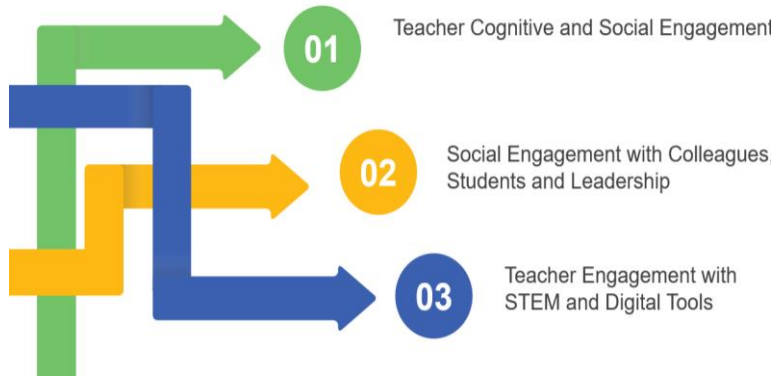


In 2015-2016, a study on teacher engagement was conducted with 227 educators, 167 STEM educators, and 60 non-STEM educators, in the TDSB as part of the STEM strategy.

STEM Teacher Engagement Survey Examined :



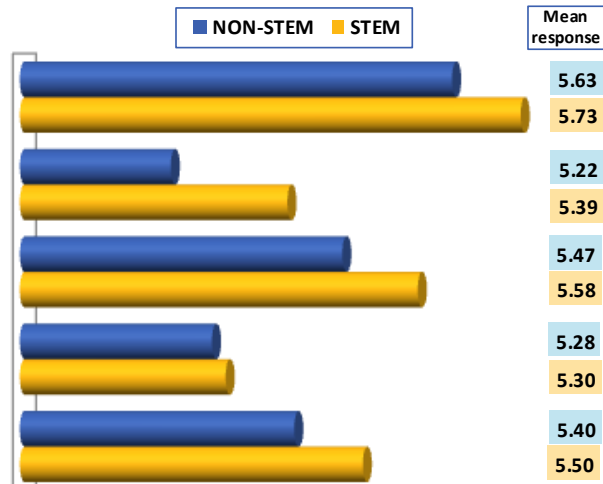
Overall, the results have shown that *engagement* involves much more than just learning and teaching and includes many dimensions. A major finding from the study, was that overall STEM teachers show **statistically significant increased engagement** over non-STEM teachers in many areas of engagement.

For further details on "Fostering Global Competencies and Deeper Learning with Digital Technologies Research Series" please visit: <http://www.tdsb.on.ca/research/Research/Publications/TechnologyandInnovationinEducation.aspx>

			<p>Majority of educators always cognitively and emotionally engaged in teaching</p>
			<p>STEM educators had statistically significant emotional engagement compared to non-STEM teachers and STEM educators find teaching exciting and fun</p>
			<p>STEM educators' engagement with colleagues was statistically higher than non-STEM educators</p>
			<p>More than half of STEM educators are ALWAYS sympathetic and socially engaged with students</p>
			<p>The results show a disconnect between educator's expectations of leadership and their actual experience</p>
			<p>Educators support technology in the classroom, but some may feel uncomfortable using it</p>
			<p>Use of some digital tools were minimal (social media and video-conferencing)</p>

