

**STUDENT JOURNALS:
FOSTERING METAGOGNITION AND AGENCY**

DALYCE FORSTER

B.Ed., University of Lethbridge, 1978

A Project
Submitted to the School of Graduate Studies
Of the University of Lethbridge
In Partial Fulfillment of the
Requirements for the Degree

MASTER OF EDUCATION

FACULTY OF EDUCATION

LETHBRIDGE, ALBERTA

August 2004

Abstract

Recent studies indicate that best practices for teachers involve multiple intelligences, learning styles, and higher order thinking skills in their short-term and long-term planning. There is also substantive support for journal writing as a means of communicating knowledge and thought processes. This study presents both quantitative and qualitative research that demonstrates how journal writing can enhance a student's understanding of self as a learner, as well as develop a sense of agency, or empowerment for the learning process. Thirty-one students from a middle-school grade six class participated in a survey that analyzed their understanding of metacognition as learners, their sense of responsibility and ownership for their learning, and the degree to which they felt journal writing reflected knowledge of self and growth. The results from this questionnaire were analyzed and became the themes and specific writing prompts for the journal writing club that was formed afterwards. This club was made up of ten volunteer students who were interested in learning more about the research on multiple intelligences and learning styles, and agreed to meet during the noon hours to discuss and write about themselves as learners in a middle-school environment. The split-page journal entries became an interactive communication between the student and teacher as each piece of writing received written feedback and comments. The student responses, for the purpose of this study were interpreted as qualitative data. A discussion of the study follows regarding the implications for teachers. The final recommendations suggest implementing a similar journal writing program for middle-school students that promotes understanding and development of individual learning styles.

Acknowledgments

To my family for being so incredibly supportive and patient during the many hours I have spent working on my degree, thank you.

To the professors of education at the University of Lethbridge, and particularly to Dr. Leah Fowler and Dr. Richard Butt, for sharing your knowledge, your insights, and your time; I am grateful for your encouragement, influence and strong support.

To all my students who participated in the study; your involvement and authentic input added a richness to the project; a huge thank you.

And last but not least, to my daughter Christie, who allowed me to tell her story; thank you for being the reason I began this journey.

Table of Contents

Abstract	iii
Acknowledgments.....	iv
Table of Contents	v
Chapter 1: Background and Rationale.....	1
Christie’s Journey.....	1
Introduction	5
Definitions of Key Terms.....	8
Chapter 2: Literature Review	11
Metacognition	11
Differentiated Learning	12
Cognitive and Affective-Based Learning	13
Journal Writing	16
Chapter 3: Methodology	18
Participants	18
Individual Profiles of Focus Group.....	20
Framework.....	24
Themes for Journal-Writing	25
Teacher’s Role	26
Chapter 4: Discussion and Analysis of Data	28
Likert Scale Survey Results	28
Choices About Writing.....	29
Thinking About Cognition.....	30

Choice About Classwork	31
Identification of Preferred Learning Style.....	32
Understanding Personal Learning Agency	32
Responses to Promises, Responsibilities, Respect, and Role	33
Student Perception Of Expectations and Decision-Making	33
Decision-Making And Self-Perception of Worth To School	33
Completing Work.....	34
Setting and Accomplishing Goals.....	34
Birth Order and Sibling	35
Results and Interpretation of Journal Entries 1-8	37
Journal 1 Questions and Analysis	37
Journal 2 Questions and Analysis	33
Journal 3 Questions and Analysis	37
Journal 4 Questions and Analysis	40
Journal 5 Questions and Analysis	43
Journal 6 Questions and Analysis	47
Journal 7 Questions and Analysis	53
Journal 8 Questions and Analysis	56
Chapter 5: Reflections, Implications, and Recommendations	68
References	74
Appendices	78
A. Likert Scale Survey Questions and Tally of Results	79
B. Samples of Student Journal Entries	85
C. Surveys, Questionnaires, and Instructional Sheets	96

Student Journals: Fostering Metacognition and Agency

"Life stories prompt pedagogical reflection."

--Max van Manen (1991 P. 3)

Chapter 1: Background and Rationale

Christie's Journey

Once upon a time in a land not far away, lived a maiden and her infant daughter.

Now the maiden had been married to a handsome young man, but he had left months before his daughter's birth to seek fortune, fame, and another life in another kingdom. In fact, when he left on his journey, the news of his unborn child was not made known to him and he never returned, never laid eyes upon his beautiful creation.

The maiden worked hard to financially support the child, by day as a teacher, and by evening a private consultant. And when the day came for her to give birth, she left her workplace and went to the hospital, alone.

What a precious sight to behold. The infant had her mother's mouth, but her father's dark brown hair and eyes, olive-colored skin, and slightly curved left pinky finger. The entire village fell in love with her immediately, and she was showered with gifts; family and friends embraced her unconditionally. Life was good.

And then one day a gentleman of an age much older than that of the maiden introduced himself as the one who would gladly take care of both the maiden and her daughter for the rest of their lives. When he suggested a union, the maiden replied with a 'yes' to the proposal and promise of a stable, secure future for her and her daughter. The marriage took place just after the child's first birthday. Life was good.

As the next few years passed, the noble gentleman held true to his words, and loved the child as if it were his own. The maiden was comfortable in her role as mother and wife, but did not want the child to grow up alone without siblings. Thus, an agreement was reached and soon the daughter had a baby brother to play with. Now life was very good.

But as life has its share of ups and downs, so too did the family find itself in a situation that would change the paths of those involved forever...

One dreary, cold day in November, when the vivacious, happy-go-lucky, daydreaming daughter was in her second grade of school, a woman, disguised as a caring, knowledgeable, and understanding teacher, said to her, "You will never amount to anything in life if you cannot read. Kids who do not read well are never going to do well in school, and you, young lady, are one of them." The damage done seemed irreparable as the brall righten-hearted child's self esteem and confidence was shattered instantly. The once self-assured little girl crumbled into a sobbing heap on the floor at home as the family watched in horror. Life was not good anymore.

An antidote for the curse that had been placed on the little girl became the family's aspiration; the beginning of a journey to understand how to overcome such a destructive forecast ensued. The family focused on the talents and strengths of each child, and enrolled them in a variety of sport leagues, clubs, classes, and teams. They were told they could do and be whatever they wanted. Over the years, this did much for the daughter's confidence as her natural athletic talents and physical attributes made her a popular recruit. In addition to the involvement in extracurricular activities, the foursome frequently talked at the dinner table about the advantages of being unique, of

learning differently, but always being loved and supported. Sharing the characteristics that make each special in his/her own way helped to dull the bite of that teacher's venomous words. And constantly showing that both were treasured equally helped to make the daughter understand that she belonged, but the scars never disappeared completely. Life was only bearable.

The gap between the two children grew over the years. The son excelled at anything he did, whereas the daughter became more and more anxious, especially at test times, as fear consumed her. By the end of her junior high years, the daughter was experiencing bouts of vomiting and patches of hair loss that coincided with expectations in the classroom to meet traditional standards and to learn in the same way as all her classmates. The mother, who wanted nothing more than to take away the pain and misery for her daughter, began to research the strategies to overcome severe anxiety and school phobia. And, as if fate were in complete control, she was blessed with a chance meeting with someone who convinced her that "writing" could be a life-changing answer. She rushed home to share the news with her daughter, and they both agreed to start a diary. Each entry began with a list of things each was grateful for. There were no pre-determined themes or questions to answer. But taking time to reflect on the day's events felt good and the shared quiet moments at the dinner table were special. Life loall righted promising, if only for a brief while.

Then one day in her grade eleven year, the daughter found herself facing one of the biggest challenges ever. Even though she was a star athlete, well-liked by peers and teachers, and faring well in her academic pursuits, the haunting, self-destructive voice that dwelt in the back of her mind surfaced at a moment of weakness and struck her from

behind. A seemingly insignificant event, one that many high-school students experience but survive, almost destroyed this daughter. Her boyfriend of two years had decided that they should go their own way, experience high school's opportunities as singles, and move on. This in itself was acceptable to both parties, until the boyfriend immediately began dating another girl. The devastation and sense of rejection, the same one that must have passively lurked somewhere inside since she was young, resulted in an complete emotional breakdown. The "irrational but real to her" feelings of not being good enough, smart enough, or wanted, sent her spiraling downward. It was not long before the situation required medical attention. The mother studied all about the brain's chemicals and how serotonin depletion can cause severe depression if not treated properly. Counseling was also recommended and so the next six weeks were filled with sessions of strength-building, and regaining self-confidence. And do you know what the counselor purchased for her? A journal boall right. A beautiful mahogany-colored, hard-cover, leather bound boall right with metal-tipped corners, and a silk tassel page marker. "Tell me your story," she said. "Write down anything and everything your mind is thinking, your heart is feeling, and your soul is wanting." And the daughter did. Life seemed fragile, but not hopeless.

Soon the tear-stained pages became pages filled with words of self-knowledge, goals, a plan for the future, and hope. The daughter completed the remaining year of high school and graduated with pride and renewed confidence. She decided that she wanted to become a dental hygienist where everything is clean, sterile, and where her passion to help others loall right and feel better could be fulfilled. She had learned much about herself over the years of reflection and knew how to focus on her strengths, talents,

and interests. Now her journal entries involve the stories of her patients. Life is best when one knows herself deeply.

“Pedagogy is a fascination with the growth of the other.

(van Manen, 1991, p. 13)

Introduction

The starting point to this inquiry was a journey that began twenty-two years ago, with the birth of my daughter. Before starting my formal research, I had already witnessed the impact a teacher can have on a child, experienced the profound effect that self-image has on one’s daily activities, and lived the narratives that molded the future of both my daughter and myself. I had several questions for which I was able to glean only partial answers to until I came full circle with my research. As a mother, I needed to know how I could continue to help my own child develop an understanding of her strengths and weaknesses and learn to take ownership of her own learning so that no one else could damage or dictate her destiny. As a teacher, I wanted to know more about how children like my daughter, who learn differently, can be honored for their uniqueness. And as an ordinary person, who like everyone else, has a story to tell, I wanted to understand how the events in my life have influenced who I am as a mother and a teacher. Albeit the journey is far from over, I feel prepared to present a thought-filled analysis of a qualitative inquiry with phenomenological hermeneutical sensibility to those reflections. The study focuses on the phenomenon of student journal writing in a grade six middle-school setting, and the relationship to their metacognitive development as a way to foster agency and responsibility for their own learning. Student Journals: Fostering Metacognition and Agency is the focus of this inquiry.

I believe that one of my purposes as an educator is to foster metacognition and encourage each individual to discover and then take charge of his or her own personal compilation of knowledge, power, and abilities. In order for that kind of ownership to occur, students must be encouraged to pursue self-regulated learning through ongoing, exploratory, and reflective experiences. Teaching, like many other professions, involves one's knowledge of self and of personal truths. In Parker Palmer's *Courage to Teach* (1998) we are invited to challenge our hearts and inquire more deeply the question, "who is the self who teaches" (p. 4). I have taken this questions to another inner landscape—that of the students'. Who is the self who *learns*? Charting the intellectual (how they know and learn), emotional (feelings), and the spiritual (connectedness) paths of a student's life is seldom a part of our daily activities in the classroom, yet we know as teachers that we project our inner lives, our fundamental capacity for connectedness every day. Knowing the "self" deeply enhances the inner forces that connect us with the students, the subjects, and each other. And when we have an intimate grasp of inner self, we find our outward self, our community with others. Following this same philosophy, my pedagogic reason for this inquiry is to study and implement a strategy with my grade six students that promotes a sense of self and personal agency in relationship with others. That strategy involves student journal writing and reflection. During the various stages of my daughter's education, she was faced with challenges regarding her preferred learning style, which did not match the instructional style she was receiving. In addition, her vision of herself with a role to play within the school setting was unclear. In every situation, journal writing, reflective notes, and guided prompts assisted her in reaching a

deeper understanding of herself and a sense of worth and appreciation for her own unique, special qualities.

Rooted in personal experiences, professional knowledge began to emerge for me when I entered the master of education program. While taking one of the course requirements, I was introduced to self-understanding in the form of reflection on one's personal and practical knowledge. In chapter nine of *Understanding Teacher Development* (1992), Richard Butt et al promotes a context for teacher development through teacher autobiographies as a way to understand the nature of teachers' knowledge, lives, and careers. In writing my own autobiography and then analyzing the connections between personal and professional experiences, my own sense of self as teacher broadened. I learned that my development as a teacher is deeply rooted in early family and schooling influences. Biographical materials revealed to me that some of the most important changes I made as a professional were based on my increasing understanding that I am the author of my own actions, and that my personal pedagogy included getting to know myself and others deeply. In another course about qualitative research instructed by Dr. Leah Fowler, I was introduced to the split-page journal entry practice that allows dialogue to occur between writer and reader (student and teacher) on an ongoing basis. This method of the student writing on only the left hand half of the page so that the mentor or reader can respond and make comments beside any line is an ideal way to communicate back and forth in a fluent, flowing and personal manner. I adopted this same journal-writing style for this study. A simple formula taken from McAlpine's (1992) work was adapted for the feedback provided to the students: teacher comments and responses were based on "vision, challenge, or support". Vision responses

were based on an ability to see where the learner was coming from and going to and attempt to provide further insight. Challenge responses had the intention of making the learner think even more by using requests for specific details. The supportive comments were meant to reinforce the learner's self-worth and increase the confidence and potential of the learner.

Definition of Key Terms

Interestingly, I had my own understanding of certain key terms such as 'agency', 'metacognition' and 'learning styles' as they applied to my own context prior to conducting a search and then I discovered throughout the search that my perceptions did not exactly match my findings. A definition of the term 'agency' was not available in the educational context I was looking for; instead its definition repeatedly referred to the business of serving other businesses or the relationship between a person and another who is appointed or given authority to act on the interests of that person. My sense of the word is being in a state of action or exerting power on behalf of oneself. 'Free agency' or 'providence' or 'control' over one's learning is what I intend it to mean. The true way to success, in my definition is how a result is obtained or achieved, the act of being involved in the process.

Researching the term 'metacognition' proved to be easier as there was an abundance of sites that referred to thinking about thinking and regulating one's own learning. The notion of consciously reflecting and acting upon the knowledge of cognition to assess and modify thinking processes and strategies is not original. When I decided that I wanted to use journal writing as the avenue for promoting metacognition and agency, I thought I had come up with a fairly innovative concept, but I was

mistaken. There are several books, journals, and articles that discuss journal-writing as a desirable method of increasing one's understanding of self. I remember Keith Roscoe (Education 5200 class) telling us that virtually no research is new or original and he advised us not to fool ourselves into thinking we would hit upon an idea that was totally unique or unheard of. That thought has stayed with me for three years now, and I realize that this study is one that has been developed with the help of much reliable research that has been conducted by others. I know that having students respond to specifically designed prompts through journal entries to encourage thinking processes and empowerment is unique only in the sense that it is geared towards pre-adolescents.

There are also several interpretations of what 'learning styles' means; however, in this study, the definitions provided by Silver et al (2000) will be used. Silver divides learning styles into four categories; mastery learners, interpersonal learners, understanding learners, and self-expressive learners. The first style (mastery learner) uses the five senses and thinking. Learners who prefer this style like to learn through hands-on activities and following directions one step at a time. The second style (interpersonal learner) likes to learn with the five senses and feelings. These students like to learn with their friends and like to learn about people and how they feel. The third style (understanding learner) likes to learn through the sixth sense-intuition- and thinking. They like to solve problems and explain things. They enjoy questions that ask them to explain how and why things work. The fourth style (self-expressive learner) uses the sixth sense-intuition-along with feeling. These students love to use their imagination and to create their own ideas. They also like to choose their own projects and make things that are new and different.

The intent, then, of this final project for my master's of education program is to determine whether grade six students' journal writing can improve their ability to monitor their own critical thinking and regulate their own learning. The investigation includes a study and analysis of students' written responses to various questions encompassing the notion of metacognition, (thinking about thinking) and agency (empowerment and self-control).

Chapter 2: Review of the Literature

Metacognition (self-monitoring of thinking)

“Self-knowledge is thought to be at the foundation for all knowledge and as a unified process of thinking...has moved (us) to appreciate the continuum of logic and emotion, mind and body, individual and nature, and self and other.”

(Kincheloe & Steinberg, 1993, p. 311)

Although there is many different definitions of the term “metacognition” each one contains common elements. A search on the web shows fourteen different ways of saying that metacognition is thinking about one’s thinking. Bondy (1984) states that the difference between cognition and metacognition is a difference in self-awareness and control. “Whereas cognitive processes may occur automatically and subconsciously, metacognitive processes involve conscious monitoring and regulation.” (p. 234). Fogerty, Perkins, and Barell (1992) describe the critical relationship between metacognition and transfer. “In order to transfer knowledge or skills from one situation to another, we must be aware of them; metacognitive strategies are designed to help students become more aware” (p. 259). An example of transfer might be when learning a foreign language such as French, some vocabulary may carry over to Italian. Or when something learned in math is transferred over to the next visit to the grocery store. We as educators tend to assume that students automatically take what we teach and apply it elsewhere. Yet students do not necessarily do this without guidance. That is where journals containing thought-provoking questions, goal-setting activities, problem-based learning strategies, and self-assessments can help students develop the ability to transfer strategies to real life situations.

