

# Ontario Innovation Tour - Texas

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## ATTENDEES

DONSKY, Debbie - Principal, Learning Design and Development

PATHY, Janani - Principal, Middlefield Collegiate Institute

ROSEMIN, Rick - Principal, Learning Resource Services

TSE, Peter - Superintendent of Schools, CEC-East

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## CONTEXT AND BACKGROUND

This two-day tour was organized and hosted by Apple with funding support from CODE. The purpose of the tour is to provide opportunities for educators to visit and dialogue with district and school administrators, teachers and students of schools in Belton and Coppel, Texas - respectively Belton New Tech High School, Richard J. Lee Elementary School, and Coppel New Tech High School. The intent is for attendees to gain a better understanding through conversations and observations of the innovative practices at three Apple Distinguished schools in the following 5 dimensions:

- leadership;
  - learning and teaching practices (instructional strategies, designing learning);
  - ongoing professional learning;
  - evidence of success (assessing and measuring impact); and
  - learning environments. (structures).
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## LEARNING HIGHLIGHTS

The following are some of the learning highlights:

### **Belton New Tech High School - Waskow, Texas**

**Belton New Tech High School (Grades 9 to 12) has approximately 500 students engaged in project-based learning with a technology focus. Students work toward state standards through specific projects designed by the teacher. Students are required to use technology to complete the projects and are assessed based on the content and knowledge, collaboration, professional work ethic, written communication, oral communication and technology literacy.**

Reference: <http://www.bisd.net/newtech>

What are some of the “out-of-the-box” thinking to better engage students in learning?

- How do we overcome the barriers in order to consolidate and crystallize the ideas?

What is project-based learning / problem-based learning?

- How do we structure the learning (instructional) to facilitate deep learning and critical thinking THROUGH project-based or problem-based learning?
- How do we have students design the learning as opposed to completing the task / project in learning? - students as "learning designers"
- How do we drive the learning? E.g., using driving questions as a starting point or big idea to challenging question as a starting point

What are students learning from the projects (4 to 6 weeks duration)?

- How do we measure the learning in students to ascertain whether students are learning BETTER (in engagement, content and skills) in this modern structure?
- How do we structure the learning within the parameters of *Growing Success*?

What are some alternative ways for students to demonstrate learning? These are the "projects".....

- How do we use the conversations, observations as well as the project / products to measure learning? How do we provide clarity for students, staff and community - How do we ensure validity and accuracy?
- How do we engage students in learning by increasing the relevancy in their work e.g., projects are relevant tasks such as media reports every morning instead of announcements
- How do we "score" student learning (evaluation) to compare with other students (secondary) e.g., for Post secondary placements? - validity and accuracy, assessment vs. evaluation - within the parameters of *Growing Success*
- How do we know students are learning? How do we know our efforts are indeed improving learning?

According to Belton, the relationship between teacher and student is very different - not forced. There is a sense of control (in the students) in their own learning.

- How do we build the structures to support all students? The positive relationship as a foundation / engagement strategy - this is an equity/inclusion piece
- How do we build the structures to empower students, e.g., not tracking lates - TRUSTING students with the responsibility for learning, and working with them / supporting them if the behaviour becomes chronic..

What are the opportunities for teacher collaboration?

- How can we build in structures to promote collaboration - between all parties? E.g., teachers working out of a common workspace, students having "flex" learning time,

What are the strategies that the school is using to "market" themselves to the community?

- How can we promote our craft (Pride in our work and learning)? This is a public relations piece..... HOW do we shift this mindset in all (our staff primarily)?
- What is our "image" and the guiding principles behind it (that drives our actions)?

What are the strategies to increase efficiency, particularly in the allocation of resources?

- How can we reallocate / rearrange / restructure the way we do things to better allocate resources - equipment and materials, e.g., if we are going to a one-to-one situation, how do we provide for ALL students?

### Richard J Lee Elementary School - Dallas, Texas

**Richard J Lee Elementary School (K to Grade 5) has approximately 550 students engaged in challenge-based learning through flexible learning environments. It is a net-zero school where the building is designed to conserve and reserve energy, i.e., the building is an energy efficient structure where natural energy generated through solar, wind and water is used to (self) sustain the needs of the school. They are able to return extra amount of energy to the state.**

Reference: <http://www.coppellisd.com/lee>

What is challenge-based learning?

- How do we structure the learning (instructional) to facilitate deep learning and critical thinking through challenge-based learning?
- How do we drive the learning? E.g., starting with the big idea to the challenging question to the actual challenge that impact lives

What are the flexible structures that promote collaborative, anypace learning?

- How do we build "cohort structures" where students are grouped into houses - Grade 1 to 5 in one house - opportunities for students of different ages to work on common projects / challenge at different levels / depth.
- How do we build open concepts ← doesn't mean open in structure, but open in the view and stance of learning - the co-learner

What are the opportunities for teacher learning and professional development?

- How can we build in structures to promote on-going professional learning without giving up instructional learning time, e.g., vertical planning time between teachers of one grade, using flex time for students and teachers

What are the new roles for the student? Teacher? Administrator? Parents?

- How do we shift the mindset for all so students become designers of learning? Teachers become curators of learning? The changing roles of students and teachers - the concept of workshops and experiments

## Coppell New Tech High School, Coppell, Texas

Coppell New Tech High School (Grades 9 to 12) has approximately 400 students engaged in project-based learning with a technology focus. Students work toward state standards through specific projects using technology and are assessed based on the content and knowledge, agency, collaboration, written communication and oral communication. All students have to take 4 dual credit courses before they graduate from the program.

