University of Alberta

Storytelling as a Springboard for Teaching Information Literacy

by

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ABSTRACT

The objective of this qualitative research project was to determine if storytelling would improve grade four students' information literacy. A storytelling program was presented to a class of 21 grade four students. This storytelling program was designed from a constructivist perspective and was used to guide the students through Carol Kuhlthau's process approach to research. It aimed to determine how introducing an affective dimension to learning would affect the research process. The data included interviews, focus groups, observations and the students' final projects. I demonstrate that the students became emotionally involved in the research process and were highly motivated to complete the research project. Because of the storytelling program the students felt that the research inquiry was authentic. Imagination impacted the research process, including being viewed as a source of information. The students successfully worked their way through the steps of Kuhlthau's process approach.

Acknowledgements

Many people have supported me in my efforts to carry out this project. Without their help I would not have been able to complete this research. I have always believed that any accomplishment is a collaborative effort. Creativity is a process of joining minds and ideas to come up with something new and innovative. This work is an example of this. Many ideas were shared and much support was offered to make this possible.

This project started in 1999 when I became an oral storyteller under the direction of my drama teacher, Carol Laycock. Many thanks are offered to her for her inspiring instruction.

In 2005 I began the laborious process of applying for a SSHRC grant. Thanks must be offered to Alvin Schrader, Margaret Mackey and Heidi Julien who guided me through my grant application. Of course, thanks are due to the Social Sciences and Humanities Research Council; without their financial support I could not have carried out this research.

Following my successful grant application, I went hiking in Skoki Valley, Lake Louise with my brother Davis. On this hike we discussed what shape my research project should take. Although I knew what I loved and what I wanted to investigate, this inspiring discussion with Davis gave my ideas a tangible shape and form. Thanks to Davis for his help in this creative process.

I have received endless support from many individuals in the writing of this thesis. Thanks to Julie West for her counsel and advice in as I planned the instructional component of this program. Thanks to Jeanne and David Yawney who have always been supportive in my educational endeavors.

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Chapter One: Introduction and Literature Review

Librarians and educators alike have long utilized storytelling for pedagogical purposes. In her documentation of the use of storytelling in North American libraries, Anne Pellowski claims that the first storyhour in an American library began in 1899 (1990). Although these storyhours followed a different pattern than what we see in libraries today, it was the beginning of a strong tradition. Pellowski's book *The World of Storytelling*, along with its Canadian counterpart, *Burning Brightly*, document the beginning of the contemporary storytelling tradition in North America (1990; Stone 1998). Furthermore, a substantial amount of literature exists demonstrating how to use storytelling in schools and libraries (Cooper & Collins 1992; Grugeon & Gardner 2000; Kavanaugh 1997; Norfolk et al. 2006; Zipes 1995; Zipes 2004). This literature often claims that storytelling is intrinsically beneficial for children and will aid them academically (Egan 1989; Zipes 2004). Unfortunately, there is very little research to validate these claims. Furthermore, the existence of this literature does not indicate that storytelling is widely used or recognized as a valid medium for instruction. While there is some scholarly literature to substantiate the use storytelling for educational purposes, more is needed. By investigating the value of storytelling in teaching information literacy, this research will make a substantive contribution to the body of knowledge pertaining to storytelling and education. Furthermore, it applies constructivist theory to storytelling as a means of information instruction in a way that has not been used in the past. As an original concept, this research is important to expanding information theorists' knowledge of information literacy research.

Although there is little existing research pertaining to storytelling, this research study builds on what does exist. I have examined relevant research and theories in the areas of information literacy and learning theory. The following literature review will cover this literature, beginning with storytelling. Kieran Egan, an educational theorist, has contributed substantially to the theoretical framework of this project, and therefore will be highlighted in this section. Following the discussion of storytelling the literature review will highlight information literacy. Carol Kuhlthau's process approach will receive special attention. Other information theories and theorists will be reviewed and finally, my research problem will be presented.

Storytelling

In 1986 the Ontario Ministry of Education funded research to investigate the value of the arts in education. This study involved presenting a 20-30 minute story-reading session each day to an inner-city grade one class. The intervention lasted for 12 weeks. At the end of the intervention the children were given a vocabulary test, asked to rearrange the scrambled pictures from a story, and asked to recall one of the stories they were told. The scores from the children who were part of the intervention were compared with scores from a control group. The children who had had stories read to them daily surpassed the control group in all areas, especially vocabulary (Wright & Young 1986).

Frances Smardo has also conducted research in the area of storytelling. In 1982 she produced a work that considered whether children were able to comprehend more from an in-person storytelling session as opposed to a

videotaped storytelling session or one offered via 16 mm film. Smardo's research (1982) examined a group of 437 children between 3 and 5 years of age. The children were divided into different groups by type of storytime viewed and participated in the storytime session once a week for a period of six months. A pre- and post-test were administered to examine the language skills of the children. The emergence of improved technology has created a need to reinvestigate this question as some of the problems experienced in the study were a result of technological inefficiencies. Still, the study demonstrated that the children who took part in the live storyhours showed more improvement in their post-test scores than children who were part of a video or film storyhour. Perhaps more important is the finding that the children in the control group, or those who did not participate in any type of storyhour, scored significantly lower on the language skills test than those who were part of a storyhour (Smardo 1982).

Short of these two articles, very little scholarly research in the area of oral storytelling exists. As Frances Smardo Dowd points out, despite the prevalence of storytelling in libraries, there is little to no research to measure the influence of storytelling (1997).

As previously mentioned, numerous theorists and educators have expounded the advantages of storytelling. Specifically, Kieran Egan is the author of many books and articles on storytelling (Egan 1989, 2001, 2002, 2005, 2007). Egan believes that storytelling is a teaching tool that needs to be utilized more than it is. The basis of his argument lies in his belief that imagination is the most efficient and effective tool of instruction (2007). Egan emphasizes the importance

of utilizing children's natural gifts to teach them, imagination being chief among these (1989, p. 7). He argues against what he calls the "inappropriately mechanistic way of thinking about teaching" that ignores the power of the imagination as a learning method (1989, p. 1).

Egan has developed a model of teaching that is based on the imagination. He explains the functions and capabilities of the imagination, illustrating why it is a vital learning tool. Because our ability to think abstractly is a function of the imagination, we can use it to think objectively. Imagination allows us to consider other peoples' feelings, and therefore we can draw on the imagination to attempt to understand someone else's perspective (2007, p. 16-17). Furthermore, imagination increases our memory. Egan argues that new information is learned in the context of ideas and feelings. Therefore, utilizing the imagination to create context and invite an affective dimension to education would improve students' ability to absorb new information (2007, p. 13-14). Egan draws a connection between imaginative learning and an increased level of emotional involvement in the learning process. He states that an affective teaching model will help students mature emotionally, improve motivation to learn, and increase their memory (2007, p. 19).

In promoting the idea of using imagination in teaching, Egan places faith in children's ability to handle abstract concepts. This notion is in opposition to the common model of teaching that moves children from the concrete to the abstract. Egan agrees that a young child may not be able to adequately define or explain an abstract concept; however, "they use such concepts clearly in making sense of all

kinds of stories" (1989, p. 12). A child's ability to understand a story and apply it to a real life context attests to their ability to understand abstract concepts.

Egan's theories support my belief in the pedagogical use of storytelling. He claims that because storytelling can actively engage children's minds in the teaching process, it is a powerful teaching tool (Egan 1989, p. 7). Thus, his theories have provided a framework for this research. This project has explored these ideas further and verified many of Egan's points.

Information Literacy

Kuhlthau and the Process Approach

In her research on the factors that make a successful library media program, Carol Kuhlthau found that a constructivist view of learning is critical (Kuhlthau 1993). Kuhlthau's research looks at the search process from the user's perspective. In 1989 Kuhlthau published research from a series of five studies that examined the user's experience of searching for information. Kuhlthau investigated high school seniors, college and university students, as well as school and public library users. Her data was qualitative and quantitative. Using this data, Kuhlthau developed the process approach, a series of six stages that users experience when searching for information. It is intended to include affective as well as cognitive aspects of information seeking. In addition, this model reinforces the idea that the search process is about creating meaning (Kuhlthau 1989).

The process approach begins with the 'initiation' stage. In this stage the researcher recognizes a lack of knowledge and is likely to have feelings of

uncertainty. This gives way to the 'selection' stage during which the researcher weighs perspectives and anxiety increases until a choice is made. The 'exploration' stage follows. Feelings of confusion and doubt are common in this stage. Because the researcher is likely to encounter information that challenges previously held beliefs, this stage can be threatening and frustrating. 'Formulation' is the next stage and involves establishing a focus. This generally results in the topic becoming more personalized. Gathering information and defining the topic further or the 'collection' stage is the second to last stage. Feelings of confidence increase during this process and continue to increase as the user moves into the last stage, 'presentation.' Relief is common in this final stage. Part of this stage is summarizing the research and organizing the information in preparation for completing the work assigned (Kuhlthau 1991, p. 368).