Differentiated learning (knowing preferred learning style)

"There are differences that make a difference."

--Max van Manen (1991, p. 32)

One of the most recent reform movements for instructional improvement to sweep our educational system is entitled "differentiated instruction." The philosophy underlying the definition of differentiated instruction, according to Tomlinson (2001) is, "In a differentiated classroom, the teacher proactively plans and carries out varied approaches to content, process, and product in anticipation of and response to student differences in readiness, interest, and needs" (p. 7).

I contend that a teacher's role is to plant seeds for effective change and ensure that the goals remain central in everyone's thinking. To foster self-understanding, authentic metacognitive reflection must take place. When confronted with a situation or dilemma, the student, through differentiated *learning* can develop the ability to assess his/her own thinking strategies. The instructor's role is to introduce the students to inventories that determine learning style preferences, as well as exercises that analyze strengths and weaknesses, and methods of dealing with these reflective admissions. Activities would include assessing or reviewing one's current and previous knowledge, identifying gaps in that knowledge, planning gap-filling strategies, determining the relevance of new information, and potentially revising beliefs on the subject.

Freed and Parson (1997) claim to have hit upon a revolutionary notion that most gifted and virtually all children with ADD share the same learning style. "Simply put, they are all highly visual, non-sequential processors who learn by remembering the way things look and by taking words and turning them into mental pictures" (p. 17).

Therefore, the teaching techniques, and conversely, the learning techniques that work

well for gifted right-brained students should also work for children who have been diagnosed as ADD. Discovering whether one is right, left, or whole-brained early in one's life could have a profound affect on learning. When children learn that being "right-brained" for example, means that they have an uncanny visual memory strength, a photographic memory that allows double digit multiplication in their heads, or spelling to occur forward or backward, can be a prescription for success. In a classroom where the teacher has facilitated such understanding through assessments and surveys that students themselves analyze and interpret, learning can occur in balance with these newly acquired strategies.

Cognitive and Affective-based learning (intrapersonal intelligence)

"There is really nothing more to say—except why. But since why is difficult to handle one must take refuge in how.

--Toni Morrison (Princeton Language Institute, 1993, p. 366)

Affective learning, according to Kraiger et al (1993), involves attitude (an internal state that influences the choice of personal action) and motivation (to increase one's competence). If one adds to preferred learning styles, the research on multiple intelligences, and in particular, one study that Howard Gardner and his colleagues (1993) conducted on intrapersonal intelligence, (as described in *Multiple intelligences: the theory in practice*), it becomes clear that students can learn how to capitalize on their strengths and compensate for their limitations. Gardner discusses how school knowledge is often dissociated from real-world contexts (the kind of knowledge required in workplaces and in personal life) because real-world contexts usually involve collaborative, contextualized, and situation-specific thinking. And even though schools do provide group activities, students are usually judged on their individual work. By

contrast, in many social and occupational settings, one's ability to communicate effectively and work productively with others is critical. Yet schools and teachers tend to focus on the academic intelligences such as the linguistic and logical-mathematical, when adaptation to the social environment and world outside the classroom calls upon interpersonal intelligence. And having a sense of oneself as a learner with particular strengths and weaknesses, and the ability to recognize which skills are required, draws upon intrapersonal intelligence.

Gardner and his colleagues conducted research and created a multifaceted model designed to foster successful performances in school and occupational settings for "at risk" students. Their project entitled *PIFS* (practical intelligence for school) was based on the premise that students who thrive in school need to learn, apply, and integrate both academic knowledge about subject domains and practical knowledge about themselves, academic tasks, and the school system at large. They divided knowledge into three broad areas: (1) one's own intellectual profile, learning styles and strategies (2) the structure and learning of academic tasks (3) the school as a complex social system. "The intervention program targeted sixth and seventh grades (ages eleven to twelve) because this is a time when students should have developed considerable practical knowledge about the school environment, and a time after which lack of such knowledge proves increasingly deleterious to scholastic performance." (p. 123). Based on a series of interviews with students from a variety of socioeconomic backgrounds, responses to questions were assessed on issues such as strategies for studying, the evaluation process, subject matter differences, the roles of teachers and administrators, peer relations, and the nature of the school system. When the results were transcribed, students were divided in

categories of high, middle or low PIFS profiles. The main factors that differentiated low from high profile students were the elaboration of responses, awareness of strategies and resources, and sense of self as learner. “Low” students were not able to articulate how academic performance could be improved, felt that school was a mystery, and had a limited or negative identity as learners. The “highs” were able to differentiate between personal strengths and weaknesses, varied their approaches to different subjects accordingly, and had a strong sense of themselves as learners. Most could relate their school tasks to both long-term and personal goals.

From these interviews, Gardner et al identified the following themes that they infused throughout the course of the students’ daily work in major subject matter areas: ability and willingness to play an active role as learner, understand the learning process involved in different academic activities, and take a pluralist view of school tasks and roles (p. 126). The aim of the *PIFS* infusion curriculum was that transfer be explicitly directing students’ attention to how problems in different domains relate to each other and provide them with the tools and techniques for self-monitoring.

The infusion approach can be thought of as a metacurriculum that serves as a bridge between standard curricula (math word problems, geography, vocabulary) and a decontextualized thinking or study-skills curriculum that purports to be applicable across subject matter ... intended to help students better understand the reasons for the types of tasks they are assigned and how best to accomplish them. (p. 127)

The fostering of reflection and self-monitoring, a constituent of intrapersonal intelligence, is precisely what I hope to accomplish through daily journal entries. I believe that students acquire knowledge best when it is related to their own sets of abilities, both strengths and limitations. The difference between Gardner's study and the one I conducted is that journal-writing become the main tool for critical reflection and interactive communication.

Journal-writing

"Every writer, by the way he/she uses the language, reveals something of his/her spirit, habits, capacities, bias. This is inevitable as well as enjoyable...No writer long remains incognito."

(Strunk and White, 1979, p. 67)

There have been several studies conducted on the development of metacognitive skills through journals, but most intended subjects have been high school or post-secondary students. Few studies have involved pre-adolescents or middle-school-aged children. Alderman et al (1993), analyzed the learning logs of pre-service teachers enrolled in an educational psychology class. The content they examined identified four categories of writing: strategy use, goal-setting, self-monitoring, and attributions. Some conclusions that were drawn included: (1) knowledge of context or purpose of a strategy is critical to understanding the strategy (2) the types of goals set in indicative of future achievements (3) reports of attribution demonstrated the dynamics of a performance, and (4) because logs are a self-monitoring tool by nature, they appeared to be a "powerful instrument" for strategy improvement (p. 52).

Feathers and White (1987) studied the journal entries of freshmen enrolled in a developmental reading class and they deduced that "student journals can provide

evidence that students are coming to metacognitive awareness...” (p. 264) through observing the comments of the task at hand, the strategy applied, and the general process of learning. They concluded that journal entries were useful as a means of studying the process of learning because they provide a view, not only of what the students are doing, but of what they are thinking as well (p. 268).

Kraiger et al (1993) used three general classifications to evaluate learning outcomes of journals: cognitive, skill-based, and affective, while Ridley et al (1992) divided findings into two processes and outcomes: goal-setting, and metacognitive awareness. All these studies support the notion that reflective journal-writing can promote thinking that demonstrates self-awareness, knowledge awareness, task awareness and strategy awareness. This kind of conscious, informed knowing was my goal for the study group of grade six students participating in the project.

Chapter 3: Methodology

Participants

This study presents both quantitative and qualitative research that demonstrates how journal writing can enhance a student's understanding of self as a learner, as well as develop a sense of agency, or empowerment for the learning process. Thirty-one students from a middle-school grade six class participated in a survey that analyzed their understanding of metacognition as learners, their sense of responsibility and ownership for their learning, and the degree to which they felt journal writing reflected knowledge of self and growth. The entire class was initially given a four-point likert scale questionnaire containing questions regarding their feelings and thoughts about the three main themes: metacognition, agency, and journal writing. Each student received a copy of the survey. The questions were read aloud along with the four response choices and students placed a number beside each choice in the spaces provided for each category (See Appendix A). At the end of the survey, the class was given the opportunity to ask me questions about the research I was conducting, and share how they felt about learning more about the content. At the end of the session, I invited them to write their names on a sign up sheet if they were interested in pursuing some of the questions covered in the questionnaire in more depth, on a volunteer basis, during some noon hours. A total focus group of ten students, (four boys and six girls) volunteered to meet, discuss, and respond in writing to eight given sets of questions related to the main themes.

The results from the questionnaire were analyzed and became the themes and specific writing prompts for the journal writing club that met once a week over an eight-week period. This focus group was particularly interested in learning more about the

research on multiple intelligences and learning styles, and agreed to meet every Monday noon from April 5th to June 7th, 2004 to discuss and write about themselves as learners in a middle-school environment. The split-page journal entries became an interactive communication between the student and teacher as each piece of writing received written feedback and comments. The student responses, for the purpose of this study were interpreted as qualitative data, and followed by a discussion regarding the implications for teachers. The final recommendations suggest implementing a similar journal writing program for middle-school students that promotes understanding and development of individual learning styles.

From the inception of this project, it has been my desire to create a or year-long series of weekly discussion and journal prompts that focus on promoting a sense of control and improved understanding of the “self” as both a learner and as a citizen within a middle-school environment. However, to determine the value of such an endeavor as well as to refine the concept, first required a focus study of a smaller nature. Responding to questions and then discussing the results to surveys, questionnaires, and case studies about learning styles, multiple intelligences, higher order thinking skills and decision-making encouraged students to discover and identify themselves along with their own attributes. They were then asked to respond privately in their journals to thought-provoking questions related to the themes. The writing prompts provided were intended to improve the student’s understanding of his/her role as student when it comes to learning, studying, working in groups, preparing projects and being accountable for him/herself.

In addition to learning about one's preferred learning style, strengths, weaknesses, and limitations, the students also reflected upon their place in a middle-school environment. Some of the weekly writing prompts and discussions revolved around peer relationships, student-teacher relationships, and roles as citizens in a middle-school.

Individual Profiles of Focus Group

Pseudonym: Jazzy

Demographic Data: This female is twelve years old and has one other younger sister. Her parents are volunteer drivers for field trips and are involved, supportive people.

Personality: Jazzy is one of the most popular girls in grade six. She has numerous friends who tend to turn to her for advice and she is often the center of attention. She has a very respectful attitude towards adults and is a defender when it comes to hurtful or negative words towards anyone, whether he/she is a friend or not.

Academic Strengths/Weaknesses: Jazzy is extremely athletic and artistic. She prefers to demonstrate her understanding of concepts visually using models and diagrams. Her weakest subject is math (she has to work hard at it), and her strongest is language arts; she is an amazing creative storyteller.

Pseudonym: Dark

Demographic Data: This twelve-year-old female is an only child.

Personality: Dark is an independent, confident, and determined individual with strong opinions about life and people. She loves engaging in conversations with her friends and when that isn't possible, you will find her reading a novel.

Academic Strengths/Weaknesses: Dark's least favorite subject is math, but she is an above average student in all subjects. She reads well above grade level and loves to write.

If I were to predict her future, I would guess that she will be the author of a mythological series. Dark tends to analyze content for applicability to her own needs and prefers to demonstrate her work through visual representation.

Pseudonym: Speaker Box

Demographic Data: This twelve-year-old female is the younger of two girls in her family. Her sister is attending the same school and is in grade eight.

Personality: Speaker Box is a dynamic, entertaining, and extremely well-liked member of the class. Her popularity is based on her caring, kind, and fun-loving personality. She loves to sing, dance, and perform for others and is a very talented athlete as well.

Academic Strengths/Weaknesses: Speaker Box is an all-around strong student who works very hard to excel in every subject.

Pseudonym: Mop Man

Demographic Data: Mop Man moved to the school from a neighboring community and therefore knew only one individual in the class at the beginning of the year. He has an older brother who is attending high school.

Personality: It did not take Mop Man long to make friends as he is a friendly, caring, and kind individual. He tends to lack confidence in himself, however, and would call himself a follower as opposed to a leader.

Academic Strengths/Weaknesses: Mop Man fits the description of “late bloomer” perfectly. It took most of the school year for him to demonstrate that he can perform above average and is capable of being a strong student academically. Getting homework done is his biggest challenge, but if music could be incorporated into all assignments, Mop Man would be thrilled and work would get done.

Pseudonym: Hailstorm

Demographic Data: Hailstorm is a middle child with a younger brother and an older sister. She is also twelve years old.

Personality: Hailstorm has a huge heart and is very sensitive to other's emotions and feelings. She cares about everyone and everyone cares for her in return. She plays ringette hockey and loves all sports. In class she is somewhat reserved and quiet, yet she willingly and happily participates in all activities.

Academic Strengths/Weaknesses: Hailstorm's academic abilities fall in the average range with no obvious strength or weakness. When given a choice, she prefers to demonstrate her understanding through diagrams, posters, and visual presentations.

Pseudonym: Tally

Demographic Data: Tally is an only-child who lives with her father and step-mother.

Personality: Heritage plays a significant role in Tally's life as she was born in Inuvik and has traveled extensively in her twelve short years. She is very outgoing and animated most of the time, but can find herself emotionally distraught at times as well.

Academic Strengths/Weaknesses: Tally is the type of student who prefers the social aspect of school much more than the academics. She is quite capable of above average work but often chooses not to put in the time and effort required, and therefore appears to be weaker than her potential. Singing and giving musical performances is how Tally loves to demonstrate her strengths.

Pseudonym: Sandwich

Demographic Data: This twelve-year-old male is a middle child with an older brother and a younger sister.

Personality: Sandwich is a fairly quiet, shy, and reserved individual. He enjoys playing video games and tends to avoid large group activities. His friends enjoy the same hobbies and when given a choice, Sandwich will join a noon-hour computer club over an athletic option.

Academic Strengths/Weaknesses: Sandwich was invited to join the gifted and talented program for his strength in math. He excels in this subject and struggles with language arts, particularly in writing.

Pseudonym: Ina

Demographic Data: Ina is an only child and is twelve years old.

Personality: Ina is a serious, shy, and very organized young lady. She prefers to work on projects alone, and would love to have more time in class to read textbooks and take more notes.

Academic Strengths/Weaknesses: Math is Ina's weakest subject, but her skills in all other subjects are above average. Ina is a 'mastery' style learner.

Pseudonym: Question Mark

Demographic Data: Question Mark has an older brother in grade eight and, like Mop Man, came to the school from a different jurisdiction. He is twelve years old.

Personality: Question Mark quickly became one of the most popular boys in grade six with his leadership qualities. He has a great sense of humour and is very outgoing.

Academic Strengths/Weaknesses: Question Mark is academically strong in every subject and has good work and study habits. When group activities are organized, Question Mark is always selected and others rely on him for all the good ideas.

Pseudonym: Drama Queen

Demographic Data: Dewey is a female with an older sister and both live with their mother (single-parent family).

Personality: Drama Queen is a name that suits this young lady; she loves to perform and has few inhibitions in front of an audience. Her self-confidence shows clearly, and her comfort level with herself is refreshing. She has a positive outlook that rubs off on those around her.

Academic Strengths/Weaknesses: Drama Queen is considered learning disabled and requires a modified program to meet her unique needs. Organization and auditory deficiencies are major considerations when planning for this child's best learning environment.

Framework

The participants in our noon-hour "meta" writing club were informed of the purpose of the club and what they could expect to accomplish over the eight-session period. I provided them with a notebook for their journal entries as well as a table of contents listing the themes and proposed timeline. By approaching the project as a "club" the study group signed up as interested volunteers, and the potential researcher/teacher conflict of coercion or bias was avoided. We met in the classroom over the noon hour to discuss, share, and respond to the teacher-provided surveys, questionnaires, or questions outlined in their table of contents. This qualitative study was a three part study where I surveyed student perceptions about journal writing, metacognition, and agency; I prepared some curriculum materials to share with the focus group at lunch; and with the concepts and prompts provided, I analyzed what the students produced in their journals.

The inquiry involved interactive dialogue between the students and the teacher in a non-threatening environment. Students understood from the start that their written reflections on learning and thinking would require no re-writes, nor would grammar, spelling, mechanics and style be critiqued. Negative, critical, or judgmental comments were avoided completely. The goal of better understanding his/her preferred learning style, dominant intelligences, strengths, limitations, and sense of self as a student in a middle-school was the only intent. The results would not be reflected, in any way, on the report cards or given a grade of any kind.

