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Section A: Project Information

1. Project ID

4481.5.01

2. Project Title

Learner Engagement

3. Host School Authority

Holy Spirit Roman Catholic Separate Regional Division No. 4 [4481]

4. Host School Authority Contacts

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5. Brief Description

The project will examine and implement current research and practice that promotes Student Engagement. Our project aims to enhance “all students’ abilities to *learn how to learn* and to become lifelong learners in a knowledge-based society” (Parsons and Taylor, 2011, p.3 – quoting Gilbert, 2007, p. 1). Our previous projects focused on Assessment for Learning and 21st Century Learning. This project will carry forward and deepen these themes through a more rigorous emphasis on Student Autonomy; Adaptive Goal Orientations; Critical Thinking and Knowledge Building; Collaboration and Community Building; and Assessment for Learning. By the end of the project, learners will own their learning and will be motivated to learn. Learners will become increasingly reflective and meta-cognitive about their learning. There will be an emphasis on process and growth in learning over knowledge alone and our learners will see real world connections in their learning that sets them up for a lifelong commitment to learning.

6. Keywords/Themes

Engagement, Assessment for Learning, Autonomy, Goal Setting

7. Project Status

Submitted

8. Schools Involved

All Schools

9. Grades

ALL

10. Open to Cross-School Authority Collaboration?

- YES
- NO

11. Is Cross-School Authority Collaboration Established?

- YES
- NO

Section B: Project Parameters

1. Project Duration

- 2012/13
- 2013/14
- 2014/15

2. Schools Involved

3. Grades Involved

Grade	Number of Students		
	2012/2013	2013/2014	2014/2015
PreK	365	365	365
K	365	365	365
1	370	365	365
2	369	370	365
3	327	369	370
4	338	327	369
5	364	338	327

6	356	364	338
7	307	356	364
8	329	307	356
9	319	329	307
10	290	319	329
11	280	290	319
12	301	280	290
Total	4,680	4,744	4,829

4. Research Leadership

a. Source of Research Leadership and Support *(Check all that apply)*

University Partnership(Faculty/Graduate Students)

Internal Research Expertise

b. Brief Description Of Research Leadership

Provide a brief description of how your school authority will address research leadership.

Division Principal coordinates a collaborative team consisting of two AISI project research leaders and a consultant from the University of Lethbridge. With information gathered from individual school AISI leadership teams, the divisional AISI team will set the research question, methodology, and measures to be carried out by schools. The divisional team will guide, facilitate and oversee the implementation and data collection.

Section C: Project Design

1. Project Overview

Provide a brief general overview of the AISI project including the following:

- *background or context for the project*
- *purpose*
- *scope*
- *student learning goal(s)*

Note: Please keep the summary brief, but at the same time, provide sufficient information for others to understand what the project is about.

Holy Spirit Roman Catholic Separate Regional Division #4 Schools draws upon work from the previous four cycles of AISI, in addition to further research supporting continued efforts toward student-driven engagement and motivating our students to be aware of potential for growth and the process behind being life-long learners. We focus on discernment of the degree to which an educator may influence student engagement and motivation through the research to encourage 'growth mindsets', mastery, autonomy, and purpose in our students, guided by the research and writing of Carol S. Dweck (*Mindset – The New Psychology of Success: How We Can Learn and Fulfill our Potential*) and Daniel H. Pink (*Drive: The Surprising Truth About What Motivates Us*). "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).

(Dunleavy & Milton, 2009, p. 13).

Each school, from Pre-Kindergarten to Grade 12, will be exploring and employing instructional strategies that foster student autonomy, mastery goal orientations, critical thinking & knowledge building, and collaboration & connections with community. Students will increase their motivation and ability to take ownership of their learning. Students will develop and strengthen skills for life-long learning. Applying the very philosophies written by Dweck and Pink, each of the schools, and most often the individual teachers will be allowed the autonomy to employ instructional strategies designed to increase student intellectual engagement. The district AISI research team will share the literature review and the baseline data with administrators and teachers to help inform each school's research. Schools will be asked to collect, create and share within the division their plans and data collected regarding improving student intellectual engagement.

The division will foster the ideas found in the literature review and supporting instructional strategies through: offering focused professional development at district and school Professional Development Days; promoting related sessions, workshops, and conferences; and supporting collaboration among teachers working toward improved student engagement. The district AISI research team will focus on analysing student engagement at the junior high level, following one group of students' survey and P.A.T. results from the end of Grade 6 to the end of Grade 9, a convenience sample of which will also be individually tracked in terms of perceptions and attitudes toward engagement. This group was chosen based on research findings that intellectual engagement in this age group typically declines. It is our goal to maintain or increase intellectual engagement for our Junior High Students. The district will also collect the information provided from each of the schools in the division to synthesize the overall picture of student engagement in Holy Spirit RCSR #4.

2. Statement of Student Learning Goal(s)

Provide a statement about the improvements in student engagement, learning and performance that are anticipated as a result of the project.

Students will become more reflective of learning processes.

Students will increase their motivation and ability to take ownership of their learning.

Students will develop and strengthen skills for life-long learning.

Students will become aware of personal learning goals.

Students will develop strategies for problem solving to attain goals.

Students will recognize the application of classroom learning as it pertains to the globalized world.

As a result, we expect stamina, perseverance, creativity, and individual learning to improve as will be evident in classroom assessment, through statements from students, teachers, and parents.

3. Research Question(s)

What question(s) is the project designed to address?

Note: The research question(s) must focus on impacts on student engagement, learning or performance and be strongly linked to the student learning goal(s) for the project.

To what extent have identified instructional strategies in Holy Spirit Roman Catholic Separate Regional Division #4 made an impact on the intellectual engagement of their students and teachers?

4. Literature Review

Provide a brief account of what has been published by scholars and reported in AISI projects relative to the area of inquiry for this project.

