The title 'WHAT DID YOU DO IN SCHOOL TODAY?' is rendered in large, bold, orange, sans-serif capital letters. Three orange silhouettes of people are integrated with the text: one sits atop the 'WHAT DID' section, another leans against the 'YOU' section, and a third stands to the right of the 'DO IN' section. The entire graphic is set against a white background with a subtle orange gradient.

WHAT DID YOU DO IN SCHOOL TODAY?

EXPLORING THE CONCEPT OF
STUDENT ENGAGEMENT AND ITS
IMPLICATIONS FOR TEACHING
AND LEARNING IN CANADA

CONCEPT PAPER MAY 2009

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PENNY MILTON**



Canadian Education Association



What did you do in school today? is a multi-year research and development initiative of the Canadian Education Association (CEA), funded through collaboration with the Canadian Council on Learning (CCL) and a number of Canadian school districts. Launched in 2007, the initiative was designed to capture, assess and inspire new ideas about enhancing the learning experiences of adolescents in classrooms and schools. ***What did you do in school today?*** includes a survey of students in participating districts. Research and development work is being carried out through CEA's partnership with the Galileo Educational Network and The Learning Bar Inc.

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What did you do in school today?
**Exploring the Concept of Student Engagement and its Implications
for Teaching and Learning in Canada**

MAY 2009

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An agenda for “raising the bar” to achieve excellence and “closing the gap” to address persistent inequities in high school completion, engagement and achievement among different groups of young people is widely shared in Canada. Often, however, excellence and equity are viewed as mutually exclusive goals (Friesen et al., 2008) in districts’ plans for improvement. They tend to be addressed through separate initiatives, resourced through different budget lines, and measured against significantly different criteria; excellence is reserved for enhancing “bright” students’ success with the traditional academic curriculum (Gilbert, 2007a) while equity is translated into programs designed to help “at-risk” students make it through school, often with extra support or modified programs.

Treating equity and excellence as two separate but equal concepts reinforces an age-old idea that deep conceptual learning (i.e., experiences that engage students in actively learning to think through the ideas of the disciplines they are studying) and success in school are only for some students. This way of thinking about the organization of mass schooling has its roots in the beginnings of public education. Although it served society reasonably well in the past by differentiating pathways to adulthood, it no longer offers a viable foundation for modern education systems.

Advances in the learning sciences and insights into human development have provided all the evidence we need to confirm that the vast majority of students are capable of becoming powerful learners. And yet, our school systems continue to struggle in attempting to meet the needs of all adolescent learners, especially those from the most vulnerable groups in society. Although graduation rates in many provinces across Canada have improved significantly since the 1990s, in 2005 approximately seventeen percent of youth aged 15-19 were not attending school and ten percent of Canadians 20 to 24 years of age did not have a high school diploma and were not enrolled in school (Canadian Council on Learning, 2005). Of equal concern are the numbers of students who may graduate but have a low sense of belonging, low participation rates (Willms, 2003), and lower achievement rates as they progress through secondary school.¹

¹ Throughout this report *secondary school* is used as a term that includes middle or junior high schools and high schools.

Disengagement from secondary school – whether a student leaves or struggles through – is a significant source of inequity in Canadian society, not only because it places a large number of students at a disadvantage as they make the transition to adult roles, but because disengagement is disproportionately experienced by students living in poverty, youth with disabilities, and adolescents from visible minority and aboriginal communities. Despite the evidence of overall increases in graduation rates, the patterns of inequity in engagement and achievement among youth in Canada remain.

The Canadian Education Association's (CEA) emerging agenda for youth aims to bring forward new ways of thinking about youth and their learning. The agenda rests on two key convictions: 1) there are effective ways to create powerful learning experiences for all students and 2) transforming schools to improve the experience and outcomes of learning for all students requires a significant shift in our current designs for learning, the beliefs we hold about the purpose of schooling, and the knowledge we draw on to understand adolescent learning and development. Mobilizing new ideas to test their potential for transforming schools in ways that improve the educational experiences and outcomes of schooling for all students is a common focus of the various initiatives designed to move the agenda for youth forward in partnership with others who share CEA's vision for educational and social transformation in Canada.

CEA believes student voices need to be central in shaping how we think about the modern purpose of schooling and learning environments. CEA's agenda for youth was built on what we learned from the young people who created *Imagine a School...* and *Design for Learning*². Both events also contributed to a significant shift in our perspectives on prevailing ideas about student engagement and provided the impetus for the development of *What did you do in school today?*.

In the context of CEA's focus on adolescent learners *What did you do in school today?* emerged as an opportunity to test the potential of some new ways of thinking about the concept of student engagement and its relationship to learning environments and student achievement. The *What did you do in school today?* initiative captures dimensions of student engagement that are prevalent in the current literature on adolescent education, but it also contends that the construct could be strengthened through a deeper focus on students' experience of *intellectual engagement* in learning. The project contributes to the development of intellectual engagement as a concept by testing its value for expanding our understanding of student engagement and its potential for transforming classroom practices to enable all students to become deeply engaged in powerful learning experiences.

In addition to exploring the relationships among different dimensions of engagement, the project is guided by a set of research questions that tap into the concept of intellectual engagement:

- What are students doing in classrooms?
- How do they feel about their experiences of learning (e.g. how challenging or engaging do they find it)?
- Does the work they are asked to do contribute to learning?
- How can classroom practices (i.e., teaching practices and other factors such as time, how students are grouped, and the physical environment) be improved to create more effective and engaging learning environments?

