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Engaging metacognition : electronic portfolios in a culturally and linguistically diverse classroom

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ENGAGING METACOGNITION:
ELECTRONIC PORTFOLIOS IN A CULTURALLY AND
LINGUISTICALLY DIVERSE CLASSROOM

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Abstract

This project presents qualitative inquiry in the form of action research that explores the potential of electronic portfolios (EP), in terms of supporting four culturally and linguistically diverse (CLD) students as they started to negotiate learning expectations within a foreign context. Through the lens of a student-generated EP, the students began to participate in purposeful metacognition and engage in self-advocacy as they practiced communicating their knowledge, strategies, processes and goals as learners. Recommendations for supporting CLD learners in the development of metacognition and self-advocacy include facilitating opportunities for CLD students to create, reflect on, build strategies for, record and share personal goals for and as learning. Strategies suggested in this project include the use of mid-task questioning, personal narrative, reciprocal teaching and tracking personal growth through the creation of personalized multimedia electronic portfolios.

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Chapter 1: Research Question and Context

Introduction

Identity: A concept students are expected to demonstrate an understanding of by the end of Grade five, as prescribed by Alberta provincial curriculum (Alberta Education, 2007). I have been working throughout my professional career to come to an authentic understanding of what this term means. If I am meant to facilitate the exploration of this concept with my students, I should be able to communicate my understanding in a relatively clear way. It took a Grade four student to teach me that identity can take a lifetime to understand and that it is an ongoing process toward self-knowledge that is dependent on life experience, cultural and linguistic context, accumulated knowledge and interpretation.

Pei Xi had arrived in our Grade 3 and 4 class one icy morning in March. I had found yet another electric-blue student notice form, hanging precariously out of my over-stuffed mail slot in the staffroom on Tuesday morning at 7:45. As I reached for the intimidating pile, I immediately pushed my mental to-do list for the morning aside and began making a new "to-do for Pei Xi" list. I lugged my way up the three flights of stairs to the coolness of my classroom. I stuffed the pile, minus the blue sheet, in my already-brimming inbox and sat down to scan the notice form to get a sense, though superficial, of who Pei Xi was. It read: "Pei Xi, age 10, from China, ESL, speaks Mandarin, in Canada for two weeks, starts March 9th." As I scrambled to make sure that Pei Xi had a name tag above his coat hook, that his duo tangs, pencil box and other resources were all *personalized*, I considered my plans for the day and how Pei Xi could/would contribute. Who was this child? Did he have any siblings in the school? Why did his family choose

to come to Canada? Was it a choice at all? What are his skills, preoccupations, talents, fears, dislikes, allergies? These were the questions running through my mind as I attempted to prepare for a child I knew so little about.

I greeted each student as they slowly sauntered toward our coatroom. In my mind's-eye I was saying Pei Xi's name over and over, trying to decode an acceptable inflection, in a language that was as foreign to me as this day would be to him. There he was, a slender young boy with bright yellow-rimmed glasses, with a look mixed with excitement and apprehension projected on his face. As he approached, I welcomed him, "Hello Pei Xi. My name is Ms. Anderson. Welcome to our school!" He giggled a little, and shook my hand.

We arranged his heavy backpack on his assigned shiny brass hook and then gathered for our daily class meeting at the front of the classroom. I took attendance. "Good morning Natasa." "Good morning Ms. Anderson." "Good morning Julie." "Good Morning." "Good morning Kalid." "Morning." "Good morning Pei Xi." He giggled again. "Am I saying your name correctly?" I inquired. He shook his head slowly. We took the next few minutes to engage in a Mandarin pronunciation lesson. Once I had practiced and achieved a fair version of his name we moved on to the remainder of the list. This routine continued for the next three days. By Thursday morning, with the help of my students, I had achieved the proper pronunciation of his name and was rewarded with a high five.

By Friday morning, I was ready to prove to Pei Xi that I had indeed been practicing and that I would nail the proper pronunciation on the first attempt that day. I

went down the list and I welcomed Pei Xi during our morning routine. "Good morning Pei Xi." He responded, "No, no, Ms. Anderson. Call me Ryan."

I was visibly taken aback. I wondered if my poor pronunciation was too much for this child and if that had been the catalyst for the name change. Perhaps the inspiring learning opportunity in which I was engaged was a nightmare of humiliation for this child.

I spoke to Pei Xi/Ryan's mother later that afternoon and inquired about the new name. She explained that they had encountered so many people who found it incredibly difficult to pronounce all of their names that their family had decided to adopt names that they considered more "Canadian" and from that point on I should also call her "Alice."

Pei Xi/Ryan was not the only child to have such an experience upon arriving in Canada. I have welcomed many students from a variety of countries with names like Julie, Sabrina and Jacob. I always go down to their folders filed away in the office to find their hidden identities; Jueng Yu, Alpalinario, Shun Yu, names with character, history and experience behind them, abandoned in the name of convenience and assimilation. Filled with a sense of sadness, wonder and contemplation, I sit with their native names, wondering what other aspects of their identity are being compromised daily for them to feel like they *fit,* to be understood in the eyes of their new home?

How can we expect students to take future risks, to undertake the grand challenge of becoming self-regulated learners (Zimmerman & Moylan, 2009) if they begin their intertextual (Hasebe-Ludt & Hurren, 2003) cross-cultural journey by feeling continuously afraid of being wrong, beginning with their name? How can I support my students in finding their authentic voice, and using it to direct their learning, in ways that respect

their personal experience, skills and knowledge, and that are also valued within the Alberta education system?

Context

I work in a Grade 5 and 6 multi-aged classroom at an elementary school, in downtown Calgary, Alberta. Due to the central location, availability of subsidized housing and/or company-owned residence within the inner city, our school attracts a large population of new immigrants from around the world. As a result of our linguistically and culturally diverse population (53 different countries and 40 different languages within our population of 220 students), our school is being groomed as an English Language Learner (ELL) centre of excellence within our school board. We are closely aligned with the system ELL team and work together to develop outstanding practices and outcomes for multilingual learners.

Our staff works with students in multi-aged learning environments including 13 classrooms, a gymnasium, library, and music room. The school has recently been renovated, earning a Leadership in Energy and Environmental Design (LEED) silver standard while retaining its heritage (the original sandstone building was built in 1912).

Along with multi-aged K-6 classrooms, we also have two Literacy, English and Academic Development (LEAD) classes, geared toward students with limited formal schooling. These students often arrive from refugee camps or from countries at war, and have not had the opportunity to access formal schooling.

The school follows the Alberta K-6 elementary curriculum, with an emphasis on English language instruction. Diversified and personalized learning is at the forefront of the work, due to our high level of cultural, experiential and linguistic diversity. Emphasis

is placed on the facilitation of experiential and cooperative learning opportunities, with the support of community sponsors. Students require experiential learning opportunities like fieldtrips, guest speakers, and residencies in order to develop the background knowledge that is often taken for granted within the Alberta curriculum. Cooperative learning is integral to supporting the development of culturally appropriate social skills.

The professional staff share a common language and a commitment to the explicit instruction about Canadian values of citizenship, character and personal development through the implementation of a program called the Circle of Courage (Brendtro, Brokenleg, & Van Bockern, 1998). The Circle of Courage is a program that emphasizes the values of belonging, independence, generosity and mastery, while encouraging individual responsibility for upholding these values within learning, local, national and global communities (Brendtro, et al., 1998).

As an educator working in such a diverse context, I find myself dancing between the criteria and expectations of the system, and the needs, experiences and readiness of my students. The difference in culture, language, experience and knowledge within the classroom and school creates amazing opportunities for cross-cultural exploration, contrast and comparison. It is often the students who inspire the most significant learning opportunities.

The student population is transient. Many of the families stay with us for a short time due to impermanent work visas, shifting housing and/or employment opportunities and a desire for alternative school programs that match familiar concepts of traditional school systems in their native countries. The school staff is constantly collaborating on and sharing methods, strategies and knowledge that support student learning in a foreign

and often impermanent context. An overlying question always seems to be: How can we ensure that students, who enter and/or leave at varying points throughout the year, and come from a variety of cultures and experiences, receive the learning that is most important for them?

Due to the nature of the present inquiry, I chose to limit the scope to include the multi-aged Grade 5 and 6 students enrolled in my literacy class. The purpose of this project was to explore how EPs can support culturally and linguistically diverse learners develop metacognitive knowledge and skills, so essential to academic success in Alberta. Therefore, the meaning-perspectives (Erickson, 1985) of the actors (student(s)/teacher) are integral to the inquiry. Not meant to be an exhaustive analysis of the educational potential of EPs, this project is an exploration of a specific classroom as a social and cultural environment for learning, and the individual experiences of the culturally and linguistically diverse (CLD) learners within this environment. For the purposes of this project, cultural and linguistic diversity can be understood as an experience of the interplay of cultural difference between home and dominant culture of the school, difference between the primary language spoken at home and/or the student-participant's first language and English language used at school (Pransky, 2008).

As a result of my teaching assignment, the project began with 17 Grade 5 and 6 student-participants, all between the ages of 10 and 12 years old. At the beginning of the school year, all student-participants were working within a writing proficiency of Benchmark 3 and 5 according to the Alberta K-12 ESL Proficiency Benchmarks (Alberta Education, 2011). The student-participants were all immigrants, living in Canada from between 1 and 6 years, coming from one of eleven different countries, and speaking one

of eight different languages, other than English, as their primary language at home. English was an additional language for all participants.

Due to the previously discussed transient nature of the school's student population, by the end of the project, only four continuing participants remained. The loss of active participants was a result of a variety of events. Some participants left the school, many were removed from my classroom as a result of the school's policy of flexible grouping, some were unable to or refused to return consent forms throughout the project, while others experienced loss of evidence and reflections due to misuse or break down of technology.

The four students who were able to participate throughout the project included Anna (pseudonym), a grade six female student who immigrated to Canada from Russia and was enrolled in the Alberta public school system in July 2010. Anna spoke Russian with her family at home.

The remaining student-participants were all grade five students. Jack (pseudonym), a male student, originally from the Philippines, moved to Canada in December 2008. Jack's primary home language was Tagalog. Foad (pseudonym), another male student, immigrated to Canada from a refugee camp in Afghanistan, in March 2008. Foad spoke Russian at home. Finally, Lucy (pseudonym), a female student from China, immigrated to Canada in July 2010. Lucy speaks Mandarin as her primary language at home.

All continuous student-participants had been in Canada from between 2 and 4 years. They were all working at a writing proficiency Benchmark 3. The literacy class

that I was teaching was focused on developing personal strategies for creating cohesive, detailed and well-structured narrative writing.

There is a lot of pressure for students to succeed in the eyes of the system, in terms of standardized testing, English language benchmarks, and other evaluation and assessments tools. This could, and sometimes does, interrupt the educative process and personalization of curriculum. As an educator, my greatest challenge resides in the translation of student knowledge of the Alberta curriculum in ways that support, respect and encourage native knowledge, skills and talents. How can I actively engage CLD students in a learning process that supports their comprehension of the expectations held by the Alberta education system, in terms of the vision of a "successful student"? It is imperative that students learn to use their voice, and become active, autonomous learners, while communicating their newly acquired knowledge in ways that are understood and valued by the dominant culture of the system.

Within this teaching context, I try to think of curriculum in terms of the key concepts and understandings and attempt to relate them in ways that are familiar and relevant to students.

Project Rationale

In the last decade, there has been an increased emphasis on personalization, diversified instruction and the importance of addressing and making explicit the metacognitive processes of student learning, within the Alberta education system. I have been working diligently to unfold how these teaching methods might look differently for a classroom full of CLD learners (Pransky, 2008). Throughout this project, I have planned, acted, observed and worked collaboratively with my students. Together, we

investigated how planning, creation, presentation, and reflection of, for and as learning through the lens of an EP can facilitate the development of metacognitive skills, a sense of self-advocacy and communicative competencies of the CLD students in my Grade 5 and 6 classroom.

One of the responsibilities of an educator is to guide students in on-going self-reflection and self-evaluation, creating a shift toward greater student agency in learning. I have deconstructed the Alberta English Language Arts Programs of Study for Grade 5 and 6 (Alberta Education, 2000), and identified multiple general and specific outcomes that require the development of metacognition in terms of achieving success as a student in Alberta (Appendix A).

As students accept increased responsibility for learning, they become more adept at recognizing their strengths, interests and areas for growth. Striving towards one's personal highest potential requires a level of sophistication in self-understanding; it also entails knowing one's capabilities and strengths in order to effectively continue the learning process.

> Rather than creating more intervention programmes designed to facilitate the development of metacognition in children and teachers, it seems more appropriate for researchers to help teachers to identify opportunities in their everyday practices, which may become sites for greater metacognitive engagement. (Larkin, 2010, p. 118).

At the school level, teachers are working to translate policies into better practices. My interest in supporting the development of metacognitive knowledge and strategies with CLD learners began with the following questions: How can educators support CLD

learners as they explore the foreign-to-them expectations of the Alberta education system? How can educators help all students begin to develop metacognitive knowledge and strategies? How can electronic portfolios support the facilitation of movement beyond compliance and toward self-advocacy and engaged participation in the learning process?

Because of my interest in supporting CLD learners develop greater understanding of metacognition and helping teachers find ways to integrate metacognitive language and strategies into their everyday practice, I conducted an action research project that explored Electronic Portfolios (EPs), using iWeb software, with four Grade 5 and 6 CLD students. What follows is a detailed account of what occurred as well as the new knowledge that resulted from the project. The process of our learning has been communicated through empirical assertions based on collected evidence (video, audio, verbal and written reports), analytic narrative vignettes, quotes from student introspection and reports and teacher field notes, interpretive commentary framing both particular and general description and theoretical discussion (Erickson, 1985). The guiding question for this project is: How can participating in the creation of an electronic portfolio (EP) support culturally and linguistically diverse (CLD) learners in the development of metacognitive knowledge and strategies?

Chapter 2: Literature Review

Culturally and Linguistically Diverse Learners

Building relationships with students and families, explicit vocabulary instruction, facilitating experiential learning opportunities, and above all providing ample opportunity for the students to practice what they have learned, are just a few of the common strategies put forth by authors and educators about how to support English language learners (ELL) in the classroom (Coelho, 1996, 2004; Gunderson, 2009; Haynes & Zacarian, 2010; Pransky, 2008). Many of these strategies can be considered best practice for any learner, not only ELLs. As the dynamics of a classroom are informed by the presence of students learning a new language and negotiating within an entirely new set of cultural values, norms and expectations, it becomes clear that an educator's responsibility goes far beyond simply teaching the prescribed curriculum.

CLD learners are students who are faced with a mismatch, in terms of language, culture, or socioeconomic status, within the dominant culture of the classroom (Larkin, 2010; Pransky, 2008). Although, being a CLD learner does not assume poor academic success, it does challenge educators to design learning opportunities that explicitly communicate the expectations of the school system and encourage students to become active, autonomous and successful life-long learners (Pransky, 2008).

The importance of becoming an independent and self-motivated learner may differ between home and school, as might the emphasis on higher-level thinking. For many immigrant families, due to social and political factors, conformity is desirable in terms of helping their children fit in, thus increasing the likelihood of academic success and future employability (Larkin, 2010). CLD learners are required to define themselves

using unfamiliar cultural terms, in unfamiliar cultural contexts. In turn, their understanding of self in relation to their environment and those who inhabit that space can also become unfamiliar.

Because CLD learners exist within a space of foreignness, it can be challenging for them to find strategies for accurately communicating their ways of knowing and being. Language, though only one part of a student's foreign experience, marginalizes in terms of how he/she is able to conceptualize, internalize, articulate and make connections between new experiences and previously held conceptions and processes of knowing. As a result CLD learners are often displaced from the mainstream classroom activities or offered busy-work projects designed to develop competence with mainstream linguistic conventions. CLD students are then left with few opportunities for meaningful contributions, personal responsibility or developing a sense of self-worth within their learning community. Compliance, or blindly doing what they are told by teachers, administrators or other school staff, becomes a survival strategy. Often muted by the foreignness of their situation, CLD learners fade into the background, wanting to simply fit in, comply and fly under the radar. Often, that is exactly what happens, many students leave school under-educated, feeling marginalized and destined to be under-employed. Such educational approaches reinforce the concept of diversity as being an obstacle rather than a facilitator of learning (Chambers, 2008; Yuet-San Tang, 2003).

Researchers like Larkin (2010) and Pransky (2008) argue that it is not only about the opportunities offered to the students, but it is also up to the teacher to reflect on the assumptions, perspectives and personal beliefs that they bring to the classroom every day. Pransky advises that educators should not assume that it is only students who are learning

English as a second/additional language that are in need of intentional instruction around language and the processes of learning. He describes all students who experience cultural or linguistic differences from the dominant classroom culture as CLD (2008).

Pransky maintains that some students who come from abroad may, in fact, have a greater advantage to some students born in English-speaking families, due to their literacy-oriented experiences, relationships and schools. He states that, "Cultural norms, beliefs and values influence development, cognition, use of language and identity and form the parameters within which children learn best" (2008, p.2). If these parameters are *mismatched* (Pransky, 2008) the child will find it challenging to decode the implicit instructions, meanings and expectations of the school system.

Pransky suggests that teachers need to focus more on who the students are, rather than on how the classroom is organized. He argues that it is often "these clashes between the child's cultural and linguistic development and identity on the one hand, and the teacher's and classroom's on the other, that causes the learning of CLD students to become problematic" (2008, p. 2).

Pransky (2008) takes a sociocultural perspective, which emphasizes who the child is and how he/she thinks, uses language and makes sense of the environment, over the comparison of their abilities to the dominant cultural expectations. He encourages teachers to look at their students and consistently ask these questions: What am I really teaching? What are my students really learning? What do we need to focus on? How do I know? What do I do? (Pransky, 2008).

Pransky adopts three models that support the development of quality-learning schemata and skills. The first is Vygotsky's three-stage theory suggesting that a student

first requires a clear and explicit external model to follow. Then, he/she is able to begin to internalize the learning by slowly taking on responsibility with structured practice and with time, the student will eventually come to be independent (as cited in Pransky, 2008).