Kuhlthau later attempted to evaluate whether or not libraries trying to incorporate the process approach were successful and why. Kuhlthau trained library media specialists who then volunteered to implement the process approach into their programs. She then used questionnaires to determine the successes and problems they were having. Problems included lack of time, confusion of roles and poorly designed assignments. Successful elements included a team approach with support from all school staff, grounding in constructivist theory, a desire to inspire life-long learning, and competence in designing activities (Kuhlthau 1993).

Inspiring life-long learning moves information literacy from the context of library skills to information skills (Kuhlthau 1995, p. 49). This change in

approach is linked with the inquiry approach to learning that is intended to prepare students for learning throughout their lives (Kuhlthau 1995, p. 49). Instead of focusing on specific library abilities such as using a catalogue or understanding the Dewey Decimal system, this approach draws attention to critical thinking, recognizing the need for information, and knowing what to do with information when it is found (Kuhlthau 1995, p. 49). In addition, it embraces a constructivist stance that puts discovery of meaning in the hands of the researcher, focusing on process rather than product.

Joy H. McGregor also approaches information literacy from a constructivist perspective. In 1994 McGregor published research which investigated the intellectual processes involved in research. Qualitative methods were used to examine the thinking processes of high school students in their research. Despite the fact that McGregor claims the importance of higher-level reasoning skills in researching, she found that most students do not instinctively operate in a metacognitive manner. Moreover, students were seen to value product over process. In addition, the nature of the question to be answered affects the level of thinking used (McGregor 1994). McGregor's findings illustrate the need for assignments which focus on process. Additionally, McGregor states that a metacognitive environment that enables young children to develop sound thinking habits is needed (1994, p. 132). These points are consistent with Egan's theories of utilizing storytelling to teach. As a mirror of life, stories invite the viewer to draw connections between fantasy and reality. This creative method of finding meaning is a complex intellectual process.

Focus on Inquiry

Alberta Learning has been a proponent of inquiry-based learning since its 1990 model *Focus on Research*. In 2004 this research model was updated to the model presently used, *Focus on Inquiry*. Based on the work of inquiry leaders such as Carol Kuhlthau, Joy McGregor and others, this model synthesizes 30 years of research (Alberta Learning, 2004 p. 9).

Focus on Inquiry follows research steps very similar to Kulthau's information process model. These steps are planning, retrieving, processing, creating, sharing and evaluating. The stages of the information process have been molded into a model meant for Alberta teachers to use in guiding their students through research. An important aspect of this model is reflecting on the research process. Reflection is to be carried on throughout the whole process. By engaging students in this metacognitive process, *Focus on Inquiry* aims to increase students' awareness of the process they are going through and the skills they are using (Alberta Learning 2004, p. 3).

While this model is similar to Kulthau's model, the following differences are noted. *Focus on Inquiry* takes students through to not only the completion of the project, but to the evaluation of the final product. In contrast, the process approach ends when the student is prepared to begin the final presentation of the project. Also, Kulthau's model provides much more time for broad investigation in the initial stages of inquiry. Finally, the *Focus on Inquiry* model provides very specific expectations for the students in each stage. *Focus on Inquiry* was

developed for the explicit purpose of helping teachers guide students through inquiry, and therefore, employs a more guided approach to inquiry.

Information Power

In 1998 the American Library Association (ALA) published a set of guidelines for School Library Media Programs entitled *Information Power.* These standards stress a planning philosophy, incorporating the needs of the school curriculum, and partnerships between school personnel and the school library media specialist. In 1998 *Information Power: Building Partnerships for Learning* was published. This new text gives added attention to the idea of creating lifelong learners (American Association of School Librarians 1998, p. vii). It provides a series of standards and examples of applicable information problems. These standards are followed by statements describing how they can be integrated into the curriculum. The tangible information problems and the connections to curriculum make it clear that this manual is action oriented and emphasizes the need for information skills to be tied to the curriculum. Principles of the school library media program's responsibilities to learning and teaching, information access, and program administration are also provided (American Association of School Librarians 1998).

The philosophies put forward by the ALA in this manual support the idea of life long learning. In addition, these standards are meant to take a holistic approach to information literacy. The ALA's approach to these standards demonstrates a change in information literacy philosophy. Constructivist

underpinnings are evident in an attempt to make the standards as interpretive as possible.

Teaching Information Literacy

While it is clear that information literacy standards for schools exist, the question of whether or not they are being utilized remains. This inquiry is addressed by Marlene Asselin. In 2005 Asselin sent questionnaires to grade 6 and 7 teachers and teacher librarians in a western Canadian province. The questionnaires were aimed at discovering information literacy skills and pedagogical factors. Asselin wanted to discover whether or not information literacy was being taught. Asselin found that a significant amount of instruction in schools focused on how to access and locate information and select appropriate resources for particular purposes. What is needed is more emphasis on ethical dimensions of research as well as critical thinking. In addition, more support from districts and schools needs to be given for teaching information literacy. Many teachers felt that there was not enough time to teach information literacy (Asselin 2005).

Similarly, Danley, Forde, Lahmon, and Maddox surveyed 126 school librarians in 18 countries to find out what techniques for teaching information literacy are used. They found that the creation of lifelong learners is a goal of school librarians all over the world and that school librarians see themselves as possessing a constructivist's perspective (1999, p. 130). Data revealed that most school libraries are understaffed and that school librarians spend less than one

quarter of their time conferring with teachers about their programs (Danley et al. 1999).

Evaluation of Skills

An important component of teaching information literacy is evaluating what students learn from information literacy lessons. Tracey Foggett investigated the degree to which students in grades 4 and 5 learn information literacy skills. Foggett utilized qualitative methods in her study. These included brainstorming, concept mapping, observation and questionnaires. Thirty students participated in the research (Foggett 2003).

Foggett found that students understood the concept of information literacy, relating it to ideas such as the internet, television, books, libraries etc. Observations revealed at least a basic level of information literacy. Foggett reports common behaviours such as skimming books and referencing encyclopedias. The interviews revealed that all the students were dependent on asking other people to help with the information search process. In addition, most students relied on non-fiction books as opposed to the internet for information sources (Foggett 2003).

In her conclusion, Foggett optimistically stated that most children have basic information searching skills (Foggett 2003, p. 61). This research provides a preliminary understanding of information literacy skills and serves as a spring-board for future studies.

In further investigation of user perceptions of information literacy, Kuhlthau conducted a study to determine how students believe the library helps

them. Thirty-nine schools across Ohio took part in this study. A survey was used and qualitative data collected from students in grades 3 to 12. This data revealed that students link the school library directly to their schoolwork. The most common constructs revealed in student's responses included: the belief that the library saves time with schoolwork, the library enables students to meet their deadlines, and it provides a study environment. In addition, students believe that the library removes stress from learning (Kuhlthau & Todd 2005, p. 83). Kuhlthau's research findings emphasized the school library as an active agent in helping students reach their academic goals. She discovered that interventions such as demonstrating specific library skills served little purpose without directly stating how they will help students complete their schoolwork (Kuhlthau & Todd 2005).

Research Problem

The works referred to in this literature review provide an overview of the literature that is relevant to this research. The fact that there is little research pertaining directly to storytelling demonstrates the need for this study. Still, this research built on the existing literature dealing with storytelling and information literacy. Kuhlthau's key work on information literacy provides the grounding for this research, theoretically as well as methodologically. In addition, the information literacy standards that have been developed by the ALA as recorded in the text *Information Power: Building Partnerships for Learning* provide a measurable definition of information literacy (1998). Finally, this literature provided methodological examples.

My research examined how storytelling can be used in the school library to improve information literacy. Specifically, it investigated whether or not a storytelling program designed to demonstrate the process approach will increase grade four students' understanding of the information process.

In the past, school library media programs attempting to implement information literacy programs have struggled with creating assignments that encouraged the process approach (Kuhlthau 1993). Furthermore, reports on information literacy programs list students' "emotional attachment" to the project as an element of success (Kuhlthau 1993). Learning theorist Kieran Egan argues that storytelling is an effective teaching method because of its appeal to children's natural way of learning and its affective dimension. These characteristics and theories attest to the potential of a successful information literacy program based on storytelling. My study considered whether this is indeed true. In the following section I describe how my study was carried out, methodologically as well as ethically.