What did you do in school today? is a multi-year research and development initiative (see Figure 1) created to generate national, district and school level data and dialogue about student engagement in Canadian secondary schools. Student (and teacher) surveys are collected using a modified online survey system created by The Learning Bar. The initiative is designed to bring students more intentionally into the school improvement process, and the *What did you do in school today? Student Survey* provides an opportunity for students to regularly share their experiences of engagement in school and classrooms. Data collected throughout the school year provide ongoing opportunities for staff (and students) to work collaboratively as they interpret and act upon the data and build new knowledge about student engagement in the context of their day-to-day practices.

² Information about *Imagine a School ...* and *Design for Learning* are available on the CEA website site at <http://www.cea-ace.ca/dia.cfm?subsection=the>

One of the initiative's primary goals is to create new ideas, research tools and evidence that schools can take account of and use in their specific contexts, but the project will also facilitate the creation of networks among participating schools and develop strategies to share its findings widely with school districts across Canada. The work will be relevant to those responsible for professional education of teachers, to policy-makers, to school districts and above all, to schools themselves.

Figure 1 *What is Research and Development?*

Research and Development (R & D) is a strategy for developing new products, identifying solutions to complex problems or advancing knowledge in an area of study. In the business world, R & D is often described as the process followed – design, proto-typing, consumer testing and production – in creating new products. More and more, however, R & D is also associated with creative activities that are undertaken to build new knowledge and to understand how it can contribute to innovations in science, industry, culture, and social and political change.

As a strategy for testing and developing new ideas and practices, R & D has not yet played a significant role in the in the education sector. Information accessible to schools about what works – or does not work – in teaching, learning, school leadership etc., still tends to emerge mostly through conventional research designed to test relationships (e.g., whether a new literacy program leads to improved student literacy scores). The outcomes of this research are most often (though not always) expressed in terms of average effects. And while the findings are scientifically sound, Christensen (2008) and his colleagues contend that they cannot “tell specific people whether following the average formula will lead to the hoped-for outcome in a specific school” (p. 166).

In education, a lot of emphasis is also placed on external measurements of school and district performance as they relate to accountability

policies, but these too are not always sufficient for making local decisions about how to focus ideas, practices, resources, energy and leadership to improve learning (Elmore, 2006, p. 17). Enabling schools to actively participate in matters of accountability requires access to the fine-grained data necessary for instructional decisions that is best collected, interpreted and acted upon in local settings.

R & D projects offer an alternative to conventional research, especially when the ideas being explored are evolving and need to be worked on collaboratively, over time, through practice in local settings. It is a strategy for studying learning and teaching in context and allows the development of new ideas and research to “take place through continuous cycles of design, enactment, analysis, and redesign” (Design-based Research Collective, 2003, p. 5).

Like conventional research, R & D is evidence-based and guided by clear objectives, but a core part of the process is also aimed at creating new knowledge – ideas that are worth adopting as well as those worth working with to develop in new directions (Scardamalia & Bereiter, 2003) – that can be shared with others who are working with similar ideas or trying to solve similar problems.

THINKING ABOUT STUDENT ENGAGEMENT SO FAR

When student engagement first emerged as a concept in the late 1980s, researchers tended to view its “causes” almost exclusively through the lens of a set of demographic and social risk factors attributed to individual students (e.g. family circumstances, influence of peers). Over time, however, the concept and its measures began to shift in meaning as a result of increased attention to the influence of school context, particularly the relationships between school climate and students’ experience of engagement.

Empirical studies over the past twenty years have shaped the emergence of engagement as both a strategy for improving educational achievement and as an independently valuable outcome of schooling. Definitions and ways of measuring student engagement vary a lot depending on different approaches to studying the topic, but the majority of studies focus on one of two key dimensions (see Figure 3):

1. **Social engagement** – participation in the “life” of school.
2. **Academic engagement** – participation in the requirements of success in school.

Many researchers also differentiate these dimensions further to reflect the “typical” range of students’ experience of social or academic engagement. These “components” point to three different ways of understanding how students engage in school or academic work:

- behaviourally (e.g. attendance, participation in extra-curricular activities, assignment and homework completion)
- emotionally (e.g. sense of belonging, sense of competence, motivation), and/or
- cognitively (working strategically)

The concept of student engagement and its translation into new practices to support students in secondary schools has grown considerably over the past twenty years. Attention to the different dimensions and components (see Figure 2) of the concept have given rise to important shifts in perspective about the importance of students’ experiences in school and the influence of these experiences on social, emotional and academic outcomes. Over the past twenty years they have also drawn attention to school context variables that can bring about important changes in the structures and practices of secondary schools.

Figure 2 Current Definitions of Student Engagement



Figure 3 *Social and Academic Engagement*

Social Engagement

Social engagement is commonly defined as a combination of students' sense of belonging at school, their acceptance of the goals of schooling, feelings of being connected to and accepted by peers, and experiences of relationships with adults who "show an interest in them as individuals" (National Research Council, 2003, p. 42). Research in this area has led to an awareness that large numbers of students feel disaffected or alienated from the life of school, and this is cause for concern because a student's sense of emotional attachment to school has "a strong effect on whether a student persists or drops out" (National Research Council, 2003, p. 25).

Research has established that social engagement is not sufficient on its own for predicting engagement in learning. However, "students who feel disrespected or socially isolated [or don't see the relevance of the goals of schooling to their own lives] are not likely to function effectively at school" (National Research Council, 2003, p. 42).