The second model adopted by Pransky (2008) is Mediated Learning. Here the student requires support to connect the learning to the relevant past and possible future experiences (transcendence). The learning must have a clear and direct focus for the student in order for her/him to actively participate (intentionality and reciprocity), all elements of the experience must have meaning for the student. Finally, the student must have the opportunity to reflect on the learning being done (metacognition).

The third model applied by Pransky (2008) is the Cognitive Load Theory, which involves providing students with a clear focus for their learning, minimizing distractors and supporting the learner in the development of important schemata and skills by assigning enough time for students to internalize the learning being done. The application of these three models, according to Pransky, encourages student ownership of, engagement in and motivation for learning.

Larkin (2010) suggests that as a starting point for facilitating metacognition in their classrooms, teachers should engage in the process of self-reflection to build personal metacognitive knowledge, in order to question the assumptions and bias that characterize their professional practice. By developing one's own metacognition, one becomes more open to new diverse ways of approaching familiar situations. For many students it is a challenge to understand the expectation held by the Alberta education system that learning is an active process in which one must eventually become an independent conductor of inquiry. It is the educator's responsibility to make this explicit, to model

metacognitive behaviours and facilitate learning opportunities that encourage the development of metacognition.

Self-Advocacy

Self-advocacy has traditionally been viewed as a movement for the learning disabled (Danneker & Bottge, 2009; Zickle & Arnold, 2001) in response to subordinating practices that both trivialize and marginalize individual experience within the arena of the dominant culture. The movement was inspired by action groups who felt that their issues were being championed by the professionals, outsiders who were both identifying issues of contention and prescribing solutions, with little insight into the authentic experience of being disabled. People with disabilities began organizing conferences on their own behalf (Hall, 2010) in an attempt to take control over the direction, interpretation and communication of their lives and personal experiences.

The notion of self-advocacy as being a response solely to disability is limiting in contemporary society. When we break down the term *self* as being the subjective experience of individuality, and *advocacy*, from the Latin word *advocatus* or *advocare*, meaning to call to one's aid or to give voice (Merriam-Webster, 2012), one can see how self-advocacy is a skill and way of knowing that is applicable to all human beings in their subjective experience of marginalization in differing contexts. For the purpose of this text, we can understand self-advocacy as a process of knowing, communicating, and acting on behalf of the subjective self.

When dealing with CLD learners, the process of supporting the development self-advocacy skills can encourage educators to adopt culturally responsive pedagogy, which works to facilitate student exploration of self in overlapping cultural contexts. "Each

teacher must view each child as a dynamic, culturally contexted being, who deserves curriculum developed *in situ*, based on his or her needs, interests, and experiences" (O'Brien, 2000). Yuet-San Tang suggests that the consideration of pluricultural perspectives in the classroom opens learning opportunities to allow the "generative possibility of changing [the] world by manipulating the language in which it is constituted" (2003, p. 30). In order to access the potential of diverse perspectives in terms of their impact on current ways of knowing, educators must facilitate opportunities for students to explore, celebrate and inform learning outside the confines of the dominant culture.

Self-advocacy is not an instinctual skill. Children require models, explicit instruction and a variety of opportunities to practice sharing their ideas, exploring different means of expression and discovering who they are and what they hold to be true and good. Marilyn Low (2003) argues that the arbitrary assessment of students can stigmatize, marginalize and inhibit creativity and willingness to share differing perspectives. Through the words of her students, Low asserts that the process of teaching and learning is messy; mistakes occur, confusion is reality and perfection is an illusion. She questions the current systematic value of evaluation and correctness over ingenuity and creativity.

Low suggests that the current educational system forces culturally diverse learners to define their personal identity and previously established conceptions of the world, according to unfamiliar and arbitrary dominant cultural values. Burhans and Dweck (1995) argue that a general conception of self as an object of contingent worth creates a condition of helplessness. Therefore, providing students with opportunities to discover

the benefits of self-advocacy in safe, positive and unconstrained environments both encourages students to focus on mastery-oriented responses to challenge (Burhans & Dweck, 1995) and emphasizes the value of cross-cultural, collaborative and ever-changing curriculum that evolves from embracing diversity.

Immigrant families are often confronted with decoding the social expectations of a foreign community: finding a job, learning a new language and accessing support services. As our knowledge of community expands toward a global union, such experiences become more commonplace. The process of entering a foreign context, in which one must interact with unfamiliar conceptions of place, language, social values, expectations and roles, can be daunting. Scholars like Aoki (2003; 2005), Chambers (1999; 2008), Fowler (2006) and Irwin, Rogers, & Wan (1999) have called upon educators to consider these contexts of hidden curriculum. They encourage the translation of experience through story, as a way of reconceptulizing the relationships between teacher, student and curriculum as reciprocal, complicated and mutually dependent on the process of translation.

As we consider the experience and process of learning in a culturally diverse classroom, the importance of student involvement and input in describing the place between curriculum and self becomes more pronounced.

Metacognition

Learning is a process of active involvement in the creation of knowledge and skills. This is not a new view on pedagogy. Aristotle, Jean-Jacques Rousseau, John Dewey and Maria Montessori were all proponents of student-centered learning. The term cognition has its roots from the Latin *co-gnoscere*, to become acquainted with or to come

to know, and is understood in this text to mean the mental process of learning or creating

knowledge (Merriam-Webster, 2012).

The term metacognition was popularized in the 1970s by John Flavell's work in

developmental psychology. Flavell was inspired by Jean Piaget's theory of intellectual

and perceptual development. Through theoretical and experimental investigation, Piaget

described the qualitative development of intellectual structures as being dependent on a

reciprocal relationship between *accommodation* and *assimilation* (as cited in Flavell,

1963). Accommodation is engaged through opportunities to interact, test and explore new

and different objects and experiences. Assimilation is the reorganization of prior

cognitive structures or *schema* as a result of accommodation. Both accommodation and

assimilation are connected to, informed by, as well as reorganize prior knowledge and

experience.

In 1976, Flavell coined the term metacognition as referring to "one's knowledge

concerning one's own cognitive processes and products or anything related to them"

(p.232). Flavell states that metacognition involves the conscious monitoring, assessment

and regulation of any cognitive enterprise (1976, 1977, 1987). With experience and

practice children learn to store, retrieve, monitor and use information when problem

solving, in school-assigned tasks as well as in everyday social interactions. Learners are

not only able to reorganize cognitive structures or schema but also consciously strategize

and engage in the act of such reorganization. Flavell suggests that direct and explicit

instruction in metacognitive processes, or thinking about thinking, encourages personal

inquiry about how one finds appropriate information, where one can find appropriate

resources and when such strategies are required and/or appropriate and would increase the learners problem solving effectiveness.

Flavell maintained that the management and monitoring of cognition is supported by two reciprocal components: metacognitive knowledge and metacognitive experiences (Flavell, 1987, 1992). Metacognitive knowledge, as Flavell explained it, is the accumulation of information about one's cognitions (Flavell, 1992). This phenomena encompasses variables of self, task and strategies that inform and act in a reciprocal relationship (Flavell, 1992). Ultimately metacognitive knowledge refers to knowingness about the variables that affect the outcome of a learning task. Person variables can be further organized in to sub-categories: *intra-individual*; *inter-individual* and *universal* (Flavell, 1987). Intra-individual variables are the knowledge about one's own self-efficacy, skills, aptitudes, interests, etc. (Flavell, 1987). An example of an intra-individual variable is a student's belief that he/she is skilled at verbal tasks, but poor at communicating in writing. Inter-individual variables reflect a comparison between self and other (Flavell, 1987). An example being one's belief that he/she is more adept at mathematical computation than his/her peer(s), and that his/her siblings act more generously than he/she. Finally, universal variables involve the conceptualization of the way the human mind works (Flavell, 1987). The human mind is capable of misconceptions, familiar topics are easier to master than unfamiliar topics, or practice is required to master any given skill.

Next are task variables, which deal with the nature of the information that is presented and how it should be handled (Flavell, 1987). The density, difficulty, familiarity and organization of a given task all provide information to the learner about

how he/she should manage the achievement of their goal. For example, if the task is a timed assignment, it may require the learner to skim the text to gain an understanding of the main ideas of the text, rather than focus on the detailed supporting points. Task variables rely on previous experience with similar tasks with which the learner makes inferences and connections, and then applies this knowledge to the present goal. This variable can be challenging for children. Ann Brown (1987) suggests that "this lack of stable, statable [*sic*], knowledge is due to children's relative lack of experience in learning situations that occur repeatedly in school; it reflects their novice status as deliberate learners" (p. 73).

Finally, strategy variables are process-oriented variables in which the learner applies procedures for getting from point A to point B (Flavell, 1987). Flavell (1992) distinguishes between cognitive strategies, which are meant to make cognitive progress, and metacognitive strategies, which are meant to monitor cognitive progress. For example, it may be clear to a learner that in order to keep track of the important ideas of the content shared by a speaker, the learner may take notes as they listen (cognitive strategy). In order to ensure that they understood the speaker clearly and that they do not have any misconceptions, the learner may paraphrase as a clarification technique (metacognitive strategy).

A metacognitive experience is any conscious cognitive or affective experience that has to do with the development of knowledge, skills and/or attributes (Flavell, 1992). The experience of awareness of, monitoring, assessing, and/or controlling cognition can be fleeting and/or a result of careful and reflective consideration (Flavell, 1992; Garner, 1987). For many students this may be as simple as having a sudden feeling of confusion

when they are unable to retrieve a particular word or a feeling of pride when they are able to recall the answer to a question on a familiar topic. Simply put, a metacognitive experience is awareness about thinking about thinking. Garner (1987) explains that metacgonitive experiences often occur when there is a failure in cognition. Sometimes there is a failure in both cognition and metacognition where the learner is unable to detect a misconception (Flavell, 1992).

Metacognitive experiences and knowledge about tasks and strategies work in a reciprocal relationship (Flavell, 1987, 1992; Garner, 1987). A metacognitive experience can inform reconsideration of the nature of a task and encourage the learner to redirect, revise or abandon the previously chosen strategies. The success or failure of a given task informs self-efficacy, therefore changing the person variables of metacognitive knowledge. The interrelationships between all of the metacognitive components are endless and occur throughout the learning process (Flavell, 1992). Flavell (1977) maintains that metacognitive knowledge should not be considered qualitatively different from other kinds of knowledge, as it can be activated automatically, it can be developed gradually with practice and is fallible.

A student should to engage in his/her work, not only as the architect of knowledge-based products, moreover as the translator/communicator of the process. For a student to truly understand that learning is an on-going heuristic process which requires self-advocacy, he/she must be given opportunities to interact with knowledge as the investigator, the planner, goal setter, generator, reviewer, evaluator and translator.

Traditionally, students were given an assignment designed by the teacher, with little understanding of the underlying objectives, assessment criteria or practical value of

the learning opportunity. Students were expected to complete the assignment for an undefined or isolated audience, hand it in and receive an often arbitrary or subjective grade with little feedback about their performance. Students were alienated from the learning process, robbed of the valuable knowledge that comes from self-regulated learning. The student voice was ignored, as was the potential that comes with diverse ways of thinking. As I reflect on this pedagogical approach to teaching and learning, I begin to understand that the teachers were the ones developing the cognitive and metacognitive skills and strategies, they were the ones doing all the work (Jackson, 2009).

We have all heard the ancient Chinese proverb: "Give a man a fish and you feed him for a day. Teach a man to fish and you feed him for a lifetime". Although this proverb can be considered cliché, it is the cornerstone of my teaching philosophy. If it is my job to teach students how to learn, I must provide authentic learning opportunities. I have worked with many students that approach learning with the expectation that the teacher's job is to impart knowledge to them; that a student's responsibility is to sit passively and wait for knowledge to come to them. If they struggle, the teacher is there to save them and show them the way. This is learned behaviour. As Flavell (1977) suggests, metacognition is a form of knowledge like any other; it is acquired through a gradual process of experimentation and practice. We cannot expect students to become self-regulated learners without facilitating ample opportunities for them to participate in the metacognitive domain of learning.

My favourite teaching moments are watching my students struggle and find their way free. Without a teacher who is willing to "save the day" students are left to explore

other problem-solving strategies; trial and error, collaborate with peers, and utilize resources at their disposal to find support. These are all strategies that will have life-long value. Once a student leaves the safety of the classroom, they will no longer have a lifeguard there to give them answers and solve their problems, therefore we should not teach them to be dependent on such a fictional character.

Students must be involved in the entire process of learning, beginning with building an understanding about the rationale around what they learn in school. They must be at the front line of the exploration of diverse ways of learning and thinking, the identification of task-appropriate skills and strategies, the design of assessment criteria, the process of evaluation and finally the means of translating or communicating the knowledge and/or skills that have been acquired throughout the process. "A learner can be said to understand a particular cognitive activity if he or she can use it appropriately and discuss its use" (Brown, 1987, p.65). Without these experiences, how can a student be expected to achieve the goal of becoming an autonomous and self-motivated life-long learner?

Curriculum Context

It is the contemporary challenge for educators to facilitate the engagement of culturally and linguistically diverse (CLD) learners in metacognitive processes, which may be foreign or contrary to that which they have been exposed to in their native culture. Cynthia Chambers (1999) argues, "curriculum theorizing must begin at home but it must work on behalf of everyone" (p.148). She suggests that we begin to pay closer attention to the particulars and personal histories of the people and the land here in Canada, in order to begin to develop relevant curriculum that is meaningful, not only to a

particular group of people, but that is accessible to people from all over our country and globe (Chambers, 1999, p. 147). This idea of curriculum captures diversity, personal experience and interpretation, and brings it to the forefront of learning. It encourages educators to facilitate more learning opportunities that are inclusive, rather than exclusive.

In contemporary curriculum contexts, we cannot assume homogeneity of experience. Our classrooms have become simulations of global communities. There is more diversity of language, experience and knowledge than ever before. The conception of place and its significance in identity formation, educational approaches and expectations differs greatly from student to student, and our curriculum must consider this diversity in relevant and meaningful ways. We must encourage our students to share their stories, to reflect on their knowledge and experiences as a way of developing self-advocacy skills. Chambers (1999) suggests that curriculum theorists can no longer deny the particulars and must embrace the fact that there will be no single answer to this question

Howard Gardner's (1999) theory of multiple intelligences (MI) supports the idea that all students can learn, have strengths and support the greater learning community with a variety of diverse talents and skills. Gardner (1999) defines an *intelligence* as "a bio-psychological potential to process information that can be activated in a cultural setting to solve problems or create products that are of value in a culture." Gardner, Kornhaber, and Wake (1996) maintain that traditional manifestations of school have been considered to be modeled around decontextualized, notational activities that alienate the student from relevant and active participation in community functions. However, with

further consideration, it becomes evident that a contemporary secular school setting is just one type of context that appeals to and is successful in educating students who respond to that particular context (Gardner, et al., 1996, p. 264). The theory of MI challenges educators to consider the variety of strengths, interests and potential of our diverse student populations, as informed by cultural and personal experiences and ways of knowing. This theory supports the contemporary notions of inclusion and universal education. It is up to the educator to provide learning opportunities that help shape and uncover those skills, attributes and knowledge for all students.

Kind, Irwin, Grauer, and de Cosson suggest that educators who support a more "holistic curriculum perspective" (2005, p. 33) and encourage a more reciprocal learning environment, provide students with opportunities to discover the benefits of self-advocacy in safe and unconstrained environments. Such learning environments emphasize the value of cross-cultural, collaborative and changing curriculum that evolves from embracing diversity and encouraging exploration of self.

Similarly, Jessica Hoffmann Davis (2000) considers metacognition a key component in the learning process. She describes it as a means of "providing opportunities not only for self-knowledge, but for a knowledge and appreciation of others" (p. 341). In our increasing culturally and linguistically diverse classrooms, these opportunities are invaluable for all students, native to Canada or not.

Our CLD students require opportunities to explore the new cultural, linguistic and social expectations and perspectives held by the dominant school culture. They need time to experiment with ways to mesh their native ideologies and paradigms with those valued and expected in the dominant school system. A student needs on-going opportunities to

explore and reflect on the personalized process of learning in order to begin to understand self as a learner. This holds true for both CLD learners and those who come from the dominant culture.

Students from all different cultural and linguistic backgrounds and experiences learn from one another and begin to understand that learning is an active process in which one must participate in the creation of knowledge. "Beyond all else, active learners are students who are aware of their own individual powers for structuring meaning and who are respectful of the myriad of alternative approaches that can be embraced by others" (Davis, 2000, p. 342).

Motivation is affected by a variety of physical, emotional and psychological influences. Fatigue, anxiety, lack of interest or a general feeling of unworthiness can all influence one's motivation to achieve, complete or even attempt a given task. Larkin (2010) discusses three motivational styles that affect the way students approach and achieve a given task. The first motivational style is that of "learned helplessness," as termed by Diener and Dweck in 1978 (as cited in Larkin, 2010). Here a student views ability as fixed and therefore has a tendency to give up easily or avoid potential challenges, due to perpetuate feelings of inadequacy. The second motivational style, as described by Covington (as cited in Larkin, 2010) demonstrates an association between success of a given task and the learner's self esteem rather than the successful completion of said task. This style is also associated with fixed ability, whereby the learner correlates poor achievement with low ability, thus causing high levels of anxiety or stress for learners engaging in challenging tasks. The third motivational style presented by Larkin, is mastery-oriented. Learners exhibiting this motivational style understand that ability is

not fixed and that learning involves mistakes and failure. They will engage in and adjust task-oriented strategies and effort, according to the demands of the task, thus building a base of metacognitive knowledge about self (Larkin, 2010). It is this type of intrinsic motivation that characterizes autonomous learners, where the joy comes from the process of learning and seeking new ways of approaching tasks. It is up to educators to support the development of intrinsic and mastery-oriented motivation, through the facilitation of learning opportunities that demonstrate the dynamic nature of ability and the opportunity for students to reflect on the process, evaluate their progress, explore other options and change their approach mid-task.

