cars, with him assisting them. Frank also oversees the 6 technology courses in the Skilled Trades Faculty at Kenner Collegiate: Hospitality, Landscaping, Transportation Auto, Small Engine Auto, Hairstyling and Construction.

The purpose of each of these technology courses is to *provide students with experiential learning through which they can obtain the introductory skills and knowledge of that trade in a safe environment*. In doing this each teacher maintains *strong community links* in the local community to keep the courses relevant, and to provide the grade 12 (Y13) students with practical work experience within the industry, and easier transitions in the future.

The Ontario Teachers' Union has negotiated that senior (grade 11 and 12) Technology classes have no more than 22 students. Graduating students from these courses (approximately 85%) gain their OSSD with an endorsement for Specialist High Skills Major (SHSM).

The teacher of the small engines course is Matthew Amyotte. He was a structural engineer then moved into a career in marine engineering prior to teaching. This course covers a range of small engines including lawnmowers, motorcycles, snowmobiles, powersports and quad bikes. Currently covering basics of how a small engine operates. All students in pairs are disassembling a small engine, writing down each step, then completely re-assembling it so that it still works.

The teacher of Hospitality is Peter Poley. The school is located in a low socio-economic community, so his students spend a lot of time catering for those in need their community. This class when I was visiting was making muffins for the school's breakfast club the next morning, which feeds breakfast to over 200 students each day. Last night his Grade 12 class did a roast beef dinner for 150 homeless people at the Methodist church across the road. Tonight they are cooking a lasagna dinner for a community programme run by the nearby Catholic church.

The teacher of Hairstyling and Manicure is Julie Hinton. Her course connects with a local tertiary provider and with local employers. Most of her students are female (currently 64 of her 66 students) and about 20% are seriously considering a career in either hairdressing or manicure.

Unfortunately the teachers for the landscaping and the construction courses were off-site on the day I visited, so I was unable to see those courses in operation.

Assessment for the OSSD (Ontario Secondary School Diploma) now involves a high level of teacher judgement, which has the advantage of allowing course design to be more flexible, in keeping with the strengths and passions of the teachers, and more responsive to the current needs of the students in each school's community.

6. Visit to the Construction Academy at Bowmanville High School

Bowmanville High School is a grade 9-12 (Years 10-13) school with 1,000 students which runs an off-site Construction Academy. It was set up 17 years ago by teacher Don Clubine, who still teaches the course. This year he has 14 grade 11-12 (Y12-13) students on to the course, most of whom will go on to a successful career in one of the trades.

Local tradesmen often "employ" students on the course when they are short-staffed and pay them for this work when it is out of regular school hours. Don is very happy for this to happen as through it, not only these students, but also all the others also on the course, find out more about work readiness for industry.

The students learn how to use tools safely on a work-site, how to problem solve on the job, how to work as part of a team, they get practical on-site experience in a wide range of construction trades, they develop confidence, maturity and employment skills, and they are provided with a smoother transition from school into work or post-secondary education.

He takes them for a variety of "theory" courses in their portocom, through which the students gain credits towards the OSSD. They also do their planning and design work there. Some of the course is taught on nearby construction work sites when it is appropriate for them to participate in tasks at a suitable level for their skills.

7. Visit to student Wellbeing and Sustainability programmes at Clarington Central Secondary School

While I was in Ontario the Ontario Teachers' Union released a report it had commissioned into measuring student wellbeing, by Dr Arlo Kempf, Director of the Master in Teaching programme, University of Toronto. The opening sentence of the report states, "*Over the past decade, questions concerning student wellbeing have moved steadily to the centre of education policy in Ontario, in Canada, and internationally, in response to what might be termed a crisis in youth wellbeing.*"

Diana Moriarty (left) is the teacher of environmental science and Kelly Baillie (right) is the Guidance Counsellor. Kelly oversees the school's student **wellbeing** programmes and together with the Head of Science they drive **sustainability** within the school, encouraging it to become a component of all courses throughout the school.

As in other developed countries, Canada has seen a huge increase in students' online activity, in obesity, and in youth mental health issues in the last 10-15 years. At Clarington they have implemented various programmes to improve the health of students, with an emphasis on positive mental health:



Ten years ago Dianna with her classes started to plant out a **natural meadow habitat** with plants donated by Earth Angels. Previously it was grass but now contains 15 native meadow plants and no invasive plants. Within one year the change was dramatic along with the insect life the plants attracted.