Chapter Two: Research Methods

In the 1980s educational theory began to emphasize the concept of a workable truth in which reality is the sum of a person's interpretations (Danley et al. 1999). As educationalists began to subscribe to the constructivist model, their pedagogical focus turned to process instead of product and experience as opposed to outcome. Constructivism turns the focus of instruction to helping the learner become a self-directed problem solver (Danley et al. 1999, p. 3). These ideas parallel Egan's educational theories closely. Because storytelling invites children to extract their own meaning from a presentation, it is a constructivist style of teaching.

Numerous studies on teaching information literacy have emphasized the importance of a constructivist view of learning in order for instruction to be successful (Kuhlthau 1993; Danley 1999). Egan and Kuhlthau both outline a constructivist model in their literature and these ideas have informed this study (Egan 1989; Kuhlthau 1993). This literature provided a theoretical basis for my research and practical guidance for its design. The role of constructivist theory in information literacy is evident through examining the effect it has had in shaping information literacy standards and in fostering information literacy instruction in schools. Furthermore, the important discoveries made in regards to information literacy as outlined by Kuhlthau, Asselin, and others, in addition to information literacy standards, informed the design of my storytelling program.

Research Questions

This study addressed the following questions:

1. Can a storytelling program incorporate the process approach successfully?
2. Can participating in a storytelling program raise grade four students' awareness of the stages of the process approach?
3. Will students participating in a storytelling program learn how to analyze sources critically?
4. Will students participating in a storytelling program be able to approach the research process critically?
5. Will students become emotionally involved in the information literacy program?

Definitions

The following definitions guided this study:

- *Information Literacy:* as defined by the American Association of School Libraries, is the ability to find and use information (1998). Nine standards of information literate students are articulated by the American Association of School Libraries in *Information Power: Building Partnerships for Learning.* These standards will be considered as part of the definition of information literacy in this study. They include: the ability to access information efficiently and effectively, to evaluate information critically, to use it creatively and accurately, to pursue information related to personal interests, to appreciate literature and other creative expressions of information, to strive for excellence in information seeking, to recognize the importance of

information to a democratic society, to practice ethical information use and to participate in groups that pursue and generate information (1998). This study utilized this definition of information literacy.

- *Storytelling:* In the context of this study storytelling is completely oral. It is considered a revival form of the more traditional form of storytelling where it is an integral means of communicating the information and customs of a specific culture's history and beliefs over generations (Pellowski 1990). In this study, storytelling is an oral narrative taken from a text but not memorized, with a beginning, middle and end.
- *Process Approach:* This method of describing the information process is taken from the research and theories of Carol Kuhlthau. Please see page 5 of the literature review for a detailed definition of the process approach.

Research methods used in this project were observation, interviews, and focus groups. Overt observation was conducted in each of the storytelling sessions. Five thirty-minute interviews were conducted with the students, two forty-minute focus groups with four to six participants were conducted with the students, and two one-hour interviews were conducted, with the teacher and the teacher/librarian respectively. The students' written assignments were also included in the data set.

Storytelling Program

A storytelling program was prepared specifically for the purposes of this research. This program consisted of nine sessions, five of which were 90 minutes in length and four that were 60 minutes in length. The program was delivered to

25 students in a grade four class. Of the 25 students, 21 chose to be research participants. The storytelling program took place at the beginning of the school year. This is significant because the students had not received much instruction at a grade four level yet. The storytelling program was conducted over the course of six weeks. Data collection was then carried out in the following three weeks. In each session between one to four stories were told. All the stories told centered on the theme of the Lost Lemon Mine. The Lost Lemon Mine is an Alberta legend and therefore, the storytelling program supported the social studies curriculum (Stewart 1993). The grade four curriculum focuses on Albertan history and cites storytelling as a means for learning this material (Alberta Education 2005). These storytelling sessions were linked to an assignment designed to guide the students through the process approach in order to complete a persuasive research paper. By using a story for lost treasure, this storytelling program was a metaphor of searching for information.

Content of the Storytelling Sessions

The students were welcomed to the storytelling program and told that they would be solving a mystery. They were invited to search for the Lost Lemon Mine. This meant conducting research for the purpose of proving whether or not the Lost Lemon Mine exists, and if it does, discovering its location. The students were asked to provide evidence to support their claim. In each class stories were told that provided more information about where the mine could be located. The stories were based on fact and legend. The stories centered on themes such as expeditions that went in search of the Lost Lemon Mine, the Canadian gold rush,

First Nations legends, stories involving geographical locations and landforms relevant to the Lost Lemon Mine legend, etc.

After the stories were told the students were given time to work on their assignment. In five of the sessions a short lesson (approximately 20 minutes) was given, highlighting a skill needed for the completion of the assignment. These 'mini-lessons' covered skills such as creating a bibliography, assessing information credibility, using databases, note taking and keyword searching. Following the lessons students were invited to "explore" or find information in the library or on the computers. During the last two weeks they were invited to continue exploring or to write their paper. (For more details about the stories told and mini lessons delivered please refer to appendices N-P.)

The Assignment

A notebook casually referred to as the "red booklet," that was designed as a guide to the assignment, was given to each student. The assignment was very loosely framed, allowing the students to research any aspect of the Lost Lemon Mine they desired. The unifying factor was the research question—deciding on a location for the Lost Lemon Mine, or conversely, proving that it does not exist.

The stories told provided a springboard for further research, i.e. "clues." Using the clues, the students formed a focus and conducted further research on their chosen area of interest. The assignment required the students to write a one-page persuasive report explaining their claim. Their final report included a title page and bibliography. The students' teacher graded this paper and included the grades in their progress reports. On the final day of the storytelling program, each

student placed a sticker on a map of Alberta and told the class where they believed the Lost Lemon Mine was, or they explained that they did not believe the Lost Lemon Mine existed.

Incorporating the Process Approach

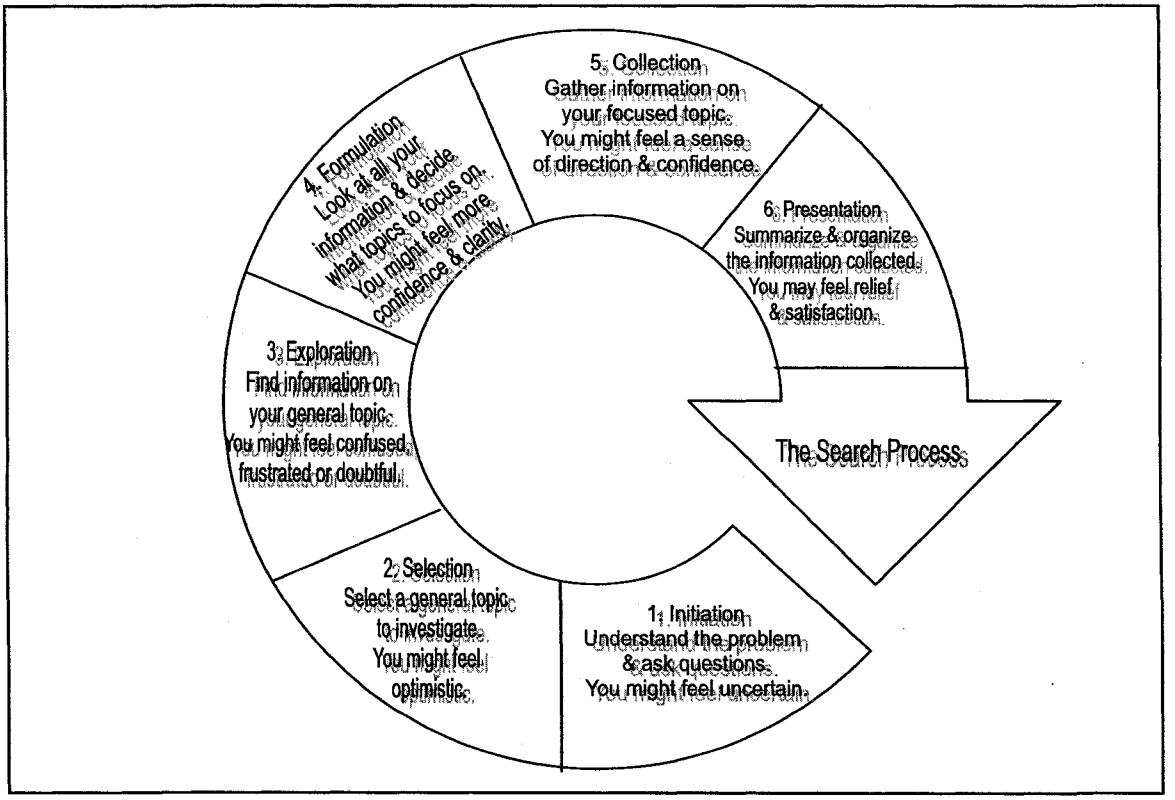
This program was designed to foster a genuine inquiry for the students as opposed to being an imposed research question. To accomplish this, the assignment was framed as a treasure hunt. Because the assignment was framed as a treasure hunt the students were invited to use their imaginations. In addition, the idea of a treasure hunt acted as a metaphor for an information search and reflected the theme of the assignment. Several materials were used to demonstrate the process approach to the students. First, a colorful visual aid was used in each class. This visual aid was an arrow in a circular shape with a section partitioned off for each step of the process approach. On the partitioned section the name of the step was written, followed by a brief description of the actions typically taken in that step and the emotions that typify that step (Figure 1). Second, the notebooks given to the students outlined the process approach. On a cover page the complete process was portrayed. Following this was a section for each step of the process. Within these sections were prompts to lead the students through each respective step. These prompts included questions, examples and space to take notes or write.