The literature discussed above inspired me to look at my classroom more closely. What do my students understand about learning? Where are they coming from? Who do they identify with? What notions of knowledge and inquiry do they hold? What are their strengths? What are their challenges? What is my role in their discovery of self, other and the world at large? What do they understand about the metacognitive process, self-advocacy and learning? What resources do I have at my disposal that would support such inquiry?

Electronic Portfolios

Electronic portfolios (EP) are no longer simply a way of addressing the Information and Communication Technology (ICT) outcomes as prescribed by Alberta Education (2003). Rather, they are being explored in contemporary educational systems as a means of engaging students and teachers in the process of learning in a digital forum. The concept compares the learner to an artist, who uses the portfolio as a means to showcase their work (Barrett, 2007). However, where an artist might include only their

best work, education portfolios have a variety of uses, depending on their purpose. It is maintained that the most significant use of a portfolio in terms of student learning in K-12 classrooms, is one that monitors and represents the learning process. Thus, the student is able to represent cognitive growth and personal development, informing assessment through a more comprehensive lens than standardized assessment (Barrett, 2007; Meyer, Abrami, Wade, Aslan, & Deault, 2010). The EP facilitates learning opportunities that maintain the student as being central to the learning process. The claim is that through the creation of an EP, students begin to develop the skills and knowledge necessary to identify and select evidence of personal growth and learning, to participate and communicate their learning by reflecting on and representing the process of knowledge creation in individualized and creative ways.

The EP supports constructivist educational pedagogy in that the process is student-centered. Autonomy and initiative are highly emphasized, which introduces the value of self- advocacy (Stefani, Mason, & Pegler, 2007, p. 11). The process of selection, reflection, evaluation and representation involve students in higher-order thinking (Slavin as cited in Stefani, et al., 2007, p. 11). Although the creation, maintenance and presentation of an EP has great educational implications for all learners, CLD students, in particular, may benefit from such student-centered learning opportunities. Direct experiences facilitate a greater understanding of the expectations of the school system, while supporting the development of skills, knowledge and attributes required of lifelong learners. Although technology can inspire metacognitive knowledge, there is nothing inherently metacognitive about using technology (Larkin, 2010). It is up to the educator to integrate technology with learning opportunities that engage students in the

development of metacognitve knowledge and strategies. The educational potential and ubiquitous nature of technology offers endless opportunities to engage students in the exploration of self as they investigate the integration of native knowledge, experience and personal perspectives, with those of the dominant culture. "The aim of constructivist principles as applied to e-learning is to engender independent, self-reliant learners who have the confidence and skill to use a range of strategies to construct their own knowledge" (Stefani, et al., 2007, p. 12).

The EP addresses the skills, knowledge and attributes required of learners in a digital age. It provides opportunity for a learner to create and engage in a personalized learning environment, which will ideally support the communication of a learner's personal story, thus informing the teacher's choice of appropriate and personalized educational strategies and supports.

As Barrett (2007) explains, an EP supports the facilitation and exploration of multimedia (audio, video, graphics and text) in the collection, organization and representation of knowledge. Dialogical self-theory, suggests that due to globalization an individual no longer maneuvers or creates identity within a single homogeneous culture, rather they live on the "interfaces of cultures" (Hermans & Hermans-Konopka, 2010, p. 29). CLD learners experience this phenomena daily as they attempt to negotiate self in terms of home, local dominant and global culture. Hermans & Hermans-Konopka (2010) suggest that otherness is an essential part of the dialogical process, within which one engages in a narrative that is told to another person or to oneself. With dialogical-self theory in mind, one can conceive of an EP as a small step toward facilitating a forum through which a student may begin to reflect on self and engage in dialogue surrounding

his/her personal narrative, where he/she is free to express his/her voice with regard to personal experience and perspective. Such an opportunity offers the potential for students to participate in the learning processes across the cultural and digital commons. This type of learning may incite students to embrace advocacy for self and for the greater cultural, local or global community. Student voice could contribute to a collective critical analysis of some dominant and perhaps discriminatory conditions of the education system.

For the purposes of this project, the EP is used as a tool to facilitate the exploration of metacognition and self-advocacy, to monitor the growth of metacognitive knowledge and showcase examples of significant metacognitive experiences as communicated by student-participants. Although there is clearly potential for the assessment of student achievement of both general and specific outcomes as outlined by the Alberta programs of study, this project is focused on the opportunities offered through the creation and use of an EP for CLD students to explore and develop metacognitive knowledge and strategies, as a step toward self-advocacy. Therefore, the student-generated EPs were designed to be a personalized digital space where a student engages in metacognitive processes (planning, monitoring, reflecting, self-assessing, self-evaluating, goal setting) and records the personal metacognitive knowledge and strategies that encouraged cognitive growth. Through the creation of and interaction with a personalized EP, students will engage in a collaborative and reciprocal learning environment, focused on personal development and self-advocacy.

iWeb

There is a plethora of EP software available. The criteria required for this project as determined in consideration of the student population, context and literature review included the following:

- Intuitive

- Compatible

- Portable

Intuitive. The priority for the software used throughout this project was that it be user-friendly for learners of all language and technological proficiencies. The tool had to follow a very simple conceptual model that was accessible to CLD learners, regardless of their educational, cultural and linguistic experience. The conceptual model of the software interface had to be intuitive to the point where very little language instruction was required for students to begin to explore the potential of the tool. Most of the student-participants have had experience with Mac computer technology to varying degrees; therefore, they were relatively prepared with a basic mental model of how to use iWeb. With teacher and peer support as well as detailed instruction sheets and dedicated time for students to gain hands-on experience, all participants were able to achieve relative independence using iWeb.

Compatible. It was important to this project that the technology used was (a) already available at the school and (b) compatible with the assistive technology and programs used most often by teachers and students (Photo Booth, iMovie, GarageBand, iPhoto, iTunes, Read and Write Gold, etc.). There is little benefit from spending money on new technology without first identifying the educational value of such an investment.

Using iWeb students were able to integrate the technology, skills and strategies they had learned in previous school years and/or at home with their families, to communicate their knowledge, within an already existing program. Peers who had experience with the Mac technology eagerly supported the students who did not, thus providing further opportunity for students to engage in collaborative student-centered learning.

  Portable. Perhaps the most important criteria when choosing the software used throughout this project was the potential for a student to leave the classroom with his/her work in hand. As was previously stated, the transient student population offers consistent and often abrupt exits. For an EP to be of benefit to this student population, students must be able to export their work in its entirety at a moment's notice. Withholding student learning in an inaccessible location once they have left the school, board, system or country negates an integral purpose of the EP, to promote self-advocacy. EPs are meant to facilitate a platform upon which a student may share evidence of their learning with others. CLD students in this context are often transient and should not be penalized simply because they transition to a new context. The value of an EP is in its ability to support the communication of the personal growth of any learner, through the creation and presentation of evidence. When using iWeb, students were able to export their EP to a local folder, therefore they were able to take their work with them and share it with their new teacher(s), family or friends.

Chapter 3: Process

Methodology

Action research is an increasingly valued and implemented form of educational research that involves the active participation, collaboration, reflection and critical inquiry by all participants. The purpose is to facilitate change, through a reciprocal relationship between context, participant and researcher. Such interpretive research recognizes the classroom as being a socially and culturally organized environment for learning, where the perspectives of teachers and students are essential to the educational process (Erickson, 1985).

Action research mirrors many of the most critical elements of the instructional core (student, content, teacher). One of the most fitting definitions of research is a "careful or diligent search" (Merriam-Webster, 2012). Action is defined as an "act of will," or the "bringing about of an alteration by force or through a natural agency" (Merriam-Webster, 2012). When we look at the two terms collectively we can understand it to mean a careful or diligent search for change through natural agency. Such a search directly involves the care and respect for all participants, their role in the reciprocal relationship and the ultimate challenge of creating new knowledge. These core values encompass the very nature of learning.

> If classroom teaching in elementary and secondary schools is to come of age as a profession—if the role of teacher is not to continue to be institutionally infantilized—then teachers need to take adult responsibility of investigating their

own practice systematically and critically, by methods that are appropriate to their

practice. (Erickson, 1985, p. 157)

Action research embraces *curriculum-as-lived* (Aoki, 2003; Fowler, 2006), it

provides a systematic process through which learners can reflect, strategize, act, evaluate

and reflect once more (Alberta Teachers Association, 2000). These are skills that are

expected of students in order to be considered successful, according to the Alberta

Programs of Study. Therefore, throughout this project, as a researcher, I chose to actively

participate in and observe the process of learning along with my students. We explored,

reflected, collaborated and reciprocated in the learning process and created knowledge

together.

Abbott, Dunn and Aberdeen (2012) suggest that collaborative action research

engages colleagues in a process that constructs a common foundation of relevant

knowledge. Their project paired pre- and in-service teachers, teacher educators and

mentor teachers in a quest to link theory with practice. The goal was to develop a

repertoire of instructional strategies that would address the unique needs of English

language learners as guided by the concerns, practices and social context experienced by

practicing teachers. Abbott, Dunn and Aberdeen (2012) maintain that it is this type of

reciprocal teaching and equal partnership that has long-term impact on teachers'

professional practice.

Action research is rich in metacognitive practice, as it is grounded in the

reflection on authentic challenges faced by practicing teachers. It lends itself to the

development of evidence-based teaching practices and often, collaborative problem

solving. Gauthier (as cited in Abbott, et al., 2012) and Selenger (as cited in MacDonald,

2012) argue that action research is inspired by the desire to take action and make change within a specific and tangible context. Action research acknowledges that a problem resides within a given community and is informed by the experiences of the members of that community. Therefore, this approach to research encourages the community to participate in the reflection, research, creation and execution of a solution. It puts power in the hands of the members of a community and helps to identify resources that are available within that community, thus encouraging self-reliance. Moreover, as Zeichner (as cited in Abbott, et al., 2012) suggests, it respects the professional competence of its participants and encourages schools and communities to develop "more democratic and inclusive ways of working."

Action research can be challenging for many reasons, particularly when dealing with collaborative action research. Challenges emerge when attempting to come to a consensus about the most important challenges that face the community, or when dealing with pre-existing hierarchical relationships (Abbott, et al. 2012; MacDonald, 2012). It can also be challenging for participants to maintain a firm commitment to the research project for an extended period of time or to come to common interpretations and analysis of the evidence collected throughout the project.

Within the scope of this project, I was able to address some of these challenges by engaging some of the professional staff at my school, by suggesting metacognition be the topic of one of our year-long professional learning communities. The acceptance of this suggestion allowed me to exchange ideas with other colleagues and receive differing perspectives on the evidence I collected within my classroom. Furthermore, the students themselves acted as participants in this project. Although many were excluded from the

final report, for reasons mentioned in the Curricular Context section of this project, they were actively engaged in the reflection, creation and execution of the action research process. Engaging students in the research process not only facilitated authentic learning experiences that incorporated and modeled the real life value of metacognitive processes, the students were given an opportunity to voice their concerns, opinions and suggestions for change. They became active citizens of our learning community, finding their own voice and advocating for themselves.

Method

 Stage 1: Establishing a baseline. I met with all of the participants and their families in face-to-face meetings at the beginning of September 2011, to introduce the project, hand out consent forms and answer any questions that the families may have had. All participants submitted consent forms, signed by their parent or guardian (Appendix B) as well as a consent form signed by the student participant (Appendix C).

 The country of origin, home language, age and time spent in Canada was recorded for each student-participant, in order to ascertain the demographics of the research and to determine cultural and/or linguistic diversity of the participants.

 Hacker, Keener and Kircher suggest that writing is "primarily applied metacognition in which production of text is the production of meaning that results from a person's goal directed monitoring and control of their cognitive and affective states." (Hacker, Keener, & Kircher, 2009, p.170). Considering this theory, along with the initial assessment of student language proficiencies, based on Alberta Education's K-12 English as a Second Language Proficiency Benchmarks (2011) and informed by a beginning-of-the-year writing sample, I decided to focus the EPs on writing as, about and for learning.

The writing assignments we were about to engage in were geared toward learning the

mechanics and conventions of writing, using writing as a means of articulating the

(re)creation of knowledge and as a means of engaging in and recognizing metacognitive

experiences. The creation of a personalized EP, designed to facilitate metacognitive

practice and record metacognitive knowledge, experience and strategies was integrated

with learning opportunities grounded in the achievement of general and specific learning

outcomes for writing, as described by the Alberta Program of Studies for English

Language Arts (Alberta Education, 2000).

Over the first two weeks of the school year, I conducted initial assessments and

the students participated in technology centers that provided hands-on learning

opportunities about the basic knowledge and skills required to use iWeb. With the

support of one teacher, their peers and instruction sheets, students learned to (a) create

folders for each subject and save their work in appropriate and organized ways, (b) find

applications that were not currently on their navigation bar, (c) set up an appropriate

Microsoft Word document, (d) record video using iMovie (though later we found that

Photo Booth was more intuitive for the students) (e) upload photos from a digital camera,

using iPhoto and (f) explore, organize and begin their own personal EP using iWeb.

This initial process was successful because of the cooperation and collaboration

between two full-time and one part-time professional staff (including the teacher

researcher). We had combined our classes and took turns with assessment and the

facilitation of the centers. This process would be infinitely more difficult without the

cooperative efforts of a teaching team.

Students were engaged and excited to show each other what they knew about using the technology in the classroom. It was also a perfect opportunity to introduce the students to the concept of misconceptions, as they reflected on what they thought they knew and started to re-evaluate that knowledge according to what they were learning from the centers, peers and teachers. At the end of each literacy class, we would reflect on the learning of the day by asking these questions:

- Did you have any misconceptions? What were they?

- How did you realize that you had a misconception?

- What do you know now that you didn't know before?

Recognizing the growth that resulted from such collaborative exploration and the consequent metacognitive discourse, I established Learning Community Meetings (LCM) as a permanent routine in my literacy class. LCM provided a daily opportunity for the students and me to participate in a *grand conversation* where we would explore, create, share and evaluate metacognitive knowledge and strategies. This front loading and exploration time was integral to the positive self-efficacy that was observed and communicated throughout the project. It encouraged students to share their thinking and help make our classroom a safe environment, where mistakes and misconceptions were the key to our learning.

Students began their EP by creating a Welcome page and a page entitled All About Me. The first step was to include a prewritten message explaining the purpose of the EP on their Welcome page. They were encouraged to personalize the pages with pictures, music, design and/or facts about themselves.

As a class, we brainstormed possible information that could be included on the All About Me page. The students' ideas were recorded on chart paper and posted on the wall for future reference. The All About Me page was an ongoing assignment, where students were welcome to add, revise, edit and/or delete information as they saw fit. The All About Me assignment was included as an accessible entry point for students to both learn about the software, as well as begin to explore ways of sharing their personal stories.

Next, students were given a list of initial question prompts that encouraged them to think about the general nature of learning (Appendix D). They were asked to take the questions home and independently think about their answers. The following day they were asked to record their responses using video, audio, written word or another representation of their choice and post them on a new blog page in their EP.

During the next LCM we visited each other's EP and shared our responses. I went through the responses of the student-participants and coded them according to the previously established coding system (Appendix E).

The following weeks were focused on the development of a common metacognitive language. I used explicit instruction of specific language and sentence frames, designed to support the development of communication skills, encourage students to initiate, clarify and extend understanding throughout communicative tasks and begin to monitor personal comprehension of shared knowledge. The sentence frames were a collaborative effort between teacher-researcher and the students. This collaboration began on the first day of school and continued long after the project was completed. The

sentence frames provided a concrete and safe way for students to begin to develop a common and culturally accepted language about learning and thinking about learning.

Pransky (2008) is an advocate for the careful consideration and explicit instruction around classroom uses of language. I identified with his anecdotal account of student understanding regarding the word "listen" as a behaviour and/or consequence, rather than being synonymous with "learn." Wanting the students to have an initial, safe and collaborative opportunity to consider the process and strategies associated with learning in greater depth, and to begin our exploration of current metacognitive knowledge, we engaged in a grand conversation about listening.

I began the class by asking the question: "What are you *doing* when you are listening?" Students responded with answers like "Looking at the teacher." "Sitting still." "Not talking." As the students gave their suggestions, I recorded them on chart paper. Once our list was exhausted, we attempted to reframe all answers into what one does when one listens, rather than what one doesn't do. For example "not talking" had been reframed as "being quiet/silent." It was clear by the answers elicited that most of the students had experience with and knowledge about the etiquette and cultural behaviour expectations associated with listening. However, none of the initial answers included any reference to the brain, thinking or learning.

The next step included a redirection of the question: "What parts of the body are being used when we are listening?" Students eagerly provided answers including "eyes, ears, hands" and, with some prompting, "brain." With that, we returned to the initial list to see if we had any new information to add. One student suggested that we include writing, because we were writing what we were listening to throughout the exercise. The

class agreed. Anna raised her hand and stated: "We use our brain, so thinking [should be added]." Writing and thinking were included to our list.

Once the connection between listening and thinking was established. I followed up with the question, "If you are thinking when you are listening, what are you thinking about?" The students provided answers like: "Thinking about what they are saying" and "Thinking about what you are hearing." Wanting the students to be as specific as possible, in order to develop accessible strategies that they could refer to in the future, I prompted them further. "What are you thinking about, when you are thinking about what a person is saying?" There was some silence for a while as the students contemplated this question. I wrote the question on the board and invited them to discuss it with the person sitting next to them, their elbow buddies, for a few minutes.

As I observed the conversations being held around the class, I noticed that many of the responses were statements that could be framed as questions. After five minutes, we regrouped and I asked for volunteers to share their thinking. The first group stated that they were thinking about the words the person was saying. The next group suggested that they thought about whether or not they understood what the person was saying. The third group added that they were thinking about if the person was right or not. The subsequent groups stated that they thought about what they know about what is being said, perhaps a transfer of knowledge from our guided reading lessons focused on making connections. All thoughts that were shared were recorded on the white board.