This concept is commonly measured by indicators such as attendance, punctuality, participation in extra-curricular activities, and emotional attachment to school. In the early development of the concept, measures of social engagement were considered a constructive way of identifying students who were at risk of disengagement and, ultimately, of dropping out. Since then, this dimension of student engagement has also provided schools with direction for adopting proactive dropout prevention strategies focussed on improving school climate factors that tend to have the most influence in supporting high levels of engagement in the life of school. These include, for example:

- An ethic of caring and supporting relationships.
- Respect.
- Fairness, trust and a strong disciplinary climate.
- Teachers' sense of shared responsibility and efficacy related to learning.
- A school-wide culture of "academic press" (Lee, Bryk, & Smith, 1993), or high expectations for academic success.

Academic Engagement

In the early 1990s, Newmann (1992) and his colleagues defined academic engagement as, "the student's psychological investment in and effort directed toward learning, understanding or mastering the knowledge, skills, or crafts that academic work is intended to promote" (p. 12). Newmann's definition continues to lead research in this area and efforts to understand what motivates students to participate in the requirements for success in school (i.e., completing assignments and homework, attending and participating in class).

A number of authors including, for example, Marks, 2000, Newmann, 1996, the National Research Council, 2003, Park, 2005, and Yair, 2000 have identified factors that contribute positively to academic engagement:

- Social support for learning.
- "Academic press" (Lee, Bryk, & Smith, 1993), or high expectations for academic success.
- Supportive learning environments that promote competence and control.
- Active participation.
- Instruction that is meaningfully connected to students lives in and outside of school.
- Parental encouragement.

In its early development, academic engagement tended to be measured exclusively through observable student behaviours such as time on task or homework and assignment completion. Over time, researchers have also begun to explore the influence of more individualized measures, such as interest and personal effort, strategies for strategic learning, sense of competence, perceptions of social support for learning, and so on.

NEW WAYS OF THINKING ABOUT STUDENT ENGAGEMENT

Today, it is difficult to find a school district that has not adopted student engagement as a central lever for secondary school reform. References to student engagement and its different dimensions frequently appear in district and school plans for improvement. But its popularity can overshadow the fact that the literature on student engagement is characterized by a very complicated set of meanings and research results that are difficult to compare because definitions are frequently reconfigured from one study to the next. Researchers and practitioners are voicing concerns about the growing murkiness of the concept and arguing for the need to synthesize current ways of thinking about student engagement into a more coherent – and multidimensional – framework (Fredericks, 2004; Appleton, 2008; National Research Council, 2003).

As some researchers advocate for greater coherence, others have argued that we need to go back and take a deeper look at the assumptions underlying popular ideas about the engagement. Zyngier (2007), for one, believes current ideas about student engagement are still far too *individualistic* because most research continues to depict “[engagement] and the academic success that accompanies it, as a function of the individual, ignoring the contribution of gender and socio-cultural, ethnic, and economic status (class) factors” (p. 97). He also argues that the concept is too *interventionist* in nature because of the tendency to talk about engagement as “something students do and that teachers can organize for them and do to them” (Luse, 2002, as cited by Zyngier, 2007, p. 97).

Although assessing proximal goals such as increasing attendance and reducing dropout rates can mark progress that reassures us we are moving in the right direction, ultimately we need to achieve the more ambitious goal of promoting deep cognitive engagement that results in learning. (American National Research Council, 2003, p. 32)

The current construct of engagement, focused on remedying individual students’ responses to schooling and their ability to meet the requirements for success in school, also lends little to our collective understanding of how engagement is enacted in classrooms or how it affects the quality of learning experienced by students. In 2003, the American National Research Council reflected on the limitations of our thinking about engagement so far (see sidebar).

Improving the educational experiences and outcomes for young people in Canada requires a reorientation in thinking about student engagement that grounds it more intentionally in what we want to achieve for all students. By listening to what students say about their experiences of schooling and looking at student engagement in the context of the modern day purpose of schooling, we can extend its potential as a powerful construct for engaging both students and teachers in the transformation of schools and classrooms into places of effective teaching and deep learning.

Student Perspectives on Engagement

When students have opportunities to talk about learning in secondary schools, some describe their experiences as highly engaging and enjoyable; they find the work interesting and challenging and thrive on working to excel in both academic and/or extra-curricular activities. Too often, however, students describe classrooms – where they spend the majority of their day at school – as places that are boring, hectic, stressful, and disconnected from the real world. Even students who, by traditional standards, seem to be highly engaged in learning often reveal that they are going through the motions or merely “doing school” (see, for example, Pope, 2003), motivated by factors that have little to do with what or how they are learning (e.g. achieving long term goals or getting good marks).

A similar picture emerged when CEA, in partnership with Destination Arts, York University asked high school students to imagine a school that “got it right” for adolescent learners and then in partnership with the Galileo Educational Network, to design a classroom where they could be deeply engaged in learning. Speaking to audiences of educators, parents and peers, the diverse groups of students said that school can be incredibly boring; they reminded teachers that “textbooks don’t teach”; they expressed frustration with the quality of their relationships with some teachers and administrators; and they challenged the fairness and meaning of both school rules and taken-for-granted ways of evaluating their work. Set against all of the challenges that left them feeling frustrated and disengaged in school, however, the students also offered powerful images of what it would take for them to feel fully engaged in learning. In the school they imagined, they would:

- Solve real problems.
- Engage with knowledge that matters.
- Make a difference in the world.
- Be respected.
- See how subjects are interconnected.
- Learn from and with each other and people in their community.
- Connect with experts and expertise.
- Have more opportunities for dialogue and conversation.