Note: The literature review should:

- be related directly to the research question(s)
- synthesize results into a summary of what is known and what is not known

- *include an explanation of how the literature will influence the AISI project*

AISI Cycle 5: Holy Spirit Roman Catholic Separate Regional Division #4 Literature Review

The Development of Intellectual Engagement in Holy Spirit Catholic Schools

Jana Boschee, Thelma Gunn, Heather Hay, Lorelie Lenaour

ABSTRACT

In preparing for Alberta Initiatives for School Improvement Cycle 5, Holy Spirit Roman Catholic Separate Regional Division #4 drew upon the outcomes of the previous four cycles of AISI, in addition to exploring research regarding intellectual engagement, adaptive motivation, and life-long learning. More specifically, a closer examination of psychological and pedagogical research regarding mastery, autonomy, and purpose in our students and their impact on positive intellectual engagement and adaptive motivation was reviewed.

INTRODUCTION

The AISI Cycle 5 project being proposed by Holy Spirit Roman Catholic Separate Regional Division #4 will examine and implement current research and practices that promote intellectual student engagement. Our project aims to enhance “all students’ abilities to learn how to learn and to become lifelong learners in a knowledge-based society” (Gilbert, 2007; as cited by Parsons & Taylor, 2011, p.3). More specifically, our project will focus on ‘intellectual engagement’ as a means to create learners who are accountable for their learning and will be more motivated to take on new challenges. It is our hope that learners will become more reflective and autonomous. There will be an emphasis on knowledge building (e.g., Bereiter & Scardemalia, 2006) over knowledge acquisition, and our learners will discover the necessary real world connections that will establish the foundation for lifelong learning. Key themes from our past projects that focused upon Assessment for Learning and 21st Century Learning will be carried forward and deepened through a more rigorous emphasis on student engagement.

Defining Student Engagement

For the purpose of our research, the umbrella term student engagement will be defined as: “The extent to which students identify with and value schooling outcomes, have a sense of belonging at school, participate in academic and non-academic activities, strive to meet the formal requirements of schooling, and make a serious personal investment in learning” (Willms, Friesen, & Milton, 2009, p. 7). It is also understood that “Student engagement is the product of motivation and active learning” (Barkley, 2010; p. 6). Barkley further clarifies her definition by adding, “The definition of active learning, where students make information or a concept their own by connecting it to their existing knowledge and experience, is critical to student engagement” (p. 17). By way of these definitions, student engagement can be regarded as both a process and a product. That is, it is both fluid and measurable.

Intellectual Engagement

There are several components that comprise student engagement. They include academic, cognitive, intellectual, institutional, emotional, behavioral, social, psychological, to name a few (Parsons & Taylor, 2011, p.3). These components are combined and organized in different configurations depending on the researchers’ focus and discipline. For this AISI Cycle 5 research project, a focus on one category of student engagement (i.e., intellectual engagement) represents a natural continuation of our previous AISI foci on student success in the 21st century. “Today’s world absolutely requires collaborative critical thinkers, creative and courageous innovators, and true lifelong learners” (Parsons & Taylor, 2011, p. 5) While there are several definitions of intellectual engagement within the literature, there are common understandings of what it entails. Willms, Friesen, and Milton (2009) define it as “a serious emotional and cognitive investment in learning, using higher-order thinking skills (such as analysis and evaluation) to increase understanding, solve complex problems, or construct new knowledge” (2009, p.43). This definition aligns with two of the factors identified within Reschly and Christenson’s (2006a, 2006b) four-subtype model of student engagement. Academic engagement factors (i.e., graduation credits, time on

task, and homework completion), and behavioural engagement factors (i.e., attendance statistics, voluntary classroom participation, suspension rates, and extracurricular participation) are important components of engagement, but the less observable factors (i.e., cognitive and psychological engagement factors) are perhaps the most difficult to develop and measure. Similar to intellectual engagement, they are typically demonstrated via evidence of self regulation, the perceived value of learning, personal goals, and autonomy. With respect to cognitive engagement, students' perceived sense of belonging and identification

are noted. Finally, relationships with teachers and peers are additional examples of psychological engagement (Appleton, Christenson, & Furlong, 2008; p. 372).

Intellectual engagement is also in keeping with 21st century learning approaches and philosophies. Dunleavy, Milton, and Crawford (2010) write:

"These concepts (of intellectual engagement) capture the aspirations of both teachers and students for teaching and learning that create enduring knowledge and skill. Renewed attention to the kinds of learning experiences young people need to develop an expanded set of competencies for navigating a 21st century world is a significant consequence of the new measures of intellectual engagement and instructional challenge. Engaging students in the curriculum in this way - through work that creates the conditions for deep emotional and cognitive investment in learning - is the foundation of intellectual engagement, instructional challenge and

related core ideas..." (Dunleavy, Milton, & Crawford, 2010; p. 6).

Therefore, in an attempt to develop and support the intellectual engagement of students within Holy Spirit RCSRD #4, the key concepts, themes, and ideas present in our AISI Cycle 5 project include: adaptive motivation, student-directed learning, an emotional and cognitive investment in learning, higher-order thinking skills, and the construction and the building of knowledge.

Intellectual Engagement in the School Setting

Willms, Friesen & Milton (2009) identify four key pieces to intellectual engagement: effective use of learning time, positive teacher/student relationships, high expectations for success, and appropriate instructional challenge. They also discuss the importance of a student directed versus teacher-directed learning environment "Today's teachers are called upon to work with colleagues to design learning environments that promote deeper engagement in learning as a reciprocal process. Learning can no longer be understood as a one-way exchange where 'we teach, they learn'. It is a reciprocal process that requires teachers to help students learn with understanding, and not simply acquire disconnected sets of facts and skills" (p. 39).

Given the recent 21st century focus upon student-directed learning, intellectual engagement necessitates a transformation in our pedagogical approaches and motivational strategies. In order to develop self-directed learners, critical thinkers, and collaborative partners in learning, schools must create a solid foundation upon which to support these characteristics. Learners of today must feel invested in their learning "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" (Dunleavy & Milton, 2009; p. 13). Simply, students must possess the motivation to invest attention, effort, and enthusiasm (Brophy, 2004). While an engaged student has always been perceived as one who attends daily, meets graduation requirements, spends time on task, and completes all homework, these are merely academic and behavioural factors, if that same student lacks a

motivational commitment to his or her academic experience, they are not truly engaged (Gunn & Hollingsworth, 2012).