Following the sharing session, I asked the students: "Which of these thoughts would make the most sense to think about first." One of the students suggested, "The one about understanding, 'cause if you don't understand then you are stuck." With some

prompting, we discovered that by "stuck" the student meant that you couldn't think about the other suggestions that were on the board, because you wouldn't understand the topic well enough to know if you agreed, or knew more about the subject. I followed this statement up with the question: "How do you know if you understand or not?" Foad raised his hand and said: "I would check in my head if I get it." Another student added to this by suggesting that, "You can ask yourself if you understand."

Asking questions was a familiar strategy for some of these learners, so we then reviewed all the suggestions on the board and reframed them all as questions they could ask themselves. "Do I understand what is being said?" "Do I agree or disagree?" "Do I have anything to add?" "Do I have any connections to share?" This was the beginning of our preoccupation with mid-task questioning.

Wanting the students to think deeply about understanding, during the next LCM I directed them back to the first of our mid-task questions, "Do I understand what is being said?" I followed it up by asking, "Okay, but how do you know that you understand something?" After a lengthy discussion, the students decided that they knew they understood something, if they could tell someone else about it. My next question was "How do you know that what you understand is correct?" The students came back with a variety of suggestions like ask someone, look it up and re-read.

As we were mostly focused on conversation up to this point, I focused on the oral strategy of asking for clarification. I introduced the idea of paraphrasing as a clarification strategy. I gave them the sentence frame "So, what I hear you saying is…" which would be followed up by a summary of their understanding expressed in their own words. The

response to such a statement would be "Yes, that is what I meant." Or "No, what I meant to say was…" followed by a restatement of their thinking.

Being able to communicate one's understanding to others is an important strategy for assessing and clarifying one's own understanding. It was important to point out that the goal was not to repeat what had been said verbatim, but rather to be able to restate the important ideas in one's own words. The students and I practiced this strategy in the remaining classes of the day and it has continued to be a staple metacognitive strategy in my classroom ever since.

We had begun a flow chart on our wall that recorded the sentence frames agreed upon by the class up to this point. Over the next three LCMs we had established a multiple-step, mid-task questioning strategy that we could all agree upon and support each other with (Figure 1). I gave all of the students a personal copy of the strategy to keep with them to use as a metacognitive resource and/or take home and share with their families. As a community, we all worked diligently to ensure that after someone in the class had finished sharing their ideas, another student would independently raise their hand and clarify their understanding, ask clarifying questions, add to what had been said and/or share a personal connection.

What are we doing when we listen?

Use mid-task questioning.

Do I undertsand what is being said?

Ask clarifying questions.

Metacognitive experience

Strategy

Sentence frame

Mid-task question

New personal inquiry

Paraphrase

Respond

"So, what I hear you saying is..."

"Yes, that is what I meant."

"No, what I meant to say was..."

Yes, I undertand.

No, I don't understand.

How can I communicate my understanding?

Do, I agree or disagree with what has been said?

Do I have any questions about what has been said?

Do I have any connections I can share?

Do I have anything more to add?

Do I need help?

Access personalized list of learning strategies and ways to represent learning. (speak, write, draw, sing, etc.)

"I agree with what _____ is saying because..."

"I disagree with what _____ is saying because..."

"I was wondering..."

"_____ reminds me of...because..."

"I was thinking..."

"Did you know..."

"I need help."

"Would you please repeat that?"

"Could you explain that in a different way?

Figure 1. Mid-task questioning strategy.

At first this process required a high level of teacher direction, prompting and language support, but by the end of the project all student-participants were able to clarify and extend communicative tasks independently or with minimal support from their peers and/or teacher. The use of both academic and subject-specific vocabulary had increased for all student participants. The ease and confidence with which students were able to use the sentence frame "I need help," then request assistance from their peers, as well as demonstrate an understanding that the knowledge offered by their peers was an important resource of information, was considerable. The development of a common metacognitive language and strategy brought the learning community together, advanced individual metacognitive knowledge and created a safe space for learners to recognize, attend to and correct misconceptions.

I was inspired by Linda Christensen's (2000) approach to teaching English language arts. Integrating learning outcomes with opportunities to explore the importance of reading and writing as conduits for political action both engages and challenges students to reflect on their personal values and belief systems. Christensen (2000) suggests that literacy is a tool with which students begin to know themselves, the world around them and begin to negotiate their assumptions about and acceptance of truth according to dominant culture. Although Christensen worked with students in secondary school, I wanted to take her philosophy and apply it to the elementary classroom as a way of introducing my students to the concept of advocacy through story. I wanted to facilitate opportunities for my students to begin to explore their personal stories as a meaningful way to engage in the writing process and to become familiar with the ideas of metacognitive knowledge and experiences or thinking about learning.

Our first writing assignment, *The Power of a Name*, was inspired by Linda Christensen (2000). We began the year reading stories and poems about names. I read to the children, they read with/to each other. Students were invited to bring text from home. They chose their favourite text to practice reading aloud and shared them with their families and their Grade 1 and 2 reading buddies.

I introduced the Writers' Workshop Process Checklist (Appendix F) that I had developed with my students from previous years. It is an eleven-step checklist that encourages students to begin to explore writing as a process that involves brainstorming writing, revision, re-writing, editing, peer and teacher conferencing and publishing. The students were not asked to publish every piece of writing they completed, only to create a

final draft to be assessed. After the three narrative assignments were complete, the students were invited to choose their best work to publish.

Dedicating the first week to pre-writing, students were asked to brainstorm ideas while participating in *morning pages* (Cameron, 2002)*,* in which they practiced writing stream of consciousness, listening to their thoughts, recording their preoccupations, questions and ideas with abandon and honouring their story, past, present and future. For many it was a challenge to write without thought to conventions, spelling, form or function, while others reveled in the freedom of the act. Some of the more reluctant writers chose to record their morning pages verbally using GarageBand, software that was available on our classroom computers.

The students were also asked to reflect on and/or interview their families about how and why their name was chosen. What were the family histories behind their name? What cultural meaning does their name have? What stories/memories are attached to their name? How do they feel about their name? If they could choose their name, what would it be?

Next, the students wrote lists of nouns, adjectives, and verbs that remind them of their names. They were encouraged to add texture, honesty and depth to their writing by using their home language in their lists. We shared our lists in the form of oral *métissage* (Hasebe-Ludt, Chambers, & Leggo, 2009), each student sharing a short list of their most interesting, descriptive or emotionally powerful words. Our personal narratives braided together, simultaneously representing points of affinity and diversity of experience. Each student inspired the next with new perspectives and approaches to the same task, they were encouraged to borrow ideas and add to their list as they listened.

Each step after pre-writing was introduced in mini-lessons at the beginning of each literacy class. Students were encouraged to work through each step at their own pace, seek help from their peers and I was available for student/teacher conferences throughout the hour. Again, they were supported with editing checklists, instruction sheets and graphic organizers.

Two weeks of literacy classes were dedicated to working on peer conferencing and how to use the peer-conferencing strategy (Appendix G), step five of the writers' workshop process, where students learned to share their work, receive, record and provide constructive feedback from/to their peers. Throughout this process students became more and more confident using the sentence frames established earlier, as a way of clarifying the suggestions made by their peers.

Near the end of this initial writing assignment, I facilitated mini-lessons focused on reflection, communication and goal setting. The students reviewed their work and the process they went through to complete it. They participated in small-group (4-6 students) mini-lessons geared toward the exploration of goal setting and paragraph formation.

I introduced the students to goals that were Specific, Measureable, Attainable, Realistic, and Timely (SMART). We explored the meaning of these words and built another sentence frame to facilitate their use.

"By (date), I will (specific task). I will know I have reached my goal because (evidence to prove that you have reached your goal)."

The students were introduced to the idea that goals should be based on reflection of work and the identification of areas that are challenging, rather than arbitrary learning outcomes.

Continuing with their reflective inquiry, the students created short reflection paragraphs about the writing process. We used a strategy called Say it! Prove it! Explain it! (SPE), that I had developed in collaboration with my students in previous years (Appendix H). The intention of this strategy was for students to begin to create more cohesive and detailed paragraphs that provide complete information for their reader, as well as develop communicative competency when discussing metacognition.

Begin with the main idea and the reasons behind it (Say it!). Next, prove what you have said by providing specific details or evidence to back up your point (Prove it!). Finally, explain your point by telling the reader how your evidence proved your point or why it is important to your understanding about learning, the world or human nature. Although the mini-lessons were mainly focused on the communication of learning and thinking, the SPE strategy was applied to all our writing/communication assignments throughout the year and was the topic of numerous metacognitive conversations, reflections and goals.

After some modeling, as well as collaborative and independent practice with goal setting and the SPE strategy the students were asked to reflect on their initial experience with the writers' process. They were given a list of prompting questions that they could choose from to respond to (Appendix I). A paper copy of the prompts were given to each student, as well, a digital version was posted in our classroom community folder located on our school server. Again, students were given the choice of video, audio, written text or any other form of representation they preferred. Students completed their reflections, posted them in their EP, shared their thinking and goals in student/teacher conferences,

and began to collaborate on the creation of a personal strategy list that would support the attainment of their individual goals.

Stage 2: Thinking about learning. The next stage of the project involved the creation of another personal narrative also inspired by Linda Christensen (2000). Following her example of inviting students to bring their home into the classroom, thus encouraging students to feel safe to share real feelings and experiences, I chose to engage my students in a writing exercise that opened the door to personal history.

Christensen (2000) shared a poem, *Where I'm From* written by George Ella Lyon, with her class. Although I loved the form and ideas presented in the poem, I found the language to be exceptionally challenging for my elementary CLD students. Instead, I shared some of the student-generated poems included in Christensen's work (2000). The poems written by her secondary students were more accessible and were motivators in the sense that it was not a poem written by a professional and accomplished writer. I was excited by the use of non-standard English and/or native language in the poetry and the potential it had to inspire depth and texture to the work of my students. We read *I Am From…* by Oretha Storey, *I Am From Swingsets and Jungle Gyms* by Debby Gordon and *I Am From Pink Tights and Speak Your Mind* by Djamila Moore (as cited in Christensen, 2000).

The students broke into small heterogeneous groups (4 students) to read *I Am From Swingsets and Jungle Gyms* by Debby Gordon. Each student had a copy of the poem. I read the poem aloud to the class as they followed along. The students' first task was to read the poem silently to themselves. Next, they were asked to read the poem again and this time highlight words that were challenging or those they didn't understand.

This activity engaged students in metacognition, as they monitored thinking and inner dialogue to begin to identify where their comprehension was breaking down.

After each student had covered their page with highlighted words, they worked together using resources available in the classroom (dictionaries, computers, peers and teacher) to begin to interpret the meaning of the challenging words.

Once all of the vocabulary had been addressed, we went line by line through the poem making a list of the type of details that the writer used to describe her past (Christensen, 2000). By the end of the poem we had a list of ideas that could inspire students and that they could draw from as they moved through the assignment.

- Collections
- Food
- Activities/games
- Things found in a backyard
- Things found in a neighbourhood
- Places
- Friends
- Family members
- Important events
- Sayings/lessons

The next lesson was focused on creating our own lists. Students were encouraged to bring their lists home to get some input from their families. They were reminded that they were trying to collect specific and detailed items that evoked vivid memories. I encouraged them to use the language of their home whenever possible.

We gathered again to share our lists in the spirit of métissage (Hasebe-Ludt, et al., 2009) and similar to Christensen's (2000) experience, I found that students who wrote detailed and rich items inspired those whose lists were more vague. I encouraged the students to borrow ideas from each other in the spirit of collaboration, but it was also emphasized that they were only to borrow *ideas* and then make them specific to their own life, family and experiences.

Once the lists were completed the students began to work through the writers' workshop process again at their own pace, with peer, family and teacher support. As with most learning, there was a distinct and vast continuum on which the students fell in terms of their understanding and willingness to work through the writing process. Much of my time was spent working with reluctant writers, verbally planning, scribing and/or recording thinking, using video and audio software. Students who were confident in their ability to follow the process independently and take risks were unofficially identified as human resources that other students who felt less confident could access when/if they found themselves stuck. I facilitated student/teacher conferences during the second half-hour of the literacy class to answer any burning questions that students might have had. We also used a question box, where students could record issues, questions or concerns that they encountered and that I would address during small-group mini-lessons or at the beginning of the next class. I dedicated another week to peer conferencing, to ensure that students had the support they required to engage appropriately in this part of the process.

Once students approached the end of the process, they were invited to reflect on the achievement of previously set goals, the writing process and/or newly created knowledge, by accessing and responding to the same list of reflection prompts provided

in Stage 1 (Appendix I). Because students were working at their own pace, I set up a sign-up system for teacher/student conferences where they shared their EP with me, before continuing on to the next assignment. Not wanting to influence a student's reflection, I postponed the collective sharing of EPs until all the students had completed their own for this assignment. Although they were welcome to seek support from their peers, the goal was to engage in personal reflection about their own learning and not be influenced by their peers. Still, it was interesting that many of the students chose to respond to the same reflection questions.

Stage 3: Reflecting on learning. The students played an integral part in planning the third narrative assignment. They chose the topic. Throughout our read-aloud exploration of personal narratives, we came across Cynthia Rylant's (1982) Newbury Medal winning book, *When I Was Young in the Mountains*. The students enjoyed the text so much that they requested it to be the model for our third personal narrative assignment. Though written in 1982, the text is vivid with detail and descriptive language, it models appropriate use of past tense (a relevant learning goal for the students at the current stage of their learning) and evoked vivid and diverse memories from the students. The style of the text included repetition, which we had been exploring as a way to anchor writing, however Rylant also included descriptive and detailed paragraphs that expanded on one main idea.

Although it was only a few students who suggested the assignment, all the students demonstrated excitement and interest at the idea that they were able to inform their own learning. We broke into small groups and each group went through their assigned pages line by line to create a list of ideas, feelings and memories that Rylant

drew from. We came back together and shared our lists. Rylant's ideas inspired original ideas that were included in the list as well.

With our collaborative list as a guide, the students worked through the writers' workshop process one more time, this time choosing their own pre-writing activities. I made myself available for student/teacher conferences and worked daily with a small group of students that still required a high level of support to engage in the writing process. At this point in the learning process, most students had become so comfortable asking for support from their peers that they were able to work through the process relatively independently, with intermittent requests for teacher support. That is not to say that my literacy classes weren't hectic, as is any classroom with 24 CLD and/or ELL students and a single teacher. We worked together to support one another, understanding that everyone deserves teacher support and attention, as we attempted to find systems that worked for us; student/teacher conference sign-up sheets, question boxes, email, small-group mini-lessons, peer support, etc. Some days were more productive than others.

The system established in Stage 2, where students would reflect on their learning using the same question prompts, was maintained, allowing students to work at their own pace. They were invited to share their reflections in student/teacher conferences and then later on in an LCM.

Stage 4: Articulating new knowledge. When the students had completed their reflections on the third narrative assignment, they were asked to return to their EP and review the reflections, questions and goals they had created throughout the process and then revisit the initial learning-reflection questions they had answered at the beginning of the project (Appendix D). It was emphasized that they should try to expand on their

previous answers, applying the SPE strategy to their reflections and including new

knowledge about writing and/or learning. Once the students had completed their

reflections, the EPs were ready to be published and shared with their family, friends and

teachers.

Chapter Four: Data Analysis

Due to the nature of the project, I chose to base my analysis on student introspection as communicated through retrospective written and verbal reports. There are limitations to this type of reporting; accuracy of reports from untrained participants, limitation of known vocabulary to match internal states and inability for an external observer to verify reports (Lieberman, 1992). Because the present project is focused on the development of metacogntive knowledge and experiences as communicated by students, it seems logical to accept the validity of such reporting as a measure of growth in knowledge and strategy.

The analysis involved the examination of patterns of discourse presented within student EPs that reflect cognitive and metacognitive knowledge, experiences and strategies encountered throughout the learning process. The student-participant EPs were transcribed and coded. The categories for the coding table were informed by the literature previously reviewed and by the observations and collaboration of students and teacher participant(s) (Appendix E). The categorical assignments of reports, within the coding table, are interpretations of behaviour, where boundaries have been drawn artificially by the researcher and therefore tend to overlap. The reports have been included because they were present in student-participant EPs and represented thinking about thinking. The students were given pseudonyms, and the analysis of their retrospective reports was organized by project stage.

Collective Analysis

The analysis of data consisted of cross-case analysis of student-participant introspection as communicated during the four stages of learning reflection responses and

represented in their personalized EP. The goal of this analysis was to highlight the type of

metacognition communicated by the student-participants, as well as establish patterns of

growth in terms of the student's ability to communicate metacognitive knowledge

effectively, using learned strategies. Table 1 shows counts of student-participant

responses interpreted as metacognitive behaviour for each stage of the project.

Table 1

Counts of Student-Participant Responses Interpreted as Metacognitive Behaviour

		Student Participant															
		Anna				Foad				Lucy				Jack				
		Project Stages																
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Type	Code																	Total
Affect	ASE	1	2	1	0	1	3	1	2	0	1	2	0	3	2	1	0	20
	AE	0	0	2	0	2	0	1	0	2	0	0	0	0	0	2	0	9
	AB	0	0	0	0	2	0	0	0	0	0	1	0	4	0	0	0	7
	ADD	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2
Cognitive	CKD	1	0	0	0	1	0	0	0	2	0	0	0	0	1	0	0	5
Knowledge	CS	2	2	1	0	3	2	1	2	0	3	2	1	7	2	3	1	32
Metacognitive	MKIA	0	0	1	1	1	1	0	1	1	1	1	2	2	0	0	0	12
Knowledge	MKIE	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	MKU	1	0	0	2	2	0	0	2	2	1	0	1	1	0	0	1	13
	MKT	0	0	1	1	1	0	0	0	0	0	1	1	2	1	1	0	9
	MKS	1	0	0	2	1	1	0	1	1	0	1	1	1	1	1	2	14
Metacognitive	MEA	1	0	0	0	1	1	1	0	0	0	0	0	1	1	1	1	8
Experience	MESA	0	0	0	0	2	1	0	0	1	0	0	0	1	1	2	1	9
	MEGS	3	1	1	0	2	3	0	0	1	1	0	0	1	1	1	0	15

Throughout all stages of the project the most frequent comments communicated

in student-participant EPs were regarding cognitive strategies learned in class, through

collaborative work, dialogue or small-group mini-lessons. Collectively the student-participants communicated knowledge of cognitive strategies most frequently in Stages 1, 2 and 3, second only to comments and/or questions regarding metacognitive strategies in Stage 4.