The Modern Context of Teaching and Learning

Alongside students’ perspectives of what they want from school is increasing evidence that deep engagement in learning is – and has been for some time now – what they *need* from their experiences of schooling. The impacts of the shift from industrialized to knowledge-based societies, globalization, and extensive technological developments have had an especially direct impact on youth. Social, political, cultural and economic relationships have been transformed, and young people are increasingly dealing with the demands of lives that “present high levels of challenge, complexity and individual responsibility” (Claxton, 2006, p. 2).

Today, knowledge forms a major component of all human activity, and human (intellectual and social) “capital” has become the foundation for accessing and being able to make genuine personal choices about social, political and economic opportunities. In this context, all young people need to learn to *use their minds well* through deep engagement in learning that reflects skills, knowledge and dispositions fit for their present lives as well as the ones they aspire to in the future. More than ever, their health and well being, success in the workplace, ability to construct identities and thrive in a pluralistic society, as well as their sense of agency as active citizens, depend on it.

In the past the measure of an “educated person” was largely based on what they knew; now, the value of learning is measured by “what [students are] able to do with what they know” (Gilbert, 2007a, podcast) as they go about solving problems, building new ideas, creating new ways of doing things, or making a difference in the world. Becoming knowledgeable today entails much more than the acquisition of knowledge and skills; all students need to develop competencies through core skills such as reading, writing and computation (or other ways of accessing knowledge), but they also need to develop their own unique capacities to learn – to explore and make sense of ideas; to discover connections among diverse concepts; to push at the boundaries of what they know (Egan & Gajdamaschko, n.d.); and to work through the misconceptions they may hold (Bereiter & Scardamalia, 2003, p. 7) by learning to think and work with others as they “learn their way around” the disciplines they are studying (Bransford, Brown & Cocking, 1999, p. 136).

The distinction between “knowing” and being able to “do things” with what we know has enormous implications for education because it calls into question many of the fundamental ideas – often taken for granted – that influence how we have thought about public schooling for more than a century. Gilbert (2007b), for example, argues that transforming schools to meet the needs of modern day learners requires that we rethink:

- **Curricula** – the need to shift from viewing skills and knowledge as a set of discipline-based facts, figures and procedures to ideas and actions that can be connected, improved upon and used to build new and innovative ideas or processes.
- **The purpose of learning** – from accumulating and storing facts and figures (i.e., the mind as a filing cabinet) to learning skills and dispositions that promote deep understanding, thinking, and improving on or building new knowledge.
- **How learning happens** – from individualistic teacher-directed learning to learning that is collaborative and co-constructed among teachers and students (p. 6).

Transforming schools also entails rethinking *who learning is for*. Education systems as we know them were designed to meet the needs of the emerging economic context of the late 19th century and accomplished this goal by sorting students for different pathways to adulthood.

What all students need from their experiences of schooling today was, in the past, reserved for a few. It was assumed – even expected – that “all students would enter school, but only a few would succeed with the traditional academic curriculum” (Gilbert, 2007a). This model and the assumptions underlying it not only fail to meet Canada’s current social and economic needs, they also lag far behind what we know about human development, human intelligence, and how people learn. At one time they may have served society reasonably well, but they do not meet the needs of a society committed to success for all students. Within the context of this commitment, the ***What did you do in school today?*** initiative advances student engagement as a core idea for improving the quality of teaching and learning in Canadian schools.

STUDENT ENGAGEMENT – A MULTIDIMENSIONAL CONCEPT

Our current ideas about student engagement have emerged from our focus on school-level factors that contribute to social engagement (participation in the life of school) and academic engagement (participation in the requirements for success in school). For some time now, however, evidence has been mounting to show that many of the problems experienced by students in secondary school – disengagement, dissatisfaction with their schooling experience, dropping out – are overwhelmingly connected to classroom environments. The ***What did you do in school today?*** initiative proposes that adding the more recent focus on intellectual engagement (serious emotional and cognitive investment in learning) to the social and academic dimensions of student engagement provides a more complete foundation for understanding the concept and its potential as a unifying framework for “raising the bar and closing the gap” (see Figure 4).

Each of these dimensions – social, academic and intellectual – frames the conditions and outcomes of engagement differently, and when considered together they offer distinct perspectives in their stance toward students. In many ways, however, the concepts are also complementary. Whether considered alone or in unison, they are commonly viewed as ways of thinking about proactive strategies that can mediate and strengthen the impact of curricular and instructional reforms. They draw increased attention to the importance of students’ experiences in school, show the connections among those experiences and a range of social, emotional and academic outcomes, and highlight aspects of school and classroom practices that contribute to healthy human development, motivation to achieve, sense of confidence, pride in success at school, and so on.