Pillars of Intellectual Engagement

While intellectual engagement has yet to be fully articulated in the literature, it does embody several components worthy of exploration in this project. Dunleavy and Milton (2009) outlined a number of instructional designs that are intended to result in adaptive intellectual engagement (see Appendix A). Those most pertinent to this project can be categorized into five pillars of interest. They include: 1) student autonomy, 2) adaptive goal orientations (i.e., intrinsic motivation and mastery learning), 3) critical thinking and knowledge building, 4) collaboration and community building, and 5) authentic and meaningful assessment, Student Autonomy. Autonomy is central to Deci and Ryan's (e.g., 2008) Self-Determination Theory (SDT), in which they use the terms autonomous motivation versus controlled motivation to replace intrinsic versus extrinsic motivation. Autonomous motivation is when a student behaves with a full sense of volition and choice whereas controlled motivation occurs where there is external pressure and demand for specific outcomes (Deci & Ryan, 2008). Deci, Vansteenkiste and Lens (2006) assert that autonomous motivation promotes greater conceptual understanding, better academic achievement, improved persistence at school, increased creativity, and enhanced well-being. Avoiding the urge for a teacher to manage and control all levels of learning serves to increase a student's sense of autonomy and therefore intellectual engagement (Dweck, 2006). Simply, in order to increase interest, ownership, accountability, there is an obvious need to move from a teacher centred approach to a student centred approach. In the Alberta Education document Making a Difference (2010), suggested strategies known to increase student autonomy, and therefore intellectual engagement include the creation of learner profiles, employing flexible groupings, implementing differentiated instruction practices, as well as using differentiated assessment.

Adaptive Goal Orientations. As previously mentioned, a student's motivational orientation is crucial in regards to his or her level of engagement. A mastery orientation that embodies student goal setting and intrinsic motivation provides the foundation for intellectual engagement and life-long learning. Research has demonstrated that a student's goal orientation is a representation of his or her beliefs about learning (i.e., how they approach, engage, and respond to learning tasks). Mastery orientation refers to an individual's purpose in developing competence, and has been attributed in the research to positive outcomes like increased self-efficacy, persistence, positive affect and well-being. Conversely, a performance orientation refers to an individual's purpose in demonstrating competence, with a particular emphasis on impressing others (Kaplan & Maehr, 2007). Typically, a student's goal orientation is directly correlated to how they set up and respond to goals. The achievement of established goals increases adaptive motivational constructs such as self-efficacy, selfconcept, resilience, and intrinsic motivation, to name a few. Therefore, it is crucial that teachers assist students in establishing both proximal (short term) and distal (long-term) goals (Stock & Cervone, 1990). By reaching realistic, attainable short term goals (i.e., learning tasks, assignment completion, etc), there is a greater likelihood of attaining long term distal goals (i.e., program completion, subject mastery, etc).

As indicated, intrinsic motivation aids in the development of intellectual development and life-long learning. Ryan and Deci (2000) describe intrinsic motivation as the “inherent tendency to seek out novelty and challenges, to extend and exercise one’s capacities, to explore, and to learn” (p. 70). Simply, intrinsic motivation can be described as taking part in, or completing a task for the inherent satisfaction of the task itself. Conversely, extrinsic motivation is described as completing a task for a reward or avoidance of punishment; outcomes that are more separated from the task itself (Ryan & Deci, 2000). Similar to a mastery orientation versus a performance orientation, a student who is intrinsically motivated is more likely to be engaged at school and to persist regardless of difficulty or adversity.

Critical Thinking and Knowledge Building. Throughout the literature there is consensus that education is beginning to move away from traditional educational patterns to more innovative modes and methods of learning (e.g., Cheng, 2006; Trilling & Fadel, 2009). Rapid technological changes have increased the availability of information as well as radically improving communication. The traditional method of instructing students to locate and report knowledge under the direction of the teacher is no longer sufficient. Memorization, repetition, and basic comprehension are lower order skills that were once useful, but in the Knowledge Age, inadequate when compared to higher order skills such as critical and creative thinking, elaboration, and evaluation. In other words, students are now expected to be good problem solvers and knowledge builders (Bereiter & Scardamalia, 2006; Scardamalia & Bereiter, 2006). In addition, 21st century school-aged students are rapid processors of information who demand more expedient methods of instruction and communication (e.g., Kapitzke, 2006), both as independent, self-directed learners as well as being members in a larger community of learners. Teacher centred instruction has now given way to student centred classrooms.

As explained by Scardamalia and Bereiter (2006), knowledge building can be further defined as “a coherent effort to initiate students into a knowledge creating culture. Accordingly, it involves students not only developing knowledge-building competencies but also coming to see themselves and their work as part of the civilization-wide effort to advance knowledge frontiers” (pp. 97-98). To that end, 21st century learners must also understand the socio-cognitive aspects of knowledge building (Law, Lee, & Chow, 2002; Scardamalia & Bereiter, 2006; Zhang, Scardamalia, Reeve, & Messina, 2009). Students must understand that they are not working in isolation, but are part of a larger community of thinkers (Zhang, et al, 2009). They must learn to accept the ideas of others, receive constructive feedback, anticipate challenges and problems, engage in self-monitoring and reflection, and build upon the work of others (e.g., Bereiter & Scardamalia, 2006; Walser, 2008; Zhang, et al, 2009).

Collaboration and Community Building. Students must feel connected to the school environment and its inhabitants, and value what is being provided both academically and socially in order to be engaged (e.g., Christenson, Sinclair, Lehr, & Godber, 2001; Lehr, Hansen, Sinclair, & Christenson, 2003). This can be accomplished by building a strong sense of community and care (e.g., Christenson & Thurlow, 2004). Students who perceive that their teachers and peers are supportive of them will lead to a beneficial cycle of increased levels of engagement (e.g., Baumeister & Leary, 1995). Nevertheless, there are some stumbling blocks that can mitigate the effectiveness of positive school attempts to increase student engagement. They include gender, grade

level, and socioeconomic status (SES).