Other than cognitive strategies, student participants focused the majority of their reflections on self-efficacy, metacognitive knowledge, goal setting and self-assessment of goals and/or tasks. Students commented the least on inter-individual metacognitive knowledge, dialogical discourse, cognitive knowledge development and behaviours associated with learning throughout all stages of the project.

The question prompts accessed by the student-participants throughout Stages 1 and 4 (Appendix D) focused more on exploring a student's general knowledge about the nature of learning rather than a specific learning task, drawing student participants to comment more on intra-individual metacognitive knowledge than in the other stages of the project. While the student-selected question prompts in Stages 2 and 3 (Appendix I) requested reflection on particular tasks, they inspired more comments regarding strategy, self-efficacy, self-assessment and goal setting.

Throughout the project it was clear that students required practice with making connections between reflection, self-assessment and goal setting. Often student-participants were keen on reflecting on their work, strategies and knowledge, but required support to understand that the reflections were meant to inform future goals. Often the goal set by the student-participant was not connected to the reflections they shared, inferring a misconception of the purpose and reciprocal nature of reflections, self-assessment and goal setting. For some students, this connection was clarified through

student-teacher conferences, LCM, collaborative learning opportunities, etc., while others continued to require support as they explored the use of reflection as a means of identifying areas for future growth and creating goals informed by that reflective process.

All student-participants grew in their ability to use shared metacognitive language to communicate thinking about learning. In Stage 1, some of the student-participants represented their reflections using simple or incomplete sentences whereas in Stages 2 through 4 it was evident that the student-participants were attempting to employ the SPE strategy learned in class, and they created more cohesive paragraphs.

The student-participants were engaged in the reflective process and excited about using iWeb. The time spent reflecting, creating and posting selections was focused and met with interest and a willingness to explore the tool independently, or with peer support. All student-participants used a combination of video and written word to communicate their thinking about learning. While there were other options available (audio recording, photography, etc.), these were the two forms of communication most readily adopted by all students in the class.

Each student-participant chose a video recording as the representation format for his or her initial reflections in Stage 1. They all chose to write ideas on paper first and read their answers as they recorded them using Photo Booth software. Jack, Anna and Lucy all continued with this strategy for the second reflection in Stage 1, while Foad chose not to write his responses on paper and simply recorded his thoughts spontaneously using Photo Booth. Foad continued to use this communication strategy for the third reflection in Stage 1, then returned to writing out his ideas ahead of time and only used video recording one more time for his reflection in Stage 3. He opted to type his

reflections for Stages 2 and 4. Jack, Lucy and Anna all chose to type their reflections in Stages 2, 3 and 4.

It was interesting to see where the students' metacognitive knowledge clearly developed and in which areas they remained the same. Overall the students were able to identify more specific examples of both cognitive and metacognitive strategies that they used when learning, while the communication of a general understanding of the nature of learning remained relatively the same.

Many of the strategies that were discussed by students in Stage 4 transcended a literacy focus, and included strategies developed in math, social studies and science, perhaps due to the fact that we weren't reflecting within our regular literacy time. I accepted all reflections, focused on literacy or not, as a representation of their metacognitive growth. In reality our lives are not compartmentalized according to subject-specific criteria, nor is our metacognitive knowledge or experiences. Strategies and knowledge explored in literacy can inform one's approach to problem solving in a variety of circumstances and vice versa.

Individual Analysis

I have selected to analyze each student individually in order to respect the personalized processes, metacognitive knowledge and experiences. The following section will look at each student-participant's reflection(s), noting trends and growth in metacognitive knowledge and ability to communicate metacognitive experiences. The individual analysis of student-participant EPs will then be followed by a discussion of my findings and recommendations in terms of the potential an EP offers in terms of the engagement of CLD students in metacognition and self-advocacy.

Foad. Foad began his metacognitive exploration by including a few pictures of himself, taken with Photo Booth, and to writing the following: "I like to play soccer." It became clear at the onset of this project that Foad was a reluctant writer; he was easily distracted and often opted for what he considered to be the easiest path, rather than the path that communicated his needs, interests and/or learning styles best. Foad began the project with an understanding of the learning process as being highly dependent on adult support, instruction and evaluation. In the first reflection of Stage 1, when asked to describe what learning is, Foad explained: "I think learning is when… when a teacher is talking and makes you do…or makes you smarter and smart in the future." This statement suggests that Foad held the role of a teacher, supplier of knowledge, as most important to learning, putting most of the onus of learning on the teacher, instead of the learner. While exploring his knowledge about the learning process further, he made statements like: "I learn by the teacher and doing work, read and listen." This statement identifies generalized cognitive strategies and behaviours that he believed contributed to the development of knowledge. There is, again, an emphasis on the role of the teacher, without any specific details surrounding how the teacher helps him learn, or what doing work, reading and listening entail.

After analyzing Foad's first reflection, he and I engaged in student-teacher conferences and mini-lessons that Foad engaged in emphasized the importance of an individual's role in learning. We discussed and identified strategies that he already used to learn, that were independent from the teacher. With the support of a small group of students we looked at the variety of learning resources available in the classroom, school and community and identified the teacher as only one part of the learning process.

As Foad engaged in the second reflection, his comments identified new cognitive knowledge development, as well as outlined personal goals he had set for himself. In one video reflection he stated:

What I learned this week about reading, learning, writing was that I learned punctuation, why do we use capital letters and I know some new words and I learned for writing I don't really have to write I can just type it for my homework.

Foad demonstrated an awareness of the lessons that we learned together over the past weeks. Although, it is unclear through his reflection, how much of the learning he understood.

In the following LCM we discussed the importance of being able to prove your learning, rather than just say you learned something. The students had decided that if you could tell someone, represent or teach about what you knew in specific detail; that would prove your knowledge. This drew us back to our SPE strategy, and its application to learning reflection.

Foad was able to identify the SPE strategy learned in class for creating cohesive paragraphs, in his next reflection. He also expressed an understanding of the role practice plays in improving skills. Communicating an awareness of metacognitive experience, Foad shared questions he still had about the writing process: "My questions are…I don't really have questions, but I'll try to make one up and see…My questions are…who invented paragraphs, I guess?"

Recognizing that he was unable to recall any lingering questions he had about the writing process, Foad both recorded a metacognitive experience of forgetting and showed

growth in his ability to take risks. In previous reflections he had simply skipped the prompt about lingering questions, here Foad took a risk and "made one up."

In class, we had been discussing how taking a risk and providing some kind of response, rather than simply skipping over the task, often leads to learning we hadn't even considered. Foad had been demonstrating a willingness to take risks by making comments and/or asking questions during our LCMs, and he was able to transfer this risk-taking strategy in this reflection.

Being aware of metacognitive experiences was a challenging task for many students. The students and I had decided to carry around a pad of sticky notes everywhere we went, so that when we became aware of thinking about learning we could quickly write down our experience, so we could discuss it later or reflect on it in our EP. We kept the sticky notes in a writing journal used for pre-writing.

Foad still had many questions about the writing process and the SPE strategy, although he was not able to identify them as lingering questions during his second reflection. Foad and I discussed his question about the invention of paragraphs, identifying it as a possible personal inquiry that he could undertake for the class. Together we then reviewed his sticky notes and previously written work, and we identified a few relevant lingering questions about the writing process that he hadn't included in his entry. We were able to come up with two reasons for this oversight. After reviewing his entry, Foad communicated that he was in a rush to complete his reflection and neglected to review his sticky notes or his work prior to beginning his reflection. Therefore the learning and questions were too distant for him to be retrospective. Foad was learning about the role that evidence played in learning. It is through reviewing and

reflecting on previously completed challenges that we are able to build metacognitive knowledge. We worked together on strategies that could support independent self-assessment such as the writing rubrics (Appendix J), editing checklist (Appendix K) and self-assessment checklists (Appendix L) used in class.

The following LCM and large-group mini-lessons focused on strategies that would support all students as they assessed their own work with the help of a teacher, family member or peer, when required. Also, many of our grand conversations surrounded the importance of taking the time to really look at our work carefully, with the support of such self-assessment resources, and of identifying authentic questions that could be asked to support deeper understanding or clarify misconceptions. After all, what is the point of asking a question that you don't really want to know the answer to?

Foad's final reflection in Stage 1 showed growth in his understanding of the difference between perfection and personal growth. He stated:

I chose to make a paragraph like good and add Say it! Prove it! Topic Sentence and Explain it! Actually, that's not the order, but it's okay for now. And that's it. I chose it because I wanna [sic] make a paragraph really nice so I get a good mark on my report card and be a good student.

Foad identified cognitive strategies learned in class that support the creation of a cohesive paragraph, though again, he neglected to prove that he truly understood how these strategies worked. Although he did not mention a teacher or family member as the evaluator of his work, it is evident that he continued to be motivated by extrinsic rewards, like report card marks.

Foad continued to require support to engage in and complete the writing process. He was most engaged in learning when provided with time to interact with his EP and reflect on his work. He communicated his lack of self-efficacy when dealing with the writing process in the second stage of the project. Foad explained: "The writing process that I followed was hard, I need a little help from the teacher then I can finish the process."

At our student-teacher conference Foad and I discussed how being specific about which step(s) of the writing process he found most challenging, would help me to know where to begin to help him. Foad returned to his EP and included the following, "The most challenging part for me was writing a lot because my hand hurted [sic] a lot."

In Stage 1 of the project, Foad had identified typing as an alternative strategy for handwriting that he found both helpful and motivating. When asked why he wasn't using this strategy, he explained that sometimes there weren't enough computers for everyone to use, which is the case in most classrooms, and that he found it challenging not to have his work with him to take home. There wasn't much I could do about the access to the computers at school, because it was important to share the resources equally amongst our class, as well as the rest of the school. Foad and I discussed using the computer time that he did have to its full advantage by having a plan and focusing on his work during that time. We could make his work that was done on the computer more accessible with the use of a memory stick and/or learning how to email his writing to himself. Using these strategies would make his writing accessible both at school and at home. Since we did not have memory sticks to provide to the students, and Foad's family didn't have one that he could use, I set up a peer tutoring session with another student who had learned how to

email Microsoft Word documents as attachments, using his school email account. With support, Foad was able to use these strategies to complete his assignment.

Upon completing the writing process, Foad reflected: "The part that I am most proud of myself in writing was that I got my work done." This was a big step for Foad, it was the first time he had acknowledged success without extrinsic motivation. He was not judging himself against the validation of others, rather he felt successful based on his own merit and what he maintained as a benchmark for success.

Foad had grown in other areas of his learning, particularly in his reflection process. Where he once found it challenging to make his reflections relevant to his current learning, connect them to appropriate lingering questions and then develop a relevant and meaningful goal, Foad achieved all three independently in Stage 2. After reflecting on how the writing process was challenging for him to complete independently, he asked: "The question that I still have about the writing process is why do we do the writing process? My thought is that our writing will get better." He was able to identify a genuine question that had been occupying his mind, and make an inference about a possible and reasonable answer to that question. Foad went on to create the following personal goal, "My goal for the next writing assignment is to understand more of the writing process." It was a moment of celebration for Foad. Not only was he thoughtfully reflecting about his learning, he was showing perseverance in his willingness to seek more information about the writing process, rather than giving up as he had done before.

In Stage 3 of the project, Foad focused most of his time and reflections on adding juicy words to his writing. He expressed feelings of self-efficacy while simultaneously commenting of the benefits of peer conferencing, thus demonstrating knowledge of

cognitive strategies. Also, because Foad chose to video tape his responses for this stage, he was able to capture two metacognitive experiences where he felt confused and was unable to identify and/or correct the breakdown in knowledge.

> I'm proud of my work because I added…more exciting words and I added…I added more words for example instead of saying 'poop' I said droppings, 'cause my peer said to me to start all my sentences with 'When I was young in… never mind… [looks at a paper, searching for the appropriate explanation] that's it.

Foad's tried to prove what he was saying, by providing a specific example from his work. He experienced confusion, recognized that he was confused, attempted to support himself by searching his paper for an appropriate explanation of his thinking, and then gave up.

Foad continued to require support until the end of the project to recognize when he was having a metacognitive experience, and when he needed to take personal action to correct his misconceptions or clarify his understanding. Foad was still at a point where the reflections were something that was required by the teacher and had not yet adopted it as a strategy for personal growth. He often rushed through his reflections and was more concerned about getting it done than being clear about his learning.

Foad was developing in his ability to communicate his thinking in clear and concise ways, as was demonstrated in the following reflection:

> I liked writing my memories the best because it reminds me of my childhood and my memories come back to me. One time I bonked my head on a table then my head started to bleed. Whenever you share your memories, you also get to hear other people's memories.

Here, Foad communicated his clear engagement with the writing assignment, as well as provided an example of a shared memory and his thoughts on why sharing personal narratives is important. He continued to demonstrate the development of his knowledge about the SPE strategy when writing his next goal.

My goal is to add more juicy words to my draft. The reason is because I don't have any juicy words in my draft. If I had more juicy words then my draft is gonna be better and more exciting.

This goal included a statement of what he planned to do and how it would help his writing.

Foad was inspired to reflect on his personal growth since his arrival in Canada. He communicated metacognitive awareness of growth by stating:

I think learning is knowing things that you didn't know when you [were] new. When I was new I didn't know ho[w] to read long books and I didn't really read a lot, but now I know how to read and I can read really long books like [The Lighting Thief].

In a follow-up student-teacher conference, Foad explained that when he referred to being *new*, he meant new to Canada.

Foad went on to communicate his knowledge about review, reflection and clarification strategies as learning tools. "I do work and review it so I don't forget it. After school I always tell my mom what I learned." This statement demonstrated Foad's knowledge about the importance of transferring information from short-term to long-term memory. He used and reflected on verbal repetition and the verbal clarification strategies

learned in our literacy class, as well he identified his mom as being a useful learning resource that extended outside the school.

Foad emphasized the importance of revisiting new knowledge as being an integral part of the learning process, again by stating:

> What I understand about learning now is that if you review your learning in your summer break then it's going to be more helpful in your next grade and in your future. I was always afraid of my next grade but since I always read books and reviewed my learning the next grade wasn't that bad.

Foad may have been transferring new knowledge developed this year to previous actions perhaps undertaken, perhaps not. Foad was beginning to articulate an awareness of practice as an integral part of the development, creation and maintenance of new knowledge. He showed growth since the beginning of the project when he regarded the teacher as the sole provider of knowledge.

From these final reflections it may be concluded that Foad was in the process of moving away from a complete dependence on the teacher, as the supplier of knowledge and evaluator, towards a more autonomous approach to learning where he becomes an actor who engages in and reflects on the use of both cognitive and metacognitive strategies as a means of creating new knowledge. Foad experienced personal growth in his ability to articulate his knowledge based on evidence to advocate for personal strategies that help him learn and take risks in facilitated learning opportunities.

Anna. Anna included some photos of herself, as well as pictures of her school friends, taken with Photo Booth in her All About Me page. She also brought a picture of her brother from home and uploaded it. She included information about her likes and

dislikes, as well as her school interests. "My favourite subject is Social Studies, because I like learning about the history of different countries. I find Science most challenging because I have to learn different names of people, countries and cities."

The information about school subjects that Anna included in her All About Me page demonstrated intra-individual metacognitive knowledge and self-efficacy as she reported on her perceived strengths and challenges. It also indicated that she could be holding some misconceptions about the nature of science and social studies. We discussed this at one of our first student-teacher conferences and she explained that she had confused the two in her reflection, though she chose not to return to her EP to reflect on her misconception or change her entry.

Anna's initial reflections were brief. She made statements that were focused on the behaviours and cognitive strategies associated with learning. Anna was able to articulate her understanding of learning as building new knowledge. "I think learning is when you study new things and when you try to understand something." She also described some cognitive strategies that she used to support her learning. "Read books, listen and do different exercises that help us understand."

Although Anna was able to communicate what she understood to be the nature and strategies associated with learning, she did not provide details that indicated her level of understanding about what these strategies and behaviours looked like. Anna was an active and vocal participant as our class deconstructed the concept of listening, as was described in the Method section of the project. Her own personal reflections did not demonstrate a transfer of knowledge, in terms of including specificity to her EP reflections.

Anna's second reflection was similarly brief. She communicated self-efficacy when stating, "I learned how to write a proper paragraph." Though she neglected to demonstrate this learning by describing the criteria of a *proper paragraph,* or show how, where or when she had managed to create one.

Communicating awareness of a metacognitive experience as well as identifying the potential for new metacognitive knowledge about the task of writing a paragraph, Anna wondered, "Are there any other ways of writing paragraphs?" I addressed this question in a consequent LCM, commenting that all of the strategies that we were learning about together were simply that, strategies. We all have different ways of solving problems.

During the LCM, I asked the students to turn to the person seated next to them and take turns giving detailed directions on how to leave the room from where they were seated. Once they had created directions, I then asked the partner groups to find a different partner group across the room from them, and share their directions. Afterward, I asked if the directions were exactly the same for each group. The students explained that their answers were different in many ways. Some were different because they were seated in a different spot in the room and others were different because they used different landmarks or words to describe where to go. After a few groups had shared their experience, I attempted to tie in the concept of personal strategy. I explained that depending on where you are or what you know, and where you want to go, there might be multiple ways of getting there. Although some tasks have conventions that are agreed upon by a community, like the idea that we would leave the room by the door and not the window, or as in writing, the idea that word order changes the meaning of a sentence, the

way we get to the door or the words we choose could be different for many people. Strategies are simply one way of doing something. It is the learner's job to find a way that works best for him/her.

