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EXPLORING THE INFLUENCE OF A STRENGTH-BASED APPROACH ON MI'KMAQ LEARNERS AND LEARNERS EXPERIENCING POVERTY AND THEIR TEACHERS

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Agenda

1. Origins underlying study
2. Theoretical underpinnings: Culturally Relevant Pedagogy (CRP) and Restorative English Education Introduction to AI: Approach to working with teachers and students
3. Overview of student workshops
4. Overview of teacher workshop
5. Implications



IURN Study 2016-2018: Redressing the Achievement Gap in Literacy with Vulnerable Populations at a Vulnerable Age

Dr. Anne Murray-Orr & Dr. Jennifer Mitton

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Additional information is available at the end of the article

CURRICULUM & TEACHING STUDIES | RESEARCH ARTICLE

Learning routines that reflect teachers' asset-based pedagogies: Creating breathing spaces for students

Anne Murray-Orr^{1*} and Jennifer Mitton¹

Abstract: The findings of this inquiry emerged from a research study conducted over two years in two schools investigating how teachers support learners from populations who have been historically underserved by a provincial education system in Canada. Emerging from a focus on how teachers in four rural middle school classrooms supported literacy acquisition through teaching in the content areas, this work revealed asset-based pedagogies made visible by teaching and learning routines that provided learners supportive spaces to grow. Each of these routines was developed by teacher participants to enable students to think, ask questions, make choices, assess their learning, and take risks as learners. The results of this study affirm what is known about how to support learners in culturally and economically diverse classroom contexts and afford new understanding about asset-based informed learning routines that can encourage students to take risks academically. As learning routines have not often been studied in relation to culturally relevant pedagogy, culturally sustaining pedagogy, or additive schooling theories, this study suggests a novel intersection with these asset-based pedagogies. This intersection offers fresh possibilities for understanding their enactment in classrooms.

Subjects: Middle School Education; Multicultural Education; Teaching Practice - Education

Keywords: asset-based pedagogies; culturally relevant pedagogies; teaching and learning routines; academic risk-taking

ABOUT THE AUTHORS

Anne Murray-Orr is a Professor in the Faculty of Education at St. Francis Xavier University, teaching preservice teacher education courses in language and literacy, and graduate courses in early childhood pedagogies and literacies. Her current research areas include middle school teachers' use of culturally relevant literacy practices in content areas, parent and family engagement in early grades during the pandemic, preservice teachers' experiences of an alternate practicum during the pandemic, and preservice teachers' multiracial identities.

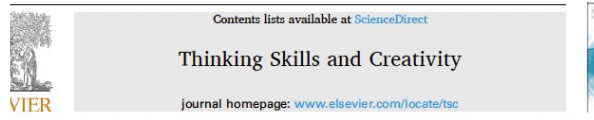
Jennifer Mitton is a Professor in the Faculty of Education at St. Francis Xavier University teaching preservice teacher education courses in secondary literacy and graduate courses in qualitative research methodologies. Prior to university teaching, she taught in secondary schools in New Brunswick, Nova Scotia, and Turkey. Her research interests include adolescent literacies, classroom assessment, and pedagogical practices that foster academic risk taking.

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Thinking Skills and Creativity 43 (2022) 101005



oring the connection between playfulness and learning: ng learning memorable in a culturally and economically se grade 5 classroom

er Mitton¹, Anne Murray-Orr

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LEINFO

ool pedagogies risk-taking

ABSTRACT

This paper focuses upon the case of one middle school teacher, Jackie. Over the academic year, we explore Jackie's instructional decision making and assessment | a focus on how she infused play into learning and the ways it impacted students. | play and its impact upon learning and engagement is linked to several cognitive, e social benefits with the bulk of the research literature situated in early childh contexts, although some suggest it can take many forms across the continuum journey in school. To demonstrate the impact of Jackie's teaching, the findings are found poems showcasing Jackie and her students, showing how a playful appra and assessment was enacted in Jackie's classroom, creating conditions for student problem solving, analyze/critique ideas, suggest hypothetical thoughts, ask c attempt new skills. Implications of attending to how Jackie infused play into c making related to instruction, assessment and interpretation of curriculum includ to understand more about how a playful pedagogy can support middle school : ingness to engage and persist with learning.

duction

Purcell about Mrs. Purcell never know what I'm going to be up to, to make it as exciting as possible. this to them at the beginning of the year:

Middle Years Teachers' Critical Literacy Practices as Cornerstones of Their Culturally Relevant Pedagogies

Anne Murray-Orr and Jennifer Mitton

Abstract

Critical literacy is widely accepted as an important element of culturally relevant pedagogy. In this article, we detail results of a study into how six teachers in rural Eastern Canada purposefully incorporated critical literacy into teaching and learning activities in their classrooms from a culturally relevant pedagogical stance. Findings highlight teachers' intentional planning that embeds critical literacy, critical literacy in the wider community, and use of multimodal practices in teaching for critical literacy. The critical literacy practices of these teachers reflect their thinking about knowledge and knowledge construction as one key aspect of their culturally relevant pedagogy.

Background

Operationalizing culturally relevant pedagogy (CRP) in the classroom requires more than a particular attitude, although attitude is vital. "Culturally relevant teachers envision their students as being filled with possibilities. They imagine that somewhere in the classroom is the next Nobel laureate..." (Ladson-Billings, 2008, p. 165). Along with this commitment to seeing all students as filled with possibilities, the ability to plan, teach, and assess in ways that support this commitment are needed. Critical literacy is widely accepted as an important part of CRP. Morrison et al. (2008) used Ladson-Billings' (1995) theoretical framework to organize a synthesis of 45 research studies on how teachers enact CRP in their classrooms, finding that many teachers employed critical literacy instruction as part of a practice that "emphasizes academic success for all students..., assists students in the formation of a positive cultural identity... and guides students in developing a critical consciousness...[the three] central tenets" (Morrison et al., 2008, p. 434) of CRP Ladson-Billings outlined.