It is self-regenerating and requires no watering or weeding. The meadow has become a breeding ground for native insects, including several varieties of the milkweed assassin bug, which in turn brings in a wide variety of native birds. The insects also attract native toads, and these attract native owls into the area.

The plants include several species of milkweed, St John's wort, sweet oxide, Canadian wildrye, wild strawberry, New England aster purple, white aster, gold aster, tall meadow sunflower, lobelia, black-eyed Susan. Students learn to identify all these plants and to distinguish them from the invasive weeds. They have ordered ID signs for the plants, which they will insert next year.

A second sustainability project they are currently working on is the creation of an **outdoor classroom**, making use of an ash grove on the boundary of the school. Within this is a natural clearing which they will use as the classroom, with log seating, layered in height elevation, and with an outdoor chalkboard. It will include paths to protect the forest floor and a shelter, with water collection. The classroom will be available to all classes in the school across all curriculum areas.

The ash grove already includes lovely bird life. Their plans include the planting of a new natural meadow habitat around the grove which will further encourage the insect and bird life. They will be installing bat houses, a butterfly garden, a native bee hotel (which is habitat for solitary bees, which are good pollinators and are in decline – apparently they don't tend to attack people as no hive to protect), and three nest boxes which they have already put together – these are easy spaces for birds to build their nests in but have mirrors installed in them so students can keep track of eggs laid, hatched and survival rates.

8. Visit to the Forest Restoration and Living Classroom at Woodland Star International School in Limuru, 40km north of Nairobi, Kenya

While visiting family in Africa, I met with the Principal of the Nairobi Woodland Star School, Timo Lehmann and the Director of the newly established Brackenhurst Botanical Garden, Mark Nicholson.

The 80-hectare Brackenhurst site includes a conference centre, a theological training school, the Woodland Star International School and the 40-hectare restored forest, which is now categorized as a botanical garden

The forest restoration project was started 18 years ago by Mark, whose property borders the school land. He initially came over regarding a dead cow in the bush that was impacting on his property. When asked what he would do with the cyprus, black wattle and eucalyptus scrub land if it was his, he said he would restore it to native African bush, so he was appointed by the school owners to lead this project. He has a Ph.D. from Cambridge and over the past 17 years has overseen the planting 110,000 indigenous trees on the 40-hectare site, which is now home to over 1,500 species of indigenous plants, which he has sourced from all over east Africa, including trees, climbers, shrubs, flowers, herbs, ferns, orchids and fungi.

Prior to starting the planting, they did an initial survey in 2000 and found a maximum of 35 bird species. It is now home to 187 species as well as various animal species, including several varieties of monkeys. Trails have been established through the forest with the common and botanical names of most trees displayed along the trails.

The international school has its own sustainability garden.



And it has an outdoor classroom in a regenerating area of the forest, which is used “every day across all areas of the curriculum”.



Conclusion

In 2017 Mahurangi College employed a consultant to lead our community consultation. The top priorities which came back from our school community, were Student Health and Wellbeing, Sustainability, Academic Achievement, Innovative Programmes, and Community Connection, in that order. There was an almost identical response from the community consultation in the Peterborough School District in 2015:

http://www.kprschoools.ca/en/our_board/boardroom/strategicplanning.html

So my visit was very timely as we too undertake school-wide initiatives in each of these same priority areas.

In 2019 will be starting a construction academy similar to that at Bowmanville High School. It will operate at both L2 and L3, each course for two hours per day throughout the year and linking in strongly with local tradesmen, who are sponsoring the courses.

Our sustainability project includes courses at Y7-10 (and from 2020 in the senior school), but also extending our own sustainable practices as a school, and undertaking a forest restoration project, in partnership with the local council, of a 6-hectare reserve bordering the college.

The forest restoration project will link in strongly with our Student Health and Wellbeing project, which will completely reform and revitalise our pastoral care systems throughout the college.

The initiatives for academic improvement being undertaken in each of the school districts I visited, align closely with learning initiatives our school, particularly through our Community of Learning.

The inquiry process used by teachers in Canada is very similar to our Spiral of Inquiry model. In our school we have focused more on individual teacher inquiries, whereas in Canada the emphasis is strongly on group inquiries by small teams of teachers, which I would like to see more of in our school.

Jenni Donohoo will be leading a workshop on collective efficacy with the teachers in our Kahui Ako in 2019.