Studies have shown that while girls experience not only a greater sense of belonging, peer support, relevance toward school work, and academic engagement (Marks, 2000; Reschly, et al, 2008), male students have a higher sense of relatedness toward teachers and higher levels of teacher-reported engagement (Furrer & Skinner, 2003; Reschly, et al, 2008).

With respect to grade level factors, the move from elementary school to junior high school can be detrimental with marked declines in motivation, attitude, and attendance as well as increases in mental health issues, crime, and substance abuse. This is especially evident between grades 7 to 9 (Reschly, et al, 2008; p. 421). Finally, socio-economic factors and minority status may have an impact on student engagement. As indicated above, these factors are correlated with students being at-risk for non-completion of school. That is, at-risk students typically have poor relationships with teachers, feelings of isolation, behavioral disorders, and achievement-related factors (e.g., Satchwell, 2004; Suh, & Suh, 2007; Suh, Suh, & Houston, 2007). As such, they are less likely to be positively engaged in school. Therefore, by focusing upon community building activities both within the school and amongst parents and local community affiliations, students are more likely to exhibit intellectual engagement.

Assessment For Learning. The importance of assessment for learning practices and appropriate and timely feedback cannot be understated.

Wormeli (2006) asserts that assessment is, "...a coaching, nurturing tool. Its emphasis is not so much on documenting deficiencies as it is on shaping our instructional decisions." (p. 20). By providing students with feedback regarding areas needing further consideration, and by emphasizing areas that are strengths, students will be able to move forward in their learning with an appropriate sense of self-efficacy and with the goal of mastery.

So, what type of feedback is most beneficial to students? Dweck (2006) provides clear direction in stating, "...children need honest and constructive feedback. If children are 'protected' from it, they won't learn well. They will experience advice, coaching, and feedback as negative and undermining.

Withholding constructive criticism does not help children's confidence, it harms their future." (p. 182). It is also important that students are fully participating in the assessment process (Schimmer, 2012). Willms, Friesen, and Milton (2009) state that students should be given the opportunity co-create assessment criteria to improve their learning as well as enhance intellectual engagement.

AISI Cycle 5 Project

By exploring the literature regarding intellectual engagement, Holy Spirit RCSR #4 has been able to conceptualize and infuse

research within their proposed project design. Intellectual engagement is a relatively new area of academic interest as it identifies the need for cognitive and psychological engagement in conjunction with behavioural and academic engagement. Without adaptive motivation, collaboration and community building, assessment for learning, and knowledge building strategies, students are unlikely to feel connected to their academic settings, teachers, and the curriculum. We believe that intellectual engagement is the necessary foundation for a student to be successful as an academic, a contributor to his or her immediate circle of influence, and as a citizen of the world. While this may seem to be a lofty goal, it is our hope that identified instructional strategies will assist students in

becoming successful and committed individuals. We believe this is possible by motivating, encouraging, and providing the necessary knowledge, skills, and strategies as outlined through intellectual engagement.

REFERENCES

- Alberta Education. (2010). Making a difference: meeting diverse learning needs with differentiated instruction. Edmonton, AB: The Crown in Right of Alberta.
- Appleton, J. J., Christenson, S. L., & Furlong, M. J. (2008). Student engagement with school: Critical conceptual and methodological issues of the construct. *Psychology in the Schools*, 45, 369-386.
- Barkley, Elizabeth F. (2010). Student engagement techniques: A handbook for College faculty. San Francisco: Jossey-Bass.
- Baumeister, R.F. & Leary, M.R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117, 497-529.
- Bereiter, C., & Scardamalia, M. (2006). Education for the knowledge age: Designcentered model of teaching and instruction. In P. A. Alexander, & P. H. Winne (Eds.), *Handbook of Educational Psychology* (2nd edition) (pp. 695-713). Mahwah, NJ: Lawrence Erlbaum Associates.
- Brophy, J. (2004). *Motivating students to learn* (2nd edition). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Cheng, Y. C. (2006). New paradigm of learning and teaching in a networked environment: Implications for ICT Literacy. In L. T. W. Hin, & R. Subramaniam (Eds.), *Handbook of Research on Literacy in Technology at the K-12 Level* (pp.1-20). London: Idea Group Reference.
- Christenson, S. L., Reschly, A. L., Appleton, J.J., Berman, S., Spanjers, D., & Varro, P. (2008). Best practices in fostering student engagement. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology* (5th ed., pp. 1099-1120). Bethesda, MD: National Association of School Psychologists.
- Christenson, S. L., Sinclair, M. F., Lehr, C.A., & Godber, Y. (2001). Promoting successful school completion: Critical conceptual and methodological guidelines. *School Psychology Quarterly*, 16, 468-484.
- Christenson, S. L., & Thurlow, M. L. (2004). School dropouts: Prevention considerations, interventions, and challenges. *Current Directions in Psychological Science*, 13, 36-39.
- Deci, E.L., Lens, W., & Vansteenkiste, M. (2006). Self-Determination theory: another look at the quality of Academic Motivation. *Educational Psychologist*, 41(1), 19-31.
- Dweck, Carol S. (2006). *Mindset: The new psychology of success*. New York, NY: Ballantine Books.
- Dunleavy, J. & Milton, P. (2009). What did you do in school today? Exploring the concept of Student Engagement and its implications for Teaching and Learning in Canada. Toronto: Canadian Education Association (CEA), 1-22.
- Dunleavy, J., Milton, P. & Crawford, C. (2010). The search for competence in the 21st

century. *Quest Journal* 2010. Retrieved June, 2012, from <http://www.leadingedgelearning.ca/q2011/questjournal2010.html>

Furrer, C., & Skinner, E. (2003). Sense of relatedness as a factor in children's academic engagement and performance. *Journal of Educational Psychology*, 95, 148-162.

Gunn, T., & Hollingsworth, M. (2012) Improving student engagement with 21st century learning practices. *Northwest Passages: Journal of Educational Practices*, 10, 1-12.

Kaplan, A., & Maehr, M. L. (2007). The contributions and prospects of goal orientation theory. *Educational Psychology Review*, 19, 141-184.