The themes for the eight journal-writing sessions that follow below were chosen based upon the results of this survey:

Themes for Journal-Writing that Enhance Metacognition and Agency

1. Knowledge of Self as Learner with Unique Characteristics:

- A. School: Introduction to thinking about school work and learning through writing.
- B. Personality: Analysing and understanding multiple intelligences and recognizing own strengths, weaknesses.
- C. Talents: Linking multiple intelligences to learning style preferences and relating to own experiences.
- D. Experiences: Relating strengths and weaknesses to Bloom's Taxonomy of higher order thinking skills.

2. Knowledge of Self as Learner with Decision-Making Powers and Sense of Control

- A. Decisions: Relating "thinking versus feeling" learning preferences to decision-making skills.

B. Uniqueness: Identifying similarities and differences among middle-school students and differences between adolescents and adults.

C. Leadership: Identifying who young people see as leaders among themselves, (and/or in our society), and what qualities are seen as important to become a leader.

D. Growth and Insights: Reviewing initial thoughts regarding metacognition and agency to current ones and sharing growth and/or change in knowledge of self.

Although these themes represent only a fraction of the desired selection if this were to become an integral part of a middle-school language arts program, they address the questions posed about agency and metacognition and provide an opportunity to share researched data on multiple intelligences, learning styles, and higher order thinking. The next thirty-two pages contain the actual journal prompts given to the focus group along with an analysis of each writing session and the implications their responses have for educators like myself.

Teacher's Role

My role was to guide the discussions and writing sessions and then provide written feedback to the students while interpreting, for the purposes of this culminating Master's project, the responses to the writing assignments. A simple formula taken from McAlpine's (1992) work was adapted for the feedback provided to the students: teacher comments and responses were based on "vision, challenge, or support". Vision responses were based on an ability to see where the learner was coming from and going to and attempt to provide further insight. Challenge responses had the intention of making the learner think even more by using requests for specific details. The supportive comments

were meant to reinforce the learner's self-worth and increase the confidence and potential of the learner.

Chapter 4: Discussion and Analysis of Data

Likert Scale Survey

In order to create a study that would have reliable data, a four-point likert scale questionnaire with twenty-five statements about metacognition, agency, and journal-writing was created with the target group being any grade six to eight, twelve to fourteen year-old students. Thirty-one students in my homeroom completed the survey. For additional insight into the students' responses, and to determine if placement in the family structure had any effect, they were asked to identify themselves as the oldest, youngest, middle, or single sibling in the family. Analysis of the data included discussion revolving around the four main themes: journal-writing, metacognition, learning style preference, and agency. When significant patterns involving sibling status appeared, the analysis included these as possible factors.

Prior to the ten volunteer students embarking on the journal-writing experience, they were asked to complete a survey, along with all the other grade six students in the class, that indicated where they currently saw themselves as learners, and members of a middle-school environment. (See Likert Scale Questionnaire in Appendix A). The results were tallied quantitatively and also appear in Appendix A; however, qualitative comments about my interpretation of the results follow here. Once the students began the noon-hour journal writing activities, the individual written entries were copied and I analyzed these for evidence of growth or change in their understanding of self as learner and the power or control they had for their learning as a middle-school student. The students received immediate teacher feedback about their reflections in the journal entries and copies of this interactive communication or dialogue between writer and reader were

made. (See Appendix B). Any data collected demonstrating increased understanding and awareness of learning style preferences, strengths, weaknesses and attributes was analyzed and reported using primarily an interactive dialogue-on-paper approach.

The results of this survey were as follows:

Choices About Journal Writing

In the category about journal writing I asked, “Do you see journals as a way to learn about yourself?” Statements 1, 4, 9, and 13 specifically required the students to respond to the value of journal writing for the purpose of learning more about themselves, or as a tool for learning. Overall, the majority of students either strongly agreed or agreed that they were comfortable about writing in their journals at school (71%) and most could write about what they have learned (87%). A smaller majority (68%) supported the idea that journals are a good way to find out what he/she is thinking.

Interestingly, however, only 45% of the total class agreed or strongly agreed that keeping a journal could help to understand themselves better. The majority (55%) disagreed or strongly disagreed, half of whom were in category 2, the youngest of the siblings in the family. The two categories that most strongly supported the notion that journal writing lends itself to better self-understanding were the ‘middle siblings’ group (category 4), followed by the ‘no siblings’ group (category 1).

There are several thoughts that come to mind when analyzing this particular set of responses: one, it appears that students view journal writing as a school mandated activity similar to doing mad minutes in math or following the scientific process for writing up experiments. The teacher says do it so they do it. Perhaps the request to do journal entries

has had so much academic focus that the benefits of reflecting have not reached the level of personal understanding and evaluation.

Two, it may be that the youngest siblings have been influenced by older siblings in the family who have talked negatively about their experiences with journal-writing and the same thoughts or attitude towards this kind of activity has rubbed off. Along the same lines but with a different rationale, I wonder if the youngest ones in the families have received less adult attention when it comes to schoolwork or time set aside to share whereas “no sibling” students might receive more time and attention?

Responses to this questionnaire provide data that is excellent pedagogic information to use when determining whether journal writing can enhance metacognition and agency in grade six students. The majority of students, at the beginning of the project did not see journal writing as a way to find out what they think, or as a way to understand themselves better. But at the end of the eight week session, the focus group shared numerous benefits of written reflections.

Thinking About Metacognition

In the category of metacognition, I asked, “Do you understand how you learn best?” “Do you know how to study?” “Do you like to think about learning?” Questions 2, 3, 5, and 20 were analyzed in pursuit of answering the above questions. Again, a large majority, over three-quarters of the students, strongly agreed or agreed that they understood themselves as learners. Over two-thirds of the class (71%) agrees they have a plan of how to study for tests, while less than a third (29%) disagree. Seven out of the nine students who negatively responded to the question were either the oldest in the family or the middle sibling, yet a full 100% responded that they knew how to learn best.

There is a discrepancy here in the responses indicating that grade six students do not necessarily view having a plan of how to study for tests as a part of how they learn. This has important relevance to discussions in a classroom, as we need to include various methods of studying and preparing for tests as an integral part of the learning process.

In statement 5 where students are asked to respond to whether they like to have choices about the work they do in class, the overwhelming response is 'yes' (87% in favor compared to 13% who do not). The purpose of asking this question was to determine whether differentiated learning is a student preference and not just a recommended approach in recent educational reviews. It is not really a question that directly aims to uncover metacognitive processes, although at the time of constructing the questionnaire it seemed to fit. However, it is important to note that of the 13% who said 'no' to having choices about the work they do, there was no pattern related to sibling status as one student from each category responded negatively.

Choice About Classwork

When asked if they like to think about how they learn and work, over three-quarters (77%) agreed or strongly agreed. In the classroom, on a day-to-day basis, time for discussions specific to this question is limited, yet it is clear that many students are truly interested in multiple intelligences and interpersonal aspects of learning. Of the 23% who disagreed, all were from the middle and youngest category of siblings. As mentioned earlier, it is difficult not to speculate about current family dynamics: do families with more than two children spend less time discussing issues such as these at home, or perhaps the need is not there as a pattern has already been set by the older siblings?

Identification of Preferred Learning Style

In this category, I asked, “Can you identify your own favorite way to learn?” The responses to this section of the survey indeed prove that students are spread across the spectrum when it comes to learning preferences and that a teacher must be forever cognizant of the fact that he/she has a wide variety of mixed abilities and modes of learning in the classroom to address. I have learned that one cannot provide choices for every activity in every subject every period of the day. But I have also learned that within any given week, one can and should incorporate into lesson plans, a strategy that meets the needs and preferences of each type of learner at least once in that week.

According to my group of learners, there is an overwhelmingly strong and equal preference (81%) for Mastery Style learning and Understanding Style learning. Both styles indicate a preference for realistic/practical, intellectual/knowledgeable information and process of acquisition. The majority of the students who chose these styles of learning are from the ‘middle’ sibling group. For the 19% of the students who do not like this approach to learning, there needs to be opportunities at various times in the week for Interpersonal and Expressive Styles of learning that include sociable, imaginative, insightful and friendly interaction.

Understanding Personal Learning Agency

In this section, students responded to questions regarding their role as learner and their power to make personal decisions. There were thirteen questions in the survey that related to a sense of agency, and overall the students indicated they have a strong sense of power and responsibility for their learning.

Responses to Promises, Responsibilities, Respect, and Roles

Students responded with 100% agreement (either strongly agreed or agreed) to the following four statements: “If I make a promise I work to keep it.” “I am responsible for my own actions.” “I respect myself as a good learner.” “I believe my role as a student learner should be an active one.” This class may be unusually dedicated, confident, and mature, but we have no other groups to compare to so the assumption that this group of twelve-year olds is “typical” leads me to believe that our middle schools are receiving students who are honest, responsible, and ready to participate.

Student Perception Of Expectations and Decision-Making

There were three statements that received 94% support or agreement: “I am responsible for finishing my school work;” “I have high expectations of myself at school;” “I think about whether something is right or wrong before I decide what to do.” Although no one strongly disagreed with these statements, in each case there were two students who disagreed. Three of the responses out of the six who disagreed were ‘middle’ siblings. However, when looking at the 94% positive results, from a researcher’s point of view, it is difficult to see it as anything but a promising middle-school experience for these students.

Decision-Making Powers And Self-Perception of Worth To School

For the statement “I believe I have decision-making powers as a student”, three students disagreed (10%) and twenty-one students agreed (90%), and for “I believe I am an important member of my school,” 97% agreed and 3% (one student) strongly disagreed. These ratios are not unanimous that students have decision-making control, but still indicate a very strong sense of power over student-related choices and self-

worth. There appears to be no lack of confidence at the age of twelve regarding the ability to take charge.

Completing Work

There were four students out of the total who disagreed to the statement, “I keep working until I am finished.” The remaining twenty-seven students all responded with “agree” or “strongly agree.” This 13% of the class who disagreed may be the same students who have required daily monitoring of on-task behavior this year. Every middle-school classroom can claim to have similar profiles who fit this description, and it is these students who we must keep in mind when we differentiate our instruction.

Setting and Accomplishing Goals

With reference to statement 15, “I set goals and work to achieve them,” 16% of the students disagreed and 84% agreed. The majority of the students in grade six appear to be very aware of the concept of setting and achieving goals. Those that disagreed, I suspect, would acknowledge whole-heartedly to being able to set goals, the problem being with accomplishing them. This is where student contracts that outline deadlines, commitments, goals, and self-evaluations could really help a student who lacks finishing abilities to succeed.

There were two statements that indicated even more divided views. For the one about deciding whether to do homework or not, six of the students indicated that it was not their own choice to make. Three students strongly disagreed and three students disagreed (total of 13%) that doing homework was a decision they made but rather one that parents and teachers made for them. Half of these students (3 out of 6) are in the ‘youngest sibling’ category. The large majority, 87% of the students, understood

homework to be a choice or responsibility of their own. The other statement that had the most revealing and even alarming responses was, “The teacher is more responsible than I am for what I learn.” Almost half of the students (45%) agreed or strongly agreed to it. Of the fourteen students who supported the statement, five came from the ‘no siblings’ category and another five from the ‘middle sibling’ category. This conflicts with responses to other “agency” type statements that indicated a strong sense of student power and ownership for actions and learning.

Perhaps, from a student’s perspective, this statement means that the teacher, as a professional working for Alberta Education, is responsible for delivering the curriculum to the student. And perhaps the intent of the statement, which was to determine if the student had decision-making power and was responsible for whether learning takes place in the classroom, are two different interpretations of the sentence. Even so, if that many students feel that more responsibility for learning lies with the teacher than with themselves, this could have significant implications for all stakeholders. Does this mean that students only feel responsible for and control over the decisions that revolve around interpersonal and intrapersonal intelligences (how to learn best, setting goals, doing homework, finishing assignments, keeping promises), but not over learning the content itself?

Birth Order and Siblings

Although birth order and information about siblings is secondary to the study and not central to the purpose, it does provide us with a perspective on possible current family dynamics.

It appears that the majority of the students who do not see journal-writing as a way to learn more about themselves, nor are as interested as the others in thinking about how they learn, happen to be the 'youngest' siblings in the family. They also represent the majority who do not keep working till finished nor feel they have a choice about whether they do their homework or not.

The 'oldest and middle' are the majority who do not have a study plan. The 'middle' represent the majority who do not set goals and work to achieve them, nor have high expectations of themselves and do not think about something as right or wrong before doing.

The 'no siblings and middles' make up the one-third who feel that the teacher is more responsible for learning than the student. They also represent the majority who do not keep working until finished nor feel they have a choice about whether they do their homework or not.

This small survey provided significant data for me for the journal-writing project that followed as it gave a reliable, legitimate account of grade six students' perceptions of journal-writing, metacognition, and agency. It provided me as teacher-researcher with a better sense of how grade six students feel about themselves as learners and the questions that might interest them most when it comes to journal writing and reflecting on their learning styles, their strengths, their weaknesses and their ideal learning environment.

Journal # 1: School

"I am always ready to learn, although I do not always like being taught."

--Winston Churchill (Peter, 1977, p. 297)

Concept: What works and what doesn't work for students, who like Churchill, may not fit into traditional settings or teaching styles.

Prompts:

- Think back to elementary school. What is the first thing you can remember? Was it good or bad? What else can you remember from your first school year?
- What is your favorite school subject? What do you enjoy most about school now?
- Have you ever had teachers who tried to teach you to think for yourself? How did they do that? Were they successful?
- Think back on all your school years so far. Describe the teacher that helped you the most. What did he/she do to help you?
- What are two things that your teachers could do right now to help you become a better student or make the classes more meaningful to you?
- Describe the perfect school for you. What would the classes be like? Where would the school be located? What kinds of things would you study? Who would teach you? How many students would there be? How would your achievements or progress be recognized?

Analysis of Journal # 1 Entries: (See Appendix B for student journal samples)

There were ten students in attendance. Before starting the session, I asked each one to select a nickname for him/herself to use throughout the duration of the project. Then we ate our lunch and discussed some of the concepts before they spent twenty minutes

quietly writing their own personal responses. Some of the responses were anticipated, while others came as a surprise to me:

Q: Think back to elementary school. What is the first thing you remember? Was it good or bad?

For many of the students, certain teachers were their first recollection.

Dark wrote, “The first thing I can remember from elementary was my grade three teacher swearing at us. It was a pretty scary experience if you were there!”

Sandwiches said, “The first thing I can remember is in grade one when the teacher marked our papers with a pen. One time I brought a pen and everyone used it and marked their papers, acting like the teacher.”

Question Mark said, “The first thing I remember was going to school on my first day. I was very nervous. I met lots of friends and settled in quite well. My teacher was Mrs. _____. She was very good and nice. My next two years were terrible. I had a bad teacher named _____. She screamed at us for not getting stuff right and our class was the only class to have her two years in a row.”

Ina wrote, “The first thing I think about from elementary school is when my grade five teacher walked around in her pantyhose. The other thing I remember is that I asked a question one day because I didn’t understand. But she didn’t believe me because she thought I just wanted a free answer.

For others the memories revolved around friendship issues.

Mop-Man said, “The first thing I can remember is me and my friends outside at recess. I was in kindergarten and me and this other kid always fought over this one toy.”

Jazzy wrote, “When I was going into elementary school, I had to go to three different schools before I found one that my mom liked. Every time I went to a different school, I had to give up my best friend. It was awful.”

It is clearly not the knowledge, the units of study, or the subjects that stand out in these students’ minds when asked to recall memories from elementary school. It is the human element, particularly the adult in the picture that stands out. The impact of certain actions (using a pen to mark grade one papers), or the words (swearing or screaming at the children), or even the attire of the teacher (sound of pantyhose when walking) is what these students recall. Next to teachers, friends and issues regarding friendships are right up there as vivid memories.

Q: What is your favorite school subject? What do you enjoy most about school?

Jazzy: “My favorite subject is art. It always has been and always will be. I enjoy being with my friends and experiments.”

Sandwiches: “My favorite subject was powerpoint. I liked it because it was easy and fun. I enjoy doing gym because it is a time to run around and play games. I like playing dodgeball.”

Question Mark: “My favorite subject in school is Band and P.E. I enjoy being able to talk and learn with friends.”

Mop-Man: “Option (classes) and band are my favorite subjects because I love playing instruments.”

Ina: “I like math for a subject because it challenges me and I think it is fun. In school I like to write, because it is fun for me to write in boall rights and stuff.”

Dark: “My favorite school subject is probably L.A. And the thing I enjoy most in school is working together on projects with or without my friends.”

It appears that a majority of this group prefers non-core subjects to core subjects, and enjoys working and learning with their friends.