Figure 4 Characteristics and Outcomes of Student Engagement

	SOCIAL ENGAGEMENT	ACADEMIC ENGAGEMENT	INTELLECTUAL ENGAGEMENT
Definition	Meaningful participation in the life of the school.	Active participation in the requirements for school success.	Serious emotional and cognitive investment in learning.
Factors Influencing Engagement	<ul style="list-style-type: none"> ▪ School teams, clubs, student government, and school-wide campaigns such as environment week ▪ Positive relationships with peers and adults ▪ High expectations for success. 	<ul style="list-style-type: none"> ▪ Defined curriculum outcomes ▪ Assignments, tests, and marks ▪ Individual student effort ▪ High expectations for success ▪ Positive classroom disciplinary climate ▪ Intellectually challenging lessons ▪ Teacher and parental encouragement ▪ Direct and indirect consequences. 	<ul style="list-style-type: none"> ▪ Instructional challenge, characterized by: <ul style="list-style-type: none"> ▪ Curriculum as discipline ▪ Exploration, understanding of concepts ▪ Development of ideas through the disciplines and through work on authentic problems ▪ Individual and collective knowledge building ▪ Effective learning time ▪ Positive classroom disciplinary climate ▪ High expectations for success ▪ Positive relationships with teachers.
Developmental Outcomes	Friendships, social networks, sense of belonging, self-confidence, and often enjoyment of school.	Academic success, credit accumulation, and high school graduation. Post-secondary destinations. Orientation to good work and personal responsibility.	Confidence as knowledge-builders, problem-solvers, conceptual thinkers, self-motivated learners. Orientation to original work and often collaboration.
Engaged Canadian Students*	Emma was an obviously bright student with a talent for music and drama that she expressed through participation in the school's premier jazz ensemble and drama club. When at school, she could be found in the music room. Although school work came easily to her, she skipped many classes and left school at 17 without a graduation diploma. Her social skills and self-confidence enabled her to find office work. A supervisor eventually persuaded her to take post-secondary studies as a mature student.	Johanna's family had high expectations for her to be the first to go to university. A good student, she rarely skipped a class and worked late into the night to keep on top of her homework. She maintained a part-time job working at least 17 hours a week because her family was unable to provide more than the basics. She resisted group projects or extracurricular activities in order to focus on getting good grades and a university place. She hoped that life after high school would be less stressful for her.	From an early age, Aleem was a curious child fascinated by the world around him. Following the death of a childhood friend from cancer, he became determined to understand the disease and help overcome it. He dug deeper in his science classes and entered a number of projects in science fairs where his work attracted the attention of some research scientists. He began working in their labs during the school year and holidays. His plans include university studies that will allow him to pursue a medical research career.

***Note:** Names and other identifying information have been changed to protect the students' privacy.

ENGAGEMENT FOR LEARNING

The concept of intellectual engagement draws on a rich variety of insights about how people learn (see, for example, Bransford, Brown & Cocking, 1999). We know that effective learners take responsibility for their own learning, persist in face of difficulties, and find intrinsic value in the work that they do. Carol Dweck (2007) found that “the most motivated and resilient students are not the ones who think they have a lot of fixed or innate intelligence [but those] who believe that their abilities can be developed through their effort and learning” (p. 6). Her experiments also revealed that students’ concepts of self as learner are affected by, and can be changed by, the nature of feedback that they receive from important adults, including teachers. This finding is at odds with widely held views that schooling outcomes primarily reflect innate ability. What all students want (and need) are learning environments designed for deep intellectual engagement through which they become expert learners. Every student’s learning biography is unique, but Evans, Gerlack and Kelner (2007) also demonstrate that some patterns are common among adolescent learners. Developing adaptive capacity, competence and proficiency during adolescence requires “increasing levels of personal motivation, as well as the move from surface to deep learning if the higher levels are to be attained” (p. 198). Motivation and deep learning are, in turn, fostered when young people have opportunities to try “things that are challenging and of deep interest to them,” capturing the close relationships among emotion, cognition and the development of social and intellectual learning capacities (p. 199).

*Learning is the
outcome of thinking,
not instruction.
(Beairsto, 2007)*

When students are intellectually engaged, they experience serious emotional and cognitive investment in learning or, as Friesen (2008) describes it, “an absorbing, creatively energizing focus requiring contemplation, interpretation, understanding, meaning-making and critique which results in a deep, personal commitment to explore and investigate an idea, issue, problem or question for a sustained period of time.” (p. 9)

The first contention put forward through *What did you do in school today?* holds that certain classroom practices (see Figure 5) give rise to higher levels of intellectual engagement than others. Because intellectual engagement is a new concept, it is difficult to pinpoint which classroom practices will be most effective in supporting it. From what we know so far, however, designs for learning that begin with the goal of intellectual engagement lead to instructional choices that:

- Emphasize conceptual learning and opportunities for students to
 - work with authentic ideas and problems,
 - develop a deep understanding of ideas,
 - sort through misconceptions, learn new ideas and create or improve upon ideas,
 - see conceptual connections across disciplines.

- Require high levels of student participation and provide time for in-depth work.
- Incorporate authentic assessment as a strategy that enables students to set goals and assess their own learning.
- Result in work that is
 - relevant, interesting, and connects with students' aspirations,
 - rigorous and allows students to think as "professionals" and create "professional" quality outcomes,
 - challenging and allows students to experience a sense of deep intellectual and emotional investment in learning,
 - built from diverse and improvable ideas,
 - informed by the current state and growing knowledge bases of different subject disciplines.
- Promote students' sense of ownership and responsibility for their own learning.
- Invite students to be co-designers of their learning in classrooms that support student voice and autonomy.
- Provide a high level of social support for learning and encourage students to take risks, ask questions, and make mistakes.
- Foster collaboration and community building for learning.
- Engage students in becoming literate with technologies as social networking-knowledge building tools.
- Connect students with opportunities to develop abilities in critical thinking, intellectual curiosity, reasoning, analyzing, problem solving, communicating, etc.
- Bridge students' experience of learning in and outside of school by exposing them to digital technologies in knowledge building environments.

Figure 5 *What is Classroom Practice?*

Practice is not the personal attributes or characteristics of any individual teacher or administrator, but a collection of patterned activities in a school (Elmore, 1999) that emerge from choices about instruction, theories of learning, thinking about curriculum, the way time and physical learning environments are organized, ideas about the nature of knowledge, how students are grouped for learning and so on.