During the first storytelling session the process approach was explained. It was presented as the steps required in solving a mystery. Support for conveying these concepts included the visual aid (Figure 1) and the cover page of the

notebook with the diagram and explanation of the process approach. Following this description of the process approach, I explained that as the students worked through the assignment, they would also work through the steps of the process approach. Again, I used the visual aid to point out the first step and invited the class to immediately begin working on that step. I then referred the students to the corresponding section in their notebooks, i.e. the "initiation" stage.

Figure 1

The Search Process visual aid used in the classroom



A similar pattern was followed throughout the remainder of the program. Each time I came I used the visual aid to demonstrate what stage of the process approach the class was working on. In addition, the sections of the notebook were used to guide the students through the assignment. Each day the class would read

the prompts in the notebook demonstrating the work needing to be done that day. It should be mentioned that not all students worked at the same pace. While most students followed the structure I laid out, some students required more time in certain stages than others. To address this I would simply tell the class that they should work at their own pace. My goal was to allow the students as much freedom as possible in working through the stages of the process approach. Therefore, it was necessary to allow students to take as much time as they needed in working through the various stages. However, the students generally moved through the assignment uniformly.

Many of the skills in this assignment were new to this class. This was the first time they had written a research paper of this nature and as a result it was a very demanding exercise for them. To meet the demands of the workload, the teacher/librarian and teacher met with the class for supplementary classes on four to six different occasions. In addition, one-on-one time was given to specific students with the teacher and/or teacher librarian to help them with their individual needs.

In the initial plan I had intended to have the students reflect on how they used the process approach to arrive at their choice and to write this in a story format. As I approached the assignment with the students, it was apparent that the challenge of simply writing a one-page summary of their research was sufficient for the time allotted. In addition, prior to beginning the program, a discussion with the teacher and teacher/librarian made it evident that having the students write a short story of their experience was beyond the scope of this project. While the

teacher explained that this would be possible, it would have demanded extra time and energy from the teacher and students. I determined that this additional work would increase the potential for this project to become too taxing for the teacher and the students and abandoned the idea.

Conducting Child-Centered Research

Conducting research with children necessitates a close consideration of the unique characteristics of children and childhood. Children's distinctive roles and attributes have significant impacts on research theory, methods, and ethics. Furthermore, the reciprocal relationship between children and the construct of childhood places children in a unique context. Not only do children constitute a social group, children are a minority (Oakley 1994). As a minority group without political power, physical strength, or social influence, children are vulnerable. The construct of childhood is built on the premise that children are different from adults. Because children are in the process of becoming adults, they are often defined by what they are not instead of what they are (James et al. 1998). This definition by default implies that children are incomplete, which threatens to bias researchers. As Anne Oakley points out, the phrase 'childish' or 'childlike' is often applied to adults in a demeaning or debasing way (1994). Indeed, past research with children has been "criticized for conceptualizing children as incompetent, unreliable and incomplete, as mere objects to be studied" (Barker & Weller 2003). More recently, a paradigm shift has emphasized children as subjects of research as opposed to objects (Christensen & James 2000). As children's lives are explored largely through the eyes of adult proxies, researchers

are attempting to adopt a child-centered perspective in order to give a voice to children. I strove to maintain a child-centered perspective throughout this research project. This was manifest through reflexivity and the research methods utilized.

Reflexivity is fundamental to adopting a child-centered perspective. As a method of exploring one's own subjectivity and raising awareness of the impact the researcher has on interpreting data, reflexivity allows those working with children to be cognizant of their own bias and their pre-existing ideas of childhood (Somekh & Lewin 2005). Part of reflexivity is accepting children's voices as valid and allowing children the opportunity to express themselves in the research setting. Traditional research methods have been called 'adultist' because they rely on literary skills that many children have not fully developed (Valentine 1999). Utilizing skills children are not fluent with will only intimidate them and inhibit their ability to express themselves. By providing alternate methods that make use of children's practiced abilities, such as drawing, photography, conversation, narrative, etc., researchers permit children to express themselves in a way that makes sense to them (James et al. 1998). Making research relevant to children's lives places faith in children by allowing them to determine what is important to them.

Using children's language is another important method of conducting child-centered research. Not only does it ensure that children understand what is taking place, it minimizes the imbalance of power between adult and child. Researchers have also involved children in the research process by ensuring that they receive a report of the results in language that is relevant to them (Valentine

1999). It is also argued that using multiple methods is an effective way of conducting child-focused research. Doing so opens numerous avenues for self-expression and eliminates the exclusion of respondents who may not react positively to a specific method (Darbyshire, et al. 2005). Each of these techniques was utilized in this study.

As discussed earlier, many adult methods focus on literary skills which children may not be fluent with. Such methods exaggerate the power imbalance between adults and children. In addition, a one-on-one interview may be uncomfortable for some children. Using methods that focus on skills that children are comfortable with can diffuse this discomfort. For instance, using group interviews in place of a one on one interview allows children to have support from peers in what can be an intimidating situation (James et al. 1998). Relying on narrative experiences from children is an effective way to avoid fracturing children's experiences. Research methods used in this project included one on one interviews, in conjunction with focus groups and observation.

In addition to selecting child-centered methods every researcher must examine the pre-existing values and assumptions about childhood she possesses. As James and others explain, it is not enough to choose the best methods and communicate clearly; a researcher must make every effort to be aware of any bias before beginning research (1998). Without an awareness of bias, it would be impossible for a researcher to avoid a skewed interpretation of data. Furthermore, it would be impossible to disseminate results honestly and with an open admittance of possible bias to the reader.

I have attempted to avoid bias through self-reflection throughout this project. I am aware that prior to beginning this research it was my belief and hope that this storytelling program would be successful. I believe that storytelling has intrinsic educational value and my objective was to demonstrate this by using storytelling to help my research participants through the research process. Regardless of my own beliefs, I have attempted to maintain an open mind throughout this project. I have made an effort to continually check myself for bias in data collection and analysis. I attempted to maintain an objective outlook throughout the project and tried to ensure that my interview questions were not leading. I attempted to check my bias by continually reading my research questions to remind myself that I was asking questions rather than looking for specific answers. Through maintaining an awareness of my bias and the need for objectivity I believe that I have been able to remain as impartial as possible.

Conducting Research in the School System

Because this study took place in the school system, it was necessary to consider the effect it had on the participants when selecting research methods to use. A central part of school culture is testing. Because of this, the data collection methods might have been regarded as part of students' regular workload. While the school environment can prompt greater attention and a more meticulous response from students, it can also leave students feeling as if their responses are going to be graded. It may change students' perceptions of confidentiality, or create a 'right answer' mentality (Christensen & James 2000). Scott reports that students' proximity to each other can also affect responses. Although responses

are supposed to be confidential, children are likely to discuss their answers with each other and be influenced by their peers (2000). In an environment so heavily regulated, where children are constantly measured and graded, it is not surprising that responses to research questions would be affected. The students' influence on each other was apparent throughout this research project as they collected information for their assignment. It was not unusual for a student to share a website they found with the class or for a group of two to three students to work closely together, sharing sources and ideas.

Children are often called on to answer questions that they do not have the answer to, and in such cases answering, "I don't know" can be considered uncooperative. Thus, it is the responsibility of researchers to explicitly state that responding with "I don't know" is acceptable (Scott 2000). In accordance with Scott's recommendation, I assured the students several times that saying "I don't know" or just not responding was perfectly appropriate. I also attempted to ensure that the questions were relevant and available to the students by writing them in language that conformed to their vocabulary. I attempted to conform to the student's vocabulary by using simpler words, smaller sentences, and more colloquial phrasing.

Conducting Interviews

Interviews and focus groups provide an opportunity to learn how children think and feel directly from their own point of view. However, they also present practical challenges. As relatively intrusive methods, many ethical cautions must be taken. Researchers must understand that working with children is not the same

as working with adults. Thus, many of the traditional standards developed for interviews and focus groups cannot be applied to children. This research project involved five 30-minute interviews, all conducted by me with students who were selected randomly. Selecting the interview participants randomly ensured that there was no bias in the selection of the research participants and that all the students had an equal opportunity to participate.