Journal # 2 Personality:

“There are two kinds of people in the world—those who walk into a room and say, “There you are!” and those who say, “Here I am!”

--Abigail Van Buren (Princeton Language Institute, 1993, p. 332)

Concept: Because so much of getting along in society depends on one’s personality and intelligence, it’s good for all of us to examine our strengths and weaknesses.

(Note: Multiple Intelligence Indicator questionnaire and analysis of results completed and discussed prior to journal writing session. See Appendix C)

- A man named Howard Gardner came up with eight different intelligences or ways of learning that we all possess. We are all nature smart, word smart, logic smart, picture smart, body smart, music smart, and self smart. In which of these areas do you feel most intelligent? In which areas do you feel you are the weakest? How do you know?
- After completing the multiple intelligence survey, what do you understand better about yourself?
- Do you think your teachers understand you and your way of learning?
- What could a teacher do to emphasize your strengths?

Analysis of Journal # 2 Entries: (See Appendix B for samples)

The focus of this week’s journal entries was “personality” and “intelligence.”

Prior to having our club meeting, I had asked all the students in the class to respond to a

“Multiple Intelligence Indicator” that contained ten sets of statements. (See Appendix B) The statements in each set were listed from A to H and were written in a language easily understood by grade six students. As I read out each statement, the students were asked to give it a rating from 0 to 4 depending on how much that sentence described his/her personality and learning preference. If he/she gave the statement a score of 4, it meant that it applies all the time. A score of 0 indicated it never applies to him/her. (See Appendix C). The ratings were transferred to a tally sheet and the students added up the total score they gave for each of the eight indicators (A, B, C ...).

I first tallied the entire classes’ responses to the multiple intelligence indicator. I wanted to see if the results from my classroom support the findings that researchers such as Gardner (1993) have found regarding the “mismatch” between how the curriculum is taught and how students learn best. In Gardner’s (1993) *Multiple intelligences: the theory in practice*, Gardner discusses how school knowledge is often dissociated from real-world contexts (the kind of knowledge required in workplaces and in personal life) because real-world contexts usually involve collaborative, contextualized and situation-specific thinking. And even though schools do provide group activities, students are usually judged on their individual work. By contrast, in many social and occupational settings, one’s ability to communicate effectively and work productively with others is critical. Yet schools and teachers tend to focus on the academic intelligences such as the linguistic and logical-mathematical, when adaptation to the social environment and world outside the classroom calls upon interpersonal intelligence. And having a sense of oneself as a learner with particular strengths and weaknesses, and the ability to recognize which skills are required, draws upon intrapersonal intelligence.

The results of our survey strongly support the research. Of the thirty-one students who responded, the two least popular or developed ways of learning that received the lowest rankings were logical-mathematical, (using operations, numbers and formulas) and verbal-linguistic (reading, visualizing, talking). Yet most traditional classroom lessons are delivered using these approaches. And the top-ranking intelligence selected by my students, learning through music (listening, singing, playing an instrument) is likely the least used approach by teachers. The second-highest ranking intelligence that students in my classroom rely on is the bodily-kinesthetic (role-playing, acting something out, physical movements). The structure and physical layout of our classrooms do not necessarily lend themselves to that kind of learning, although many of us educators who understand better the need for a variety of modes of instruction, try to incorporate as many intelligences into the weekly activities as possible.

The noon-hour group then met the next day, and I explained Gardner's eight intelligences (using Figure 1.3 in Appendix C) and asked them to compare their own tallies from the previous day to the dispositions described: Verbal-linguistic—"word smart"; logical-mathematical—"logic smart"; spatial—"picture smart"; musical—"music smart"; kinesthetic—"body smart"; interpersonal—"others smart"; intrapersonal—"self smart"; and naturalist—"nature smart" intelligences. The chart not only provided a description of what each intelligence had a sensitivity to and inclination for, but also described strengths and potential careers to consider.

Following this thirty-minute discussion of multiple intelligences, I gave the students the prompts (see # 2: Personality Journal Prompts) and asked them to respond to any or all of them in their journals. Their responses included the following reflections:

Every one of them wrote about how their teachers do not really understand the way that they learn best. ‘Speaker-Box’ even went so far as to say, “They teach only the things I do not like and nothing that I do. They have no clue what goes on in my head or what I am feeling. They do not know whether I am sad, angry, happy, or tired.” It’s true. Even the most intuitive teachers with sensitivity to body language, disposition, and verbal cues must admit that we do not have a clue because we cannot, will not or do not have the time in our classrooms to address the “personal” aspects of the student.

‘Mop-Man’ said, “Body smart and music smart are my strongest. Math smart in probably my weakest because I’m not the best with numbers. I’m good in music because I enjoy making sound and if I enjoy something then I want to be better at it so that’s how I enjoy learning.” This student put motivation and sense of agency into perspective for me in that the prerequisite for wanting to become better at something might be first enjoying the learning experience.

One fault of mine with this noon-hour group was the fact that I had told them about recent studies that indicated that most traditional North American classrooms emphasize the verbal-linguistic and logical-mathematical intelligences in their methodology and lesson delivery. It may have influenced what they wrote in their journals. However, prior to the discussion we had, this volunteer group had completed and tallied the Multiple Intelligence Indicator the day before with the rest of the class. Their responses to that (if this group is considered “typical” twelve year olds in grade six) indicate we definitely have a bridge to gap. Every comparison they made to their own profile put these two intelligences as their weakest and least preferred. The

volunteer group favored relying on bodily-kinesthetic, musical, interpersonal, and naturalistic intelligences to learn over verbal or logical intelligences.

Journal # 3: Talents

Genius is 1% inspiration and 99% perspiration

--Thomas A. Edison (Henry, 1945, p. 104)

Concept: These questions give students the opportunity to analyze their favorite ways of learning and to examine their own similarities and differences compared to four characters in a 5 & 6th grade case study (Appendix C Figure 6.7).

- Complete the learning styles checklist (Appendix C), and discuss the “Style Symbols” Demo that follows (Figure 6.13 – 6.16).
- Read the four passages written by different grade 5/6 students about their experiences at school. Each student represents one of the four learning styles. Each is either a Mastery, Interpersonal, Understanding or Self-Expressive learner. While reading the passages, think about which one sound the most like you. You can underline any words or phrases that describes behaviors you can identify with.
- Rank the four characters according to their similarity to you: 1 = Not at all like you; 2 = A little like you; 3 = Somewhat like you; 4 = A lot like you.
- In your journal try to explain the order you ranked your answers. Does it tell you anything about yourself and how you learn best?

The discussion that the group had after each one compared him/herself to the four characters in the case studies was so informative and revealing. We had spent quite a bit of time defining the four learning styles (Mastery, Self-expressive, Understanding, and

Interpersonal) using the “Styles Symbols” Figure 6.13-6.16 before turning to the “Cast of Characters” (Figure 6.7 in Appendix C) and it was easy for each student to rank the four according to their similarity to themselves. What I didn’t anticipate, however, was the results of the tally. Out of ten students who attended this session, a total of nine rated themselves as “a lot like” the Interpersonal learner or the Self-expressive learner (both on the right side ‘feeling’ quadrants. These learners like to learn with the senses along with feeling. They like to learn with their friends, and learn about people and how they feel. They like to use their imagination and create their own ideas for projects. They like questions that ask about their feelings and enjoy working with others as they learn. Only one person in the group selected the Understanding learner (Intuitive thinking) to be most like her. This student likes to learn by thinking about things, solving problems, and explaining things. She enjoy questions that ask her to describe how and why things work. None of the members identified themselves as Mastery learners (Sense thinking) who like to follow directions one step at a time and be shown what to do.

Analysis of Journal # 3 entries: (See Appendix B for student samples)

In the journal responses, the students show that they know themselves and their preferred learning style better than I had anticipated. Drama Queen notes, “I am mainly a people person. I get along very well with the people around me and it is very easy for me to make friends. I listen to people and their ideas. If I do not like the idea, I’ll just suggest something else. If I want to do something in front of the class like a cheer, I go right ahead and do it.”

Tally wrote, “I think I am most like Shamir (Interpersonal learner) because I love to talk, meet new people, and do group work. I often get in trouble but I do not do it on

purpose. I love school but it can get very boring sometimes.” Dark sees herself as a self-expressive learner as well but for different reasons; she doesn’t like to understand the history and the reasons that people believe in things. Question Mark, another self-expressive learner said, “I like to pick my own projects, and others like to come be my partner because I come up with ideas. I do not like that because it gets annoying. I think you should be able to explore in school on subjects and have fun, not notes, notes, and more notes. The funnier the ideas the more fun it is to me. I learn best by having fun and being serious at the same time. I like projects that I can work on and learn. Speaker Box pointed out, “Lots of things in school bore me and only a few things interest me. One thing that interests me is working with my friends and being with and playing with my friends.”

All nine self-expressive or interpersonal learners’ responses indicated a preference for working with friends on projects, and some spill righte openly and honestly about being bored in school. The boredom may imply that current methods of acquiring and assessing content do not meet the learning preferences of a majority of our children.

Ina, the one student who identified herself as an understanding learner, did not feel the ranking of the case studies helped her understand how she learns best. “I do not think it tells me because some days I like learning one way and other days I like something totally different. The way I ordered (the case studies) is how I thought that I wanted them today, but tomorrow, they might change.”

Hailstorm suggested a problem with the group’s responses in that the students might just be picking the same answer as their friends’ instead of truly identifying their

own preferences. But if that were true, they would have ranked the answers differently during their quiet case study analysis. I believe the responses are authentic and indicate a definite common pattern among young adolescents—they truly believe they learn best through interpersonal and self-expressive modes.

Journal # 4: Experiences

I am not afraid of storms for I am learning to sail my ship.

--Louisa May Alcott (Princeton Language Institute, 1993, p. 161)

Concept: Part of growing up is taking on new experiences and new challenges and evaluating what it is that made them difficult.

Pre-Journal Discussion: Bloom's Taxonomy and Higher Order Thinking Skills

(See Appendix C for Descriptors for each level and a Self Evaluation Chart)

Journal Prompts:

- Describe the hardest thing you have done academically or intellectually. Does school challenge your mind?
- Do you like being challenged or required to think and what level of thinking do you feel most equipped to demonstrate your understanding of a concept?
- If you had to compare your physical, intellectual, and emotional sides, which would you say is the strongest? Which is the weakest?

As a follow-up to the third journal entries on preferred learning styles, we discussed Bloom's Taxonomy of Higher Order Thinking Skills in the fourth session. At the beginning of this school year, I had decorated a full-length bulletin board with posters, illustrations and samples of each level of Bloom's Taxonomy and left it up all year. So the focus for this journal entry was a familiar one to the students. To begin the

discussion, we loall righted at the sample questions and activities using the six levels (See Appendix C). I asked the group to select the type of activity that appealed most to them, jot it down, and then think about why they picked it. The choices were:

- to describe or identify info from memory (knowledge level);
- to compare or outline info to form relationships (comprehension level);
- to construct or chart info to apply to new situations (application level);
- to classify, or organize info into separate parts (analysis level);
- to design or create a new pattern by combining info (synthesis level)
- to judge or evaluate the info according to set standards (evaluation level)

Analysis of Journal 4 entries: (See Appendix B for student samples)

This discussion was one I wish I had tape recorded because the students began recalling so many previous experiences where they had demonstrated their knowledge and skills in the way they did their projects. For example, one talked about the clay models she used to do a novel study assignment. Another talked about how she enjoyed researching and charting her family tree, and one male student showed he understood concepts in our flight unit by constructing various gliders and testing them. There was rich information being shared about how the students perceive their own learning and how they demonstrate their understanding that I missed capturing. And once we began writing, I realized I had made an even bigger error in judgment.

I completely missed the mark with the questions I posed for the journal writing that followed the discussion. Instead of asking them to write about a time when they had found success with one of these levels of thinking skills, I asked them to describe the level they felt most equipped to demonstrate their understanding and stopped there. Then

I went off on another tangent and asked them to compare their physical, intellectual, and emotions sides that really didn't complement or tie in with the wonderful discussion we had had. Consequently, the data collected from the writing samples seems scattered and difficult to analyze. For future situations, the questions for this section will be modified to target the theme intended.

Of the ten responses to the question about what they thought their strongest side was, seven believed they were physically strongest. Most of them talked about their successes in sports and playing on teams. Only two felt that they were strongest intellectually and weakest physically. One felt equally strong in all three aspects. If there had been an opportunity to do a follow-up to this question, it would have been interesting to find out if the reason for so many identifying physical dominance had anything to do with the fact that most pre-teen sports are seen as spirited, fun times with teammates, with no chance of rejection or elimination at that age. There may be a demand for discipline and effort, but failure is not usually a word heard among sports enthusiasts. In fact, if a child does not feel talented enough to continue with a sport, or decides he/she is not cut out for it, the option of quitting is there. Not so with the academic world. If a subject doesn't appeal to a student, or he/she feels poorly equipped to succeed with it, the option of dropping it is not there.

When trying to assess which level of higher order thinking skills they felt most equipped to demonstrate their understanding of a concept, the responses were spread throughout the levels. The only level that was not mentioned by any of the students was the evaluation level. The implication of this information for classroom teachers would be that planning of research projects, as well as day to day content delivery must address

some of these skill levels on a regular basis. For example, in math, we may forget or do not take the time to explain how and where and why certain formulas are applicable to real-world situations, and then some students tune out because there's no foreseeable reason to pay attention. Gardner's (1993) "infusion approach" which suggests a metacurriculum that serves as a bridge between standard curricula (math word problems, geography, vocabulary) and a decontextualized thinking or study-skills curriculum that purports to be applicable across subject matter is a possible solution to help students better understand the reasons for the types of tasks they are assigned and how best to accomplish them.

Journal # 5: Decisions

"Do not be afraid to take a big step when one is needed. You cannot cross a chasm in two small steps."

--David Lloyd George (Safir & /Safire, 1982, p. 76)

Concept: Teens going into adulthood face many life-changing decisions, so it's a good idea to think about how and why you make important choices early.

Pre-Writing Discussion: What is your favorite noise? Least favorite noise? What is your favorite smell? Your least favorite smell? How did you decide on your answers to these questions? Did you just say the first thing that came to your mind, or did you compare different choices in your head and then pick the best one?

Journal Prompts:

- What are the typical decisions you make in a day? How do you make most of your choices? Do you use logic or gut instinct? (Remember Journal # 3: "Thinking" learning style versus "Feeling" style preference)

- What is the biggest decision you have made in your life so far? How did you make it? Was it a good decision or a bad decision?
- What are some other major decisions you will have to make in the coming years?
- Do you feel like you have many choices in life or that you have much control over what happens to you? How can you gain more choices or control?

Analysis of Journal 5 Entries: (See Appendix B for student samples)

This journal theme of “decisions” revolved around a discussion of how we make decisions rather than what decisions are actually made or how they are arrived at. It was interesting to note that prior to presenting the focus of the session, the students were surprised that they were being asked what their favorite and least favorite sounds, and smells were. We had not reviewed the project plan for this session so the theme of “Decisions” was not in their minds when the discussion began. This authentic approach delivered rich and unexpected data. Although every student had a different response to the “senses” questions, the object of the activity was to determine whether or not their decisions were “gut” reactions, with the first thing that came to their minds being the answer, (“feeling” style preference), or if they experienced a mental list of choices (“thinking” style preference) that they evaluated and then chose one from the list. Asking the students to analyze the questions from that perspective after they had jotted down their initial responses, produced much curiosity and discussion. For many it was an affirmation of their preferred learning styles that were identified in journal session # 3. Seven out of the nine students in attendance reported that they wrote down the first answer that came to their head and didn’t stop to think

about why they picked that smell or noise, but just knew that it was the one they wanted. Only two recalled going through several choices before selecting one.

This may have serious bearing on how students approach other decision-making questions, such as those on tests. If this group is typical of most students at this age, it may be that for a majority of them, little thought goes into selecting answers. Rather than using the elimination strategy, the first correct-sounding answer is selected based on the fact that it sounds right, feels right, or sounds right. Teaching test-taking strategies may be more important than we thought.

After asking about four questions regarding non-critical, yet decision-making type responses (regarding favorite sounds and smells), I asked the students to think about other kinds of decisions they are required to make on a daily basis and write them in their journal. Later the questions went a step further and asked the students to predict what kinds of decisions would be required of them in the future.

With respect to the typical day-to-day decisions the group recognized choices such as what to wear, or eat as non-critical and non-threatening. Some of the biggest decisions made to this date covered a wide range: purchasing a piano, selling a cat, opening up to a stepmother, saying no to a stranger, changing schools, and committing to a sport. It is important to note here that there was absolutely no mention of peer pressure of any kind. Each of the responses applied more to issues at home or outside of the school environment than to ones within the school. Decisions regarding assignments, homework, or other curricular areas were not even considered as possible situations where decisions could be made.