Kapitzke, C. (2006). Internet chatrooms: E-space for youth of the risk society. In L. T. W. Hin, & R. Subramaniam (Eds.), *Handbook of Research on Literacy in Technology at the K-12 Level* (pp.158-175). London: Idea Group Reference.

Law, N., Lee, Y., & Chow, A. (2002). Practice characteristics that lead to 21st century learning outcomes. *Journal of Computer Assisted Learning*, 18, 415-426.

Lehr, C.A., Hansen, A., Sinclair, M. F., & Christenson, S.L. (2003). Moving beyond dropout towards school completion: An integrative review of data-based interventions. *School Psychology Review*, 32, 342-364.

Marks, H.M. (2000). Student engagement in instructional activity: Patterns in the elementary, middle, and high school years. *American Educational Research Journal*, 37, 153-184.

Parsons, J., & Taylor, L. (2011). Student engagement: What do we know and what should we do? Report prepared for AISI University Partners: University of Alberta. Retrieved June, 2012, from http://education.alberta.ca/media/6459431/student_engagement_literature_review_2011.pdf

Reschly, A., & Christenson, S.L. (2006a). Promoting school completion. In G. Bear & K. Minke (Eds.), *Children's needs III: Understanding and addressing the developmental needs of children* (pp. 103-113). Bethesda, MD: National Association of School Psychologists.

Reschly, A., & Christenson, S.L. (2006b). Prediction of dropout among students with mild disabilities: A case for the inclusion of student engagement variables. *Remedial and Special Education*, 27, 276-292.

Ryan, R. M. & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55, 68-78. doi: 10.1037//0003-066x.55.1.68

Satchwell, K. (2004). Literature review for the high school completion rate project. Alberta Education.

Scardamalia, M. & Bereiter, (2006). Knowledge building: Theory, pedagogy, and technology. In K. Sawyer (Ed.), *Cambridge Handbook of the Learning Sciences* (pp. 97-118). New York: Cambridge University Press.

Schimmer, T. (2012). *Ten things that matter from assessment to grading*. Toronto, ON: Pearson Canada Inc.

Stock, J. & Cervone, D. (1990) Proximal goal-setting and self-regulatory processes. *Cognitive Therapy and Research*, 14(5), 483-498. doi: 10.1007/BF01172969

- Suh, S., & Suh, J. (2007). Risk factors and levels of risk for high school dropouts. *Professional School Counseling*, 10(3), 297-306.
- Suh, S., Suh, J., & Houston, I. (2007). Predictors of categorical at-risk high school dropouts. *Journal of Counseling & Development*, 85(2), 196-203.
- Trilling, B. & Fadel, C. (2009). *21st century skills: Learning for life in our times*. San Francisco, CA: Jossey-Bass.
- Walser, N. (2008). Teaching 21st century skills. *Harvard Education Letter*, 24(5), 1-3.
- Willms, J. D., Friesen, S. & Milton, P. (2009). *What did you do in school today? Transforming classrooms through social, academic and intellectual engagement*. Toronto, ON: Canadian Education Association.
- Wormeli, R. (2006). *Fair isn't always equal: Assessing & grading in the differentiated classroom*. Portland, MN: Stenhouse Publishers.
- Wormeli, R. (2001). *Meet me in the middle: Becoming an accomplished middle-level teacher*. Portland, MN: Stenhouse Publishers
- Zhang, J., Scardamalia, M., Lamon, M., Messina, R., & Reeve, R. (2007). Sociocognitive dynamics of knowledge-building in the work of 9- and 10-year-olds. *Educational Technology Research Development*, 55, 117-145.
- Zyngier, D. (2007). (Re)conceptualising student engagement: Doing education not doing time. *Teaching and Teacher Education*, 24, 1765-1776.

Appendix A

“When Dunleavy & Milton (2009) discuss the requirements for intellectual engagement, they note how difficult it is to “pinpoint which classroom practices will be most effective in supporting it” (p. 13). However, they summarize the following list of common instructional “designs for learning that begin with the goal of intellectual engagement:”

1. Emphasize conceptual learning and opportunities for students to work with authentic ideas and problems, develop a deep understanding of ideas, sort misconceptions, learn new ideas and create or improve upon ideas, see conceptual connections across disciplines.
2. Require high levels of student participation and provide time for in-depth work.
3. Incorporate authentic assessment as a strategy that helps students set goals and assess their own learning.
4. Use work that is relevant, interesting, and connects with students' aspirations; is rigorous and allows students to think as “professionals” and create professional quality outcomes; is challenging and allows students to experience a sense of deep intellectual and emotional investment in learning; is built from diverse and improvable ideas; and is informed by the current state and growing knowledge bases of different subject disciplines.
5. Promote students' sense of ownership and responsibility for their own learning.
6. Invite students to be co-designers of their learning in classrooms; support student voice and autonomy.
7. Provide a high level of social support for learning and encourage students to take risks, ask questions, and make mistakes.
8. Foster collaboration and community building.
9. Engage students in becoming literate with technologies as social networking knowledge building tools.
10. Connect students with opportunities to develop abilities in critical thinking, intellectual curiosity, reasoning, analyzing, problem solving, communicating, etc.
11. Bridge students' experience of learning in and outside of school by exposing

them to digital technologies in knowledge building environments (Dunleavy & Milton, 2009, pp. 13-14)” (as cited by Parsons & Taylor, 2011; pp. 47-48).

5. Methodology

Describe how data will be gathered and analyzed to answer the project research question(s).

This may include:

- *the data source (describe the population or the kind of sampling procedure that will be used (e.g. random sample, volunteer sample, stratified sample)*
- *the kind of measurement instruments that will be used*
- *the techniques and tools that will be used to analyze and present project findings*

METHOD

Holy Spirit Roman Catholic Separate Regional Division #4 has developed the following research question and subquestions:

To what extent have AISI Cycle 5 projects in Holy Spirit Roman Catholic Separate Regional Division #4 made an impact on the intellectual engagement of their students and teachers?