A successful interview depends on the level of trust established between the researcher and the participant. In any interview, a researcher hopes to learn their participant's point of view. As J. Amos Hatch explained, a qualitative researcher must "gain clear understandings of the knowledge 'insiders' use to make sense of their world" (1990, p. 252).

In order to develop a good interview relationship, building a rapport with research participants prior to an interview is standard (Greig & Taylor 1999). Approaches to building a rapport with children include spending time with the child before the interview, playing a game, demonstrating how the tape-recorder works, talking etc. (Lahikainen et al. 2003). While these techniques certainly have proven useful to many, they cannot work for all children. Often a child's reluctance to share her views with a researcher may be attributed to a lack of trust. Children are taught to be wary of strangers. Lori G. Irwin and Joy Johnson explored this idea in their study on interviewing children. They explain that

> Building a rapport with young children takes time, and we cannot expect that a first-time meeting with a child is going to see the establishment of a

> suitable rapport, particularly in our current social context, in which children are encouraged to be wary of unknown adults (2005, p. 824-824).

Fortunately the interviews conducted for this project took place after the storytelling program (in week seven) and the interviewees were already acquainted with me, their interviewer. Therefore, a level of trust was already established. While I cannot say how the interview would have differed had the students not known me prior to the interview, most of the students' comments and attitudes indicated that they viewed being interviewed as a privilege. This leads me to conclude that they already trusted me on some level. For instance, on day two of the interviews I arrived at the class and Kristi (all research participant names have been replaced with pseudonyms) looked at me with a smile and asked me excitedly if it was her turn to be interviewed. Her attitude indicated to me that she was looking forward to her interview. Similarly, when it was Daniel's turn to be interviewed he sat back in his chair appearing very comfortable and relaxed. He answered the questions with a great deal of ease and without hesitation.

Despite the fact that the students knew me prior to the interviews, I still did sense that for some, the interview setting was intimidating. For instance, when I presented the interview schedule to the students, one of the students told me that he would rather not participate as an interviewee. Without hesitation I told him that was not a problem and another student was selected in his place. Moments later, however, he appeared to have regretted his decision. His face looked distraught and he asked if he could be a 'back-up' in case other students did not show up for their interviews. I assured him that he would be invited to be

interviewed if another student was unable to keep their appointment. His mixed reaction reveals the complex emotions experienced by students when asked to part of an interview.

Other students' reactions to me in the interview indicated that they viewed me as an authority figure. Susan in particular behaved as if she had a desire to please me. In one instance she told me she did not know the answer to a particular question but that she could go home and ask her mother and tell me the next day. This demonstrates that although the students were very familiar with me, it was still necessary for me to do all in my power to help the students feel relaxed and comfortable answering the questions however they pleased, or not to answer at all if that was their desire. In the case of Susan, I informed her that she need not worry about answering that question and in other situations reassured her with phrases such as "no problem" and positive reinforcement. In all interviews I made an effort to show the students that I was not looking for any particular answer. I told them they did not have to answer a question if they did not want to and I used vocabulary I thought the students would be familiar with.

In order for the adult/child relationship to work in an interview setting, it is important that both parties understand and have a unified goal about the purpose of the interview. When dealing with children, this process will most likely take time and require a special effort to communicate in terms that reflect a child's strengths and abilities. While the niceties of small talk may be enough for most adults to build trust and gain an understanding of the context and purpose of an interview, children are less savvy and a standard introductory explanation may

not be enough for a child to understand what an interview requires of them (Irwin & Johnson 2005). It was expected that I would have multiple opportunities to discuss the purpose of the interview with the participants. In the initial explanations of the research project the interview process was described, as well as prior to conducting the interview. I came prepared to explain it in multiple ways (i.e. a verbal explanation as well as a written one).

In addition to the interview relationship, the setting of the interview can have a great effect on the perceptions of a child. Most interviews are conducted in a small, private space. This type of space may help to foster an intimate, confidential mood. Many children however, are accustomed to an active lifestyle that requires a larger space. Irwin and Johnson give an example of an interview with a young girl that did not follow this traditional model. Emerald's interview took place in her home. Throughout the interview she "tumbled on the sofa," "ran around the room," "left the room to get props," and never stopped talking (2005). In this case, confining her to a small space and asking her to sit would have stifled Emerald's energy and enthusiasm. In contrast, some children may be comfortable in a small space. Others may wish to sit on their mother's lap. Each of these situations is left for the interviewer to consider. Irwin and Johnson make the point that interview spaces must be catered to the needs of the child. Doing so means thinking beyond traditional interview spaces (2005). The location of an interview can have a great influence on how a child will behave. A comfortable child will be more likely to trust an interviewer and be more open. A child in a school will be affected by the presence of peers. If possible, a researcher should allow a

participant to determine the location of an interview. This will hopefully result in the child being in the most comfortable location for them. It is acknowledged that the location of the interviews for the purpose of this research project was limited by the space available in the school. After asking the teacher what spaces were available she provided the staff room and the boardroom. Knowing that it was likely that staff would be in and out of the staff room I opted for the boardroom. This was a small room with windows on two sides and one door. There was a medium size table and seven large leather swivel chairs around the table. Each time we came into the room I let the student sit first, selecting where they would like to sit on their own.

In addition to considering interview space, researchers must consider a child's age, socio-economic background and ethnicity in determining how to pose interview questions. For instance, very young children cannot distinguish between what is said and what is meant and therefore, any hypothetical questions would be problematic (Scott 2000). Some researchers believe that children respond better to general questions as opposed to direct questions (Brooker 2001). Melanie Mauthner suggests asking children to explain a routine such as walking to school or spending time with dad and to accompany these explanations with brief questions about feelings such as happiness, sadness or embarrassing moments (1997). Because children are more responsive when they are in control of the conversation, loosely guided interviews will elicit a more complete depiction of a child's world (Brooker 2001). However, in order to facilitate analysis and comparison between a series of interviews, some structure is necessary (Greig &

Taylor 1999). Thus, an interviewer must establish some balance between allowing a free-flow of speech and following prescribed guidelines with specific questions. In order to address relevant topics while still not following a rigid structure, many researchers use visual and activity-based aides.

A set of interview questions was developed prior to the interview and followed in each interview (see Appendices A and B for interview questions). However, I remained flexible and willing to vary from the interview questions if the interviewee guided the interview in another direction. In most cases this did not happen. Some of my questions were general, some specific and some were hypothetical. Because I did not know what to expect from the interviewees, I attempted to use a wide variety of questions in order to appeal to all different types of students. Rather than the types of questions I asked, I felt as if a student's willingness to respond was more dependent on their comfort level with the situation. It was apparent that the students who were more comfortable in the interviews were those who completed the Lost Lemon Mine project with greater ease and were more outgoing.

Finally, a common response from adults when listening to children is to try to help children communicate their ideas. Adults often give children words or complete their statements for them. Irwin and Johnson caution against this habit as it may replace a child's own thoughts with the interviewer's ideas (2005). Furthermore, although a child's ideas may not always make sense to an interviewer, it is the role of the interviewer to *listen* to what a child says not to guess what they feel (Mauthner 1997). I made a conscious effort to not complete

my interviewee's sentences for them. In many cases a student would not answer a question or have trouble remembering a word that they needed to describe something. In such cases I would give the interviewee time to finish answering a question and if they did not, we would simply move on to the next question. This was my way of allowing the interviewee as much control as possible, as opposed to trying to answer the question for them.

Conducting Focus Groups

It is important to distinguish the difference between information obtained in a focus group versus information obtained in an interview. A focus group enables the researcher to understand the views of a specific group as opposed to a personal opinion. The object is to encourage group interaction in order to obtain a variety of opinions, *not* to strive for group consensus (Large & Beheshti 2001). A researcher must recognize that a focus group will demonstrate the group's mode of thinking. It will not provide the kind of detailed personal account of how an individual thinks that is possible to achieve in an interview.

By including focus groups as well as interviews it was hoped that a wider variety of opinions would be voiced. In addition, it was hoped that tensions that exist when children are asked to confide to an adult would be dissolved when the children were invited to talk with their peers (Darbyshire et al. 2005; Large & Bheshti 2001). This definitely occurred for most of the students in the focus group. Those who were confident within the group spoke freely and appeared relaxed. The atmosphere of both the groups was playful and jovial. I received the

impression that the students felt like participating was a treat because they got out of class.