Going back to the first survey these students did with the rest of the class regarding metacognition and agency, it was noted that a good portion of students felt “The teacher is more responsible than I am for what I learn.” Almost half of the students (45%) agreed or strongly agreed to this statement. This feeling of “non-control” or perhaps “non-responsibility” for learning modes and outcomes is something a teacher at middle-school might want to address at the very beginning of the school year. In building a classroom climate and atmosphere that exudes safety, responsibilities, and respect, a teacher could demonstrate how she/he plans to make use of ‘contractual’ agreements (See Appendix # C) to develop a sense of ownership for individual and group learning experiences.

When it came to future decisions, six out of nine students talked about high school, college and/or university in relation to choosing what they want to take. Likewise, the same number felt choosing the right job was going to be a big decision. Other topics such as getting married, having children, choosing friends or hobbies, taking on adult responsibilities, and confronting legal drugs (small righting, alcohol) were anticipated by one student for each. None indicated that they had already decided on any of these future situations, nor did they appear, in their writing, to sound worried or stressed about their future.

The question, “Do you feel like you have many choices in life or that you have much control over what happens to you?” received mixed reviews. Five of the nine students felt confident that they had control over their decisions.

As Drama Queen stated, “ I think I’ll have lots of choices in life because I feel like an opportunity knocks on every door. You just have to listen.”

Hailstorm wrote, “To gain more control over what I do and my choices, you have to be heard. You cannot just sit back and expect everything to go the way you want it to.”

And Tally, who seems very confident, said, “I think I have lots of choices in my life and I have control over them too.”

On the other end of the spectrum were two students who felt they had little or no control over what happens to them. Question Mark said, “No, I do not think that I can control most of what happens to me because life is full of surprises. I do not know how to gain more choices. Jazzy, too, felt that she had few choices at this stage. “I have some choices to make, but my parents make most of them. It’s like I’m a doll, and they can do whatever they want with me.” Jazzy may be feeling a little frustration over the control she feels her parents have over her. Quite honestly, I had expected more responses such as this, but perhaps this grade six group has yet to reach the point where desired independence and freedom to choose is challenged by adult authorities.

Journal # 6: Uniqueness

“Know, first, who you are; and then adorn yourself accordingly.”

Epictetus (Princeton Language Institute, 1993, p. 80)

Concept: Many young people try to make a statement about who they are, but may need to think more about what they are really trying to say.

Prompts:

- Do you dress like a certain group you hang around with or do you dress to please yourself?

- Do you think people judge others by the way they loall right or dress?
- What do you think people can tell about you from the way you dress or loall right?
- Think of how you act, talk, think, and treat others. Do you believe you are unique or much the same as your peers?
- When you compare yourself to an “average” teenager, are you proud of yourself or do you try to hide your uniqueness?
- What do you think are the main differences between an adult and an adolescent like yourself?

Analysis of Journal 6 entries: (See Appendix B for student samples)

In keeping with the generally strong, self-confident, and positive responses in the last journal entries on the concept of ‘uniqueness’, the nine students who wrote on this journal question unanimously agreed that they dress to please themselves and do not try to imitate others. Only one student, Jazzy, hinted that even though she dresses how she wants, she “sometimes cannot afford all the clothes other people wear.”

Although everyone agreed that people judge others by the way they loall right, the question, “What do you think people can tell about you from the way you dress?” elicited a variety of self-descriptors, some of which the writers must feel are accurate assessments and a few who think the impression others have might not necessarily be true of that person:

Question Mark: “I think that people think that I’m all smart and shy and goodie-goodie but that’s what I think (that they think). I like to dress to please (myself) but lots of the time my parents want me to loall right nice and part my hair...people always say

that so and so is nerdy and this and that but that person could be the nicest kid in the world.”

Jazzy: “When I came to school and met some friends they said that they thought I was a “girly-girl” because I wore pink all the time. It’s only cuz it’s my favorite color.”

Dark: “They can tell that I’m not too dressy yet I’m not too lazy to wear clean clothes. Yes, that is one of the first things people judge when they see somebody, that I’m casual.”

Drama Queen: “I think that people can tell from the way I dress is that I like to wear vintage stuff and it’s all to please myself. I definitely think people judge individuals by the way they dress. I think if one person is wearing a knitted sweater she would be a “nerd” but if someone is wearing a popular brand they would think that individual was “cool.”

Speaker Box: “Most people at the start think that I’m shy and a teacher’s pet....I do think they judge everyone on their loall rights but it turns out that a lot of people like me do not dress to fit their personality, they just dress the way they like to. I’m not like anyone in school and I’m different in every way.”

The remainder of the journal responses followed a similar pattern; people thought there were average, sporty, casual, and each one agreed that even though they are judged by the way they dress or loall right, they either didn’t care or felt that it was wrong. As Hailstorm wrote, “Like if I was wearing a very pretty outfit but had a horrible personality other’s could not tell.”

Once again, if these students’ responses to questions about appearance and attire are indicative of the majority of adolescents, then individualism is ringing loud and clear.

It doesn't appear that, at this age at least, students are overly concerned about making an impression or a statement about themselves through how they loall right. Nor do they seem to want to loall right like others and blend in with a certain fashion trend. Being quite comfortable and confident as individuals choosing their own loall right seems to be the general consensus, and this seems to go hand in hand with the desire to choose their own way of learning.

In the next two questions when the group was asked to think of how they act, talk, think, and treat others and to compare themselves to an "average" teenager, seven of them strongly verified their uniqueness. Only two felt they were 'average' teenagers and even these two mentioned differences as well:

Sandwiches: "I am similar because I wear jeans and a t-shirt like most people do, but I treat people good and I have a different personality that other people. I am proud of my similarities and differences but sometimes I try to hide my uniqueness."

Drama Queen: "I think I am an average teenager, but my parents are not ready to let me do or wear certain things yet. But I do not think you should compare yourself to anyone, just be happy with who you are."

Three students specifically compared themselves to others by how they treat people. For example, Question Mark said, "Some of the similarities of me and other kids include clothing and other things, (but) I treat people differently. I am nice."

Dark was even more critical of her age group: "I am very different in the way I dress and act. Most people are either dressing really boyish or girlish while I kind of mix both. Everybody is real glum and mean, but my friends call me bubbly. I do not try to hide my uniqueness, but teens are always really mean and act stuck up."

Jazzy said, "I think I treat everyone fair, but not all my friends do (the same.) I act how I feel comfortable."

Hailstorm and Tally both talk about how they are different when it comes to hair and clothing styles and both are proud to stay the way they are.

Tally wrote, "I think the average teenage girl wants to show lots and lots of skin and have really tight clothes. That is their choice, not mine. "

Hailstorm says, "I am different because I wear sporty clothes and most girls in my school wear Jennifer Lopez styles. I personally would not change a thing about me."

The sense of knowing who they are as members of a larger group does not seem to be an issue with these students at this point. It appears that they wear what they want to wear, but not to make a statement, and they have very clear feelings that judgments are made based on clothing and appearance. In fact, they themselves made 'blanket' statements about their peers that would be considered judgmental, likely without realizing it. Their attitude towards others implies that they are an exception to the norm. Each member in this group seems to have a sense of individual pride in who he/she is, but that he/she is not necessarily a representative of the student body in general. Having a larger focus or sample group would have been the only way this could have been confirmed.

The final question on this theme asked the students to compare themselves as teens, to adults. Some of the comparisons were quite entertaining: Sandwiches , "Teenagers like listening to loud music but adults do not. Teenagers party and do not look to see what time it is, but adults are on time and they make sure they aren't late." This student has a fairly sheltered and narrow view of the differences, probably due to experiences he has had at home with the adults in his life.

Drama Queen broadens the perspective a bit by stating, “An adult can do whatever they want but adolescents cannot do certain things,” but she doesn’t expand on what those certain things are.

Question Mark and Dark have virtually opposite opinions on the differences between being an adult and an adolescent are. Question Mark feels, “The main difference is that when you’re growing up you’re under pressure and when you’re an adult you have already experienced all of that.

Dark, on the other hand, says, “The main difference is stress. Adults get so wound up about the stupidest things (weight). All they have to do is throw a few snowballs, and spend some quality time with family.” I believe the snowball throwing implies adults should just lighten up, and the part about spending more time at home might infer that stress is caused by too much time being spent at the workplace. But whereas one student seems to think adults have already been there, done that, and the adolescents are in the midst of getting there, the other student sees the need for adults to revisit their youth and chill out a bit.

To summarize this journal writing session, it is safe to say that this focus group felt very comfortable, in fact proud, of their individualism and unique attributes, particularly with how they dressed and how they treated others. However, even though they saw themselves as unique and caring people with a sense of agency, several felt that teenagers, in general, are mean, glum, unkind, and like to wear “Jennifer Lopez” skin tight clothing. The comparison of adolescents to adults provided us a rare look at how twelve year olds describe the differences to revolve around responsibility, freedoms, and levels of stress (pressure).

Journal # 7: Leaders

“We forfeit three-fourths of ourselves in order to be like other people.”

--Arthur Schopenhauer (Peter, 1977, p. 267)

Concept: Whom do young people see as leaders among themselves, (and/or in our society), and what qualities are seen as important to become a leader?

Prompts:

- Who would you say are good “leaders” in our school (city, country)? How do you think they earned that status?
- Do you see yourself as more of a leader or a follower in your current group of classmates and friends? Are you satisfied with this identity or do you hope to make changes to it?
- If you do not consider yourself one, who would you say is a leader amongst your circle of friends? How does he/she differ from others in the group?
- What characteristics, skills, and qualities does a person need in order to be a good leader?
- If Hollywood wanted to make a movie about you and your friends facing some kind of dilemma or decision-making difficulty, what would it be about, who would take charge and become the leader, who would be the followers, and what role would you play?

Analysis of Journal 7 entries (See Appendix B for student samples)

This journal writing session took place on a day when many of the focus group members were involved in the school’s musical, and because no other day that week

would have been any better, we proceeded with only five of the ten students in attendance.

In response to the first question about who some of the leaders were, four out of five identified the teachers and the principal of our school as good leaders. Only one person went outside of the idea that only adults fit the role as leaders; he thought his brother was a leader because “he received an award for volunteering in the city.” It was not surprising that the rest mentioned various teachers and/or the principal, since the question asked for a response specifically related to our school with reference to city or country leaders in brackets. If the question had not included these three choices, the responses may have been quite different. The discussion about how their selections earned this status as leaders varied:

Jazzy wrote, “They earned that status by making decisions, and choosing to be a leader.”

Dark felt the status was earned, “by going through many years of college and university.”

Both Question Mark and Mop Man attributed status earned, “to being kind, helpful, nice, and giving a hand.”

Leadership, in these samples, is earned through personal attributes, abilities, and training, but there is not a generally agreed upon set of criteria. The fact that only five students were in attendance skews the results and the ability to identify any patterns in thinking.

When asked about how they saw themselves, as more of a leader or a follower, again the results were split: two saw themselves as both a leader and a follower

depending upon the situation. One saw herself as more of a leader most of the time, and two saw themselves as followers. The question alone does not provide a great deal of insight except that students acknowledge their roles socially and can write about how they see themselves in a group. In retrospect, I wish I had tied this question more carefully to the notion of agency and becoming a leader in the sense of taking charge of their own learning and responsibilities as students. In the editing and revisions of these journal prompts for future use, that adjustment will be made.

The characteristics, skills and qualities that were identified that make a good leader included decision-making qualities such as: being fair, kind, pleasing to everyone, and knowing what is right and wrong (Dark), and knowing how to work hard and make the right decisions (Sandwich). Other 'leadership' qualities identified were personality attributes: kind, funny, helpful, comforting, nice, unique, and smiling (Question Mark, Mop Man, and Jazzy). It is interesting to note that only two mentioned anything about work ethics, decision-making, or knowing right from wrong as important leadership qualities. The more social attributes dominated as important, but again, this is stated with caution as the sample group was quite small.

What teachers can take from these results, however, is that students do see teachers and administrators as leaders, but not all are mentioned as 'good' leaders. And good leaders, in their opinion, need educational qualifications, decision-making skills, and a kind, caring, helpful, fair, and comforting personality.

Journal # 8: Growth and Insights

“Each man’s work is always a portrait of himself.”

--Samuel Butler (Bartlett, 1968, p. 756)

Concept: Comparing initial thoughts regarding metacognition and agency to current ones and sharing growth and insights about self as learner.

Pre-Writing Discussion: Distribute responses to Likert Scale Questionnaire given to entire class at beginning of focus project and ask students to review what they wrote prior to these eight journal writing sessions. Which of the twenty-five answers given in the questionnaire (if any) would they change after completing this journal-writing session.

Prompts:

- What is the greatest insight gained or growth made in understanding yourself as a result of these sessions?
- What aspects of our meetings did you enjoy the most? What did you enjoy the least? Why?
- What are three changes you could make about yourself or your life if you could? What prevents you from making these changes?

Analysis of pre-writing discussion

Note: During this thirty-minute activity, I wrote down responses and took notes throughout the discussion to use in this part of the data collection.

The focus group’s demographics according to number of siblings in the family fell into the following categories:

Category 1 (no siblings): Ina, Dark, Tally

Category 2 (youngest sibling): Question Mark, Mop Man, Speaker Box

Category 3 (oldest sibling): Jazzy, Drama Queen

Category 4 (middle sibling): Sandwiches, Hailstorm

Of the four categories, the students in category 2 (youngest), and category 4 (middle) seemed to be most affected and changed by their experiences in the project, even though every one was able to identify changes in attitude and growth in knowledge about self as learner (metacognition and agency) as well as towards the benefits of journal-writing.

Re: Journal Writing—Student see journals as a way to learn about self:

All ten students moved their responses to ‘strongly agree.’ The discussion comments revolved around the fact that we spent a portion of our time learning about learning (ie multiple intelligences) or just sharing stories and experiences so when it came time to write, there was a sense of readiness and willingness to put it on paper. Thus, pre-writing activities should be noted as important and integral aspects of meaningful, reliable and responsible journal-writing sessions.

Re: Metacognition—Student understands self as learner and knows how to prepare himself/herself to learn:

Three of the students in the group had originally responded to these questions with ‘strongly agree’ and thus, did not change their answers. However, two of the students who had originally responded negatively to the questions moved their answers to agree or strongly agree. One was the youngest sibling and the other was a middle child. The remaining five changed their answers from ‘agree’ to ‘strongly agree’. During the discussion, many said they learned a lot from the first three journal sessions because they were introduced to multiple intelligences, learning

styles, and higher order thinking. The focus group agreed that the results of the ‘multiple intelligence indicator’ (we did as part of the journal writing # 2) proved to be the most revealing, and therefore meaningful when it came to understanding self as a learner. When asked if they thought if other classmates would have benefited from this activity, the response was unanimous—yes. “It gives students who do not feel very smart or capable a chance to see that everyone has strengths or ‘smarts’ and you just have to identify them,” said Mop Man.

Re: Preferred Learning Style—Student can identify his/her own best way to learn.

This is the one category where the oldest siblings and the no-siblings students made the greatest changes to their original responses. All four who originally classified themselves as “Mastery Style” learners moved into the “Interpersonal Style.” One student (an only child), retained her ‘strongly agree’ in the “Understanding Style” category. Two others who ‘disagreed’ or ‘strongly disagreed’ to the “Interpersonal Style” moved their responses to ‘agree’. The remaining three chose to leave their answers as originally selected as “Expressive Style” learners.

The shifts in responses can be directly attributed to the discussions and the deeper understanding gained from our noon-hour sessions with respect to learning styles. The overall distribution of responses and the fact that there is a variety of preferred learning styles in every classroom should prove significant to a teacher regardless of grade level. And introducing these styles to the students early in the year, could prove to be the most valuable activity a teacher could do in establishing a climate of individuality, self-acceptance, and respect for each other’s strengths and weaknesses.

Re: Agency—Student understands role as learner and has the power/responsibility to make personal decisions:

The five students who were the oldest or had no siblings did not feel they wanted to change any of their answers in this section because they had already ‘agreed’ or ‘strongly agreed’. Three who were in the youngest or middle categories changed their responses from ‘disagree’ to ‘agree’. And two kept their original ‘disagree’ responses. These last two students were the same ones who felt in journal # 5 that even though they understood their role as learners, they did not agree that they had the power to make personal decisions.

Eighty percent of the students, at the end of the journal writing session, claimed to not only understand their role as a middle-school student, but also felt they had the power and responsibility to fulfill that role. If this is a fair sampling of twelve year olds in our current school system, the future looks bright. But this was not the case prior to participating in the focus project where only fifty percent agreed to the same claim. The implication of this may be that time and effort needs to be put aside for discussions, activities, and reflection about the issue of student agency. It could become an integrated language arts/ health/social studies unit that fits within some of the already established objectives and learner outcomes in our program of studies.