1. For all participating junior high school students (Grades 7 to 9), have there been statistically significant changes to measured levels of intellectual engagement, (as determined by select question scores) on three standardized instruments designed to assess student engagement?
2. For a randomly selected group of junior high school students (Grades 7 to 9), have their perceived levels of intellectual engagement improved (as determined by interview methods)?
3. For participating teachers, have their perceptions of intellectual engagement improved (as determined by a survey instrument)?
4. What are the qualitative outcomes of each individual project regarding specific approaches toward intellectual engagement?

Participants

13 schools will be developing projects. This will include approximately 270 teachers. There will be a subset of subjects that will be tracked across all three years comprised of approximately 300 junior high school students. The purpose is to see the impact of intellectual engagement approaches on the highest risk group for student engagement. Because adolescence is a crucial time for student engagement to typically diminish, it is our hope that this vulnerable age group will exhibit improved, or at minimal, sustained levels of intellectual engagement.

Instruments

1) Alberta Education Accountability Pillar Survey

- selected questions will provide student, parent, and teacher perspectives of their awareness of personal learning goals and application of class learning to the globalized world.

2) Holy Spirit RCSRD #4 Locally Developed Survey

- selected questions will provide student, parent, and teacher perspectives of their awareness of personal learning goals and application of class learning to the globalized world.

3) Tell Them from Me Survey

- will provide students insight regarding their motivation, ownership of learning, application of class learning to the globalized world.

4) Interview Questions for junior high school students

- will provide student insight regarding their motivation, ownership of their learning, reflection on

learning processes, awareness of personal learning goals, attitudes and strategies for problem solving, and indications of growth in stamina, perseverance and learning.

5) Survey instrument for teachers

- will provide teacher insight regarding instructional strategies and how they relate to student motivation, student ownership of learning, student reflection on learning processes, student awareness of personal learning goals, student attitudes and strategies for problem solving, and indications of students' growth in stamina, perseverance and learning.

6) Yearly and cumulative templates for ongoing individual project outcomes

- will provide data and insight from teachers, project leads, and administrators regarding professional development needs, instructional strategies and how they relate to student motivation, student ownership of learning, student reflection on learning processes, student awareness of personal learning goals, student attitudes and strategies for problem solving, and indications of students' growth in stamina, perseverance and learning.

7) Provincial Achievement Test Grade 6 2012 compared to Grade 9 2015 (critical thinking, evaluation, synthesis questions)

- will provide information about students' individual learning, problem solving, and application skills.

Procedure

1. Fall 2011: District Principal visits schools to gather information about what teachers think need to happen in schools for AISI Cycle 5.
2. February 2012: The District Principal summarizes and synthesizes the information with guidance from a faculty member from the Education Department at the University of Lethbridge to determine an overarching theme: Learner Engagement
3. March, April 2012: Summary, synthesis and overarching theme shared and vetted with School Administrators, AISI Lead Teachers, ATA PD Council, Local ATA Council and central office staff.
4. April, May 2012: Each school is invited to bring a school leadership team to one of two meeting dates to discuss learner engagement; to discuss what data at their school is telling them; to set a direction for the AISI Cycle 5; to make connections with other schools in the division that may be considering similar projects/data collection.
5. May 2012: The research question is determined: *"To what extent have identified instructional strategies in Holy Spirit Roman Catholic Separate Regional Division #4 made an impact on the intellectual engagement of their students and teachers?"*
6. May 2012: Based on information gathered from the schools, literature review, and guidance from a faculty member from the Education Department at the University of Lethbridge, district project measures are selected including; interviews, select questions from existing surveys, select Provincial Achievement Exam questions, anecdotal records.
7. June -Sept. 2012: Interview measurement tool developed and subjects from 2012 Grade 6 class selected.
8. September 2012" Interview measurement submitted to University of Lethbridge Human Subjects Department.
9. June-September 2012: District obtains permission from parents and students to be test subjects for interviews about learner engagement between 2012 and 2015.
10. August 2012: District collects Grade 6 P.A.T. results that pertain to synthesis and evaluation.
11. Fall 2012: Schools gather baseline information about their focus within learner engagement.
12. October 2012: District administers Tell Them From Me Surveys to Grade 7 students as baseline data.
13. Fall 2012: District conducts engagement interviews with selected subjects for baseline data.
14. Fall 2012-Spring 2015: Schools and district engage in professional learning opportunities that support learner engagement strategies. Teachers implement practices to support learner engagement strategies.
15. Spring 2013: District gathers baseline information about teacher perceptions surrounding learning engagement after providing professional development in this area and allowing time for teachers to observe their classrooms and begin forming understandings and outlooks about the topic.
16. Spring and Fall 2013, 2014, and Spring 2015: Schools and district collect data supporting their project

focusing on learner engagement.

17. Fall 2012-Spring 2015: Analyze the data gathered from the selected measures and write notes about how it pertains to learner engagement.
18. Fall 2015: Draft a report of the preliminary findings to share with school district leaders to garner feedback
19. Winter 2015: Receive feedback and add to report.
20. Winter 2015: Develop strategy to share relevant data with stakeholders.
21. Spring 2015: Use feedback from stakeholders, final results from data collection to write final report.
22. Spring 2015: Forward the draft of the final report to the district leadership.
23. Spring 2015: Make revisions based on feedback received.
24. May 2015: Complete project report.
25. June 2015: Share with stakeholders.

6. Significance of the Research Study

Write a few sentences to explain why the project is important and of benefit to the engagement, learning and/or performance of the selected students.

Describe how this project may contribute to the advancement of teaching and learning in Alberta

Fostering intellectual engagement in students sets the foundation to develop independent, creative, dedicated and purposeful citizens. Psychologist, Csikzentmihalyi suggests that we have evolved to be people who have a desire to do something beyond ourselves, and that purpose gives us the energy for life (as cited by Pink, 2009). Encouraging 'growth mindsets' where students relish in their own learning process will continue the movement toward student-centred learning and learning that matters to the world.

"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." (Dunleavy & Milton, 2009, p. 13). This project will increase the breadth of knowledge of authentic and relevant practices, focused feedback, and individualized learning goals and how they impact learner engagement; as well as further the definition of 'learner engagement'.