What does critical literacy instruction look like, however, in the middle years classrooms of teachers who are committed to CRP, particularly those who are experienced and knowledgeable about what it means to enact critical literacy practices as part of their culturally relevant teaching? This was one of the questions of a research study undertaken in rural Eastern Canada by the authors of this paper over nearly two school years, from September 2016 to March 2018, funded by the Nova Scotia Department of Education and Early Childhood Development through the Inter-University Research Network.

Defining the elements of critical literacy practices is a first step toward answering this question. Lewison et al. (2002) completed an extensive review of the literature on critical literacy and found four interwoven dimensions of teacher practice which informed their research: seeing common events or ideas from new perspectives; examining multiple and contradictory viewpoints; working to understand sociopolitical

Identifying the Impact of Culturally Relevant Pedagogy: Evidence of Academic Risk-Taking in Culturally and Economically Diverse Nova Scotia Classrooms

Jennifer Mitton
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Anne Murray-Orr
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Abstract

This article reports on findings from a qualitative research study investigating ways to support learners from populations who have been historically underserved by the Nova Scotia education system, particularly African Nova Scotian and Mi'kmaq learners, and learners who experience poverty. Working with middle school teachers located in rural schools with a proven track record of enabling students to succeed and thrive, we spent two years in their

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IURN Study 2016-2018: Impact of CRP pedagogical intent/actions on students' academic risk-taking

The positive impact of CRP pedagogical intent/actions intersecting with:

- ❖ ongoing assessment (through relationships) and making learning visible for students (Mitton & Murray-Orr, 2021).
- ❖ planning for multimodal critical literacy opportunities in the classroom and in the wider community (Murray-Orr & Mitton, 2021).
- ❖ playful learning on middle school students' willingness to try new things, take risks, show their learning, and demonstrate creative thought (Mitton & Murray-Orr 2022).
- ❖ using asset-based informed learning routines that can encourage students to take risks academically (Murray-Orr & Mitton, 2023).

Origins: Prior study at NNEC: This study focused on exploring authentic literacy instruction from the perspectives of high school students who identify as experiencing struggles with literacy (reading, writing, speaking, listening etc.) and who experience poverty (Mitton, Lewis, & MacDonald, 2020).

Big take away: The importance of using a classroom circle as a consistent space to communicate elevated expectations for students who have experienced academic struggles.

Next steps: The findings of the pilot study informed the design of the study discussed in this report, particularly the research team's understanding of the need to consider the perspectives of students and what they view as pedagogical practices that nurture their interest and persistence in learning.

Communicating Elevated Academic Expectations: Positioning Students as Thinkers with Ideas to Share

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Authors' Note

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Abstract

The focus of this qualitative study is upon 15 Grade 12 students situated in an English Communications (ECM) classroom in rural Nova Scotia and the impact a daily classroom circle had upon their academic engagement. ECM is intended for students who may require further support to develop their skills as readers, writers, and language users as they enter the job market or community colleges. There is no formal curriculum for ECM, and often the demographics of such classrooms are comprised of some of the province's most vulnerable populations. In this paper, we demonstrate the impact the daily classroom circle had upon late adolescents' understanding of themselves as thinkers with ideas to share. Overall, we see this study as significant for teachers in high-poverty contexts, particularly the importance of using a classroom circle as a consistent space to communicate elevated expectations for students who have experienced academic struggles.

Keywords: adolescent literacy; circle routines; qualitative case study; restorative practices

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EDUCATION

The design of the study and hard conversations

The Research Team engaged in conversations about the complexity informing the existence of the achievement gap in this province particularly **its historical origins/structural inequities impacting the lack of achievement of specific populations** (Black Learners Advisory, 1994; Lee & Marshall, 2009; Thiessen, 2009; Province of Nova Scotia, 2016).

For example, studies have demonstrated:

- the **underachievement of African Nova Scotian and Mi'kmaq learners, and learners who experience poverty** (Kakembo, Ash, & Curry, 2014; Province of Nova Scotia, n.d., 2016).
- particularly **literacy struggles** (Brooks Arenberg, 2012; Kakembo et al., 2014).
- and evidence of **an overabundance of Individualized Program Plans in schools** (Province of Nova Scotia, 2016; Thiessen, 2009).

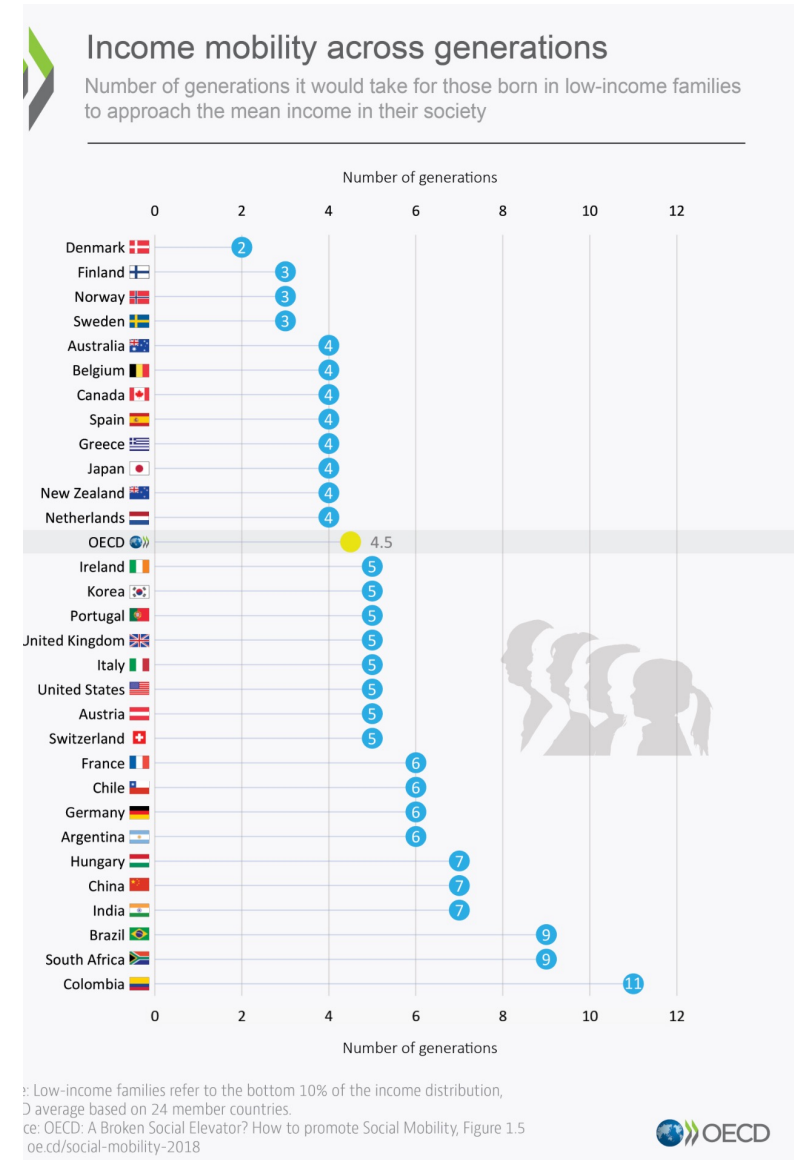
Significance:

- **Little is known about the perspectives of learners and the potential for approaching cognitive engagement** (Cooper, 2014; Walker & Greene, 2009) **from a strength-based approach** (Lawson & Lawson, 2014).
- **Very few studies actually consider students' views regarding their own cognitive engagement and what they see as "useful"**.



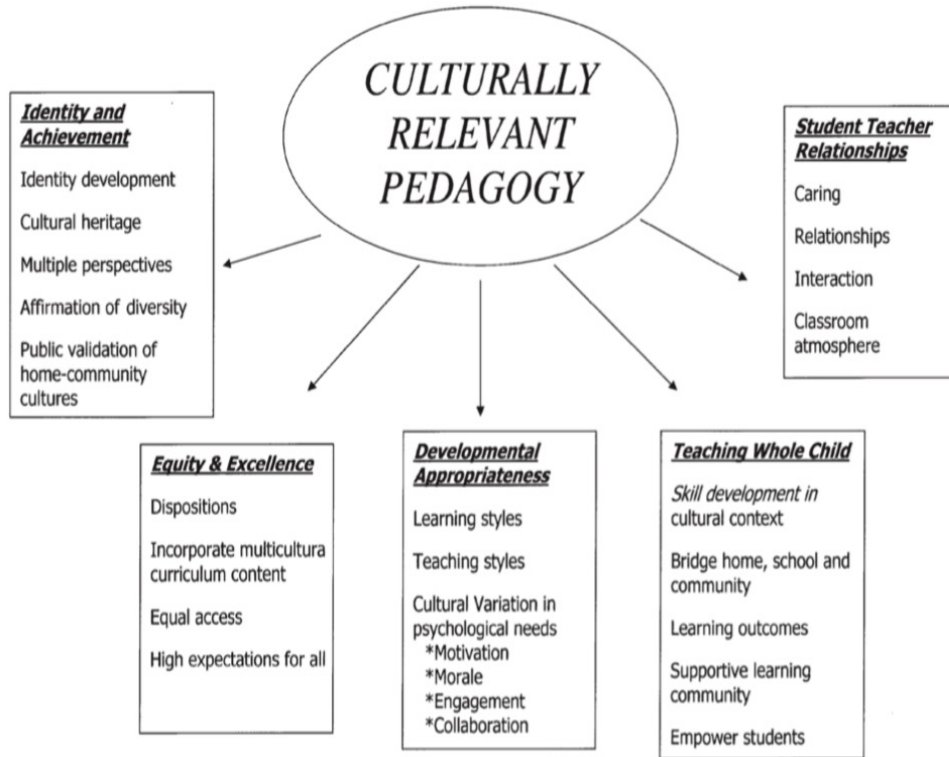
Global Trends: Income mobility “Sticky Floors and Sticky Ceilings”

- OECD. (2018). *A broken social elevator? How to promote social mobility*. Paris, France: OECD Publishing. Retrieved from <https://doi.org/10.1787/9789264301085-en>



Toward a Conceptual Framework of Culturally Relevant Pedagogy

Figure 1
The Principles of Culturally Relevant Pedagogy



Restorative English Education

To include restorative justice principles, practices, and more specifically circle processes. It is important to underscore that circles, and peacemaking circles in particular, “are not a neutral, value free process” (Pranis, 2005, p. 24).

Together, people in the circle choose a set of shared values before exploring a range of topics and ideas through a series of questions, posed by a circle keeper, that are in alignment with the circle’s purpose.

Everyone has a time to speak.

Everyone has a time to listen.

...requires everyone to stay in the room and engage in dialogue; it demands collaboration and consensus.

Brown-Jeffy, S., & Cooper, J.E. (2011). Toward a conceptual framework of culturally relevant pedagogy: An overview of the conceptual and theoretical literature. *Teacher Education Quarterly, Winter*, 65-84.

Winn, M.T. (2013). Toward a restorative English education. *Reading in the Teaching of English*, 48(1), 126–136.