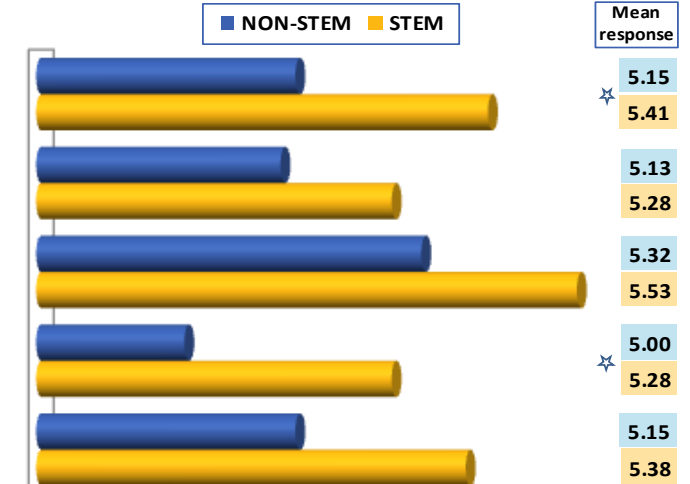
Teacher Engagement

COGNITIVE ENGAGEMENT
I try my hardest to perform well while teaching.
While teaching, I really "throw" myself into my work.
While teaching I pay a lot of attention to my work.
While teaching, I work with intensity.
Overall



Significant difference between groups* (p < 0.05)

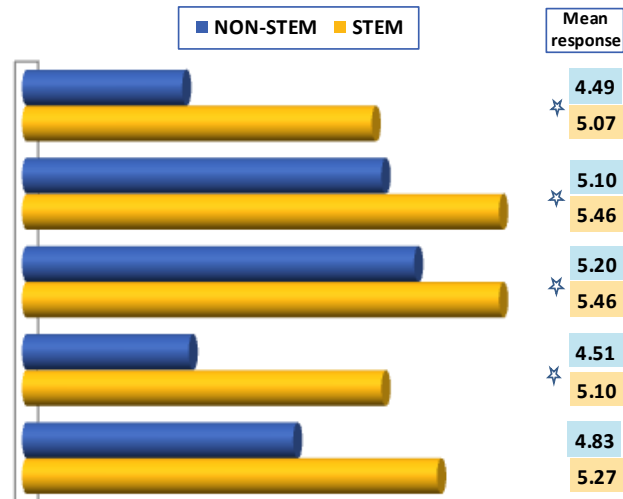
EMOTIONAL ENGAGEMENT
I am excited about teaching.
I feel happy while teaching.
I love teaching.
I find teaching fun.
Overall



Significant difference between groups* (p < 0.05)

Teacher Engagement

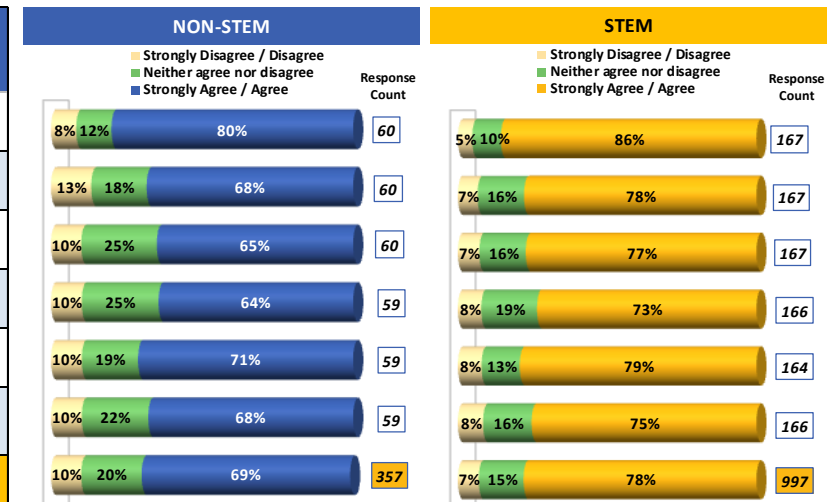
SOCIAL ENGAGEMENT: COLLEAGUES
At school, I connect well with my colleagues.
At school, I am committed to helping my colleagues.
At school, I value the relationships I build with my colleagues.
At school, I care about the problems of my colleagues.
Overall



Significant difference between groups* (p < 0.05)