In this project, two focus groups were conducted with six participants and one facilitator (Morgan et al. 2002; Large & Beheshti 2001). I facilitated each group. One group was all boys and the other group was all girls. This choice was made in an attempt to minimize the effects of peer pressure, as recommended by Mauthner (1997). The focus groups were held after the completion of the storytelling program and assignment (in week eight). The focus groups were conducted at the school and in the space the school provided. Once again, they were held in the boardroom.

Just as in interviews, there is a delicate balance of power between the adult and child. It was my job as the facilitator to attempt to dissolve a pre-existing notion of superiority. Morgan and others attempted to dissolve this relationship by having their participants refer to them by their first name (2002). Throughout the whole storytelling program I told the students to call me Jilliane. Some did, but others chose to call me Ms. Yawney. Morgan and others also recommended the facilitator stand or sit with the children to maintain a level of equality with them and they tried as much as possible to use the same language as their participants (2002). Accordingly, I sat with the students at the table and ensured that I was not at the head of the table. I also attempted to maintain a vocabulary that was similar to theirs. The use of these techniques points out that an informal environment characterized by a sense of equality is necessary to engender a comfortable and safe environment conducive to an open discussion.

In these two focus groups it appeared that the students did not feel intimidated by me. It was interesting to see the difference in the students' attitudes caused by having a group as opposed to an individual in the room with me. As individuals, some of the students appeared intimidated. Their responses to my questions were organized, reflective, and sometimes hesitant. In the group setting, the students became excited, giddy, and active. Most readily responded to my questions, often shouting or talking over one another. The boys' group in particular was playful and prankish, doing things such as cracking jokes and name-calling. In both groups dominant voices were present and their effect on their peers was evident.

A compromising factor of focus groups is the element of peer pressure. Specifically, as children come closer to adolescence the opinions of their peers are more apt to affect their behaviour in a group situation (Large & Beheshti 2001). Furthermore, in any group some people are more vocal than others. This can lead to some people not having an opportunity to express their opinions (Greig & Taylor 1999). Having one participant dominate the discussion was definitely a factor in the girls' focus group. One of the focus group participants, Shuvani, had strong opinions about every question and had the confidence and determination to voice her opinions. As a result, her ideas dominated the focus group and prevented other girls from speaking out. The facial expressions of her peers indicated that they were frustrated by their inability to answer questions. To counter Shuvani's dominance I invited specific people to answer questions, calling them by name in order to allow them to express themselves. This however,

had a limited effect. In one case the girl responded briefly to my question and the discussion was immediately swept away again by Shuvani. In the other instance I asked Amanda for her opinion and she declined response. Up to that point she had only shared her opinion once. It was apparent that she did not find the focus group environment comfortable.

Mauthner suggests that selecting groups carefully may be a solution to these problems. She offers the option of choosing groups of friends or conducting groups of all boys and all girls (1997). Leedy and Ormond refer to this as purposive sampling (2005). A researcher needs to carefully consider their research problem before choosing to design the arrangement of a focus group. For instance, if attempting to elicit the overall opinion of a large group, designing an arrangement would not provide a viewpoint that is representative of the population. Because the size of the group in this study was small, regardless of whether or not purposive sampling is used, a large percentage of the students had the opportunity to be part of either a focus group or an interview. Purposive sampling was used in conducting the focus groups in this study. The goal of this was to provide equal opportunity for each student to voice his or her opinion. Designing the arrangement of the groups was an attempt to avoid situations where a group of students would dominate the conversation. The groups were arranged in consultation with the students' teachers. As can be seen by Shuvani's dominance, our attempts failed. We did not anticipate that Shuvani would take over the group's discussion. Were I to arrange the groups again with my new perspective, I would not have placed Shuvani in a focus group.

Because encouraging participation can be a challenge, many interviewers use a variety of activities within focus groups to encourage children to be involved. For instance, in a study about the effects of asthma on children, participants were encouraged to write down good and bad things about having asthma. They were also given role-playing situations within their group. Writing provided an opportunity for less vocal group members to voice their opinions, whereas role-playing provided a more rich depiction of group members' feelings (Morgan et al. 2002). These focus group sessions attempted to provide multiple means of expression, including writing as well as talking. Each participant in the groups had a piece of paper and a pen and they were invited to draw if they chose to do so. Most of the students chose to write and draw on their papers. These papers allowed the students to express themselves in another way. Furthermore, activities were used to 'break the ice' in the beginning of the group session. These included casual chatting and allowing the students to examine my recording equipment.

Allowing more than one means of expression when collecting data provides an opportunity for new data to surface. It also allows data to be validated with a second opinion. While interviews and focus groups are valid methods of collecting data, using these methods together can provide a more complete picture of children's viewpoints. Because children are members of our society with limited means of expressing themselves, researchers have a unique opportunity to provide a means whereby children's views can be expressed.

Observation

Ethnography and observation both have the goal of understanding a way of life from "the native point of view," or the point of view of the researched (Baker 2006, p. 173). A defining feature of observation is the need to study and understand people in their natural environment (Baker 2006). Because observational research endeavors to obtain information from outward behaviour, it is emerging as a research method that is particularly suited to young children. McKechnie explains that because children have a limited ability to express themselves with language, observation is a method that can be used to provide a voice for them in research. Traditional research techniques rely on reading, writing, and language, whereas observation relies on body language, gesture, facial expression, vocal quality, etc. (McKechnie 2006). Allison James echoes this claim. In her study of children's friendships she found that through participant observation she was able to examine "fieldwork moments," or events that took place in a split second, at great length. In doing so, she attempted to unravel the far-reaching effects of day-to-day events on children's lives. Such discoveries could be made through inquiry if the participant was an adult; however, in a study with children these moments constitute a "swift lesson" for a child who has no "period of quiet and lengthy contemplation" (James 1996, p. 327-328). Given adults' limited ability to understand children's methods of communication and children's limited ability to respond to other research methods, observation provides one of the most effective methods of gaining insight into children's lives. As such, this study utilized observation as one of its primary methods.

Throughout the storytelling program I recorded my observations of the participants. I observed all 21 participants. I aimed to observe their research processes and reactions to the storytelling program. Specific items observed included what sources the students consulted during research time, how students used the library space, and what their body language and facial expressions demonstrated about their responses to the research tasks and storytelling.

The only instrumentation in conducting these observations was field notes. During each storytelling session I brought a note pad and pen to create field notes. After the stories were told I recorded any visual cues the participants gave during the storytelling to indicate their reaction to it. While the students conducted research in the library, I overtly observed their activities and recorded them. These field notes included a chronological, non-interpretive description of the events, the setting and people present, with notations regarding the time and duration of activities, sketches of the location etc. As McKechnie recommended, I recorded things such as where a specific participant moved within the library, what books they looked at and for how long, their facial expression as they looked at the book, any comments they made or questions they asked (2000). Often I was so busy during the actual session that I would sit down after the session was complete and record my memories of the session. My notes also included my impressions or feelings about what was going on and any questions I had. I also brought a map of the library that I had sketched and recorded the positions of the students within the library as they conducted their research. I was the only observer present in this study.

A key factor affecting observation is the effect the presence of a researcher has on the observed. This is formerly known as the 'observer effect.' McKechnie explains that the observer effect occurs when the ability to measure a respondent is affected by the process of measurement (McKechnie 2000). In conducting participant observation, McKechnie limited observer effect by allowing the participants to become familiar with the equipment to be used in the observation beforehand. In addition, she familiarized the participants with the objectives of the research and the expectations the research placed on them (2000). In another study involving covert observation of a library storytime for babies, McKechnie reports making every effort to look like and behave like a mother in order to reduce observer effect (2006). The observation conducted in my study was overt and, therefore, the students were informed of my purpose. I showed them my binder and explained what it was for. This seemed to reduce most students' concerns. Zachary, however, was very curious about my binder. On several occasions he attempted to look inside it. While I was not comfortable with him reading my observations, I did explain once again what my binder was for. Another attempt I made to reduce observer effect was to wear clothing that conformed to the students' manner of dress. Jones and Somekh recommend this as a symbol of equality with the observed (2005).

Despite my efforts, there were still times when I felt like the students viewed me in a role similar to their teacher. It was difficult to avoid this as my role included instruction and assignment administration and therefore was very similar to the role of a teacher. I tried to minimize the students' perception of me

as authoritarian as much as possible. I would refer all matters that were not directly regarding the project to their teacher. Furthermore, I was very open with the students regarding my role as a researcher. The fact that they were aware of this is attested to by their references to my research paper (Shuvani) and their associating me with the last time they were part of a University research project (Daniel).