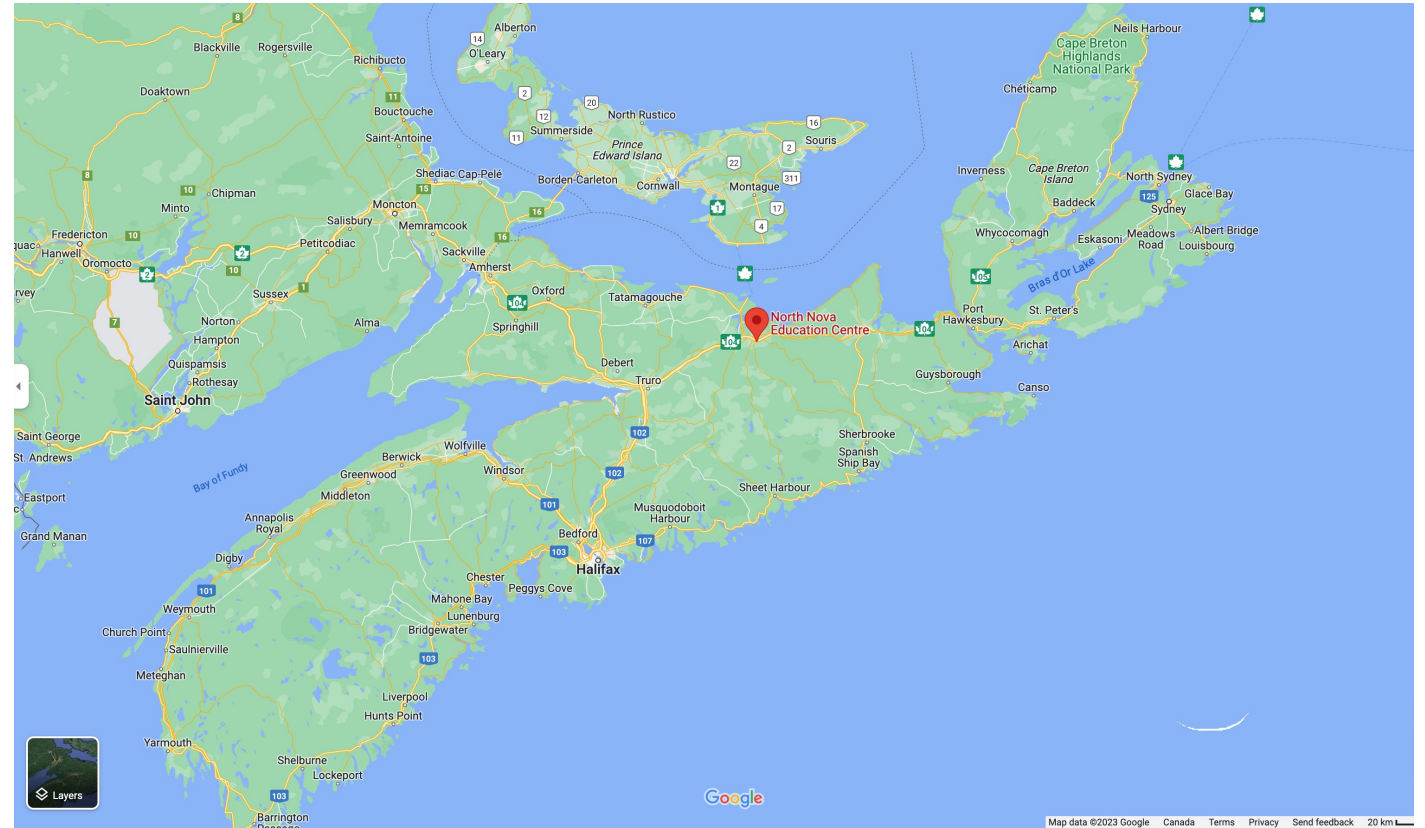


North Nova Education Centre is a grade 9-12 high school in New Glasgow, NS.

The school serves approximately 900 students and has a significant population of Mi'kmaq learners (Pictou Landing First Nation) and learners experiencing poverty (home insecure youth).

We invited two specific groups of students (18) and teachers (13) who regularly taught subjects in which these students enrolled.

To recruit participants we visited classrooms (November 2018) and described the project and what participation would entail.



Brief introduction to Appreciative Inquiry and 4-D process

Appreciative Inquiry is a process aimed at positive learning and change.

- AI is a methodological approach focused upon **searching for the best** in people and organizations.
- It involves **engaging participants to study, discuss, and build upon what is working (strengths)** rather than dwelling on what is not.

The design of the workshops is based upon the appreciative inquiry 4-D cycle; at the center of this model is a positive core:

The 4-Ds are:

- Discovery: What gives life?
- Dream: What might be?
- Design: How can it be?
- Destiny: What will be?



Assumptions of Appreciative Inquiry

1. The constructionist principle: Words create worlds
2. The simultaneity principle: Inquiry creates change.
3. The poetic principle: We can choose what we study.
4. The anticipatory principle: Images inspire action.
5. The positive principle: Positive questions lead to positive change.
6. The wholeness principle: Wholeness brings out the best.
7. The enactment principle: Acting “as if” is self-fulfilling.
8. The free-choice principle: Free choice liberates power.



Research purpose

Working alongside students and their teachers, the purpose of this study was fourfold, and happened in several stages, to:

1. Engage student participants in a strength-based process through which they identified goals regarding academic engagement and learning.
2. Identify the impact an ongoing strength-based process had upon student participant awareness of how they best learn.
3. Engage teacher participants in a workshop in which they learned about student participants' insights into how they best learn in relation to pedagogical practices, and methods, that sustained their engagement.
4. Identify the impact student insights had upon teacher participants' understanding of instructional and assessment decision making.

Methodology Overview

This qualitative study utilized a single qualitative case study design (Merriam, 2009; Merriam & Tisdell, 2016) to explore students' and teachers' experiences as they took part in AI workshops focused on strengths, engagement (what it looks, feels, sounds like), and communication of strengths.

Throughout the study our attention was upon the impact of AI-informed workshops upon two groups of participants.

- The first group, student participants, were the primary focus and with whom the research team dedicated the most time to the facilitation of workshops and gathering of data.
- The second group, teacher participants, were the secondary focus; the research team met these participants in the latter stage of the study after completing the student workshops.