After some discussion about the importance of trying new strategies, in order to find one that fits you best, we came to general consensus that rejecting one strategy for another was okay, as long as you could provide a good reason for your choice and weren't simply opting out of the task altogether.

Anna demonstrated a growing understanding of the importance of strategy in learning. Although she did not reflect on her learning done throughout the week, she did set a personal goal. "My next goal is to learn how to be able to record my thinking that is deep." Not only did she set this goal, but, she was able to go one step further this time and communicate a strategy that she would attempt to employ in support of her achievement. "I'm going to read lots of books and record my thoughts." She demonstrated knowledge of a metacognitive strategy that would support her in monitoring her thinking, as well as identified, communicated and therefore advocated for an area for personal growth and future learning.

Anna's subsequent reflections were generally focused on self-efficacy. She wrote: "I found writing the first draft most challenging because I had to think of writing lines that make sense" and

> I am proud of the stanza I wrote about my memories because whenever I read the poem it reminds me of my childhood and my grandparents. I am also proud of the way of my writing because if you read the poem you can imagine me from the inside.

She was able to honestly identify areas of pride, as well as challenges she faced and provide reasoning for her thinking. Anna was engaged with personal narrative; she expressed great enjoyment as she asked her family questions, exchanged ideas and stories with her peers, wrote her story and shared it with others.

Anna was very focused on the quality of her work, as was communicated in her reflection: "I found the step Final Revision most important because when you are done your work and you published it, there is no way back. I mean you can't go back and change your lines and your thinking in the poem." Anna and I had previously discussed that sometimes there are deadlines that need to be followed, and our job was to do the best we could in the time we were assigned. Perfection was not the goal. The writing process was one strategy to ensure that the work one creates is an example of one's best work and that was why there were so many steps that involve revision and editing.

Anna's lingering question for this assignment was: "Why do we need to write the 1st and the 2nd stanzas? I think we have to write them so we can edit them after if we would like to change them." This question was more a matter of class organization than the writing process. I took this opportunity to teach about *chunking* tasks into smaller parts, as a strategy for time management. For most students the idea of writing an entire draft in one sitting is overwhelming, so that is when we use a strategy like chunking, assigning small parts of a larger assignment to complete each day, and eventually the entire assignment will get done. The students recognized this as a strategy that we used often in our literacy class, when I would recommend small benchmarks and/or goals for us to achieve by the end of the day or class. Anna in particular was interested in self-

directing this strategy, as she communicated that she had used it before but didn't have the words to describe it.

Although Anna did not self-assess the achievement of her goal about recording her deep thinking at this time, it was clear by the pile of sticky notes bursting from her writing journal that she was indeed working toward its achievement. She did set another goal for the next reflection: "I will write a paragraph with lots of explanations, adjectives and I will prove it." Her goal was not related to the reflection that she had engaged in, but she did show metacognitive knowledge of areas in which she would like to improve.

Perhaps Anna was spreading herself too thin in terms of her understanding of the purpose of the EPs. I made a point to talk to the entire class about how the EP reflections should be considered a different assignment from the narrative writing we were doing. When reflecting, one should think about one or the other, because thinking about or reflecting on both could be overwhelming. They should choose one assignment to reflect on, be that the narrative writing process or the reflection process, and direct their reflections, self-assessments and goals to that one assignment.

Like Foad, Anna expressed a high level of engagement with the writing assignment. She enjoyed recounting her memories. It was clear through her reflections in Stage 3 that she was dealing with a sense of loss, missing her previous life in Russia.

> What I liked most about writing my story were the memories. The memories I remembered were nice and they reminded me of my friend a lot. Some of the memories were about how we talked, rollerbladed. I also remember how we drew in our diaries. I really miss her.

Perhaps due to the emotional connection she had to this final assignment, Anna was able to successfully connect her reflections, self-assessment and goals to one another. Her focus was mainly on peer conferencing and adding more detail to her writing. Although Anna, spoke positively about the peer conferencing and sharing of ideas, she also communicated the first instance of inter-individual metacognitive knowledge, comparing self to other.

> I feel fine about the writing process. I enjoyed writing the poems and stories. For example it was hard for me to add a lot of details and it was easy for my friend to add lots of details. All other steps were easy. I had written about our 'necklaces that were blue with sparkles'. That is one example of the things that were hard for me to add details.

Anna was not putting herself down, simply recognizing the support she received from her friend. However, it did encourage me to reflect on how peer conferencing could encourage unhealthy comparisons, without proper attention to the language, process and culture around such activities. It is clearly the teacher's responsibility to establish a safe environment for students to share and explore each other's strengths, knowledge and skills. Even though I had established a process and helped students develop a common language with which to engage in peer conferencing, from that point on I was even more diligent to ensure that it was not used as an opportunity to compare student work.

In subsequent LCMs we analyzed the use of the words *easy* and *hard*. Concerned that this vocabulary may express hierarchy, the students and I replaced them with "I understand how to…" and "I need help with…." The students eagerly took up this language and supported one another with its use.

The rest of Anna's reflections laid my concerns to rest as she praised her peers for the support she received and the knowledge that they helped her develop.

My partner gave me lots of suggestions to make my story better. I found it helpful because the corrections I made were suggested by my friend not me. I could not have done those corrections without my friend. Some of the corrections my friend suggested me were to add names of my friends, her family.

Anna based her final goal on the learning she engaged in with her peers and on the understanding that she had not yet achieved the goal created in her last reflection. She also expressed an interest in exploring her personal narrative and memories further.

My goal for my next writing assignment is to add tons of details to make the reader feel like he/she are [sic] watching this. It was kind of hard to remember how it looked at her place. I think her room had cream walls with a huge bed with a big closet.

Throughout the project, Anna was a clear leader in terms of her participation in LCMs, her willingness to try new strategies, to attend to and actively improve the quality of her work and engage in all learning opportunities. The development of both cognitive and metacognitive knowledge that Anna communicated was not adequately represented in her EP. She seemed to be more comfortable reflecting independently and communicating her thinking verbally in student-teacher conferences or during an LCM.

Jack. While creating the All About Me page of his EP, Jack included food that he liked, indicated an interest in marine biology and gave a brief personal history.

Hello. My name is [Jack] was came from [sic] Philippines and was born in Philippines in Manilas in the capital city of Philippines. I went to Toronto then we

went to Calgary. I have 4 family [sic]. First it was me my mom and my dad and my sister.

Jack also posted a picture of himself using headphones, taken with Photo Booth, which he later indicated was supposed to represent him interacting with iWeb, and another photo that he had uploaded from our classroom digital camera.

In his first reflection, Jack described learning as an attempt at knowing. He indicated knowledge about cognitive strategies (reading, asking questions) that support learning and also included an emphasis on the teacher's role in learning. Jack's comments also indicated some intra-individual metacognitive knowledge as he communicated strategies that he personally used when learning. I learned that he valued time to occupy a quiet learning space, where he was not distracted from environmental noise. "I usually sit alone or something, so I don't got distracted, and that's all." It is also evident from his response that Jack had retained the learning about reading instructions as a cognitive strategy, as was emphasized in the technology-center work we had all engaged in during Stage 1 of the project. "I learn best by…um…I learn best by listening to teachers and read the instructions or read a book to know something or you write something over here."

Jack was keen to use learned academic and subject-specific vocabulary in all his interactions. Whether used correctly or not, he showed an understanding of the importance of using these words and a willingness to take risks, as is demonstrated with his use of the word citizen in the following response: "I…read the instructions and if I am in a group I listen to them and citizen and I might learn something." Although it

is clear that Jack was not certain how to use the word *citizen* appropriately in this context, he did make a connection between listening to others and the concept of citizenship.

Communicating feelings of self-efficacy, as well as learned cognitive and metacognitive strategies, he stated:

I learned that if you write something you need to say it, prove it, explain it and also have a topic sentence. Especially explain it because usually when i'm [sic] writing I don't explain it and why I predicted that. I thinking it is important because if you can't explain you don't really learn from it.

Jack was also able to take a risk and make an inference regarding the reasoning behind the use of the SPE strategy, based on the conversations and learning that we had engaged in during an LCM. He followed this reflection up with a question that indicated where a breakdown in his knowledge existed, thus informing me of the support he required in the future. "How… like if you are writing, how do you explain it? How do you really explain it, like what you're writing or something?" Jack was able to communicate that he was confused about the Explain it! step in our SPE strategy, and although he did not set a personal goal in this reflection, we were both clear about his upcoming learning objectives.

Although Jack did not explicitly communicate his goal for developing his understanding of the Explain it! step in our SPE strategy, he did self-assess his achievement of the goal set in subsequent reflections. "I didn't achieve my goal yet. I just do my thinking randomly. I didn't do my goal because I keep forgetting how to explain it." Again, Jack did not explicitly write a SMART goal for himself, but he was able to communicate and advocate for learning that he felt was important for personal growth.

Throughout the second writing assignment, Jack expressed confusion about the sequencing and organization of his work. It was clear that he required support with the identification of themes in his writing and how to develop those themes by organizing similar ideas together. As the assignment was poetry, the class was also exploring the use of line breaks and stanzas as organizational tools. In his reflection Jack stated:

I think step 3 [first revision] is challenging for me because I have to organized them which and where to make spaces. I find this challenging because I am sometimes confuse [sic] and I don't know what to do.

Jack sought teacher and peer support throughout the writing process and was eventually able to communicate personal growth and provide specific examples of changes that he made in his writing. He went on to express pride in the growth of his work.

I think my writing that I'm proud of is everything because I like it when all my ideas make sense. For example 'I am from watching Fairly Odd Parents, sitting on a black comfy couch.' It shows what I'm doing and it makes sense.

Jack's reflections regarding the organization of his writing also hinted at the work he had done on increasing the specificity of his word choice and supporting details. As he participated in the brainstorming and peer conferencing activities facilitated throughout this project, he began to understand the value of specific details not only for increasing the clarity of his writing but also making it more interesting to the reader. Jack's lingering question and his ability to make an inference about a possible answer demonstrated the development of cognitive knowledge and strategies that supported his writing. "I wonder why do we need to write nouns, verbs, adjectives and adverbs? Maybe we need those

because so we can show more details to the people who reads it and won't be boring [sic]."

The development of this new knowledge was further reinforced in his creation of a personal goal for the next writing assignment.

My goal is to add more details and add new juicy words. I'm gonna improve my writing by reading my writings and see if it is exiting [sic] or not and see if the readers can imagine the writing. If it is kind of plain then I'm gonna make it more exiting [sic].

Jack was truly developing his communication skills. He was beginning to connect his reflections, self-assessments and goals to a common area of learning, as well as explore the use of specific examples to illustrate or prove his learning to others.

Jack was incredibly reflective on the value of collaboration and peer conferencing as the project progressed. Where he once sought teacher support to clarify his understanding of a task or concept, he was beginning to see his peers as valuable resources.

I think peer revisions is [sic] really helpful because your friend helps you edit your work. Your friend could find something that you need to fix. For example, when I was working on when I was young, some of my friends told me to change some of my words into past tense. I think my example is connected to my say it because at peer revisions my friends helped me edit my work.

In Stage 3, Jack continued to connect his self-assessment and goals to his reflections. He took what he learned from his friends in peer conferencing and made a personal commitment to develop his knowledge based on their suggestions.

"In my next assignment my goal is to change some words into past tense because sometimes I don't put past tense when I should've. For example in the first stanza, I changed don't into didn't."

It was clear after reading Jack's reflections that he was becoming more independent when communicating his thinking and using the first two steps in the SPE strategy to ensure that his thinking was clearly understood by others.

Jack was learning to be more specific with his description of strategies that helped him learn best. He identified metacognitive strategies like mid-task questioning and finding support through collaboration. "I would really think carefully when I learn and ask questions to myself and when I don't get it, then I would ask someone it."

Near the end of the project Jack compared his knowledge about learning at the beginning of the year to his current knowledge. "At the beginning of the year I thought you would know what you didn't know. But know [sic] I learned that when you learned [sic] something, you have to say it, prove it, explain it." Here, Jack identified the SPE strategy as beneficial to his ability to communicate his learning beyond just literacy.

Jack found his voice through the creation of his EP. His ability to communicate his thinking while interacting with his EP was more clear, thoughtful and comprehensive than in any other writing he provided throughout the project timeline. He was continually visiting his EP when he had completed his in-class assignments, reviewing his goals and implementing the strategies that he had learned in class. He took great pride in the idea that he was informing the path of his learning and that I was listening to his needs and questions. For Jack, it was a way of getting one-on-one support, while simultaneously learning to be more autonomous in his learning.

Lucy. Lucy began by focusing her attention on her likes and dislikes, creating a list of books she enjoyed reading and indicating that she was interested in animals. She illustrated all of the items found in her list of likes with pictures, which she had cut and pasted from Google images. She took a picture of herself with a digital camera at school, which she uploaded to her EP. Lucy also took the opportunity to provide a brief description of her immediate family. "I was born in China. There are 4 people in my family, my mom, my dad and my brother."

Lucy was very brief in her initial reflections. She demonstrated universal and intra-individual metacogntive knowledge as she reported on her understanding of the concept of learning. "Learning is knowing something you didn't know before." She also listed some learning strategies that work best for her. "I learn best if there are pictures or examples."

Lucy later communicated that she found the instruction sheets that provided picture prompts and examples much easier to read than the instruction sheets that were only words. Beginning with this reflection, Lucy's personal awareness of examples and pictures as being useful learning resources and empowered her to ask for these specific supports throughout the project.

Requiring some extra time to begin her EP, Lucy completed the first reflection after a few of our initial LCMs. It is evident that the information and learning that went on in the LCMs, mini-lessons and collaborative work informed some of her answers to the initial reflection questions, somewhat skewing her baseline of metacognitive knowledge. However, an EP starts where it starts and at this point, she understood that learning was about the creation of knowledge and that there were strategies that we use to

support our own learning. "Learning is knowing something that you didn't know before."

She also identified clarification questions as a personal strategy that supports her

learning. "I ask myself if I understand what the speaker is saying before I start working."

For Lucy mid-task self-questioning was an important strategy, because she

presented as being shy and introverted in class. She required a high level of support to

participate in both small and large-group discussions, although she proved to be engaged

in expressing her learning via her EP.

By the second reflection Lucy communicated new cognitive knowledge

development, as well as new metacognitive knowledge about the task of making an

inference. "I learned in literacy that an inferencing [sic] is taking what you know and

what you read or see in the text and making a conclusion." Here Lucy was able to not

only identify new knowledge but also to prove her understanding by explaining the

process through which she was able to make an inference. Her next step was to learn to

communicate or represent evidence of her application of this knowledge, (Prove it!) and

explains how this knowledge helped her learn (Explain it!).

Lucy demonstrated a general awareness of the absence of these next two steps as

she communicated her goal for the upcoming week. "My goal in literacy is to pick longer

reflections, because I want to understand it more and um, because last time I only wrote a

short reflection." After discussing this goal with Lucy, it was clear that she was confused

not about how to make her reflections longer but about the last two steps in the SPE

strategy that we had been learning. Lucy was able to inform the focus of her upcoming

learning objectives through her own reflections and interactions with an EP. She

understood how to say what she wanted to say and why she wanted to say it, as was clear

from her most recent reflection and goal, but she was still confused about how to prove what she was saying and how to explain why it was important to her learning.

After completing the second writing assignment, Lucy's reflection again communicated feelings of self-efficacy. She explained that she was proud of including "[l]ots of details because it puts a picture in peoples head." She went on to comment that her final draft differed from her first draft because she was able to: "explain using specific examples. More details 'with a variety of traditional food' so they can imagine the food." By Stage 2 of the project, Lucy was beginning to use examples in her reflections to communicate her thinking more clearly to others.

Lucy and I had been working in a small group trying to add more descriptive or "juicy" words to our writing. We talked about purposefully choosing words that could help the audience visualize what was written. We read each other's writing, and shared books that we were reading independently, identifying specific and descriptive vocabulary that encouraged us to play movies in our heads. Lucy found it challenging to decipher between specific and general words. Her EP reflections in Stage 2 informed me that the difference was still unclear to her. "More details 'with a variety of traditional food' so they can imagine the food." Here she did take an example from her work to illustrate her learning; however, she chose one of the more general lines of her poem to do so. Perhaps without knowing it, Lucy created a reflection that highlighted areas for future growth and informed the focus of her learning for the following week.

Lucy also reflected on her challenges. "The step that I found most challenging was brainstorming because it is hard for me to get ideas." Lucy, along with many other students in the class, lacked confidence in her ideas. I wanted to help my students

understand that brainstorming was a time to record all ideas without judgment. That way ideas that could be valuable later on, weren't rejected. There was a fear of failure, of not having the best idea that permeated the class when we first started brainstorming. There was also a pervasive understanding that borrowing ideas was cheating. We had spent an entire week together as a class developing our conferencing skills, and the students were beginning to recognize the wealth of knowledge and support that existed amongst their peer group. Ideas that one person might consider dull or uninteresting, another might find fascinating and unique. The class was beginning to build a safe space for ideas to flow freely without judgment or censorship.

Lucy recognized peer conferencing as a cognitive strategy that supported her learning throughout the second writing assignment. "Conferencing is important because other peoples' ideas and opinions can help to improve your work." Not only was she beginning to recognize the power of collaboration and peer conferencing as a strategy for improving her writing, she was also gaining metacognitive knowledge about the task of writing.

Writing is not an isolated event; we need each other to share ideas, get suggestions and celebrate our success. This feeling of community was an important step in helping students feel like they were not alone and writing in a vacuum. Rather they were beginning to see themselves as members of a cooperative writing community.

Lucy required support to connect her reflections to her self-assessment and goals. Although she reflected on her writing assignment, her lingering questions and goals were focused on the structure of her paragraphs in her reflections. She wondered: "How can I

remind myself to say it, prove it and explain it?" and she made a commitment to "[g]ive examples and say it, prove it and explain it."