Data Analysis

Open coding was used to analyze the data collected. The data analysis technique outlined by Strauss and Corbin was used (1990). This included creating labels for the data. The labels were then divided into categories. Line by line analysis was carried out with the observations, focus groups and student interviews. After the data was coded, charts for each category were created. Frequencies of specific labels were recorded in the charts as well as the qualities of specific labels. In this way the properties and dimensions of the categories were outlined.

The interviews with the teacher and teacher/librarian were coded as well. Question by question analysis was done with these interviews. Information collected from these interviews was compared with the observation, interview and focus group data. The teacher and teacher/librarian interviews offered a rounded perspective, supplementing information that was not available from the students.

Finally, the students' final papers were read. Notes were recorded about the papers and they offered supplemental information to the analysis of the interviews, focus groups and observations.

Ethics

Prior to conducting this research ethics approval was obtained from Faculties of Education, Extension and Augustana Research Ethics Board. This approval ensured that I was following the University of Alberta Standards for the Protection of Human Research Participants. Following this, ethics approval was obtained from the Cooperative Activities Program (CAPs). CAPs is the body governing ethics for the following school districts: Edmonton Public, Edmonton Catholic, St. Albert Protestant and Elk Island Public. It was necessary to obtain approval through them before conducting research in the school system. Guidelines for ethical behaviour were followed; specifically, the students, teacher and teacher/librarian were informed verbally as well as through written consent that they were not obligated to participate in the research and that they could withdraw at any time without negative consequence. In addition, guardian consent was obtained for the students. Information was provided to the parents that explained the nature and requirements of the research. This same information was provided to the students verbally and in a written form (see Appendices C-L for ethics forms).

When working with minors a distinction needs to be made between consent and assent. When consent is given a fully informed participant has agreed to be part of a research project. Children are deemed unable to give consent (Mauthner 1997). Rather, assent is given for children to participate in research. When assent is given, an adult has given permission for another individual (usually a child) to take part in research (Valentine 1999). As a result, it is

important for researchers to realize that when assent is received for a child they may not want to be part of the research, but have been volunteered by their parent/guardian and/or the school system. While I am aware that the participants in this project could not give consent, I sought their permission to participate in this project. If a student chose not to participate they were not asked to, regardless of whether or not their parent had given consent. In this particular project, four students chose not to participate out of a total of 25.

Seeking children's permission when they are in the school system is complicated by the fact that they are part of a rule-following community where they are used to obeying authority figures. Such an environment could engender a sense of obligation to be part of a research project, regardless of the participant's desires. Because of this unique situation, researchers must do all they can to minimize unintended coercion.

One week prior to beginning the research project, I entered the classroom and had a discussion with the students about the research project. I explained who I was, that I was a University student and a storyteller. I told them that I wanted to discover if storytelling had value in the classroom. Then I invited them to be part of my project, but explained that it was their choice. I informed the students of each aspect of the data collection including observation, focus groups and interviews. I did not explain that I would like to use their final papers, because at this point I did not plan to include their papers in the data set. I explained that they could choose to participate if they wanted to, and that in order for them to participate, their parents also had to agree. I showed them the forms and told them

that if they wanted to participate to sign the form, and ask their parents if it was okay as well. Following Valentine's recommendation, I had the students opt-in to the project instead of opting-out (1999). I reiterated the voluntary nature of the project and assured them that there would be no punishment for not participating. I also assured them that they could leave the project at any time without any adverse consequences. My objective in taking these measures was to eliminate any sense of obligation to participate.

Keeping children fully informed of the research process from before it begins to the dissemination of the results is one way to minimize unintended coercion. This may involve designing pamphlets and leaflets and distributing them before the research begins. In this case, I provided the students and the parents with a letter that explained the purpose of the project. I designed these letters separately, targeting the language in the students' letter to their reading level. Furthermore, I realized that some students might want to be part of only certain aspects of the research process. When the interviews and focus groups were arranged, students were given the opportunity to opt-out. In addition, prior to each individual focus group and interview, students were told that they did not have to participate and could leave at any time.

Valentine also suggests letting children know they can have time to think about being part of a research project before joining it (1999). This was accomplished by informing the students about the project one week prior to its start date. The students and parents had their information letters and consent

forms during this time. By structuring the project this way, it was hoped that the students would be able to make a well-informed choice.

Valentine also suggests that researchers should practice saying no with children and let them know they can withdraw at any time without negative consequences (1999). During my initial information session with the students I role-modeled saying no with the students. I told them that if they did not want to participate they could tell one of the teachers, their parents or me that they did not want to be part of the project. I expressed this in several different ways each time we progressed to a new data collection stage.

Because the students were in a rule-following community that may lead to unintended coercion, I made an effort to ensure that they were well informed. I also made efforts to provide opportunities for them to opt-out during data collection stages. There was not another classroom activity planned for students and in addition, the teachers used my storytelling program as part of their curriculum instruction. As a result, the students had to participate in my program; however, those who chose not to participate in the research project were not included in any data set.

When ethics approval was initially sought, the students' research papers and the interviews with the teacher and teacher/librarian were not included. As the project was drawing to a close, however, I realized that the students' research papers were an important source of information regarding their research results. Also, the teacher and teacher/librarian expressed their desire to be part of the data set. Knowing that they would provide an important perspective because they were

familiar with the students' research skills prior to the project, I decided to seek ethics approval for interviews with them. I also sought ethics approval for the inclusion of the students' final papers. Approval was received from the appropriate ethics boards and the new data was collected.

This chapter has reviewed the study's research methods, with particular attention to accommodations made for the children as participants. The next chapter reports the results of data collection.

Chapter Three: Results and Discussion

This research sought to discover the value of storytelling in helping students develop research and information skills. It consisted of nine storytelling sessions that I delivered to children in a grade four class over the course of five weeks. Each of the stories was connected to the Alberta legend of the Lost Lemon Mine. The stories were structured around a research assignment that challenged the students to discover the location of the Lost Lemon Mine. I also delivered short lessons demonstrating basic library skills such as keyword searching and determining the credibility of a source. At the end of the assignment the students were asked to write a one-page paper explaining where they believed the Lost Lemon Mine was located and their reasons for believing that is where it is located. Through this program I sought to determine if storytelling could be used as a framework for guiding students through the research process.

In order to discover the effects of the storytelling, I collected data in five separate ways.

1. I observed the students throughout the duration of the program. At each visit I wrote down notes on the students' comments and behaviour in a notebook. After each visit I took time to record everything I remembered from the visit including the students' reactions to the storytelling sessions, their behaviour towards me, their research techniques, and anything else that I thought would contribute to my inquiry.
2. After the storytelling program was completed I conducted five one on one interviews with students who were randomly selected.

3. I conducted two focus groups. The participants in the first group were all girls and the participants in the next group were all boys. Each group had six participants who were purposively selected.
4. I interviewed the teacher and the teacher / librarian one-on-one.
5. I collected the students' completed research assignments.

The following discussion takes these data sources and synthesizes them in an effort to answer my research questions. This includes looking at Kuhlthau's process approach, whether or not the storytelling program was able to incorporate it successfully and if the students' awareness of it increased. Also, this discussion considers critical thinking. I analyzed the data to determine whether or not the students learned to examine sources critically and if they approached the research process critically. Finally, it looks at whether or not the students became emotionally involved in the research process.

The Process Approach

Incorporating The Process Approach into the Storytelling Program

Efforts made to incorporate the process approach into this program were based around the structure of the assignment, the delivery of the assignment, and the style of instruction. Added materials that helped keep the program focused on the process approach included a red booklet all the students completed their work in and a visual aid in the form of a coloured arrow that outlined the process approach. Examining the students' reactions to the program indicates that many of them worked their way through the stages of the process approach. This can be

determined by looking at their comments regarding their research process, as well as the emotions they expressed as they went through the process.

In the first days spent working with the students on this assignment, the students were eager to jump to the final stages of the research process by selecting a location for the Lost Lemon Mine. Rather than focusing on general information regarding where the mine might be, they went immediately to selecting a final location. On my first day in the classroom I led the students in an initiation exercise. I stood at a white board and as a group we brainstormed for general ideas and topics surrounding the mystery. I would then write these ideas on the white board. This exercise gave me the feeling that the students were unfamiliar with working in the initiation stage. It was necessary for me to guide them by offering ideas and suggestions. Still, many students felt inclined to jump right to the solution of the problem, rather than offering ideas and themes. For instance, some children said things like, 'I think the mine is in the North Saskatchewan River because I saw that online.' Other students were distracted by details of the story such as whether or not Blackjack (a character named in the legend) was still alive. What this demonstrates is that generally exploring a topic or looking for themes was unfamiliar to these students. The students' teacher, Mrs. Walters noted the extended period we spent looking at the subject broadly was different than the usual research method employed by the class. She said, "There was a lot more time to explore than sometimes I am able to give and keep up as well." She also stated that at this school their approach to research is generally "a little bit more directive."