1. December 2018: Entrance student interview with JM (21 students to start)
2. January 11, 2019: **Student Workshop Event 1/Focus Group Interview:** Discover and Dream phases of AI (What is my understanding of how I learn (my learning strengths)? What conditions need to be in place for me to communicate my learning strengths to my teachers?)
3. February 15, 2019: **Student Workshop Event 2/ Focus Group Interview :** Design and Destiny phases of AI (What do I need to do to make my learning active and happening? What are my short- and long-term goals?)
4. March 6 & 7, 2019: Exit student interview with JM and 2 RAs (18 students)
5. April 26, 2019: **Teacher Workshop/ Focus Group Interview** (13 students)
6. May 15, 2019: **Follow up event with students**
7. January 31, 2021: Submission of Final Report to EECD



Phase of Study: Entrance Interviews

Student Participants'
Understanding of Themselves as Learners
prior to the AI Workshops

December 2018

Highlights of Findings

The influence of positivity upon tangible steps towards learning.

The influence of social dynamics on learning.

Limited understanding of, or willingness to name, personal strengths prior to AI workshops.

Sample of student activities AI Workshop #1

1. Warming up...
2. **Discovery:** What is my understanding of how I learn (my learning strengths)?
3. Pair interviews
4. Sharing stories

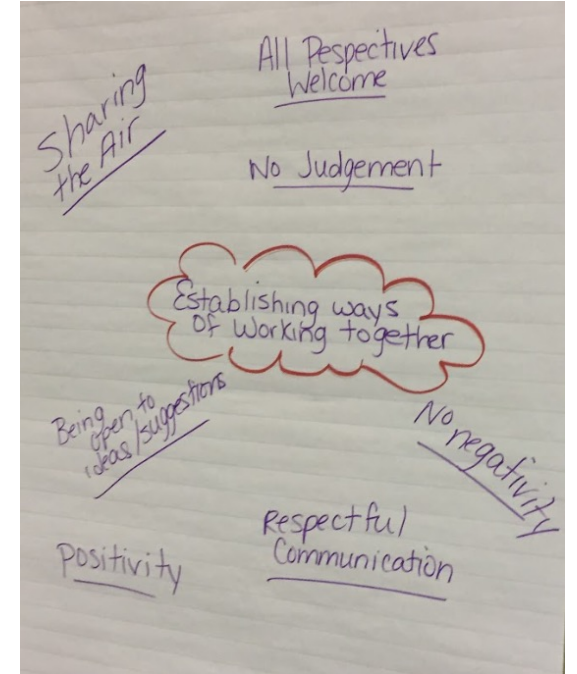
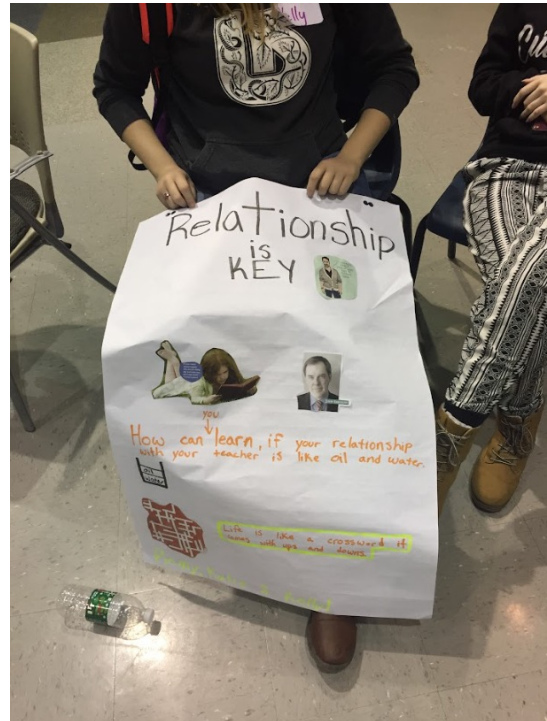
Break: Mid-Morning Snack

1. **Dream:** What conditions need to be in place for me to feel comfortable in communicating my learning strengths to my teachers?
2. Pairs: Dialogue
3. Groups: Collage creation
4. Opportunity mapping
5. Review of the morning
6. Bridging “assignment”: Preparing for next workshop (artifacts of best learning)

After Lunch

Focus group interviews





AI Workshop #1



Phase of Study: Focus Group Interview #1	Highlights of Findings
<p>Workshop 1: Factors Influencing Participants' Mixed Efforts to Dwell on the Positive January 2019</p>	1. The influence of socially approved norms informing the nature of workshop interactions and participation.
	2. The impact of affect and strong personalities on willingness to share and problem talk.
	3. Using perceptions of social dynamics and groups to problem talk and establish shared understandings.
	4. The influence of little experience in describing knowledge of self, task, and strategies to support learning.
	5. The subtle impact of AI upon participants: using cushioning statements as a strategy to dwell on the positive.

Factor 5: The subtle impact of a positive focus upon participants: using cushioning statements as a strategy to dwell on the positive.

Kristian: I don't really think that you can sort of go up to a teacher [and negotiate about what you need]...not everyone is you or Ms. L.

- Research Assistant (EM): Mhmm

Kristian: But you also don't have to be her either. Everybody is their own person. And any teacher can get a student engaged if the lesson is interesting enough. But if I were to go up to a teacher and say “Hey you need to change; I need to, I want to be able to learn this stuff.” I feel like they could understand that, but I don't think they'd change their entire lesson plan just to work around me.

- Research Assistant (EM): So, [for example], I'm going into Canadian History, and I'm teaching and you want to tell me how I can best teach you. What are you going to say?

Kristian: Um...

Research Assistant (EM): How are you going to communicate that?

Kristian: I don't like slide shows; I can't sit through a slide-show. I mean, I can if I really need to; but, but I don't want to? Um, and not, I don't want to play games either, like, I don't want to sing, I don't want to do cups with strings or something. (Focus Group 1, January 11, 2019).