Like Anna, Lucy remained unclear of the important connection between reflections, self-assessment and goal setting. This encouraged me to reflect on how I was presenting the reflections and what changes needed to take place to support students in understanding that reflections were not simply a make-work project but should be focused on a single area of their learning which they were motivated to improve. Their successes, challenges and lingering questions should inform their goals.

Lucy was beginning to create complete and descriptive reflections by the end of the project. She continued to focus on her feelings of self-efficacy, as well as her development of cognitive strategies that supported her learning.

I am most proud of starting my sentences with the 6 sentence starters because in my first draft, I only had one, clausal. In my final draft, I added the 5 other sentence starters which is using action word, preposition, using an adverb, a short sentence and subject. The 6 sentence starters can make my story more interesting and adds personality.

It was apparent that Lucy had grown in her ability to communicate her thinking using the SPE strategy. She provided examples from her work and explained how the strategy helped to improve her writing. This new knowledge was represented in most of her final reflections. "What I found most helpful was that others can give you suggestions to improve your story. An example is that I added that there were 'water lilly's in the lake.' I had more details after peer revisions." She also stated,

There were more details and I added the 6 sentence starters such as when I changed my paragraph about the zoo. I deleted 'feed them' from the part about the turkey. I did it so that my paragraph wouldn't repeat any words.

Perhaps the most significant learning expressed by Lucy throughout the project was her clear recognition of her accomplishments. At the beginning of the project, Lucy continually shied away from communicating personal strengths, but throughout Stage 4 the majority of her reflections expressed an intrinsic pride, supported by specific examples of her success. "The writing process has become easier. I can do it faster and it makes more sense. For example, peer revision, I can give more suggestions than before." Still nervous about sharing her thinking orally, Lucy was beginning to explore her voice through her EP.

Lucy did not expand on her knowledge about the general nature of learning from the beginning of the project. However, she was able to provide more specific examples of strategies that she found helpful in the learning process. Lucy described mid-task questioning as a strategy that helped her learn best:

> When I learn, I am asking myself if I understand what the speaker is saying and I am asking myself questions. I ask myself if I understand because sometimes if I don't, then I have some misconceptions. I ask myself questions because if I do, most of the time I learn something new.

Lucy went on to say, "Now I do not need to see a picture as much and now I ask myself more questions than I did at the beginning of the year." This comment may infer a negative connotation to using pictures as a learning strategy, perhaps considering them a less sophisticated text. I made sure to address this with Lucy at our following student-

teacher conference. She explained that she still would use pictures to help her learn or to explain to others, but that she was proud of her vocabulary development throughout the year and didn't find that she relied on pictures as much as she once had.

For Lucy, being able to communicate her thinking via the EP allowed her to reflect on her learning independently before sharing it with others. Her EP was a useful space where she and I could connect and where she could describe her understanding and needs without taking the risk of sharing publicly or spontaneously.

Chapter Five: Discussion and Recommendations

Discussion

The present project was an investigation of the potential benefits offered by using a personalized EP to support the engagement of CLD learners with metacognition and self-advocacy. As with all action research, the process, objectives and methods were informed by the reciprocal relationship between teacher-researcher, student-participant(s) and learning objectives. The imperfect and unpredictable nature of the elements involved in such a reciprocal relationship, resulted in imperfect and unpredictable results.

As the students and I explored the ecology of our personal narratives, misconceptions and fear were engulfed by the replenishing flames of individual experience and history. We wrote and reflected, cultivating the fertile ground of our collective experience(s), as a way of engaging in the present and informing the future. We watched as our identities evolved; re-growth emerging from the ashes left behind by metacognitive experiences. Personalized EPs were our growth rings; a record of new knowledge, experiences and strategies. We set out to learn about each other and create a collective map, drawing points of affinity and diversity from one experience to the next, in the hope that we could support one another in maneuvering within a foreign context.

The identification of a context as being foreign can be a discreet interaction between one's pre-established schema and the knowledge presented in a given situation or experience. The annual experience of stepping foot in an unfamiliar classroom at the beginning of the year, littered with unfamiliar desk arrangements and the unfamiliar expectations of an unfamiliar figure looming ominously at the front, might trigger feelings of uncertainty and alienation. When reflecting on the experience of a CLD

learner, educators must consider that they are negotiating in an even larger scope of foreignness. CLD learners are often expected to achieve and assimilate seamlessly according to dominant cultural values and educative processes, while maneuvering within a multiplicity of hidden foreign curriculum, not only for themselves but also on behalf of their families. The process of entering a foreign context, in which one must interact with unfamiliar conceptions of place, language, social values, expectations and roles, can be daunting. Identity becomes muddled by the mismatch of experience and expectation.

The creation of personalized EPs was not an all-encompassing answer, linking past to present, familiar to foreign or cutting pathways through the perceived overgrowth of diversity. Rather it became a tool with which the students and I engaged in an exploration of self, knowledge and metacognition. The work of creating knowledge was left up to the participants of the project. Ultimately, it was the relationships, efforts and interests offered by all participants that built our community and made a difference in our learning.

It is important at this time to reiterate that the software options dedicated to the creation of EPs are ubiquitous. iWeb is one of many appropriate platforms with which one could engage in the processes of creating an EP. The reasoning behind choosing iWeb here, can be reviewed in the Method section of the project.

It is also important to note that at the time this project was written, Apple was in the process of replacing iWeb with iCloud. With this in mind, I offer the opportunity to reflect on the impermanence of technology and the importance of viewing it as a tool, not as a pedagogy.

Using technology is an incredible engagement strategy for many students. For some their daily lives are affected, informed and played out within a digital interface. Facebook, role-playing games, e-mail, text, Twitter, Instagram, etc., are all social networking strategies that inform student perception about the reception, creation and exchange of knowledge. As educators it is our responsibility to facilitate learning opportunities that provide experiences of learning about, engaging in and thinking critically about culturally and socially relevant means of communication. An EP is one way to encourage students to explore contemporary and diverse communication strategies.

Relying on technology within its continuous evolution of updates, re-imaging, viruses, errors and general user misuse, can seem like self-inflicted torture. As an educator eager to learn about technology and willing to take risks with its use in my classroom, I still understand the pervasive question asked by educators across the globe, "Is it worth it?" For me, this time, it was.

I tried to approach the multitude of technical difficulties that we were faced with as opportunities to model problem-solving behaviours and strategies with my students. Although, there were times when I felt as though the digital world and I had our own virtual war going on. Often, I'd find myself crumpled in a ball at the feet of a tech-support worker, cursing the relentless and spiteful thought-stealing troll, the school server, and mourning the loss of entire months of student work. It was, however, the perseverance and dedication of my students that always brought me back from the grip of the troll. Their willingness to put loss behind them, and move forward with their work, reminded me that this project was ultimately about the development of metacognitive

knowledge, experiences and strategies, not necessarily about recording and preserving every last thought from each student. The students and I would band together in the face of adversity, mourning the loss of our hard work in the sacred space of an LCM, and share our learning with others, in the hope that we could avoid future disasters. From there, we would start from a fresh space, and a new place.

The students and their willingness to take risks in the context of this digital space inspired me every day. They would eagerly share their learning with me, showing me new, more effective or alternative means of maneuvering within the EP. They eventually came to rely on one another as an alternative support system, to address misconceptions or questions they had concerning the entire process. One of the most endearing routines that developed from this collaborative space was the intermittent call for "SAVE!" as one student would remember that he/she hadn't saved his/her work in a while and generously reminded the others to do the same. The call would be met with feverish clicks, and sighs of relief. The students didn't take advantage of this. They weren't goofing off. They were a group of learners who showed genuine care for their collective knowledge. I still hear their words echoing in my head whenever I write. I share in a sigh of relief as I guide my curser over the floppy disk icon in the top left corner and click my mouse. Saving my thoughts for another day.

Technology presents its fair share of problems, of which our learning community experienced many. However, the level of engagement and independence that was demonstrated by this group of CLD students was motivating. The EP served as a useful platform upon which students explored, modified and shared their understanding of the learning process. It functioned as a tool that students actively used to record, revisit and

share their thinking about learning. Moreover, students began to see themselves as active agents in their own learning process, as they began to inform the direction and focus of their learning.

Self-advocacy is about knowing oneself and having the confidence and means to communicate one's knowledge in ways that are culturally valued. The EP provided students with an imperfect and evolving strategy for communicating their metacognitive knowledge, experiences and strategies. This strategy was not only valued by the learning community, but also affected change within that community. Sharing knowledge and experiences about learning changed the culture of our classroom. The students actively participated in the creation of a learning community. They demonstrated and valued diversity, creativity, individuality and cooperation through their willingness to revisit preconceived notions about the nature of knowledge and how one learns.

As with all educational strategies, some students gained more from the experience than others. The nature of the EP and its compatibility with a variety of assistive technologies provided multiple entry points for students of all language proficiencies, learning styles and experiences. Although all of the student-participants used video and written word to communicate their learning, there were other students in the class who broke away and explored other means of representation.

As was mentioned in the Data Analysis section of the project, there were a few reluctant writers in my class. Where a student might refuse to put pencil to paper, or finger to key as the case may have been, having the opportunity to communicate his/her memories, reflections and writing orally using audio and/or video recording software was

powerful in terms of their personal growth and also in their willingness to share their ideas with others.

With the help of an EP, the CLD students were able to share learning with their peers and their families using concrete and tangible exemplars. Moreover, families were able to begin to connect to what was happening in the classroom. They were watching their children talk about their understanding of the learning process, negotiate prior knowledge, identify misconceptions or a mismatch and begin to create new knowledge. Parents and guardians too were able to ask questions about the value, purpose and effectiveness of the assignments being sent home, and witness some of that learning come together in a tangible continuum.

The analysis of the student-participant EPs provided me with evidence that the creation of EPs was a useful and practical strategy for engaging some CLD students in metacognition and self-advocacy. Again, EPs should not be considered the all-encompassing solution to cultural and linguistic mismatch experienced by CLD students. It is however a strategy that would be useful for particular students as they negotiate their own and others' curriculum-as-lived (Aoki, 2003; Fowler, 2006).

It is the way the EP is integrated in the classroom routines and culture that makes it valuable to student learning. An EP is a useful tool for recording metacognitive knowledge, experiences and strategies, and making them available to revisit during student-teacher conferences or an LCM. The student-participants were empowered and motivated by the notion that I would sit, revisit their thinking and help build a strategic plan for learning with them, based on their knowledge about themselves as learners. This reciprocal relationship not only developed a sense of advocacy in the students but also

supported me as an educator as I listened to the needs of individual students and personalized my approach to helping them achieve their goals.

Recommendations

It is unrealistic to think that there is time in the school day to conference with every student about every subject. Nor is it reasonable to expect all students to embrace the creation of an EP as independently as many of the students who participated in this project had done. Therefore, my first recommendation is to start small. Teachers are encouraged to identify where they are in terms of understanding metacognition. What strategies are already being implementing in the class that encouraged students to think about the nature and processes of learning? What questions are asked that encourage students to see themselves as active participants in the learning process? Which area of one's teaching practice would lend itself best to an exploration of metacognition? For me it was writing, for others it might be reading, scientific inquiry or mathematical problem solving. I suggest choosing one area of practice and begin to reflect on the role metacognition plays in learning within one's personal context, and go from there.

Next, consider the students that occupy the learning space. Attempt to establish some sense of where they are at in terms of metacognition. Together, negotiate a point of entry. Perhaps the most significant change toward increased metacogntive practice within my classroom was the explicit instruction of specific language, sentence frames and the articulation of learning through writing-to-learn (Figure 1). While reflecting on my own practice, I recognized that I held assumptions about the tools my students had access to when communicating their thinking. Although for the most part their language proficiencies were moderate, they lacked the vocabulary and experiences required to

communicate thinking about learning. The collaborative deconstruction of listening as a learning strategy, as described in the Method section of this project, built the foundation upon which we were able begin to engage in metacognitive dialogue. Each class and each student is different. They bring with them their own unique strengths, needs and challenges. It is important to be honest about where the students are developmentally, emotionally, socially and academically. Wherever they reside that is where learning could begin.

I would recommend using the technology that already exists in a learning context. Teachers may want to use that technology, whatever it is, to begin to record thinking about learning. Students could be encouraged to make suggestions about diverse ways of representing their learning process. Engage in reflective dialogue whenever possible and record the nuggets of wisdom that are uncovered. Show students that their contributions are valuable, to themselves, to the teacher and to the learning community at large, by posting, sharing and celebrating their thinking.

It is infinitely more difficult to make true change and explore new ways of thinking, learning and knowing independently. Teachers are encouraged to engage their colleagues, whenever possible. As educators we are often expected to make unreasonable situations exceptional, with little support. Activate the formal and informal leadership that exists in the school. Engage in reflective dialogue; ask questions, read and share. Without the support of my colleagues I would have been lost on day one.

Engaging CLD learners in the metacognitive processes that are expected in Alberta school systems can be challenging. Students are required to become self-advocates and articulate their personal learning processes, strategies and challenges.

Furthermore, teachers are expected to report on the development of metacognitive

knowledge and strategies within different curricular contexts. For CLD students there

may be a mismatch between the expectations of the school system and their personal

experience and knowledge base, as informed by their native language and culture. EPs,

together with deliberate and personalized planning, support the development of

educational practices that engage CLD students in metacognitive experiences. EPs create

opportunities for CLD students to articulate and reflect on their knowledge, strategies,

goals and experiences in ways that are transparent to the student, teacher, parent and

school system. With thoughtful application, EPs can become an integral part of the

learning process; recording the individual path a CLD student is taking toward his/her

full potential.

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Appendix A

Metacognitive Connections in the Alberta Education

English Language Arts Program of Study.

General and Specific Outcomes	Metacognitive Connections	
Front Matter	"[Students] reflect on and use prior knowledge to extend and enhance their language and understanding." (p. 1)	
	"Schools provide environments where students develop language knowledge, skills and strategies to achieve academic, personal and social goals." (p. 2)	
	"Reading and writing are powerful means of communicating and learning. They enable students to extend their knowledge and use of language, increase their understanding of themselves and others, and experience enjoyment and personal satisfaction." (p. 2)	
	"It is intended that students engage in purposeful language activities that respect individual differences and emphasize the interrelated and mutually supportive nature of the general and specific outcomes." (p. 3)	
General Outcome 1: Students will listen, speak, read, write, view and represent to explore thoughts, ideas, feelings and experiences.	"When students can see their ideas, thoughts, feelings and experiences in writing, they can reconsider, revise and elaborate on them in thoughtful ways."(p.7)	
1.1 Discover and Explore	**Grade 5**	**Grade 6**
Express ideas and develop understanding	"use own experiences as a basis for exploring and expressing opinions and understanding" (p.10) "use appropriate prior knowledge and experiences to make sense of new ideas and information"(p.10)	"engage in exploratory communication to share personal responses and develop own interpretations" (p.10)

Set Goals	"reflect on areas of personal accomplishment, and set personal goals to improve language learning and use" (p. 10)	"assess personal language use, and revise personal goals to enhance language learning and use" (p. 10)

1.2 Clarify and Extend	**Grade 5**	**Grade 6**
Extend Understanding		"evaluate the usefulness of new ideas, techniques and texts in terms of present understanding"(p. 14)

General Outcome 2:

Students will listen, speak, read, write, view and represent to comprehend and respond personally and critically to oral, print and other media texts.	"Students attend to the ideas being presented, make and confirm predictions and inferences, and monitor their understanding. As they interact with texts, students respond by reflecting, creating, analyzing, synthesizing and evaluating." (p. 17)	

2.1 Use Strategies and Cues	**Grade 5**	**Grade 6**
Use comprehension strategies		"monitor understanding by confirming or revising inferences and predictions based on information in text" (p. 19)
Use prior knowledge	"describe ways that personal experiences and prior knowledge contribute to understanding new ideas and information" (p. 20)	"combine personal experiences and the knowledge and skills gained through previous experiences with oral, print and other media texts to understand new ideas and information" (p. 20)
Use comprehension strategies	"monitor understanding by comparing personal knowledge and experiences with information on the same topic from a variety of sources" (p. 20)	"monitor understanding by evaluating new ideas and information in relation to known ideas and information" (p. 20)

General Outcome 3:

Students will listen, speak, read, write, view and represent to manage ideas and information.	"[Students] learn to define the need for information, ask questions, and gather and evaluate information." (p. 47) "The use of technology enhances student opportunities to access, create and communicate ideas and information."(p. 47)

3.1 Plan and Focus	**Grade 5**	**Grade 6**
Plan to gather information	"develop and follow own plan for gathering and recording ideas and information" (p. 50)	"develop and follow own plan for accessing and gathering ideas and information, considering guidelines for time and length of investigation and presentation" (p. 50)

3.3 Organize, Record and Evaluate	**Grade 5**	**Grade 6**
Evaluate information	"connect gathered information to prior knowledge to reach new conclusions" (p. 58)	

3.4 Share and Review	**Grade 5**	**Grade 6**
Review research process	"assess personal research skills, using pre-established criteria" (p. 62)	"establish goals for enhancing research skills" (p. 62)

General Outcome 4:

Students will listen, speak, read, write, view and represent to enhance the clarity and artistry of communication.