Analysis of Journal 8 entries (See Appendix B for student samples)

This final writing session was quite emotionally charged and some tears were shed while quietly reflecting on the growth and insights the “met” club gained. Most did not have enough time to respond to more than just the first prompt because we had spent most of the hour reviewing the likert scale questionnaire. And because

much of that discussion was specific to 'academic' gains, many decided to write about some of the other gains or benefits from meeting.

Hailstorm wrote, " This is our last day of met club. It is going to be sad because I have made a lot of good friendships. Coming here has brought us all together... Met club has helped me so much socially and mentally. I love what met club has helped me accomplish. It has made me think about the situation instead (of just giving it) a glance. I just think, if you watch the world go by you might never be able to catch up."

Others responded with similar comments, most of which demonstrated an overwhelming appreciation for the non-traditional approach to sharing ideas. The omission of evaluation (for report card marks), the non-judgmental feedback, the chance to exchange experiences guided only by the theme of the day, and the idea that this was not core- curriculum- based, all contributed to the success of the project as far as they were concerned. Even the fact that the group met and talked over the lunch hour which meant eating in the classroom (totally against the rules of this particular school), added a certain appeal.

Jazzy summed it up by stating, "In the last two months, I got a chance to actually be myself."

Chapter 5: Reflections, Implications, and Recommendations

This culminating project has been incredibly meaningful from both a personal and professional standpoint. There is no amount of theoretical research that could have exposed me to such insights and revelations as this human research study involving grade six students and their reflective writing. The purpose of the study was to survey, engage, and evaluate a focus group on questions about *Student Journals: Fostering Metacognition and Agency* and to that end, I now have a more refined and deeper sense of the terms “metacognition” and “agency,” as well as a confirmation of my original thoughts on the value of journal writing.

“Metacognition,” is a skill that can be developed at an early age; this focus group of twelve year olds has proven that. These pre-adolescent students can use critical thinking criteria when acquiring new information and they are interested in regulating their own learning if given the opportunity. But according to the initial survey conducted with the entire class of thirty-one students, eighty percent initially indicated that they were “mastery” learners. Then when this focus group was exposed to the variety of multiple intelligences we possess, and the learning style preferences we have control over, the enlightened group of ten changed their responses to modes that more naturally matched their talents and strengths. I believe we have raised a generation of students who have become quite dependent on ‘traditional’ (mastery style) modes of instruction whereby the standard lesson plan goes as follows: the first fifteen minutes or so are spent explaining and demonstrating a key concept, and then the students work either individually or in small groups on an activity that puts that concept to use or tests it somehow for another twenty minutes, and then a ten-minute culminating discussion or

summarizing activity occurs at the end. This is the basic lesson plan of most teachers today, and there is nothing wrong with this format, other than it is teacher-derived and driven. However, in a classroom where students have discovered and learned about their own learning style preferences, and strengths/weaknesses based on a series of beginning-of-the-year surveys, checklists, questionnaires that are analyzed and explained, the students could conceivably, for the rest of the nine month term, contract out their own way of acquiring and demonstrating their own knowledge of core concepts.

In order for this kind of organization and planning to occur, much time at the beginning of the year would have to be spent on helping students learn how to maximize their “differentiated” learning preferences and how to take advantage of their strengths. For example, if a student discovers through a series of questions and discussions, that he/she is really strong as a visual learner but needs to understand the lectures being presented auditorally, then he/she would adopt a strategy of drawing out the diagrams, or webs, or pictures of what is being presented as a way of remembering and understanding the concepts. This is what metacognition is all about: a person’s ability to reflect on his or her own thinking processes and manage his/her own learning experiences.

During note-taking and information gathering times, the student could use a system whereby all the “teacher or text” data is recorded on one side of the page, probably the right side, and then the left side is reserved for personal interpretation and transfer. By that I mean that the student can convert that information into a diagram, a chart, a song, a web, or any other meaning-making image for himself/herself. This kind of activity, however, can only occur after the students have become familiar with their strong and weak learning modes, and their preferred ways of understanding content.

With reference to “agency,” it was clear from this focus project that students at the age of twelve (grade six or seven) are the perfect target group to work with. This age group seems to have the heart and mind to believe in the powers they possess and the ability they have to make good decisions. They are still young enough to accept ideas from adults that promote self-control or empowerment, and their physiological stage of development welcomes any promising advice it can get on how to be successful in relationships with others. This focus group of students seemed to have a strong sense of self and personal agency in relationship with others. From their journal reflections, it appeared that they felt the least control over what and how they learned which takes us back to the importance of metacognition-enhancing activities. Similar to Gardner’s research project (1993), the journal writing program targeted sixth and seventh grades (ages eleven to thirteen) because this is a time, “...when students should have developed considerable practical knowledge about the school environment, and a time after which lack of such knowledge proves increasingly deleterious to scholastic performance.” (p. 123).

Although the number of writing sessions was limited, there was evidence that student journals can show that students are coming to metacognitive awareness through observing their comments of the task at hand, the strategy applied, and the general process of learning. I have concluded that journal entries were useful as a means of studying the process of learning because they provided a view, not only of what the students were learning, but of what they were thinking as well. More importantly, they were an excellent avenue for the interactive communication between writer and reader to continue beyond the noon-hour meeting time.

The project was not without its obstacles, and if I or anyone else were to conduct a similar study, these are some recommendations I would make: First, ensure that enough time for unexpected delays has been built into the timeline, especially if a human subject research approval form is required prior to beginning the project. The original plan for this study included twelve journal-writing sessions, and due to a month-long delay in obtaining the approval, only eight journal-writing sessions were completed. Secondly, if journal-writing becomes the main tool of interactive communication, the teacher needs to anticipate “follow-up” response time to questions he/she might have regarding something the student wrote in his/her journal. The ideal situation would be to have ongoing split-page journal conversations that did not follow such a rigid or strict time-line for responding to questions and one where certain comments could be expanded on.

The benefits of conducting this human research project, however, definitely outweigh the obstacles: In addition to refining some of my qualitative research skills, I created a number of documents that were quantitative in nature, to guide the journal writing sessions, that ended up being the “meat” of the project. The first document I needed to create was a twelve-week plan for journal questions and prompts, each one with a page of specific prompts related to metacognition and agency, but in “middle-school” language. This became the foundation and framework necessary to carry out the focus project and a significant step towards the data collection section I needed to establish. Then, with my mentor’s help, I designed another important document, a Likert scale survey with twenty-five questions regarding the students’ feelings toward writing, their preferred learning styles, and their sense of control over their learning. This survey was given to my entire class of thirty-one, (making it a reliable, legitimate source of

information), and it was analyzed and the results were documented. The focus group who volunteered to work on the weekly themes completed the survey again at the end of the project and any changes in attitude or growth in knowledge was assessed.

I also modified and adapted two more surveys to conduct in my class so that the focus group would be able to write with knowledge about themselves; the multiple intelligence indicators and the learning style preference questionnaire. Once administered, I tallied the findings and related them to other studies and research about multiple intelligences in the classroom and learning style preferences.

And last but not least, I created my own “learning contract.” I have always wanted to do this because few of the current assessment tools available have all the components that I believe are necessary to truly empower the students to take charge. So this contract provides a checklist of choices for the student to choose from regarding how they want to demonstrate their learning, as well as a timeline and rubrics for grading the product once completed.

Throughout the two months of journal writing sessions, I became the eleventh participant in the focus group and used the writing time as an opportunity to reflect on my entire professional career, which again was invaluable as it helped me review where I have come from, where I am, and where I am going. A journal-writing structure, which invites critical reflection, can be a most influential and beneficial tool at any age. In our society today, large numbers of people never fulfill their potentialities, partly, I believe, because their environment does not stimulate the strengths, creativity, and the capacity to develop their talents. Let us not stunt growth, but assist our future generation in finding their individual inner landscapes.

The journey that began twenty-two years ago, with the birth of my daughter has come full circle. Her experiences as a child growing up was the impetus for this project and I am grateful that her story has a happy ending. She is now a professional pursuing a career that is rewarding and fulfilling. Although she has not written for a while now, I am confident that journal-writing and reflecting will continue to be a meaningful part of her life. She helped me see the benefits of daily writing, as well as opened my eyes to the profound impact a teacher can have on a child. As a parent and a teacher, I understand how critical it is to help our children develop an understanding of their strengths and weaknesses and learn to take ownership of their learning. Honoring each child's uniqueness must be central to that understanding, and one way to encourage each child to discover his own talents and strengths is through guided, interactive writing and discussions involving thinking about thinking. Life is best when one knows himself/herself deeply.

We search the world to find the beautiful, yet unless it is within us, we find it not."

--Ralph Waldo Emerson (Peter, 1977, p. 65)

References

- Abrams, S. (2000). *Using journals with reluctant writers: building portfolios for middle and high school students*. Thousand Oaks, CA: Corwin Press Inc.
- Alberta Human Resources and Employment. (1999). *Skills plus handboall right: discovering your personal career assets*. Edmonton, AB.
- Alderman, M. K., Klein, R., Seeley, S. K., & Sanders, M. (1993). Metacognitive self-portraits: pre-service teachers as learners. *Reading Research and Instruction*. 32 (2), 38-54.
- Armstrong, T. (2000). *Multiple intelligences in the classroom*. Alexandria, VA: ASCD.
- ASCD. (1992). *Teaching to learning styles* (video recording and leader's guide). Alexandria, VA.
- Bartlett, J. (Ed.). (1968). *Bartlett's familiar quotations* (14th ed.). Boston, MA: Little, Brown Publishers.
- Bondy, E.(1984). Thinking about thinking. *Childhood Education*. March/April, 234-238.
- Burke, K. (1999). *The mindful school: How to assess authentic learning*. Arlington Heights, IL: Skylight Training and Publishing.
- Clay, M. (1998). *By different paths to common outcomes*. New York, NY: Stenhouse Publishers.
- Dunn, R. (1996). *How to implement and supervise a learning style program*. Alexandria, VA. ASCD.
- Dunn, R. & Griggs, S. (1998). Learning styles: Quiet revolution in american secondary Schools. *National Association of Secondary School Principals*. Reston, VA.

- Feathers, K. & White, J. (1987). *Learning to learn: Case studies of the process*. 26(4), 264-274.
- Fogarty, R., Perkins, D., & Barell, J. (1992). *The mindful school: How to teach for transfer*. Palatine, IL: Skylight Publishing, Inc.
- Freed, J., & Parsons, L. (1998). *Right-brained children in a left-brained world*. New York, NY: Simon & Schuster Inc.
- Gardner, H. (1993). *Multiple intelligences: the theory in practice*. New York, NY: Basic Books.
- Glesne, C. (1999). *Becoming qualitative researchers*. Don Mills, ON: Addison Wesley Longman Inc.
- Graham, B. (1994). *Student journals: metacognitive development*. Calgary, AB: Colin Bate Books.
- Haggerty, B. (1995). *Nurturing intelligences: a guide to multiple intelligences theory and Teaching*. Don Mills, ON: Addison Wesley.
- Hargreaves, A. & Fullen, M. Editors. (1992). *Understanding teacher development*. New York, NY: Teachers College Press.
- Heinrich, K. T. (1992). The intimate dialogue: Journal writing by students. *Nurse Educator*. 17(6), 17-21.
- Kincheloe, J. & Steinberg, S. R. (1993). A tentative description of post-formal thinking: the critical confrontation with cognitive theory. *Harvard Educational Review*. 63(3), 296-320.

- Kraiger, K., Ford, J. & Salas, E. (1993). Application of cognitive, skill-based, and affective theories of learning outcomes to new methods of training evaluation. *Journal of Applied Psychology*. 78(2), 311-328.
- Mahoney. S. (2004). What was he thinking? *Prevention Magazine*. Vol. 56. Number 3.
- McAlpine, L. (1992). Learning to reflect: using journals as professional conversations. The Reflective Practitioner. *Adult Learning*. Jan. 15th, 23-24.
- McCarthy, B. (1994). Learning differences designing instruction with the 4mat system. *Video Journal of Education*. Vol. IV Issue1.
- Nelson, T. (1992). *Metacognition: core readings*. Needham Heights, MA: Allyn and Bacon.
- Noddings, N. & Shore, P. (1984). *Awakening the inner eye: intuition in education*. New York, NY: Teachers College Press.
- Palmer, P. (1998). *The courage to teach*. San Francisco, CA: Jossey-Bass Inc.
- Paris, S., & Ayers, L (2003). *Becoming reflective students and teachers with portfolios and authentic assessment*. American Psychology Association. Washington, DC.
- Paterson, J. (2004). Considering the positives of increased assessment. *Middle Ground*. National Middle-school Association. Vol. VII. Issue 3.
- Peter, L. (1997). *Ideas for or time*. New York, NY: William Morrow.
- Richardson, L. (1997). *Fields of play-constructng an academic life*. New Brunswick, NJ: Rutgers University Press.

- Ridley, D. S., Schutz, P. A., Glanz, R. S., & Weinstein, C. E. (1992). Self-regulated learning: the interactive influence of metacognitive awareness and goal-setting. *Journal of Experiential Education*. 60(4), 293-306.
- Roe, B., Alfred, S., Smith, S. (1998). *Teaching through stories: yours, mine and theirs*. Norwood, MA: Christopher-Gordon Publishes Inc.
- Silver, H., Strong, R., & Perini, M. (2000). *So each may learn: integrating learning styles with multiple intelligences*. Virginia: ASCD.
- Strunk, W., & White, E. B. (1979). *The elements of style*. New York, NY. pg. 67: Random House.
- Tomlinson, C. (2001). *How to differentiate instruction in mixed-ability classrooms*. Alexandria, VA: ASCD.
- van Manen, M. (1994). *Researching lived experience: human science for an action sensitive pedagogy*. Ann Arbor, MI: The Althouse Press.
- van Manen, M. (1991). *The tact of teaching: the meaning of pedagogical thoughtfulness*. Ann Arbor, MI: The Althouse Press.
- Wolfe, P. (2001). *Brain matters: translating research into classroom practices*. Alexandria, VA: ASCD.
- Wormeli, R. (2004). Mirror and sieve: summarization as a powerful learning strategy. *Teaching in the Middle*. National Middle-school Association. Volume VII. Issue 3.

APPENDIX A

Appendix A
Likert Scale Survey and Result

Likert Four-Point Scale

Section 1:

Demographic Information

Complete the following information:

ID # _____

Gender: Male _____ Female _____

Grade: _____

Age: _____

of brothers you have _____

of sisters you have _____

If you have brothers or sisters, are you the oldest, youngest, or middle? _____

Section 2:

Read each statement and circle the answer that matches whether you:

Strongly Agree, Agree, Disagree, or Strongly Disagree.

____ 1. I am comfortable writing in my journal at school.

Strongly Agree Agree Disagree Strongly Disagree

____ 2. I have a plan of how to study for tests.

Strongly Agree Agree Disagree Strongly Disagree

____ 3. I know how I learn best in school.

Strongly Agree Agree Disagree Strongly Disagree

____ 4. Journal writing is a good way to find out what I think.

Strongly Agree Agree Disagree Strongly Disagree

____ 5. I like to have choices about the work I do in school.

Strongly Agree Agree Disagree Strongly Disagree

____ 6. I am responsible for finishing my schoolwork.

Strongly Agree Agree Disagree Strongly Disagree

____ 7. The teacher is more responsible than I am for what I learn.

Strongly Agree Agree Disagree Strongly Disagree

____ 8. I keep working until I am finished my assignments.

Strongly Agree Agree Disagree Strongly Disagree

_____ 9. Writing in a journal helps me to understand myself better.

Strongly Agree Agree Disagree Strongly Disagree

_____ 10. I decide whether to do my homework or not.

Strongly Agree Agree Disagree Strongly Disagree

_____ 11. If I make a promise, I work to keep it.

Strongly Agree Agree Disagree Strongly Disagree

_____ 12. I am responsible for my own actions.

Strongly Agree Agree Disagree Strongly Disagree

_____ 13. I can write about what I have learned in class.

Strongly Agree Agree Disagree Strongly Disagree

_____ 14. I have high expectations of myself in school.

Strongly Agree Agree Disagree Strongly Disagree

_____ 15. I set goals and work to achieve success in school.

Strongly Agree Agree Disagree Strongly Disagree

_____ 16. I respect myself as a good learner.

Strongly Agree Agree Disagree Strongly Disagree

_____ 17. I think about whether something is right or wrong before I decide what to do.

Strongly Agree Agree Disagree Strongly Disagree

_____ 18. I believe I am an important member of my school.

Strongly Agree Agree Disagree Strongly Disagree

_____ 19. I believe that my role as a student learner should be an active one.

Strongly Agree Agree Disagree Strongly Disagree

_____ 20. I like to think about how I learn and work in school.

Strongly Agree Agree Disagree Strongly Disagree

_____ 21. I believe I have decision-making powers as a student.

Strongly Agree Agree Disagree Strongly Disagree

_____ 22. My favorite way of learning is by drills, practice, demonstration, and hands-on experiences.

Strongly Agree Agree Disagree Strongly Disagree

_____ 23. My favorite way of learning is by lectures, reading, debates, discussions, and projects of personal interest.

Strongly Agree Agree Disagree Strongly Disagree

_____ 24. My favorite way of learning is by group experiences and projects, personal expression and role-playing.

Strongly Agree Agree Disagree Strongly Disagree

_____ 25. My favorite way of learning is by creative and artistic activities, open-ended discussions of personal and social values, and activities that enlighten (myths, human achievement stories, dramas).