Sample of student activities AI Workshop #2

1. Warming up...
2. Review of findings: Entrance interview and Workshop 1
3. Sharing artifacts (recent learning successes)
4. Introduction to thinking about thinking and learning
5. **Design:** Writing and sharing provocative statements about learning

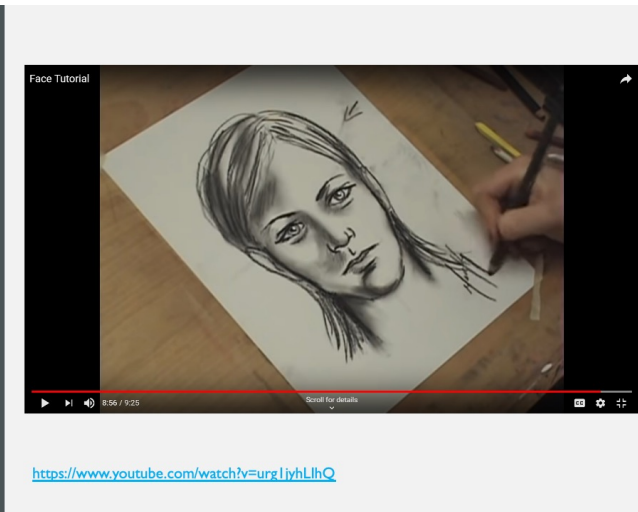
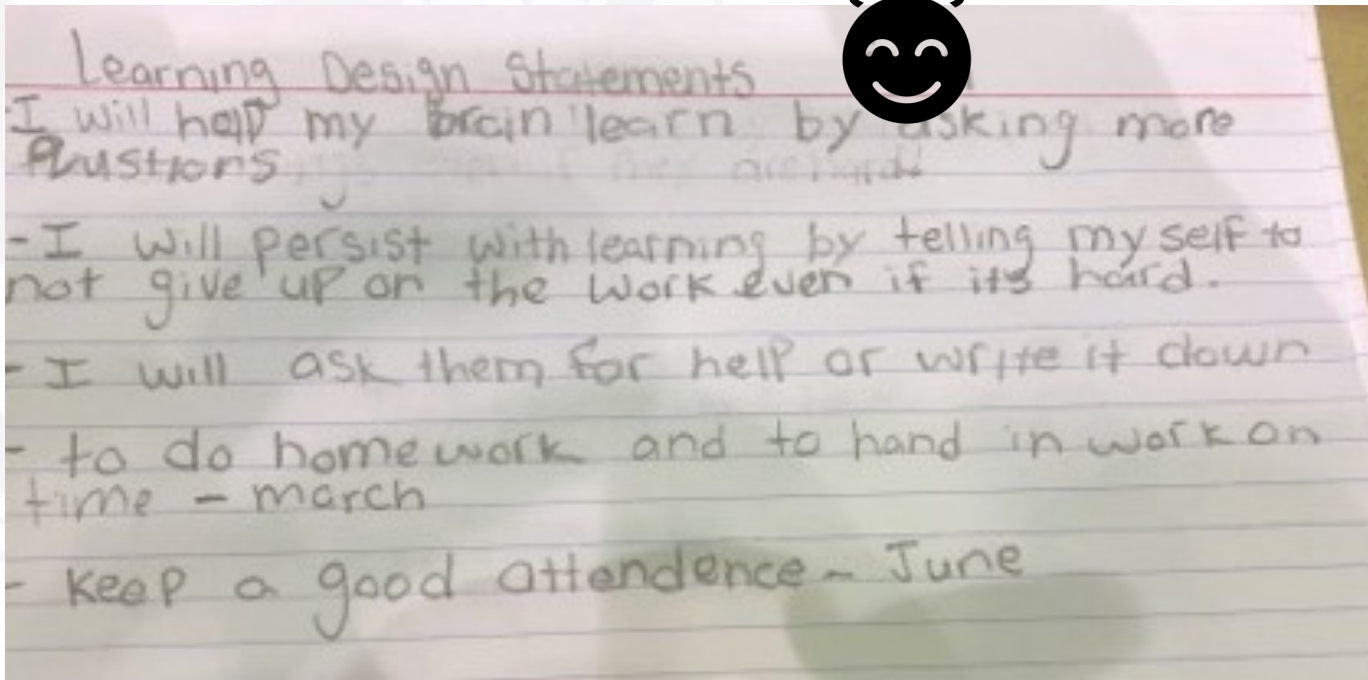
Break: Mid-Morning Snack

1. Reflecting on provocative statements
2. **Destiny:** Identifying goals (short and long) and actions
3. Gallery walk
4. Review of the morning
5. Bridging “assignment”: Preparing for March interview (artifacts of best learning)

After Lunch

Focus group interviews





What do I need to do to make my learning active and happening?

- How will I help my brain to learn?
- How will I persist with learning?
- How will I communicate this to myself and to others (teachers, peers)?
- Identify 1-2 short-term goals (by March) and 1-2 long-term goals (by June).

Phase of Study: Focus Group Interview #2

Workshop 2: Participants' Understanding of the Relationship between Goal Setting, Self-Monitoring, Responsibility, and Agency on Learning

February 2019

Highlights of Findings

1. Insight 1: The impact of setting goals on validating participants' understanding of personal strengths.

2. Insight 2: The impact of metacognitive thinking on participants' willingness to persist with learning and communicate with teachers.

3. Insight 3: The impact of a positive environment on participants' inclination to share personal details about home and mental health.

Insight 1: The impact of setting goals on validating participants' understanding of personal strengths.

Leo: I mean, I never really put much thought into it [identifying strengths and setting goals], and then today just kind of made me think about it.

Research Assistant (SM): Like, your goals in general?

Leo: Yeah.

Research Assistant (SM): Yeah! That's good!

Leslie: Um, I didn't realize how far I've come with school, really.

Research Assistant (SM): Yeah!

Leslie: I mean, there's some days that I think about it and I'm proud of myself, but to actually sit down and, like, write about it, that made me feel really good.

Research Assistant (SM): It's a nice check-in.