Reference: <http://www.coppellisd.com/Page/8038>

What are the resources available for teachers and students in learning?

- How do we design the learning resources with the students - learning through the creation of resources e.g, iTune University course designed by students, e-textbooks

What are the opportunities to better engage students in learning?

- How do we give students voice and through this, empower them, increasing their ownership in learning?

What is project-based learning / problem-based learning?

- How do we ensure that the projects promote deeper learning as opposed to representing facts and content in another medium?
- How do we measure the learning - that students are indeed learning better and developing critical thinking skills?

What are some partnerships to be explored and consolidated?

- How do we shift the mindset to involve the community as well as parents to support learning? ← Relevancy in learning, as well as supporting students when things do not go well?

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## APPLICATION OF LEARNING - THE YRDSB CONTEXT

The tour allowed attendees to gain insights from three high-tech schools that engage students in learning differently. While it is important to note that the contextual factors are different - Ontario vs. Texas, it is essential to note that the fundamental concepts are transferrable. Throughout the tour, conversations and dialogue evolved around the need to build a *Modern Learning* culture to ensure success of this transformation. Although current management theorists suggest that “culture eats strategy for breakfast” it is by changing the “way” things are done - which is in some sense, the operational structures - that we can build a different culture. The reflections and recommendations below are made with these ideas in mind.

### Keystone Philosophies, Guiding Principles and Observable Behaviours

The three schools have clarity on their keystone philosophies and use them to guide their actions. Whether it is project-based learning or challenge-based learning, students and staff are clear on how

it is connected to their keystone philosophies and what the observable behaviours are. Learning and assessment structures are also guided by these principles.

- Belton New Tech High has the philosophy of Trust-Respect-Responsibility. In place is a structure of PRO (professionalism) or Trust cards for students - giving them certain privileges as a learner in the community - to loan out equipment and resources for their work, or booking time to work in the makerspace. Students understand that if they lose the trust from teachers, they will lose the cards, thus losing the privilege of learning in the community.
- Coppell New Tech High believes in empowering learners through trust and responsibility. One of the structures is that teachers do not take attendance on lates to classes because they trust their students to be on time or have a reason to be late. Teachers will work with students who are chronically late and will work collaboratively to resolve the misbehaviour. The starting point of their staff-student relationship is with trust.
- Richard J Lee Elementary believes in challenge-based learning and thus structures learning tasks where designers (teachers) and students learn about current issues, propose solutions to these real problems and take action on them.

**Application @YRDSB - Have a clear set of keystone philosophies or guiding principles, define them through the structures in the learning environment, align them to observable behaviours, and communicate them clearly to all who are involved.**

## From Knowledge to Application through Critical Thinking

In all three schools, structures are in place for students to design their own learning driven by authentic challenges or tasks. Students are empowered to design and apply their own learning - how they want to learn the content and how they want to demonstrate their learning. Teachers guide students in applying the knowledge, ensuring that students think deeply and critically about the content.

- Project-Based Learning at Belton New Tech High uses relevant driving questions as starting points where students develop tasks to demonstrate the learning. These driving questions are the foundation to ensure application and critical thinking.
- One of the projects at Coppell New Tech High have students create e-Resources. Through this project, students learn the skills in creating e-Resources, apply the skills to create them, and load them on iTunes University. Students in essence became authors of learning for other students (globally).
- Students at Richard J Lee Elementary school extend their projects into challenges where they have to apply their learning, *and* act on it to better the lives of others.

**Application @YRDSB - Structure learning tasks and environments where students learn the content, apply the learning to support a cause, through products or actions that demonstrate innovation and creativity.**

## Shifting Mindsets and Practices

Learning is structured differently at all three schools. Staff and students demonstrate the understanding and acceptance of these different ways to learn and apply their learning. Their mindsets have shifted from the traditional instructor-learner to a more modern, flexible and open guide-learner model.

- Staff and students at Belton New Tech High talked about a different teacher-student relationship - one that is not forced. Students are proud of the control they have over their

own learning and emphasize the fact that teachers are more flexible in helping and guiding them to learn - through structures such as flex periods or common learning time.

- At Coppell New Tech High, students attend workshops and design experiments to learn. Their schedules are in mod(ules) of 20 minutes where students combine workshops, experiments and independent learning for the day.
- Richard J Lee Elementary school is designed with an open concept in mind. This goes beyond the open physical structure although it is facilitated by it. This openness extends to their practice where it is norm for learning designers (teachers) to observe each other's practice, converse and collaborate with colleagues to design learning structures for students.

**Application @YRDSB - Structure opportunities to shift the mindsets of all where ownership, control and responsibility of learning are transferred to the student without losing validity, accuracy, relevancy and authenticity.**

## **Ensure that it is an improvement**

Operating differently is not good if it does not bring about improvement in learning. Therefore it is important to ensure that a valid measurement of learning is incorporated to ascertain whether students are indeed learning better - in engagement, content as well as skills - under these *Modern Learning* structures.

- At Belton New Tech High, students work towards the Texas Education Standards before graduation. A more relevant goal for them is to increase their number of National Merit Scholars.
- At Coppell New Tech High, students participate in Advanced Placement exams and have to complete 4 dual credit courses before graduation. These are seen as standardized measurement of learning.

**Application @YRDSB - Ensure valid and objective measurements of student learning are in place. Using external as well as internal assessment and evaluation instruments to measure learning.**

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## **CONCLUSION**

The tour provided valuable insights to attendees and is a good starting point for planning and dialogue as we journey into the era of *Modern Learning*.

Respectfully submitted.  
Peter Tse, Superintendent of Schools