LEARNING RELATIONSHIPS

The decisions teachers make about classroom practices is a significant factor in students' experience of engagement. When these decisions are enacted in classrooms, they are fundamentally shaped by the nature of relationships that students encounter with their teachers and peers. Learning environments designed for deep intellectual engagement recognize the importance of these relationships and provide the time and attention required to shape new social, cultural and intellectual connections for learning.

Our ideas about teaching are often still focussed on the primary relationships between students and the content they encounter in classrooms. The role of learners in this model is largely passive because the points of engagement *end* as students receive (and practice) skills and knowledge defined predominantly by the traditional academic curriculum. Authentic intellectual engagement requires a deeper reciprocity in the teaching-learning relationship where:

- Teachers work with a passion and authority of disciplinary knowledge, and their focus shifts from transmitting knowledge to inducting young people into the ways of thinking and the core ideas of the disciplines they are teaching through a wide variety of teaching strategies chosen to complement rather than shape or direct students' thinking.
- Students' engagement *begins* as they actively construct their learning in partnership with teachers, work toward deep conceptual understanding, and contribute their own ideas to building new knowledge or devising new practices in activities that are "worthy of their time and attention." (Friesen, 2008, p. 8)

Effective learning experiences are also shaped by student-teacher relationships that support the development of young peoples' social and emotional competencies. As students progress through middle and secondary schools, they face increasing complexity. Students themselves consistently say that what most helped them thrive in spite of these challenges was the quality of relationships they developed with adults in their schools. When students have opportunities to connect with adults who approach these relationships with a spirit of caring, empathy, generosity, respect, reciprocity and a genuine desire to know students personally, they can make a unique contribution to young peoples' emerging adaptive capacity, self-sufficiency, resiliency, confidence, and knowledge of themselves as learners.

In addition to relationships with trusted adults, peer groups can exert a major influence in shaping social and academic relationships in classrooms. Intellectually engaging work taps into learning as a highly social activity – expert learners are able to explain their thinking, elaborate on their ideas, and consider multiple (and sometimes dissonant) viewpoints as they negotiate individual and shared meanings. When students have opportunities to work with their peers as intellectual partners, they develop deeper conceptual knowledge, as well as important social and cultural skills. But effective collaboration requires roles and relationships most students are unfamiliar with. Learning to engage in thoughtful conversations, understanding the legitimacy of differences, and collaborating to achieve group outcomes are skills and habits that need to be integral to students' work together and key elements of all designs for learning.

STUDENT ENGAGEMENT AND STUDENT ACHIEVEMENT

Across Canada we are witnessing increased recognition of the importance of effective classroom instruction to student achievement. Research on the importance of early learning has resulted in the significant attention currently being paid to learning environments for young children; however, so far, less attention has been focused on how classroom practices might contribute to effective learning environments for adolescent learners.

In addition to proposing that certain classroom practices (see Figure 5) give rise to higher levels of intellectual engagement than others, a second contention by *What did you do in school today?* also contends that consistent use of these practices could narrow the achievement gap in Canadian secondary schools, particularly among students who may not otherwise be oriented toward academic success. Underlying this contention is a strong belief that if we reframe our thinking about the modern purpose of schooling and begin to shift what students are doing in classrooms, other things – such as achievement – will also begin to shift.

Findings from studies in classrooms designed to create an environment for intellectual engagement are still too limited to allow for generalization. As the Canadian Council on Learning (2007) recently noted, however, the available research is promising. Evaluations of students' experiences of learning in collaborative knowledge-building and technology rich environments (Milton, 2008; Engle & Conant, 2002; Canadian Council on Learning, 2007) show that students in these environments collectively demonstrate:

- Higher levels of conceptual understanding.
- Increased motivation, engagement and persistence.
- Greater gains in literacy and math compared to peers learning through traditional methods.
- Increased problem-solving and critical thinking skills.
- The ability to ask new and deeper questions about their work.
- Increased participation and contributions to classrooms as communities of learners.
- New conceptions about the nature of learning.
- Greater flexibility in drawing diverse ideas into conversations and using them in novel ways.
- Improved research and analytical skills (e.g. assessing multiple sources of evidence).
- The ability to engage in more complex forms of reasoning and sense-making.
- Increased sense of individual and collective responsibility for the quality of work they produce.