7. Scope and Limitations of the Project

What specific areas does this project address? (e.g. student competencies)

What specific groups of students are being selected for the study? (e.g. grades, ages, characteristics, abilities)

To what extent can the results and conclusions from this project be transferable to other contexts?

What does it not address?

This project addresses student attitudes and understandings about the learning process. Though all Holy Spirit Catholic School students are involved in the project, we will be specifically tracking and studying the growth in metacognition, awareness of learning goals, and attitudes toward learning in the Grade 7 group as they journey through to Grade 9.

The results and conclusions from this study can transfer to other schools efforts to engage their learners, especially looking at Junior High schools where engagement becomes critical to retaining students. Past the school setting, the strategies, behaviours and skills researched in our study are those needed for life-long learning in the work place and in being responsible in our globalized world. The project does not address other influences that affect engagement/disengagement during adolescence.

Section D: Project Strategies and Implementation Plans

1. Student Learning Goals, Measures and Strategies

Student Learning Goal

Students are intellectually engaged in their learning.

Current Situation/ Baseline

Surveys: Schollie, Accountability Pillar, Thoughtstream, Tell Them From Me
Interviews: Case studies

Measure

What tools / instruments / data sources will be used to measure student progress toward the goal?

Surveys: Schollie, Accountability Pillar, Thoughtstream, Tell Them From Me
Interviews: Case studies

Evidence

What evidence will indicate success?

increase of percentage of students, parents feeling engaged in their learning on survey results,
anecdotal information from interviews and classroom teachers,
increase in teachers' use of strategies

Strategies

What strategies will be implemented to achieve the goal? How will they be implemented?

- Daily Five
- Layered Curriculum
- Multiple Intelligences
- Pyramid Response to Intervention
- Flexible Groupings
- Authentic Assessment
- Differentiated Instruction
- Inquiry-based / project based learning
- 21st century skills

Student Learning Goal

Students identify purpose to achieving learner outcomes.

Current Situation/ Baseline

Surveys: Schollie, Accountability Pillar, Thoughtstream, Tell Them From Me
Interviews: Case studies

Measure

What tools / instruments / data sources will be used to measure student progress toward the goal?

Surveys: Schollie, Accountability Pillar, Thoughtstream, Tell Them From Me
Interviews: Case studies

Evidence

What evidence will indicate success?

increase of percentage of students, parents feeling engaged in their learning on survey results,
anecdotal information from interviews and classroom teachers

Strategies

What strategies will be implemented to achieve the goal? How will they be implemented?

- Daily Five

- Social Justice project based learning
- multiple intelligences
- authentic assessment

Student Learning Goal

Students take ownership of individual learning goals

Current Situation/ Baseline

PAT results 2012
survey
classroom assessment

Measure

What tools / instruments / data sources will be used to measure student progress toward the goal?

PAT results
survey
classroom assessment

Evidence

What evidence will indicate success?

overall increase of success on higher order thinking skills on PAT 2015 ,
classroom teacher anecdotal information

Strategies

What strategies will be implemented to achieve the goal? How will they be implemented?

- Daily Five
- authentic assessment
- Multiple Intelligences
- Teaching creativity

Student Learning Goal

Students demonstrate skills in creating and evaluating.

Current Situation/ Baseline

PAT results 2012

Measure

What tools / instruments / data sources will be used to measure student progress toward the goal?

PAT results
Classroom assessment

Evidence

What evidence will indicate success?

overall increase of success on higher order thinking skills on PAT 2015,

Strategies

What strategies will be implemented to achieve the goal? How will they be implemented?

- Inquiry-based/project-based learning
- Teaching creativity
- Multiple intelligences
- authentic assessment
- differentiated instruction
- 21st Century skills

Student Learning Goal

Students recognize relevance and application of classroom learning to their roles in the world.

Current Situation/ Baseline

Surveys: Schollie, Accountability Pillar, Thoughtstream, Tell Them From Me
Interviews: Case studies

Measure

What tools / instruments / data sources will be used to measure student progress toward the goal?

Surveys: Schollie, Accountability Pillar, Thoughtstream, Tell Them From Me
Interviews: Case studies

Evidence

What evidence will indicate success?

increase of percentage of students, parents recognizing learning's application to world survey results, anecdotal information from interviews

Strategies

What strategies will be implemented to achieve the goal? How will they be implemented?

- Daily Five
- Social Justice project based learning
- multiple intelligences
- authentic assessment
- teaching creativity
- 21st century skills
- inquiry-based learning

2. School Community Engagement Plan

Description Of Activities <i>Who will be involved? How? What systemic supports for community engagement are planned?</i>	Timeline <i>Dates and/or frequency of activity</i>	Lead <i>Who will be responsible?</i>
Students - school satisfaction surveys - anecdotal surveys - interviews of students	survey results each spring: 2012, 2013, 2014, 2015 anecdotal: ongoing interviews: three times per year per selected student	AISI research team classroom teachers principals

	Thoughtstream online engagement	
Parents - locally administered satisfaction survey results - select group interviewed for case study	survey results each spring: 2012, 2013, 2014, 2015 interviews: twice per year per family Thoughtstream online engagement	AISI research team
Teachers - provide project input through survey - engage in professional development - implement strategies	ongoing Thoughtstream online engagement	Principals School AISI teams Division Principal ATA Local PD Council
Support Staff - engage in professional development to support teachers and student progress in the project	ongoing Thoughtstream online engagement	Principals School AISI teams
Principals along with school AISI teams - participation in initial planning session, - leading schools throughout cycle through coordination of professional development, - support through funding and project leadership, - data collection	ongoing Thoughtstream online engagement	Division Principal Superintendent
Authority Administrators - participation in initial planning sessions - provide documentation to support the needs of the division - coordination of professional development - funding allocation to schools - support school-based project leadership	ongoing Thoughtstream online engagement	Division Principal Superintendent
School Board - present periodic information updates on the progress of the project - host public consultation sessions to share and gather input from community	at regularly scheduled board meetings annual public consultation sessions Thoughtstream online engagement	Superintendent Division Principal
Business/Community Agencies - University of Lethbridge consulting throughout project for data collection and analysis - schools will incorporate various community agencies that support their specific school focus	Regular contact Thoughtstream online engagement	Division Principal AISi research team