Leslie: Yeah.

Leo: Yeah.

(Focus Group 2, February 15, 2019)

Insight 2: The impact
of metacognitive
thinking on
participants'
willingness to persist
with learning and
communicate with
teachers.

Karleigh: My short-term goals kind of go into my long-term goals as well...my first one was stay focused, ask for extra help, so I understand what I need to do. Um, make up practice questions and work them out, study harder, put my mind to it. Uh, every day after school go through my notes, work on things to make sure I got it right. Um, show them [teachers] I want to actually get through high school. Um, set a reminder for everyday so I don't forget or make an excuse as to why they're not done. And I could ask my teachers to give me a deadline besides other assignments, so I have a certain time to get it done.

Melanie: Um, my long-term goal is to, like, keep my grade in the 80's so I can, uh, not have to worry about graduating. And, um, to kind of help [me] that is to, like, put things in my calendar or write it down on like a white board to remind myself...Remind myself to do it, like, kind of like setting myself a reminder, so I know to do it either, so I don't go home and say, "Oh I forgot". And to talk to the career counsellor at NNEC to kind of see what kind of course I need or what courses I have now...are good for, or what courses I can take in high school, for college.

(Focus Group 2, February 15, 2019).

Insight 3: The impact of a positive environment on participants' inclination to share personal details about home and mental health.

Matt: Teachers should kind of figure out how to recognize different mental health [conditions] just by like looking at student's actions or communications and they should really try to engage instead of seeing this kid as useless because they have a mental issue...I kind of got like a low stage of [mental health illness] and...if you're in a class with me like you know sometimes, I'll be depressed sometimes, I'll be way too hyperactive, sometimes I'll just be calm.

Rebecca: Last semester, as many of you know, anyone that was in my classes, I struggled a lot with addictions last semester...I got suspended for being under the influence and, um, having drug paraphernalia on me. Um, so then, a lot of kids in this school, I'm not going to say a lot, but a few of them do struggle with addictions, and it's nice like when the teachers notice that. To be like, [a teacher and ask], "Are you doing okay, or are you feeling okay, is there anything I can do to help, or anything I can do to, like, make it better?" ...It would be nice if the teachers noticed that.

(Focus Group 2, February 15, 2019).

Phase of Study: Exit Interviews	Highlights of Findings
<p data-bbox="122 272 1243 405">The Impact of AI on Students' Willingness to Learn and Communicate</p> <p data-bbox="122 508 443 562">March 2019</p>	<p data-bbox="1312 272 2372 405">Impact 1: Wide range of understanding about metacognition.</p>
	<p data-bbox="1312 622 2219 833">Impact 2: Enhanced awareness of training the brain to persist when challenges arise.</p>
	<p data-bbox="1312 972 2387 1183">Impact 3: Enhanced awareness of the value in learning about others upon self understanding.</p>

Impact 2: Enhanced Awareness of Training the Brain to Persist When Challenges Arise.

For example, Melanie during the exit interview described her attempts to consider her options when she encountered a task or situation that she initially found challenging.

Melanie: Probably that there's ways to solve them [tasks encountered in class]. And ways, to kind of, just keep going and, like...your brain, kind of gives you that one thing [option] like, "I don't know". I'm still trying to backtrack [from that response] and be like, "Okay, I know it, I just don't know how to explain it. So being like, okay...I don't know how to explain it very well, but I know what it is...just, don't say "I don't know" every time.

Research Team PI (JM): Right, yeah, like that's an automatic reaction.

Melanie: Yeah. [I] tell my brain to stick with it.

(Melanie, Exit Interview, March 6, 2019)

Sample of Activities Teacher Workshop

1. Warming up...
2. Overview of student workshops: What we learned
3. Setting an Affirmative (Positive) Focus: Pair interviews
4. Sharing stories
5. Culturally Relevant Pedagogy and Metacognition: What is known in the research literature

Break: Mid-Morning Snack

1. Learning from the students
2. Analyzing student profiles
3. Discussion
4. Review of the morning
5. Focus group interviews



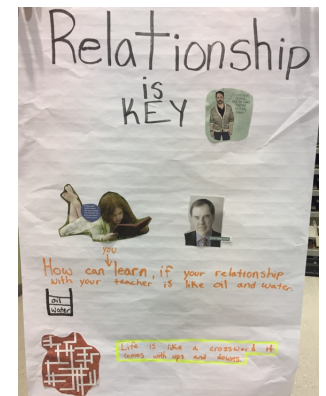
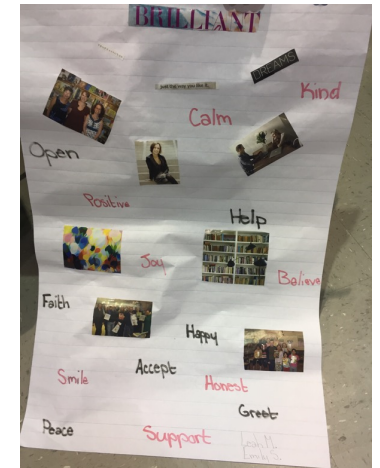


The list below is the list of ideas that students wanted to share with their teachers.

1. Cultivate positive relationships with students.
2. Everyone learns differently and at different paces.
3. Life outside of school influences learning at school.
4. Social dynamics at school impacts learning.
5. Teacher positivity can significantly shape the classroom environment.
6. Class size impacts learning.
7. Hands on learning activities are motivating.
8. Listening to music can be helpful and distracting (it all depends).
9. Living with anxiety and depression can really impact learning; please know what it looks and sounds like.

*Names and personal information were not disclosed.

**This list is based upon analyzed data; the research team confirmed these ideas with student participants prior to sharing this information with teachers.



Phase of Study: Teacher Focus Group Interview	Highlights of Findings
Teacher Workshop: Teacher Participants' Willingness to Share Understanding about Metacognition and Learning April 2019	1. Insight 1: Wide range of understanding about metacognition in teaching.
	2. Insight 2: Acknowledging the importance of slowing down and reflecting on instructional decisions.
	3. Insight 3: Reminded of the impact of teacher student relationships on learning.