4.1 Enhance and Improve	**Grade 5**	**Grade 6**
Appraise own and others' work	"develop criteria for evaluating the effectiveness of oral, print and other media texts" (p. 68)	"ask for and evaluate the usefulness of feedback and assistance from peers" (p.68)

General Outcome 5:

| Students will listen, speak, read, write, view and represent to respect, support and collaborate with others. | "students share perspectives and ideas, develop understanding and respect diversity" (p. 87) |
| | "students need opportunities to reflect on, appraise and celebrate their achievements and growth" (p .87) |

5.1 Respect Others and Strengthen Community	**Grade 5**	**Grade 6**
Appreciate diversity	"compare own and others' responses to ideas and experiences related to oral, print and other media texts" (p. 90)	"share and discuss ideas and experiences that contribute to different responses to oral, print and other media texts" (p. 90)
Evaluate group process		"assess own contributions to group process, and set personal goals for working effectively with others" (p. 94)

Note. All curriculum outcomes from Alberta Education English Language Arts Program of Study (2000)

Appendix B

Parental Consent Form

<u>**E-Portfolios in Culturally Diverse Classrooms**</u>

Your child is being invited to participate in a study entitled "E-portfolios in Culturally Diverse Classrooms" that is being conducted by Jane Anderson. Jane is a graduate student in the Faculty of Education at the University of Lethbridge and you may contact her if you have further questions at (403) 777-8563 ext. 2303 or <u>jeanderson@cbe.ab.ca</u>

As a graduate student, Jane is required to conduct research as part of the requirements for a Masters of Education degree. It is being conducted under the supervision of Dr. Leah Fowler. You may contact her supervisor at (403) 329-2457.

The purpose of this research project is to teach about the use of electronic portfolios as a way of teaching students to think more deeply about learning in general and how they specifically learn best. Students will participate in the creation of a personalized electronic portfolio, as a strategy for communicating, reflecting on, self-assessing and creating goals for their individual learning needs. Jane will be assessing the educational value of the e-portfolio, in terms of its ability to address the specific and diverse learning needs of culturally and linguistically diverse students.

Research of this type is important because our education system is focused on the importance of personalization of learning and the implementation of Universal Design of Learning (UDL) within the classroom. The principles behind UDL are focused on the design of instructional goals, methods, materials, and assessments that are as individual as the students who are participating in the learning process.

Electronic portfolios are designed to support the development of skills to self-direct, self-reflect, and self-motivate. Strength based, formative and summative assessment, help students to identify their individual learning styles, recognize the process of their learning and communicate their learning in a variety of ways. Electronic portfolios may be one example of a flexible approach that can be customized and adjusted for individual needs, thus encouraging CLD students to move beyond compliance and toward active participation in the metacognitive processes of learning, valued and emphasized in our school system, while respecting the value of their individual experiences, interpretations and cultural knowledge.

Your child is being asked to participate in this study because he/she is enrolled in grade five or six, is between the ages of ten and twelve years old and comes from a culturally and/or linguistically diverse background.

If you agree to permit your child to participate in this research, his/her participation will include sharing exemplars of process, representation, reflection and goal setting of, as and for learning, within the format of an individualized e-portfolio.

Participation in this study should not cause any inconvenience to your child, as it will be conducted within regular school hours of operation. There are no known or anticipated risks to your child by participating in this research. The potential benefits of your child's participation in this research include a greater understanding of the processes of learning, as valued by the Alberta education system, and of his/her own individual learning styles, challenges and strengths. Your child's participation in this study will help future learners who are using technology, like e-portfolios, to support their learning.

Your child's participation in this research must be completely voluntary. If you do decide to allow your child to participate, you may withdraw your permission (and your child from the study) at any time without any consequences or any explanation. If your child does withdraw from the study his/her data will not be included in the final analysis.

I will have a teacher/student relationship with all potential participants. To help prevent this relationship from influencing your decision to grant permission, I will take the following steps to prevent coercion. Evaluation is a normal part of my work, but students will not be graded as apart of my study. Participation is voluntary, with permission from students and parents. Parents are invited to ask me, or my administrator about any concerns you have. I am bound by the ethical conduct criteria by the Alberta Teachers association and the school act to ensure safety and care.

To make sure that you continue to give your consent for your child to participate in this research, I will send two (2) reminders home to call me if you have any concerns about the process of electronic documentation and how the students are doing with the process.

In terms of protecting your child's anonymity, the results of this project will be coded in such a way that your child's name or identifying information will not be physically attached to the final information contributed. Your child's confidentiality and the confidentiality of the data will be protected by the rules and regulations of the Freedom of Information and Protection of Privacy Act.

Data will be used in the completion of a culminating project, in partial fulfillment of a Masters of Education degree from the University of Lethbridge. The results of this research may be shared through publication and presentation, but the name of your child will not be associated in any way with the published results. Notes and research materials will be kept for 5 years in a locked cabinet and/or behind a computer password at the researcher's home and destroyed at the end of that time.

In addition to being able to contact me [and, if applicable, my supervisor] at the above phone numbers, you may verify the ethical approval of this study, or raise any concerns you might have, by contacting the Chair of the Faculty of Education Human Subjects Research Committee at the University of Lethbridge (403-329-2425).

Your signature below indicates that you understand the above conditions of participation in this study, that you have had the opportunity to have your questions answered by the researchers, and that you consent to having your child participate in the study.

Name of Student	*Signature*	*Date*

Name of Parent or Guardian	*Signature*	*Date*

A copy of this consent will be left with you, and a copy will be taken by the researcher.

Appendix C

Student-Participant Consent Form

E-portfolios in Culturally Diverse Classrooms

You are being invited to participate in a study called "E-portfolios in Culturally Diverse Classrooms" that is being done by Ms. Jane Anderson. Jane Anderson is a graduate student in the Faculty of Education at the University of Lethbridge and you or your family may contact her if you have further questions at (403) 777-8560 ext. 2303 or jeanderson@cbe.ab.ca.

The purpose of this research project is to see if learning to use e-portfolios helps students that speak different languages and come from different places, learn more about what learning is and how they learn best. If you agree to be part of the research project you will be asked to create your own electronic portfolio, as a way to show and tell about what you have learned, how you have learned, what you want to learn next, and how you plan to learn it. I will be checking to see if the e-portfolio helps you to learn how to learn better in Alberta, Canada.

E-portfolios are meant to help students learn how to show and tell about learning they have already done and make decisions about things they want to learn next. This research is important because it will help teachers learn how to teach better and in ways that help students from all over the world, learn better.

You are being asked to be part of this study because you are a Grade 5/6 student. If you agree to voluntarily participate in this research, you will share examples of how you learn, how you show and tell about your learning and goals that you set for future learning, by making an e-portfolio. Your name will never show up in the report, nor in anything else I do with the information.

You will be part of the study everyday, by being part of your regular school day. Your work with this research will not affect your report card in anyway. You are free to say yes or no. If you decide to be part of the research, you can say no at any time and your work will not be part of my final report. I will ask you twice this fall to make sure that you still want to be part of the research. I will keep examples of your work for five years, in a locked cabinet at my house or on a computer behind a password, then I will destroy it.

If you have any questions you can ask me at school, at the above phone number or email address, or have your family call the school, or the Chair of the Faculty of Education Human Subjects Research Committee at the University of Lethbridge (403-329-2425).

Your signature below shows that you understand what it means to participate in this study, that you were able to ask me any questions that you have, and you agree to be part of the study.

Name of Participant	*Signature*	*Date*

A copy of this consent will be left with you, and a copy will be taken by the researcher.

Appendix D

Initial Question Prompts

Please think about these questions carefully. When you answer, remember to give as much
information and detail as you can.

1. What is learning?

2. What are you doing when you learn?

3. How do you learn best? Why?

Appendix E

Coding for Student Metacognitive Behaviours

Type	Theme/Code	Description
Affect	Self-efficacy (ASE)	Comments that reflect personal responsibility for achievement of learning goal
	Engagement (AE)	Comments that indicate positive affect in regards to learning opportunity
	Behaviour (AB)	Comments that indicate reflection on behaviours related to learning
	Dialogic discourse (ADD)	Comments that indicate an exchange of ideas, modifying previous knowledge of self or other
Cognitive Knowledge	Knowledge development (CKD)	Comments indicating the creation of new knowledge
	Strategy (CS)	Comments or questions made in relation to the development of skills for planning and carrying out plans for learning.
Metacognitive Knowledge	Intra-individual (MKIA)	Comments indicating knowledge about personal skills and or challenges
	Inter-individual (MKIE)	Comments indicating a comparison of skills/knowledge, between self and other
	Universal (MKU)	Comments indicating knowledge about the nature of learning
	Task (MKT)	Comments indicating reflection on the nature of the task
	Strategy (MKS)	Comments about strategies for monitoring progress of learning
Metacognitive Experience	Awareness (MEA)	Comments indicating awareness of thinking about learning
	Self- assessment (MESA)	Comments or questions that suggest reflection on achievement of learning goal/task
	Goal Setting (MEGS)	Comments or questions that indicate thinking about areas for future personal development

Appendix F

Writers' Process Checklist

1. **Pre-writing (PW)**   Date: _____

   Choose a topic and record your ideas.

   Strategies
   Make a list/mind map:
   Think of words (nouns, verbs, adjectives, adverbs, etc.) that are connected to your topic and write them down. Set a time limit.

   Brainstorm with a friend:
   Talk about your topic with a friend. Record all the ideas that you share, without worrying about whether they are "good" or not.

2. **Flash Draft (FLD)**   Date: _____

   Get some sentences written.

   Strategy
   Free Writing
   Write for 10-20 minutes about your topic without thinking about spelling, punctuation, paragraphs or other conventions. Just write whatever comes to mind. It may not sound polished, but your ideas will be there!

3. **Revision #1 (R1)**   Date: _____

   Read over your *Flash Draft* and start to make revisions independently.

   Ask yourself the following questions and reorganize your work using strategies like sticky notes, colour codes, re-write, or cut and paste.
   Which are my best ideas?
   Which ideas are boring or irrelevant (don't have anything to do with your topic)?
   Which ideas fit together in a way that makes sense?
   Which ideas can I add more details to?
   Which ideas should come first? second? third?...

4. **First Draft (D1)**   Date: _____

   Write your first organized draft. You may want to type this draft on the computer.

5. **Peer Conferencing (PC)**   Date: _____

   Find a friend in the class and follow the *Peer Conferencing Process*.
   Make sure to fill out a *Revision Sheet* to make sure you remember his/her suggestions.

6. **Revision #2 (R2)**   Date: _____

   Use the notes you recorded on the *Revision Sheet* and make the changes that you and your peer group agreed on.

7. Edit (E)   Date: _____

Read through your writing, and use the *Editing Checklist* to make sure that you have corrected any mistakes you see.

8. Second Draft (D2)   Date: _____

Write your second draft including any new revisions and correcting any mistakes you found as you went through the editing process.
When you are done, hand a copy in to your teacher and prepare for your *Student-Teacher Conference.*
Write down any questions that you might have and bring them to the conference.

9. Student-Teacher Conference (STC)   Date: _____

Read your work to your teacher, ask your questions, discuss possible revisions and fill out another *Revision Sheet*.

10. Final Revision (FR)   Date: _____

Make the changes that you and your teacher agreed on during the *Student-Teacher Conference.*
Read your writing one more time and ask yourself:
    Is there anything I could do to make my writing even better?
    Is this an example of my best work?

11. Publish (P)   Date: _____

Congratulations you are ready to publish!

Suggested Representation Strategies:
    -create an illustrated bound book
    -create a digital story book using **PowerPoint** or **iMovie**
    -create a graphic novel using **Comic Life**
    -create an audio book using **GarageBand**
If you have other ideas about how you could publish your writing, please discuss your ideas with your teacher *before* beginning the project.

Date of Completion: _____

Congratulations!

Appendix G

Peer Conferencing Strategy

Remember to take notes, using the Revision Sheet, throughout the peer conference so that you can make changes later.

1. **The writer reads.**

   Writers take turns reading their writing aloud to the group. Listeners listen politely, thinking about:
   - Two things you admire about the writing
   - One suggestion for change

2. **Listeners offer positive feedback.**

   All comments should be positive and specific. Think about the learning we have been doing in class.

   Positive comments:
   I like the part where…
   I like the way you described…
   Your writing made me feel…because…
   I like the order of your writing follows because…

3. **The writer asks questions.**

   The writer asks for help with trouble spots they found while re-reading his/her work.

   Questions for the writer:
   What do you want to know more about?
   Is there a part that I should throw away? Why?
   Where could I add more details?
   Are there any words I could change?
   Are there any parts of my writing that are confusing?

4. **Listeners offer suggestions.**

   Listeners help the writer to make appropriate changes in his/her writing.

   Constructive questions for listeners:
   I'm confused about…
   I'd like to know more about…
   Could you add more details about…
   I wonder if your paragraphs are in the best order because…
   Could you use some different sentence starters?

5. **Repeat.**

   Go through the process for each member of the peer conferencing group.

Revision Sheet

Suggestion 1 _____

Details_____

_____

_____

Suggestion 2 _____

Details_____

_____

_____

Suggestion 3 _____

Details_____

_____

_____

Suggestion 4 _____

Details_____

_____

_____

Appendix H

SPE Strategy

Say it!

 o summarize your thinking in one or two sentences

 o explain why you think this

or

 o ask a question

 o make an inference about a possible answer

Prove it!

 o quote a sentence from the text that supports your thinking

 o prove what you have said by showing or describing an example

 o tell an story that supports your thinking

Explain it!

 o explain how your thinking helped you better understand the text

 o explain how your thinking helped improve your writing

 o explain what you learned from your thinking

 o explain why your thinking could be important to your understanding of the world, learning or human nature

Appendix I

Reflection Question Prompts

Think about your experiences with learning reflections, the writing process and/or your last writing assignment.

Choose from the questions below and create a response about your learning, thinking or experiences. Feel free to talk to your family, friends and/or teacher about your thinking. Make sure to **Say it! Prove it!** and **Explain it!**

Questions to think about:

How do you feel about the writing process?

What are you most proud of about your writing? Why?

How did you feel about the topic of your writing? Explain using specific examples.

How has your writing changed from your first draft to your final draft? Explain using specific examples.

What do you understand about the writing process?

What questions do you still have about the writing process?

Which part of the writing process was most helpful? Why?

What did you find most challenging about the writing process? Why?

What is your goal for the next writing assignment? Why?

Appendix J

Narrative Writing Rubric

Content

5	4	3	2	1
All details are reasonable, specific and connected to the main idea.	Most details are reasonable, specific and connected to the main idea.	Details are general and may be unreasonable or predictable.	Writing is general and/or repetitive.	Teacher support is required
Writing is creative, original and holds the interest of the reader.	Writing is creative and holds the interest of the reader.	Writing is simple and sometimes holds the interest of the reader.	Writing is generic.	Teacher support is required
A unique voice is represented.	A voice is represented.	A voice is represented at times.		

Organization

5	4	3	2	1
All events and details are organized in paragraphs and sequenced in an order that makes sense and helps the reader follow the story.	Most events and details are organized in paragraphs and sequenced in an order that makes sense.	Some events and details are organized in paragraphs and/or in an order that makes sense.	Few events and details are organized in an order that makes sense.	Teacher support is required.
Writing includes connections and relationships between events, actions, details and characters throughout the entire text.	Writing includes connections and relationships between events, actions, details and characters throughout most of the text.	Writing includes connections and relationships between events, actions, details and characters throughout some of the text.	Writing includes few connections and relationships between events, actions, details and characters.	Teacher support is required.

Conventions

5	4	3	2	1
Writing is almost error free.	Writing includes few errors.	Writing includes some errors.	Writing includes many errors.	Teacher support is required.
Mistakes made using capitals, punctuation and spelling didn't stop the reader from reading, understanding and/or enjoying the writing.	Mistakes made using capitals, punctuation and spelling rarely stopped the reader from reading, understanding and/or enjoying the writing.	Mistakes made using capitals, punctuation and spelling sometimes stopped the reader from reading, understanding and/or enjoying the writing.	Mistakes made using capitals, punctuation and spelling stopped the reader from reading, understanding and/or enjoying the writing.	Teacher support is required.

Sentence Structure

5	4	3	2	1
All sentences include complete thoughts and ideas.	Most sentences include complete thoughts and ideas.	Some sentences include complete thoughts and ideas.	Sentences are confusing.	Teacher support is required.
Sentences are different lengths throughout the entire text.	Sentences are different lengths throughout most of the text.	Sentences are different lengths throughout some of the text.	Sentences are the mostly the same length.	Teacher support is required.
Writing includes all six sentence starters.	Writing includes most (4-5) of the six sentences starters.	Writing includes some (2-3) of the six sentence starters.	Writing includes one of the six sentence starters.	Teacher support is required.

Vocabulary

5	4	3	2	1
Writing includes specific words and expressions to help the reader visualize the story.	Writing often includes specific words and expressions to help the reader visualize the story.	Writing includes general words to describe events and details.	Writing includes general words and is sometimes confusing.	Teacher support is required.

*Adapted from Alberta Education (2009) Grade 6 narrative scoring guide. Retrieved from http://education.alberta.ca/admin/testing/achievement/toolkit.aspx

Appendix K

Editing Checklist

Do I have an interesting first sentence? (Good Beginning)	
Do all my sentences start with capital letters?	
Do all my sentences end with a period (.), question mark (?), or exclamation point (!)?	
Did I look for places that I could be using commas (,)?	
Did I look up words that I am unsure how to spell?	
Did I look for words that I may have used incorrectly?	
Did I use paragraphs to organize my writing?	
Are all the sentences in a paragraph about the same big idea?	
Are my paragraphs ordered in a way that makes sense? (beginning, middle, end)	
Did I get someone else to read my work and give me 2-3 suggestions to improve?	

Appendix L

Narrative Writing Self-Assessment Checklist

Content

____ All my ideas are focused on the same topic

____ I have added details to make my story more interesting
(Who? What? When? Where? Why? How?)

____ I have used **adjectives**, **adverbs** and other **juicy words** to make my work more interesting

____ I have only used the word *said* three times in my writing

Organization

____ I used a *Good Beginning*

____ I have included connections and relationships between characters, events and details

____ I have organized my ideas in an order that makes sense and follows an appropriate timeline

Vocabulary

____ I tried to make pictures with my words using literary devices (simile, metaphor, personification, synecdoche)

An example of this is:

_____

_____

_____

Sentence Structure

____ I used complete sentences and organized my ideas in paragraphs

____ I used the six different sentence starters to make my sentences more interesting

Conventions

____ I used proper capitalization

____ I used proper punctuation

____ I have spelled all my words correctly

____ All my sentence make sense