3. Professional Learning Plan

Description Of Activities <i>Who will be involved? How will learning be integrated? How will leadership capacity be developed?</i>	Timeline <i>Dates and/or frequency of activity</i>	Lead <i>Who will be responsible?</i>
Professional Learning Communities - teachers will meet to share strategies, successes, questions regarding engaging students	weekly, bimonthly, depending on school	Principals

Grade Level/Subject Area Meetings - to share strategies, successes, address questions concerning student motivation/engagement	twice per year	Division Principal
Divisional Professional Development Day -keynote to set tone and direction toward student engagement - sessions to support teachers' engagement in various components of AISI project.	October 2012, October 2013, October 2014	Division Principal ATA Local PD Council School AISI Leadership Teams
AISI Coordinators' Meetings with Alberta Education -build leadership capacity		Division Principal AISI Research Teacher Alberta Education
Southern Alberta Professional Development Council - Division Principal working with SAPDC to ensure that sessions are offered related to learner motivation and engagement	ongoing	SAPDC Division Principal Teachers
School based PD days - planned and implemented to focus on exploration, implementation and review of best practices in engaging our students.	twice per year	Division Principal School Administrators School AISI Leadership Teams

4. Data Collection and Analysis Plan

Description Of Activities <i>What data will be collected? From whom? How will it be analyzed? Who will be responsible?</i>	Timeline <i>Dates and/or frequency of activity</i>	Lead <i>Who will be responsible?</i>
Provincial Achievement Tests: higher order thinking skills	Grade 6 results Spring 2012 Grade 9 results Spring 2015	AISI research team
Tell Them From Me survey: items related to intellectual engagement	October 2012, October 2013, October 2014,	AISI research team (administered by individual school AISI teams)
HSRCRSD Locally Developed Survey: items related to intellectual engagement	April 2012, April 2013 April 2014, April 2015	AISI research team (administered by individual school AISI teams)
Accountability Pillar Survey: items related to intellectual engagement	April 2012, April 2013 April 2014, April 2015	AISI research team (administered by individual school AISI teams)
AISI survey - Locally Developed	October 2012, April 2013 April 2014 April 2015	AISI research team
Interviews - case studies of 14 students	3 interviews per student per year	AISI research team

5. Knowledge Mobilization Plan

Description Of Activities <i>What strategic plans are anticipated for knowledge dissemination and mobilization?</i>	Timeline <i>Dates and/or frequency of activity</i>	Lead <i>Who will be responsible?</i>
School Community Awareness School newsletters Social Media: Twitter, Facebook School parent nights	monthly	School AISI teams
Division Community Awareness Reports to board Superintendent Blog Holy Spirit AISI Blog Social media: Twitter, Facebook	monthly	Superintendent Division Principal AISi research team
Educational Community Awareness University contact to write and present findings	to be determined	University Consultant

Section E: Project Staffing and Budget

1. Project Start School Year 2012/13

2. Staffing Requirement

Personnel Types	FTE Allocations					Total FTE Allocation
	Project Management / Administration	School Community Engagement	Professional Learning Delivery	Research Leadership / Support	Classroom Instruction / Specialized Services / Supports for students	
AISI Coordinator/Project Leader	0.10		0.30	0.10		0.50
Lead Teachers / Coaches / Mentors / Consultants / Teachers			1.60	0.30		1.90
Teaching Assistants						0.00
Other Professionals (e.g., Researchers, Social Workers, Psychologists, Liaison)						0.00

Workers, Speech Pathologists)						
Administrative Support Staff			0.29			0.29
Total FTE	0.10	0.00	2.19	0.40	0.00	2.69
Estimated Total Cost (Based on Salaries and Benefits)	\$12,199		\$215,316	\$43,215		\$270,730
Comments:						

3. Revenue

Revenue Source		Budget
1	AISI Funding Requested	\$301,706
2	Contributions from Equity of Opportunity Funds	
3	Additional Funds from Alberta Education (For Alberta Education use only)	\$3,900
4	Funding from Other Sources	\$6,804
5	Less Transfers to Other Approved AISI Projects	
6	Transfers from Other Approved AISI Projects	
7	Unexpended Funds from Previous Year	\$182,955
8	Total Revenue	\$495,365

Comments:

Request for Carry Forward submitted.
Request for Subsidy for Student Engagement Measures for 1500 submitted AND Request for Subsidy for Student Engagement Measures for 2400 submitted.
\$6804 is the remainder of the cost for Thoughtstream for Research Engagement. This will be covered through a different budget line within the school division.

4. Expenses

		Budget
1	Salaries and Benefits	\$270,730
a	Project Management/Administration	\$12,199
b	School Community Engagement	

c	Professional Learning Delivery	\$215,316
d	Research Capacity/Leadership/Support	\$43,215
e	Classroom Instruction/Specialized Services/Supports for students	
2	Professional Learning <i>(excluding salaries)</i>	\$191,818
a	Professional Learning Materials/Resources	\$16,725
b	Travel/Accommodation/Meal and other related costs for Professional Learning including sub costs/release time	\$163,779
c	External Consultants, Registration fees, etc. for Professional Learning activities	\$11,314
3	Research Activities <i>(excluding salaries)</i>	\$12,204
a	Literature Review, Data Collection and Analysis, Reporting; Other	
b	External Research Consulting	\$12,204
4	Project Management Costs <i>(excluding salaries)</i>	
5	School Community Engagement Costs <i>(excluding salaries)</i>	
6	Instructional Materials and Resources for Students	\$20,613
7	Equipment/Capital Expenses	
8	Other expenses	
9	Total Expenses	\$495,365
10	Unexpended Funds	\$0

Comments:

External Research Consulting costs are:
\$3000 for Tell Them From Me Survey for 5 Elementary Schools and \$9204 for Thoughtstream.

5. Project Expenses Percentages

Expenses	Amount	% AISI Funding	% of Total Expenses
Professional Learning	\$407,134	135	82
Research	\$55,419	18	11
Project Management	\$12,199	4	2

Comments:

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