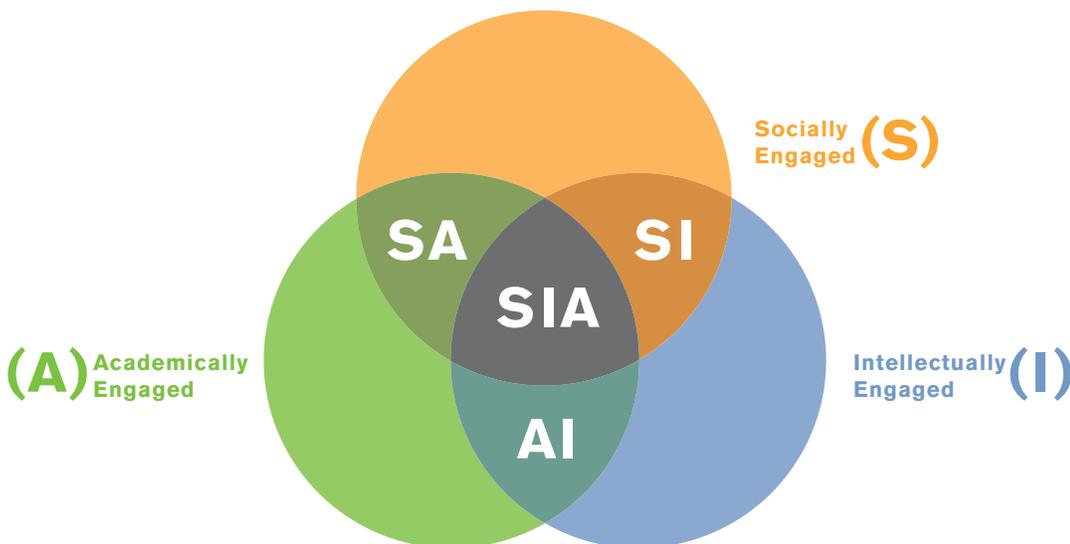
Concerns that such learning environments benefit students unequally are still commonly expressed. But evidence is mounting to show that these concerns are unfounded (see, for example, Canadian Council on Learning, 2007). Although no approach to education can be expected to single-handedly shift patterns of inequity in engagement and achievement among youth in Canada, the new orientation to thinking about issues like how students learn, curricula, instruction, and the role of technology in learning revealed through the range of collaborative knowledge-building pedagogies offers unique advantages (Scardamalia & Bereiter, 2003b) for making school a socially, academically and intellectually exciting and worthwhile place to be for all students.

The measures we currently use to assess school effectiveness tell us a lot about the objectives of learning – students’ marks, attendance patterns, credit accumulation, graduation, achievement on standardized tests – and very little about the kinds of learning experiences described above. By relying exclusively on indicators that treat learning as a cumulative event, we have little sense of students’ emerging capacity as learners, the fuller scope of what they are learning, or if they feel their learning contributes to outcomes that are meaningfully connected to their aspirations. If we aspire to create powerful learning experiences that allow more students to become effective and confident learners for life, we need to balance our understanding of how well students are “doing school” with a much deeper understanding of how engaged they are in their learning and how well schools are doing in creating experiences that allow *all* students to become passionate, effective learners (see Figure 4 – Characteristics and Outcomes of Student Engagement).

Improving the educational experiences and outcomes for young people in Canada requires a reorientation in our thinking about student engagement that grounds it more intentionally in what we genuinely want to achieve for all students. To shift patterns of achievement, we need to extend the concept’s potential as a powerful construct for engaging both students and teachers in the transformation of classrooms into places of effective teaching and deep learning. By drawing our attention to practices that support serious emotional and cognitive investment in learning for *all* students, the concept of intellectual engagement provides a powerful means of unifying our efforts to achieve excellence and equity in secondary schools.

The transformation of learning environments through intellectual engagement holds the most potential for shifting patterns of engagement and achievement for adolescent learners. Ultimately, however, each dimension of student engagement contributes to valued outcomes of schooling for young people. Overlooking the role that each plays in students’ experience can contribute to the development of risk factors associated with disengagement. A clear and consistent focus on school and classroom practices that affect all dimensions of engagement – social, academic and intellectual – is the key to enabling far more students to become effective learners (See Figure 6).

Figure 6 Interaction among dimensions of a student’s engagement



CHAPTER 5

THINKING ABOUT IMPLICATIONS FOR POLICY AND PRACTICE

What are the implications of centralizing students' engagement in learning as the core foundation for continuous academic improvement? How can schools and the communities they serve transform learning environments into places of effective teaching and deep learning? Who holds the keys to unlocking the potential of designs for learning that lead us to what we genuinely want to achieve for all students?

In the recent history of large-scale reforms, we have tended to see educational change as a technical matter; through the right combination of external pressure (e.g., accountability frameworks) and support (e.g., knowledge and resources) for improvement, schools would be able to shift patterns of student achievement. Recently, an increasing number of voices are echoing McKinsey & Company's (2007) recent observation that, "[few] of the most widely supported reform strategies have produced the results promised for them" (p. 10). After more than twenty years of concentrated reform efforts, the fundamental structures and outcomes of schooling have demonstrated incredible resilience in the face of change.

Although policies at the school level and beyond affect what goes on in classrooms, classroom instruction – how and what teachers teach – is the proximal and most powerful factor in student engagement in learning. (National Research Council, 2003)

Evidence about the importance of teaching is well established. Across the country we are witnessing increased attention to the significant relationships among classroom practice, student engagement and achievement. So far, however, these reforms have not provided the evidence we need to understand the impact of these relationships on learning or how we might go about strengthening them by building greater reciprocity between what we know about effective teaching and our understanding of effective learning.

Identifying the exact pieces of the puzzle required to build a coherent framework for transforming school and classroom practices is something that we need to work out over time. We need to recognize that the shift from helping students "do school" to deeply engaging them in learning represents a significant change for everyone in the school community, including students, teachers and parents. As this work proceeds, it is critical that we steer clear of quick external "fixes"; sound ideas about fundamental change in schools and classrooms can only be developed when educators – in close partnership with students – have the time and the latitude to sort out and develop new ideas in the context of their own work.

ENGAGING TEACHERS

The transformation of learning environments into places of effective teaching and deep learning requires new ways of looking at the improvement process and teachers' roles within it. If we approach improvement as a technical process where teachers are invited to experiment with new ideas introduced through external sources in their own classrooms, we run the risk of creating a new swell of surface level improvements. Affecting a deeper transformation to school and classroom practices calls upon all of us to begin looking at school improvement as a collaborative knowledge-building activity where teachers themselves are actively engaged in co-constructing ideas that contribute directly to school improvement and development.