Strongly Agree Agree Disagree Strongly Disagree

Breakdown and Analysis of Likert Scale Questions

The questions that relate to metacognition are: 2, 3, 5, and 20

(4 total)

The questions that relate to preferred learning style are: 22, 23, 24, and 25

(4 total)

The questions that relate to agency are: 6, 7, 8, 10, 11, 12, 14, 15, 16, 17, 18, 19, and 21

(13 total)

The questions that relate to journal writing are: 1, 4, 9, 13

(4 total)

Student Demographics

Of the 31 grade six students surveyed, the following breakdown was determined:

Students with no siblings: 6 out of 31 or 19.5% of the total surveyed

Students who had siblings and were the youngest in the family (11 out of 31 or 35% of the total surveyed)

Students who had siblings and were the oldest in the family (6 out of 31 or 19.5% of the total surveyed)

Students who had siblings and were in the middle of the family (8 out of 31 or 26% of the total surveyed).

Category 1:

Re: Journal Writing: Student sees journals as a way to learn about self.

Questions	Strongly Agree	Agree	Disagree	Strongly Disagree
(1)	8	14	8	1
(4)	5	16	9	1
(9)	7	7	12	5
(13)	8	19	4	0

Category 2:

Re: Metacognition (thinking about thinking) or student understands self as a learner and knows how to prepare himself/herself to learn.

Questions	Strongly Agree	Agree	Disagree	Strongly Disagree
(2)	3	19	6	3
(3)	13	18	0	0
(5)	18	9	3	1
(20)	9	15	7	0

Category 3:

Re: Preferred Learning Style: Student can identify his/her own best way to learn (ST: realistic, practical, matter of fact; or SF: sociable, friendly, interpersonally oriented; or NT: theoretical, intellectual, knowledge-oriented; or NF: curious, insightful, imaginative)

Questions	Strongly Agree	Agree	Disagree	Strongly Disagree
(22)Mastery Style (ST)	12	13	5	1
(23)Interpersonal Style (SF)	4	15	6	6
(24)Understanding Style (NT)	8	17	4	2
(25) Self-Expressive Style (NF)	12	12	4	3

Category 4:

Re: Agency: Student understands role as learner and has the power/responsibility to make personal decisions.

Note: (*) questions worded in a way that SD or D indicates a sense of strong student responsibility

Questions	Strongly Agree	Agree	Disagree	Strongly Disagree
(6)	17	12	2	0
(7)*	5	9	10	7
(8)	8	19	4	0
(10)	15	10	3	3
(11)	17	14	0	0
(12)	17	14	0	0
(14)	10	19	2	0
(15)	12	14	5	0
(16)	10	21	0	0
(17)	10	19	2	0
(18)	10	20	0	1
(19)	8	23	0	0
(21)	12	16	3	0

APPENDIX B

Appendix B
Samples of Split-page Journal Entries

Journal # 1 Sample

Question mark

April 1991

- | | | |
|----|---|---|
| 1. | <p>The first thing I remember was going to school on my first day. I was very nervous. I met lots of ^{new} friends and settled in quiet well. My teacher was [redacted] she was very good and nice. My next 2 years were terrible. I had a bad teacher, [redacted] she [redacted] at us for not getting stuff right and our class was the only class to have her 2 years in a row.</p> | <p>"Nice" teachers are important.</p> <p>"Ouch" - Noise pollution, right?</p> |
| 2. | <p>My favorite subject in school is band and P.E. I enjoy being able to talk and learn with friends.</p> | <p>Both music & phys ed are "core" subjects but not homework - Does that make a difference? Or is it just the nature of subjects?</p> |
| 3. | <p>[redacted] helped me the most - because she was nice and caring she would help you after school if you needed it.</p> | <p>Nice & caring & willing to help is important, isn't it?</p> |
| 4. | <p>never had one.</p> | <p>maybe teaching "thinking about thinking" is not a common practice.</p> |

Appendix B
Samples of Split-page Journal Entries

Journal # 1 Continued

Question Mark

April 1992

5 something teachers could do right now that would make classes more meaningful would be to give more examples more activities and a game that follows along with the subject their teaching.

I am listening...

6. The perfect school would be to have all the main core subjects and others. The school would be located in the mountains. I would study biology and other subjects. There would be 500 students and I would teach Mr. I would be recognized for a good student.

yes! one thing we already got...

why the mountains?

Did Mr. E.T. recognize you as a good student? Is that why you liked him?

Appendix B

Samples of Split-page Journal Entries

Journal # 2 Sample	
	Speaker Box April 26
Dear Diary,	
I really don't think teachers understand me or my way of learning. They teach only the things I don't like and nothing that I do. They have no clue what goes on in my head or what I am feeling. They don't know whether I am sad, angry, happy or tired. I feel most intelligent in music smart and I don't feel very intelligent in logic smart however. Classrooms usually emphasize in math and language but never seem to talk about math smart or music smart.	Yikes! How can we solve this? Hmmm... I believe you are right. Sometimes, most of the time, we don't take the time to find out how each other is feeling - we just get right to work on the subjects & the curriculum. True - although most teachers try to include music or movement when possible, if they understand how these intelligences play an important role in how some learn best.

Appendix B

Samples of Split-page Journal Entries

Journal # 3 Sample

Map-Man

I chose Samuel as
the least like myself
because I don't like
to know everything.
I want to find stuff
out as I go along.

Yes, Samuel sounds a little
"overly organized" doesn't he?

I chose Shamiir a little
like myself because
I don't want to get
involved emotionally
with everyone, but
with my friend I
like to know what's
bothering them.

It is difficult to become emotionally
involved with everyone, so you make
a good decision to keep to just
a friend or two that you are close
to & can trust.

I chose Nancy as
somewhat like me
because I do like to
know why, and as a
little kid I always
asked why is the
grass green? why do
we grow up? And questions
that were really big and
got me thinking about
the world.

Wow! You are really
identifying your perceptions
and thinking styles!

I chose Nina as a lot
like me because I
always have great ideas
but I don't share them.

Is there a reason why you don't
share your great ideas?

Appendix B

Samples of Split-page Journal Entries

Journal # 4 Sample

Jazzy
May 10th

① The hardest thing I've ever done in school was the 30 page math booklet Miss Knight gave us, it was our final test for that unit, and we had to do it in one hour. I knew the questions, but I had to hurry or I wouldn't finish the test.

Yes, that was quite an eye-opener for the student teacher as well. You can imagine the hours of making each one of those booklets that, too!

② I do like being challenged, but in the areas I'm good in. Having to make a diagram, or a poster/ model are areas I'm good at. To understand I like being able to try to see if it works.

You are an excellent artist and should take every opportunity to express what you know this way. Experimenting to see if something works is the application level of Bloom's

③ I am strongest in physical. Having to make something, or working with my hands works.

Taxonomy, and creating models indicate you are good at synthesizing information which is high level thinking!

I am weakest in intellectual. I need to work it out, it's hard for me to think things out in my head. Like a big math problem, I need to write it down.

Jazzy, as long as you know your strengths and weaknesses and how to deal with them, you'll always be a great learner. If you already know you have to work out problems by writing them down and you stick to using that strategy, you'll be fine.

Appendix B

Samples of Split-page Journal Entries

Journal # 5 Sample

Monday may
Speaker
B*

Dear Diary,

→ Some of the typical decisions I make in a day include what I am going to wear, what I am going to do first in my routine (brush hair, brush teeth) and what

I guess when you think about it, we probably make hundreds of decisions every day, right?

time I am going to get out of bed. When I get to school I have to decide which answer is right and wrong and how to stay out of trouble.

I am curious - do you really think about this regularly? Even if it isn't presented as a question?

→ Usually I have one idea then I go and do it. If it doesn't work, I will try another, and that is how I make my decisions. So I think I use a gut instinct.

Great to hear that you try alternate ways if your first impulse is wrong.

Appendix B
 Samples of Split-page Journal Entries

Journal # 5 Continued

Speaker
 Box

Monday May

→ My biggest decision
 in life was
 when I had
 to choose between
 going to Gilbert
 Paterson and
 Lakeview in and
 for grade five.

I am happy
 that I went to
 Lakeview because
 I made a ton
 of friends and
 I met my best
 friend, Sam.

yes, finding your "best" friend and
 gathering many friends makes
 school so much more enjoyable.

Appendix B
Samples of Split-page Journal Entries

Journal #6 Sample

Tally 7th of
June

Dear Journal,

I think people can tell that I like bright colors and loose fitting cloths. I don't dress to fit into a group because I like being myself. Hood for you.

I think people constantly judge other people by the way they dress.

I think I am different than other people because I don't care what I wear as long as I like it that's all that matters.

I think the average teenage girl wants to show lots and lots of skin and have really tight cloths. That is their choice not mine.

I like being unige and different.

I think adult are alot more mature.

It's nice to know you feel so confident & comfortable with your own decisions.

😊

We can be pretty immature at times too, but I'm glad you see us as mature.

Appendix B

Samples of Split-page Journal Entries

June 14th
Dork

Journal # 7 Sample

1. I think that our principals and teachers are good leaders. They earned this status by going through many ~~years~~ years of college and university. Thanks! But it takes more than education to be a good leader!

2. I am more of a leader than a follower. I am perfectly fine with this position and identity. Yes, I see you as a leader - and a good one at that!

3. They have to be fair, kind, pleasing to everyone and know what's right and wrong. Your insight is truly mature for a twelve year old! The characteristics of being fair & knowing right from wrong distinguish bad leaders from good ones!

4. The movie would be about me and my friends. I think that one other and I would take charge, everybody else would be followers and I would be the leader or supporters. ☺

Thank you so much for the weekly dialogue & journal writing. I learned so much from you.

Appendix B

Samples of Split-page Journal Entries

June 14

Journal # 8 Sample

Halestorm

Dear Journal

This is our last day of "Met Club". It is going to be sad because i have made a lot of good friendships. Coming here has brought us all together, like before i came i only knew 2 people now i know everyone very well. "Met Club" has helped me so much socially and mentally. I know what "Met Club" has helped me accomplish. It has made me think more about the situation then just a glance. I do not think, if you watch the world go by you might never be able to catch up.

Dear Halestorm,

I too am sad that this is our last meeting because this "Met" club (metacognition in real time) has had so many positive spin-offs. We have come together at a different level - taking time to talk about topics that are not directly related to the curriculum, yet so very meaningful & important. I am thrilled that it has helped you socially as well as mentally. Your last time is priceless! It shows how far we have come...

I thank you so very much for your participation in this project; your sharing during discussions and journal writing has provided me with some valuable, authentic, rich data.

APPENDIX C

Appendix C
Surveys, Questionnaires, and Instructional Sheets

MULTIPLE INTELLIGENCE INDICATOR

Adapted from Silver, H. (2000)

For each of the following behaviors, determine the rating that best describes you.

4 = This applies to me all the time

3 = This applies to me strongly

2 = this applies to me somewhat

1 = This hardly applies to me

0 = This does not apply to me at all

I.

___ A. I enjoy reading.

___ B. I tend to think of logic problems as exciting challenges.

___ C. I sketch or draw when I think.

___ D. I like to sing, even to myself.

___ E. I am good at using my hands to fix or build things.

___ F. I am good at making new friends.

___ G. Like to spend time thinking about myself and what I value.

___ H. I like being outside whenever possible.

II.

___ A. When I learn a new vocabulary word, I try to use it in my conversation or writing.

___ B. I prefer Math to Social Studies and English classes.

___ C. I am able to distinguish between subtle variations in color, line, and shape.

___ D. I listen to music often.

___ E. I have a good sense of balance and coordination

___ F. I like social gatherings and activities.

___ G. I greatly value my independence.

___ H. I am good at forecasting changes in natural phenomena (such as rain etc).

III.

- A. I like to argue a point or to explain things.
- B. I am adept at seeing patterns and anomalies in a situation.
- C. I am good at visualizing ideas.
- D. I am able to keep a tune.
- E. I am able to learn a new dance or sport quickly.
- F. Going to parties is one of my favorite pastimes.
- G. I often talk to myself
- H. I get involved with ecological problems (ie. Cleaning parks)

IV.

- A. I speak in metaphors and use expressive language.
- B. I am good at working with numbers and data.
- C. I am good at reading a map.
- D. I am able to play a musical instrument well.
- E. I often talk with my hands.
- F. I am easy to get to know.
- G. I regularly reflect upon my strengths and weaknesses.
- H. I prefer biology to chemistry.

V.

- A. I am good at using words to describe things.
- B. I take very little on faith alone.
- C. When I read, see the story in my head.
- D. I can tell when music is flat, off-time, or out of key.
- E. I loall right forward to physical activity, even if it is strenuous.
- F. I loall right for opportunities to work with and meet new people.
- G. I like to think things through before I take action.
- H. I am good at outdoor recreations like hunting, fishing or bird watching.

VI.

- A. I am good at using words to persuade others.
- B. I am comfortable with abstract ideas.
- C. When I watch a movie, focus more on what I see than what I hear.
- D. I have a musical “library” in my head.
- E. If I cannot move around, I get bored.
- F. I ask the advice of others when I have a difficult decision to make.
- G. I regularly need time to myself.
- H. I have a green thumb.

VII.

- A. I am interested in the meaning of words.
- B. I have an ability to read and understand charts or diagrams.
- C. I am good at matching colors and decorating.
- D. I like to make up my own tunes and melodies.
- E. I need to manipulate things with my hands to know how they work.
- F. I dislike confrontations and try to keep harmony when they occur.
- G. I like to set personal goals for myself.
- H. I like to draw or take pictures of natural settings or objects.

VIII.

- A. I find writing enjoyable.
- B. Current debates and topics in science fascinate me.
- C. I can stand in one location and visualize things from different locations without moving.
- D. I am good at keeping a beat.
- E. I like hands-on activities like woodworking, building models, or sewing.
- F. I am good at making people feel comfortable.
- G. I tend to trust my own judgment over the advice of others.
- H. I like hiking and camping.

IX.

- A. I like going to a bookstore or library to read and research ideas.
- B. I believe that there is a logical explanation for almost everything.
- C. I am better at remembering faces than names.
- D. I have a clearly defined musical taste (I know what I like and what I do not like).
- E. I would rather play a sport than watch it.
- F. I respond strongly to other people.
- G. I like being my own boss.
- H. I feel comfortable and confident outdoors.

X.

- A. I'm good at Scrabble, Boggle, crossword puzzles, or other word games
- B. I enjoy games that require tactics and strategy.
- C. I am good at playing Pictionary, solving mazes, and/or identifying optical illusions.
- D. I am good at remembering the names of songs.
- E. I am good at mimicking other people's physical behaviors.
- F. I enjoy getting others to work together.
- G. I like games that I can play alone, like solitaire or computer games.
- H. I am good at using the sun and the stars to guide myself in the woods.