What the research team learned from the student Workshops

Students struggled to describe:

- how they best learn (lack of self, task, and strategy knowledge)
- learning success apart from grades or task completion
- how they plan for learning
- how they persist with learning (lack of monitoring)
- how they evaluate their learning (part from grades and completion)

Thinking about Metacognition and motivation to learn Student Profile 1

Profile 1: Task-completion orientation: I can do well by completing all of the work, passing courses and getting good grades:

11 participants

Students with a task completion goal approach focus their efforts on:

- Assignment completion
- Finishing the task to get it done and get the points (have strong beliefs that points and grades are the aim of their work not necessarily mastery of learning)
- Students tend to ask: *“When is it due?”* or *“How much is this worth?”*

Chappuis, J., & Stiggins, R. (2017). *An introduction to student-involved assessment FOR learning* (7th ed.). New York, NY: Pearson.



Thinking about Metacognition and motivation to learn Student Profile2

Profile 2: Learning orientation: I can improve by attending to what I know/can do and do not know/cannot do:

5 participants

Students with a learning goal approach focus their efforts on:

- Improving their work and getting better.
- Finding out what they don't know and mastering it.
- Improving their level of competence and that school's purpose is to support their development of new skills/mastering learning.
- Tend to seek help more frequently in developing competence
- Students tend to ask: *"What does 'done well' look like?"*

Chappuis, J., & Stiggins, R. (2017). *An introduction to student-involved assessment FOR learning* (7th ed.). New York, NY: Pearson.



Thinking about Metacognition and motivation to learn

Student Profile 3

Profile 3: Ego-involved orientation: I can achieve if I have a good teacher and/or classroom conditions suit me (social dynamics, physical space, subject matter etc.):

2 participants

Students with an ego-involved goal approach focus their efforts on:

- Protecting their sense of self-worth
- Attaining public recognition of having done better than others or performed at a superior level
- Believing that successful achievement is a sign of ability not result of effort
- Wanting to be viewed as smart as others by focusing primarily on maintaining positive self-esteem by demonstrating that they have high ability or masking their perceived low-ability
- Avoiding help
- Students tend to ask: *“What do I need to do to out perform others?”* or *“How do I avoid being seen as*

stupid?”
Chappuis, J., & Stiggins, R. (2017). *An introduction to student-involved assessment FOR learning* (7th ed.). New York, NY: Pearson.

A great deal of research on metacognition and teaching practices designed to improve students' metacognitive abilities has been conducted since about the mid-1970s. This research has produced four important findings.

1. **Metacognition plays an essential role in classroom learning;** it can drive study behavior and improve cognition.
2. **Metacognition depends on the difficulty of a task.** When tasks are difficult, the cognitive load on working memory may be too great to allow effective metacognitive monitoring.
3. **Neither students, including university students and adults, are particularly good at metacognitive monitoring,** but metacognition can be improved significantly by directly teaching and modelling metacognitive skills.
4. **Metacognition is relatively independent of general academic ability.** In fact, "metacognitive awareness can compensate for low ability and insufficient knowledge".

For instance, realizing that attention to a task is essential doesn't depend on ability, and with this realization students are more likely to create personal learning environments free of distractions, which can be as simple as moving to the front of the class or turning off a cell phone and TV while studying at home.

All this suggests that teaching all students to be metacognitive is important, and it might be even more important with low-ability learners than with their higher ability peers.



Recommendation 1: AI-Informed Professional Development Creates Conditions for Pedagogical Change

- AI framework **can create significant change** in organizations and in individuals (Calabrese et al., 2007; Calabrese et al., 2008; Daly & Chrispeels, 2005; Orr & Cleveland-Innes, 2015; Waters & White, 2015).
- **PD** is more **effective** when there is alignment **between content and teacher beliefs** about teaching (Abrami et al., 2004; de Jesus & Lens, 2005)
- and that what it offers is **directly useful** for classroom application (Emo, 2015).
- **Positive emotions of teachers** to PD can cultivate engagement, implementation, and reflection whereas negative feelings can foster the opposite (Gaines et al., 2019).

Such an approach can enable those involved across a school or department to collaboratively:

- identify pedagogical strengths.
- create action plans to further enhance, and document the impact of, those pedagogical strengths.
- evaluate the action plans according to their impact on student learning.





Recommendation 2: Enhancing Metacognitive Awareness amongst Learners from Vulnerable Populations

The consistent use of **metacognitive strategies** can influence:

- positive student engagement and proactive approaches to learning (Dimmitt & McCormick, 2012),
- encourage study behaviors and enhance cognition (Tullis et al., 2013) and foster creative
- problem solving (Hargrove & Nietfeld, 2015).

Metacognition amongst adolescents can be improved across a range of ages, disciplines, and schooling contexts (Andrzejewski et al. 2016; Dimmitt & McCormick, 2012; Seraphin et al., 2012; Preston et al., 2014; Tullis et al., 2013; Wichadee, 2011; Zumbrunn & Bruning, 2013).

Teachers play a pivotal role in raising learner awareness about how they can monitor and direct their learning, particularly those student who experience ongoing challenges while learning (Bruning et al., 2011; Stephanou & Mpiontinu, 2017).



Closing Thoughts

We recommend targeted AI-informed professional development developed at the school and/or department level to:

- increase teacher buy-in and understanding about metacognition.
- document evidence of metacognitive thinking practices across disciplines.
- further enhance metacognitive knowledge and skills of teachers.
- The research study at North Nova Education Centre **offers a unique window** into understanding the influence **strength-based approaches can have upon learners and their understanding of personal agency**.
- This study is an **example of the kinds of research that can emerge from a school-university partnership**, particularly, results that are relevant and targeted to the specifics of a school and its community of teachers and learners.



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