The idea of engaging teachers “to lead the development work that impacts directly upon the quality of teaching and learning” (Harris & Muijs, 2003, p. 1) signals a deep shift in thinking about teachers as agents in designing effective structures for teaching and learning, as opposed to merely managing activities within them. For many years teachers have led the process of school-level improvement; the most important work they can do together now is to lead the process of improving classroom practices and increasing student engagement.

The emergence of collaborative leadership for instructional improvement presents the challenge of creating new norms for professional practice and exploring how the organizational features of schools (e.g., structures, processes, resources) can be harnessed to increase the knowledge and skills of people in the organization (Elmore, 2006, p. 26). Effective communities of practice develop a shared set of expertise and resources in the course of working on the “problems” of their practice together. The development of shared practice requires time, the freedom to think together outside of the box, and sustained interaction. And while the research is clear that “teachers improve their practice and hence, their effectiveness, *in the company of their peers*,” it is still the case that many teachers continue to work “in isolated classrooms with only brief interludes in the staffroom to discuss professional learning” (Friesen, 2008).

For teachers' work together to be effective, they also need reliable and meaningful sources of research and data, combined with regular opportunities to make sense of what the evidence is telling them in relation to their own experiences and beliefs about their practice. Too often we draw a direct line from evidence to decision-making and miss out on the essential idea of inquiry as a learning process that requires not just analysis in an objective sense, but also personal and group reflection about the subjective impact of new ideas or evidence. Engaging with teachers as influential leaders in developing new ways of thinking about school and classroom practices requires us to approach the practice of improvement as an inherently social, emotional and cognitive process that is most powerful when it is connected to teachers' day-to-day lives in classrooms with students and as members of professional communities of practice.

ENGAGING STUDENTS

Learning is affected by three contexts – community (including home), schools and classrooms. And while students are uniquely positioned to provide insights about learning through their experiences of all three, schools have tended to limit student input and involvement to the arena of social engagement (e.g. student governance, improving school climate). This practice, according to Peter Senge (2000), creates a “structural blind spot” in schools' approach to improvement because “the only person who could in fact reflect on how the system as a whole is functioning is the one person who has no voice in the system ...” (p. 58).

Reaching a clear understanding of how current structures and practices in secondary schools might be working against our ability to effectively engage all students in learning depends on bringing students more intentionally into all aspects of the school improvement process. For many years now schools have captured student voice as a source of data for improvement. However, meaningful student involvement entails a much deeper level of participation, facilitated by practices of improvement that authorize students and teachers to form influential partnerships at each stage of the process, from identifying issues and creating action plans to having a say on matters of accountability.

To be meaningful, student involvement also needs to become an integral part of the fabric of classroom practice and students' everyday experience of learning (see *Chapter 4 – Enacting Intellectual Engagement in Classrooms*). Effective learning environments see students as a diverse community of learners who are both willing to and highly capable of shaping decisions about the content, process and outcomes of their learning. Most importantly, however, they see students' role in co-constructing instruction as a fundamental element of “learning to learn”.

There is growing evidence of the benefits of engaging students both as co-initiators of improvement and as co-designers of instruction. When they become active participants, students experience deeper engagement with learning, increased commitment, interest and responsibility for learning, and enhanced relationships with staff and their peers. Engaging students as active and respected decision-makers also contributes to important adolescent development outcomes such as agency, belonging, and competence (Mitra, 2004) and to the development of skills necessary for students to participate as active citizens beyond the classroom (Rudd et al., 2006). The benefits accrued to schools are also very powerful; their capacity be inclusive, creative, adaptive, innovative and responsive to the complexity of students' lives increases, as does their ability to begin shifting patterns of achievement (Fletcher, 2005).

Although student voice can take many forms, its foundation is based on creating a level of student involvement that holds meaningful implications for students' engagement in school and in learning. It is an essential element of creating schools that support the success of all students and a powerful lever for schools working to understand and respond more effectively to the complexity of school and classroom improvement.

ENGAGING MINDS

The project of transforming learning environments begins by acknowledging that there may be core patterns of organizational practices that are no longer serving us well in our schools. Our collective beliefs about the purpose of schooling and how people learn, as well as the decisions we make about instruction, the nature of knowledge, the physical environment of classrooms, the role of digital technologies in learning, and roles and relationships in schools are all part of the current practices of secondary schools that might be working against our ability to deeply engage all students in learning.

The challenge ahead is to find ways of making these structures and practices more transparent in our conversations about improvement so that they can be analyzed and changed in response to their effects on learning. We must also acknowledge that educators are not alone in their efforts to shift patterns of student engagement and achievement. We know that there is value in exploring ways to make schools socially, academically, and intellectually exciting and worthwhile place to be for all students. But there are also other important things that need to happen inside and outside of schools to engage young people (e.g., community youth leadership initiatives, youth parliaments, national, provincial and municipal youth councils, and youth arts programs) *and* to address the social, economic and educational conditions that can improve or limit their opportunities in and outside of schools.

What did you do in school today? provides CEA, its research partners, and participating school districts with a unique opportunity to continue developing a conceptual framework and indicators for the social, academic and intellectual dimensions of engagement. The initiative also provides an opportunity for new conversations about what we genuinely want to achieve for all students and the possibility that increasing students' experiences of all three dimensions of engagement will help to ensure that far more students experience success as they:

- Develop imaginative and innovative habits of mind.
- Learn the core concepts of the major disciplines, and value different knowledge traditions.
- Gain confidence in generating new ideas on their own and collaboratively.
- Develop cross-cultural, communicative, and ethical competence.
- Become expert learners with an enduring passion for learning.

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