Appendix C
 Surveys, Questionnaires, and Instructional Sheets
 Learning Contract

To show that I know _____, I would like to:

- | | |
|---|--|
| _____ write a report
_____ do a photo essay
_____ compile a scrapboall right
debate
_____ build a model
_____ put on a live demonstration
_____ develop a powerpoint project
_____ keep a journal
_____ design a mural
_____ give a talk | _____ create a series of sketches/diagrams
_____ set up an experiment
_____ engage in a discussion or
debate
_____ produce a videotape segment
_____ create an ecology project
_____ create and present a song or rap
_____ teach a lesson on it to someone else
_____ choreograph a dance
_____ other: _____ |
|---|--|

Brief description of what I intend to do:

Timeline (Planned stages of completion):

Rough draft due by:

Final draft due by:

I agree to be evaluated on this project according to the following rubric:

	0	1	2	3	4
Persistence	Never attempts	Gives up or changes mind quickly	Attempts but stops at difficult stages	Attempts and works through most issues/stages	Does not give up until all issues / segments resolved
Self-Direction	Initiative lacking and refuses direction	Needs constant individual attention	Needs frequent reminders to stay on task	Works independently	Initiates further responsibilities
Concepts/Skills	Demonstrates no understanding/skill	Demonstrates limited understanding/skill	Demonstrates understanding of some concepts/skill	Demonstrates understanding of most concepts/skill	Demonstrates complete understanding of concepts/skills
Reflection	Never uses past knowledge or experience	Limited ability to use experience to show knowledge	Ability to reflect on experience to show knowledge but does not connect to new situations	Occasionally uses experiences to make connections to new situations.	Independently makes connections and transfers knowledge to new situations

 Signature of Student

 Date

APPENDIX C

Surveys, Questionnaires, and Instructional Sheets

An Introduction to Multiple Intelligences

FIGURE 1.3
INTELLIGENCES AS DISPOSITIONS

Disposition/Intelligence	Sensitivity to:	Inclination for:	Ability to:
Verbal-Linguistic Intelligence "word smart"	the sounds, meanings, structures, and styles of language	speaking, writing, listening, reading	speak effectively (teacher, religious leader, politician) or write effectively (poet, journalist, novelist, copywriter, editor)
Logical-Mathematical Intelligence "logic smart"	patterns, numbers and numerical data, causes and effects, objective and quantitative reasoning	finding patterns, making calculations, forming and testing hypotheses, using the scientific method, deductive and inductive reasoning	work effectively with numbers (accountant, statistician, economist) and reason effectively (engineer, scientist, computer programmer)
Spatial Intelligence "picture smart"	colors, shapes, visual puzzles, symmetry, lines, images	representing ideas visually, creating mental images, noticing visual details, drawing and sketching	create visually (artist, photographer, engineer, decorator) and visualize accurately (tour guide, scout, ranger)
Bodily-Kinesthetic Intelligence "body smart"	touch, movement, physical self, athleticism	activities requiring strength, speed, flexibility, hand-eye coordination, and balance	use the hands to fix or create (mechanic, surgeon, carpenter, sculptor, mason) and use the body expressively (dancer, athlete, actor)
Musical Intelligence "music smart"	tone, beat, tempo, melody, pitch, sound	listening, singing, playing an instrument	create music (songwriter, composer, musician, conductor) and analyze music (music critic)
Interpersonal Intelligence "others smart"	body language, moods, voice, feelings	noticing and responding to other people's feelings and personalities	work with people (administrators, managers, consultants, teachers) and help people identify and overcome problems (therapists, psychologists)
Intrapersonal Intelligence "self smart"	one's own strengths, weaknesses, goals, and desires	setting goals, assessing personal abilities and liabilities, monitoring one's own thinking	meditate, reflect, exhibit self-discipline, maintain composure, and get the most out of oneself
Naturalist Intelligence "nature smart"	natural objects, plants, animals, naturally occurring patterns, ecological issues	identifying and classifying living things and natural objects	analyze ecological and natural situations and data (ecologists and rangers), learn from living things (zoologist, botanist, veterinarian) and work in natural settings (hunter, scout)

Source: Gardner, H. (1993) *Multiple Intelligences*. New York, NY: Basic Books

APPENDIX C

Surveys, Questionnaires, and Instructional Sheets

Figure 6.7
5th and 6th Grade Case Studies
Source: Silver et. al. (2000) p. 90.

The following four passages were written by four different 5th and 6th grade students about their experiences as school. Each is either a Master, Interpersonal, Understanding, or Self-Expressive learner. Read the four passages and decide which one sounds the most like you. Underline any words or phrases that describe behaviors you can identify with.

THE CAST OF CHARACTERS**Samuel T: Mastery Learner**

I will often make a list of my next day's activities so I can be ready. Then I can check them off when I get them done, which usually happens. I do not mind class projects, as long as the teacher gives us an exact set of directions as to what is due and when. Usually I turn in those projects a few days early to make sure I have them done. Teachers like my work, although they say that I need to be more flexible and realize that there isn't always a right and wrong answer. I am not exactly sure what they mean by that. I come to school to learn, and so I like it when the teacher shows me exactly what to do and what the answers are. I know I have mastered the material when I get a test or project back and everything on it is 100 percent.

Nina F: Self-Expressive Learner

Other kids usually like to have me on their project team because I always have lots of ideas. I like it best when the teacher says, "You pick a project and create what you want." Do not you think that's what school should be for? I mean, it should be a place where they let you come and explore ideas instead of page after page of stuff! I really like thinking of things to do, although all of my "brainy ideas" do not always come off. Of course, the more ideas we can come up with, and the crazier they are, the better for me. I sometimes get into trouble because I finish assignments at the last minute. I do not really forget them, it's just that some of the routine junk really bores me. Sometimes I'll get so involved in an idea that's not necessarily the one we're working on, I forget about the one I have to turn in!

Nancy T: Understanding Learner

I like learning about ideas and their history and the reasons that people believe in them. The part of a class that I like best is when we get a chance to really think through a topic, usually on paper but sometimes outloud in discussion. I remember my mom saying that as a little kid I was always asking "Why?" I guess that has not changed much. If people give me a chance to compare choices and make my own decisions, I usually make the right one. I think school is a great place to find out all sorts of things. If, after a long

discussion or an assignment, I have been able to loall right at all the different viewpoints and start to understand them, then I feel like I have not wasted my time. For this reason, I guess I like essay tests the best because they give me some time to really express my opinions and prove my ideas.

Shamir F: Interpersonal Learner

You might call me a “people person.” It always makes me feel good to know that I have helped someone even if it’s just talking something over. Now that I think about it, I have always been the one moved by the teacher because I talk so much in class. That never bothered me so much because then I got to meet new people! I wasn’t trying to go against the teacher. It’s just that I find it more interesting doing work with a friend or a group than by myself. That’s the best thing about school—lots of action among friends. People have told me that I get too “emotionally involved” with everything, but I really like finding out how others feel about things and what they are doing about them. I am happiest when the teacher divides us into groups to develop some project together, and I really get into an assignment when it relates somehow to me.

APPENDIX C

Surveys, Questionnaires, and Instructional Sheets

Learning Styles Inventory: The Left-Right Brain Continuum
(Taken from *Right-Brained Children in a Left-Brained World* by J. Freed and L. Parsons, 1997)

A. (Preadolescents: Five to Thirteen)

- | | |
|----------------|--|
| Yes ___ No ___ | 1. Is your child extremely wiggly? |
| Yes ___ No ___ | 2. Does your child have difficulty with coloring or handwriting? |
| Yes ___ No ___ | 3. Was your child a late walker? |
| Yes ___ No ___ | 4. Is your child extremely sensitive to criticism? |
| Yes ___ No ___ | 5. Is your child good at puzzles and mazes? |
| Yes ___ No ___ | 6. Is your child good with building toys, such as Lego? |
| Yes ___ No ___ | 7. Does your child have allergies or asthma? |
| Yes ___ No ___ | 8. If you read a book to your child two or three times, is he or she capable of filling in missing words with almost perfect recall? |
| Yes ___ No ___ | 9. Is it extremely important that your child like his or her teacher in order to do well in class? |
| Yes ___ No ___ | 10. Is your child easily distracted, or does he/she daydream a lot? |
| Yes ___ No ___ | 11. Is your child unable to consistently finish tasks? |
| Yes ___ No ___ | 12. Does your child tend to act first and think later? |
| Yes ___ No ___ | 13. Do you have to cut labels out of your child's clothes? Does he only want to wear clothing that's especially soft and well worn? |
| Yes ___ No ___ | 14. Is your child overwhelmed at sporting events, loud parties, amusement parks? |
| Yes ___ No ___ | 15. Does your child tend to shy away from hugs? |
| Yes ___ No ___ | 16. Does your child need constant reminders to do certain things? |
| Yes ___ No ___ | 17. Is your child extremely competitive and a poor loser? |
| Yes ___ No ___ | 18. Does your child have a good sense of humor? Does he/she have a better-than-average ability to understand or create puns? |
| Yes ___ No ___ | 19. Is your child a perfectionist to the point that it gets in the way of trying new things? |
| Yes ___ No ___ | 20. Can your child recall a summer vacation or other event from one or two years ago in vivid detail? |

The more "yes" responses, the more to the right your child will be on the left-right brain continuum. In general, 0-4 yes answers indicate very left-brained, 5-8 somewhat left-brained, 9-12 whole-brained, 13-16 somewhat right-brained, and 17-20 very right brained. Note: This is not a scientific test; its purpose is to give a general understanding of brain dominance.

APPENDIX C

Surveys, Questionnaires, and Instructional Sheets

B. (Suitable for Teenagers and Adults)

- Yes ___ No ___
- Yes ___ No ___
- Yes ___ No ___
- Yes ___ No ___
- Yes ___ No ___
- Yes ___ No ___
- Yes ___ No ___
- Yes ___ No ___
- Yes ___ No ___
- Yes ___ No ___
- Yes ___ No ___
- Yes ___ No ___
- Yes ___ No ___
- Yes ___ No ___
- Yes ___ No ___
- Yes ___ No ___
- Yes ___ No ___
- Yes ___ No ___
- Yes ___ No ___
- Yes ___ No ___
- Yes ___ No ___
1. Are you better at remembering faces than names?
 2. When you're presented with a toy or piece of furniture to assemble, are you likely to discard the printed directions and figure out how to build it yourself?
 3. Are you better at thinking of ideas if you're left alone to concentrate, rather than working with a group?
 4. Do you rely mostly on pictures to remember things, as opposed to names and words?
 5. Do you have especially acute hearing?
 6. Do you cut the labels out of clothes? Do you favour garments that are especially soft and well worn, finding most clothing too rough or scratchy?
 7. Do you tend to put yourself down a lot?
 8. When you're asked to spell a word, do you "see" it in your head rather than sound it out phonetically?
 9. When you're studying a subject, do you prefer to get the "big picture" as opposed to learning a lot of facts?
 10. Are you good with puzzles and mazes?
 11. Can you imagine things well in three dimensions? In other words, can you visualize a cube in your mind, rotate it, and view it from every angle without difficulty?
 12. Were you considered a late bloomer?
 13. Did you need to like your teacher to do well in his or her class?
 14. Are you easily distracted to the point that you find yourself daydreaming often?
 15. Are you a perfectionist to the point that it gets in the way of trying new things?
 16. Are you ultra-competitive, hating to lose more than most people do?
 17. Are you good at figuring people out? Do others tell you that you're good at "reading" people?
 18. Is your handwriting below average or poor?
 19. Were you a late walker, or did you have other delayed motor skills as a child?
 20. When you're in a new place, do you tend to find your way around easily?

The more "yes" responses, the more to the right you will be on the left-right brain continuum. In general, 0-4 yes answers indicate very left-brained, 5-8 somewhat left-brained, 9-12 whole-brained, 13-16 somewhat right-brained, and 17-20 very right brained. Note: This is not a scientific test; its purpose is to give a general understanding of brain dominance.

APPENDIX C

Surveys, Questionnaires, and Instructional Sheets

Implications of Learning Style**Left-Brained Children in the Classroom:**

- **tend to do well in school**
- **thrive in classrooms with much listening but not much active participation**
- **enjoy talking and writing things down**
- **find it easy to grasp rules of spelling, grammar, and punctuation**
- **master foreign languages more easily**
- **tend to excel in timed testing situations and at solving problems that involve logic**
- **as children, prefer group projects rather than working on their own; as adults, become joiners and are quick to embrace group ideology**
- **like making and following rules**
- **have a greater tendency to accept and appreciate what they hear and read rather than questioning and thinking independently**
- **like the familiar and predictable**
- **often feel uncomfortable with new ideas, challenges, and surprises**
- **shine in jobs that involve routine**
- **worst when a crisis erupts that calls for creative problem-solving.**

This is the profile of the typical school-teacher.

Day-to-Day Attributes of Left-Brained Individuals:

- **love to make lists**
- **perform well in middle-management positions**
- **are highly logical and analytical**
- **usually reliable**
- **are excellent at showing up every day**
- **not especially imaginative**
- **may be uncomfortable with challenges, new ideas, and shifts in routines**
- **prefer to function in an auditory world (but have *some* ability to think in pictures)**
- **can easily recall names from their distant past but struggle with face or details**
- **tend to store information in names and words rather than images**
- **may give directions by reciting a list of street names or numbers of blocks rather than drawing a map or describing landmarks along the way.**
- **think sequentially: step A leads to step B, and step B leads to step C**
- **prefer to be told, step by step how to complete a task rather than demonstrated**
- **learn in a part-to-whole fashion**
- **digest information piece by piece until there's an "Aha!" when they get the big picture**

APPENDIX C

Surveys, Questionnaires, and Instructional Sheets

The Whole-Brained Individual:

- **in the middle with strengths of the left-brained population as well as the strengths of the right-brained individuals**
- **able to shift tasks to the hemisphere of the brain best equipped to tackle them**
- **are efficient and able to sequence well enough to follow reading directions or do a logical sequence exercise**
- **enjoy creative abilities and can paint, create music, and use their intuition**
- **has the holistic ability to solve larger problems and the attention to detail to apply it to a solution**
- **sees both the forest and the trees**
- **limitations include lacking the great organizational strengths of the left-brained individual and the creative brilliance of the very right-brained subject.**

The Right-Brained Individual:





- **the more right on the continuum, the more intuitive and random in processing info**
- **more apt to store information primarily in pictures**
- **when asked to recall an event or person, will flash instantly on an image and often remember the minute details**
- **has an excellent visual memory and uses “lists or notes” as more of a safety net**
- **diminished ability to perform logical, linguistic tasks (great with pictures and weak with words)**
- **may experience delay in auditory processing as he struggles to turn the teacher’s words into a mental picture (ie hears steps 1,2,3 but has auditory lag and misses steps 4,5,6, appearing not to be paying attention)**
-

APPENDIX C

Surveys, Questionnaires, and Instructional

Sheets

FIGURE 6.13–6.16
"STYLE SYMBOLS" DEMO

<p>One style uses the five senses and thinking. The symbol of this style is the hand. We use the hand to symbolize these students because they like to learn through hands-on activities, and they like following directions one step at a time. These learners like to be told or shown what to do; also, they like activities that have right or wrong answers.</p> 	<p>A second style likes to learn with the five senses and feelings. The symbol for this style is the heart. We use the heart to represent this style because these students like to learn with their friends. They like to learn about people and how they feel. They like questions that ask about their feelings. They also like to be shown what to do, but like to talk and work with others as they learn.</p> 
<p>A third style likes to learn through the sixth sense—intuition—and thinking. The symbol for this style is the head. We use the head to represent this style because these students like to learn by thinking about things. These students like to solve problems and explain things. They enjoy questions that ask them to explain how and why things work.</p> 	<p>The last style uses the sixth sense—intuition—along with feeling. The symbol for this style is the eye. We use the eye because these students love to use their imagination to see things that can't be seen by the senses. They like activities that allow them to pretend and to create their own ideas. They also like to choose their own projects and to make things that are new and different.</p> 

Source: Silver, H., et al (2000)

APPENDIX C

Surveys, Questionnaires, and Instructional Sheets

Sample Questions/Activities Developed Using Bloom's Taxonomy

	Primary Birds of Prey	Junior Flight	Senior Women in Society
Knowledge recalling or recognizing information from memory	Describe the beak of a bird of prey. What are the names of birds of prey we have studied?	Identify the important elements of wing design that we have discussed.	Describe the role of women in ancient Greece . . . in medieval Europe . . . during World War II . . .
Comprehension understanding meaning, changing information from one form to another, discovering relationships	Outline how birds of prey use camouflage to survive. Compare the beaks of the owl and eagle.	Restate what you know about wing design of paper airplanes while looking at a 747.	Outline some of the changes that have taken place in women's roles across the centuries.
Application using learning or information in new situations	Make a chart of a bird's environment, its family life and food.	Construct many paper airplanes. Record the effect of changes in wings.	Interview a woman from a different era in a role play.
Analysis separating information into basic parts so that its organizational structure can be understood: identifying elements and relationships	Classify these birds of prey by their hunting methods.	If we look at a diagram of a bird and a plane, what parts are related?	Correlate a famous woman with the values and era she lived in. What factors ensured her place in history?
Synthesis combining parts into new or original pattern; involves creativity	If we were to write a factual book on birds of prey, what information would be important to include? Design a table of contents for a book like this.	Design an aircraft of the future. Create a prospectus outlining the benefits, uses and superior features of this aircraft.	What impact might media/advertising have on the perceived roles of women today? Transform a present day TV commercial by infusing new values.
Evaluation judging whether or not something is acceptable or unacceptable according to definite standards	If you were a small animal, which bird of prey would you think the fiercest? Why?	Judge the entries in order to award a research grant. What criteria would you use? Judge the designs and defend your selection.	If you were to write a letter to the editor on the issue of all-girl schooling, what view would you take and how would you support your view?

APPENDIX C

Surveys, Questionnaires, and Instructional Sheets

Bloom's Taxonomy - Tracking Chart

Name.....	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation	Comments
Activity (e.g. - JOURNAL FUN! - Card #)	✓						

Source: Unknown