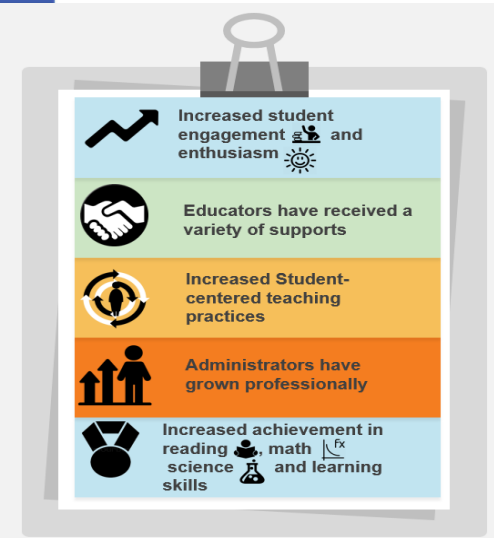
Technology Usage

TEACHING WITH TECHNOLOGY
I feel at ease learning about technologies for teaching and learning.
I feel comfortable about my ability to work with technologies for teaching and learning.
I feel comfortable about my ability to teach students to work with technologies.
I feel confident that I have the skills necessary to use technologies for instruction.
I feel confident that I can successfully teach relevant subject content with appropriate use of technology.
I feel confident that I can regularly incorporate technology into my lessons, when appropriate, to support student learning.
Overall

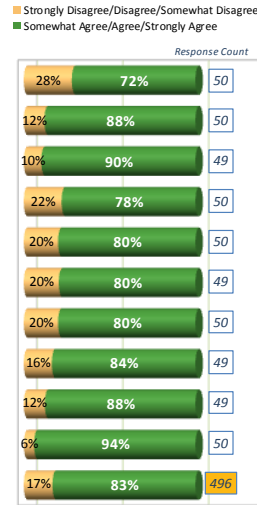


Significant difference between groups* (p < 0.05)

School Leadership Needed

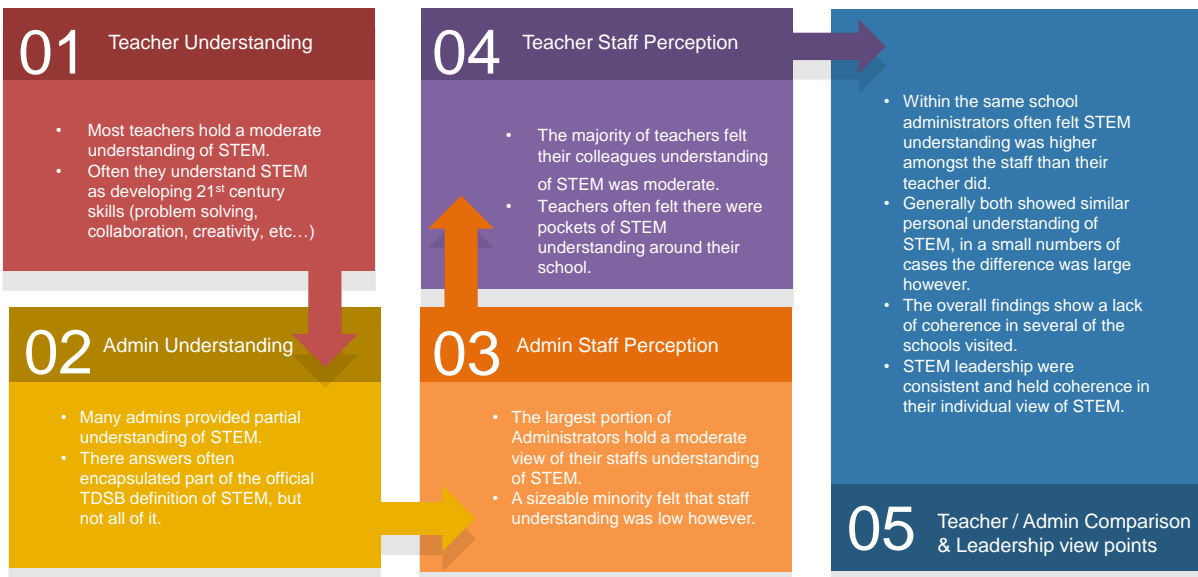


How would you rate each of the following as related to the organizational support you receive in your school environment? (Administrators)	Strongly Disagree 1	Disagree 2	Somewhat Disagree 3	Somewhat Agree 4	Agree 5	Strongly Agree 6	Mean
Our school provides enough time for teachers to plan and implement STEM teaching activities.	2% (1)	12% (6)	14% (7)	22% (11)	30% (15)	20% (10)	4.26
Our school provides the necessary materials for students to do STEM activities and projects.	(0)	4% (2)	8% (4)	28% (14)	40% (20)	20% (10)	4.64
Our school provides the necessary technology resources for STEM.	(0)	4% (2)	6% (3)	37% (18)	33% (16)	20% (10)	4.59
Most teachers in our school are open to changes in teaching.	4% (2)	4% (2)	14% (7)	36% (18)	38% (19)	4% (2)	4.12
The teachers in my school really work as an innovative team.	2% (1)	4% (2)	14% (7)	46% (23)	22% (11)	12% (6)	4.18
Our school creates opportunities for partnerships beyond school (e.g., involvement with business, sports, and arts communities).	4% (2)	6% (3)	10% (5)	29% (14)	35% (17)	16% (8)	4.33*
Our school provides high quality professional learning needed to foster STEM teaching and learning in my school.	2% (1)	4% (2)	14% (7)	30% (15)	34% (17)	16% (8)	4.38
Our school/district leaders are willing to listen attentively to teachers' thoughts.	2% (1)	4% (2)	10% (5)	27% (13)	41% (20)	16% (8)	4.49
Our school shares collective goals and values regarding how the STEM program can help boost student achievement.	(0)	6% (3)	6% (3)	47% (23)	33% (16)	8% (4)	4.31
Our school nurtures a culture of trust and risk-taking.	(0)	(0)	6% (3)	20% (10)	48% (24)	26% (13)	4.94
Overall	2% (8)	5% (24)	10% (51)	32% (159)	35% (175)	16% (79)	4.42

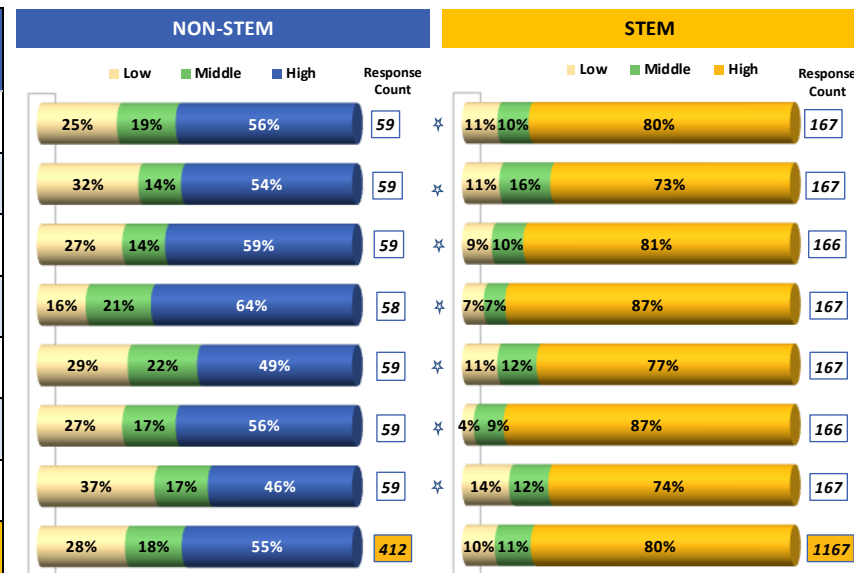


* Significant Difference between Elementary and Secondary schools

STEM Coherence – Teacher, Administrator and Leadership



SCHOOL LEADERSHIP
Our school leadership builds trusting relationships with teachers.
Our school leadership recognizes the accomplishments of individual teachers.
Our school leadership demonstrates respect for teachers by listening to their ideas.
Our school leadership believes in the skills and abilities of teachers to contribute to student success.
Our school leadership involves teachers in decision-making that affects their instructional work.
Our school leadership provides teachers with leadership opportunities.
Our school leadership creates a shared vision for our school to which teachers are committed.
Overall



Significant difference between groups * (p < 0.05)