Because this storytelling program allowed the students more freedom there was a great deal of variation in the students' progress through the steps. Some students spent more time in the exploration or initiation stages than others. Each day I spent with the students I would highlight the specific stage of the process approach that we were to focus on. This would imply that the students were expected to follow this framework; however, their progress was not that straightforward. Some of the students spent a great deal of time exploring. For instance, my observations record that on October 30th Dylan looked up from a book he was studying from to tell me that he believed the mine was in the Highwood River. At this point in the class schedule, we were in the collection stage. However, by the end of the program Dylan had decided that the story of the Lost Lemon Mine was an "urban legend." Clearly, although Dylan had already formed a focus by October 30th, somewhere between then and the end of his search, November 13th, his theory had changed significantly. This demonstrates the importance of a constructivist perspective that will permit students to guide their own search.

Despite the fact that the students may not have followed the precise schedule that was laid out for them, their comments and my observations would indicate that they did follow the steps of the process approach quite closely. Their emotional reactions to the research follow Kuhlthau's model closely. Many students expressed feeling of confusion, frustration or stress that subsided as the research progressed. As Jaldev explained, "I felt it would be hard, but when I actually started to do it, [it] kept on like I kept on feeling it would be easy. And

then I kept getting used to it and then it got easier and easier." He later states that it was easier because he had more ideas because of his jot notes. It was common for the students to express an increased sense of ease and confidence as their knowledge of the subject matter increased. Ramell said looking for information made him feel more confident because "like finding information thinking that you're not going to find anything, cause if you think at first that you're not going to find anything and then you do and so you think you can do it." Although many students' sense of ease and confidence increased as they went through the search process, many still felt that it was very difficult. When asked how doing research and writing the paper made them feel, common words used by the students were "hard," "frustrating," and "work." In contrast, Miley said it was "exciting," "fun," and "easy."

This experience demonstrated that students are capable of fully engaging in the process approach when they are permitted a significant amount of freedom. Still, a certain level of guidance is necessary in order for them to follow the steps of the process approach with a sense of the structure and purpose of their assignment. When these guides were in place the students in this study worked their way through their research assignment following the steps of the process approach.

The Students' Awareness of the Process Approach

In order to demonstrate the process approach to the students in concrete terms I utilized two separate materials. The first was a visual aid in the form of a coloured arrow that outlined each stage of the process approach on a different

piece of brightly coloured paper (Figure 1). Each day I referenced this visual aid that we casually referred to as the "coloured wheel," or the "coloured arrow." The second visual aid used was a red booklet that the students used as a workbook. Beginning with an introduction to the program, the red booklet contained a series of papers that outlined each step of the research process. I created a worksheet for each step of the process approach and placed them in sequential order with spare papers for taking notes. Therefore, this red booklet was designed as a guide to help the students work through the steps of the process approach.

The students repeatedly commented on how the visual aid used in the class pointed out the steps of the process to them. This indicates their perception of the process approach. In the beginning of my interview with Kristi I offered her paper and pens for drawing if she had a desire to make use of them. She picked them up and as we began our interview drew a picture of our storytelling sessions. What is significant about this picture is that it contains an image of the coloured wheel I used as a visual aid. Her memory retained this image so well that it became a symbol of our storytelling visits. Other students talked about how the visual aid demonstrated the steps of the research process. Flora explained this in her interview. I asked her if the coloured arrow made a difference to her. She claimed, "It helped me a lot," because "then like if you go from step by step it's much easier than doing all one thing all together." Daniel expressed a similar sentiment in his interview when he said, "it might have made a difference to everyone about what steps to do it in, like what steps to do it and if you memorized it next time

you do it if they don't have a research wheel and when you do something like that it might be good if you remembered it."

The students also discussed how the red booklet gave them the ability to organize their notes and information. In her interview Kristi indicated the important role of the red booklet. As she explained, "cause you like gave me some examples and then I just knew all of a sudden to like do the stuff I had to do." In his interview Jaldev also discussed how the red booklet helped saying, "I wrote jot notes in it so that gave me more ideas to what to write on my paper." This tool gave the students a tangible guide that carried them through the process approach.

By using the red booklet and the coloured wheel, the students were able to experience Kuhlthau's model, thereby increasing their awareness of the steps in the process approach. While the flexibility of the process was important, the structure and guidance provided by these two tools were essential in taking the students through these steps. With them, I was able to maintain a continual dialogue based on the process approach. They also provided a visual guide that helped the students gain a sense of the structure of the research process. Their comments demonstrate that although they do not recall the names of the specific steps of the process approach, they gained an understanding of its structure.

Tying the Assignment to the Curriculum

The Lost Lemon Mine program fit the grade four social studies curriculum well. This curriculum studies Alberta's history and specifically cites the stories of Alberta as a method of learning. Because this program fit well within the Alberta curriculum, the teachers welcomed it. Mrs. Ursum spoke about it saying, "it was

such a great fit to the grade four social studies curriculum. It was Alberta's history through the stories of the people, places and things of Alberta...." This ability to cover curriculum material with storytelling demonstrates the usefulness of story as a teaching method.

Involvement of School Staff

Kuhlthau emphasizes the importance of school staff being devoted in order for them to be successful in carrying out a program that incorporates the process approach. In a study examining the factors that make implementation of the process approach successful, she consistently found that successful schools had supportive staff that worked as a team (Kuhlthau 1993). The same attributes would apply to this program. Having a teacher/librarian in the school was the first element to making this program successful. The fact that this school had a teacher/librarian demonstrates that they value information literacy. Further, the school's teacher/librarian had already been teaching the inquiry model to the students and staff. As a result, they were familiar with inquiry-based learning. This was definitely a preparatory step to learning the process approach.

In addition to having a teacher/librarian, this classroom had a teacher who was open and willing to have this study conducted. Together, the teacher/librarian and the teacher provided ongoing support as this project was carried out. The teacher was present during every session and the teacher/librarian was present during many of the sessions. They carried out approximately five supplemental sessions with the students when I was not present in order to offer extra instruction or give the students more time to complete their project. They also met

with the students one on one for help when needed. Finally, the teacher graded the students' assignments for inclusion on their progress reports.

Critical Thinking

Solving a Mystery & Persuasive Writing to Aid Critical Thinking

> "I think what helped us most is my mind. Because if I never had my mind how would I think? And also, what I thought not what other people told me" (Shuvani).

Shuvani's statement perfectly illustrates the role of critical thinking in the students' completion of this assignment, which required an extensive amount of problem solving and deductive reasoning. Because the assignment was framed as a mystery, the students were required to use available "clues" to solve the problem. In addition, they had to write a persuasive argument. This writing style was unfamiliar to them and, more importantly, persuasive writing requires a synthesis of information to argue a point, as opposed to a rote delivery of information.

Critical thinking patterns can be found in the students' statements and behaviours. Often students would approach me and offer explanations of where they thought the Lost Lemon Mine was. In these moments it became clear to me that they were using the information they had available to create solutions to this problem. However, this was not always the case. At the beginning of the program it was common for students to approach me and explain that they had found the Lost Lemon Mine. When asked how they knew where it was, they responded that they had found it online. It was interesting to note that as the program progressed,

this pattern changed. Students continued to tell me where they thought it was; however, they would have a much more substantive explanation of why they believed it was there, reflecting their increasing knowledge of the subject matter.

In addition to providing explanations of their reasoning, students began to ask more questions as the storytelling program progressed. For instance, as new versions of the Lost Lemon Mine story were told, characters' names changed. The students noticed this inconsistency and began to question why the characters would have more than one name. In this way, the storytelling program naturally initiated critical thinking. Near the end of the program, Dylan began to question the validity of the Lost Lemon Mine as a whole. In the final weeks of the program he told me that he no longer believed that the Lost Lemon Mine existed because so many people had searched for it and it remained lost. In the focus group Dylan stated that the story "doesn't make sense to me" because, he said, "why would people tell about gold?" "It is just an urban legend." His reaction to the story indicates that he was thinking critically.

Many students put "clues" together to form complex explanations of where the Lost Lemon Mine could be. For instance, Zachary consistently relied on the geographical features he identified in the stories to locate the mine. He pulled all these "clues" together and began to create theories. In his final paper he states, "Most of the landscape explains it quite a bit. I learned a lot by listening to the stories about the landscape." The argument in his final paper is a combination of facts he learned from the stories, his own theories, and knowledge of the geographical features of Alberta. He specifically references a map, a book and a

website. Using these elements, Zachary created a solid argument. However, in the focus group, he critiqued his argument saying, "If I could do it again I might make a few changes to mine. You know, about Frank's slide, my dad said it couldn't really work because it is too far away so I might have changed that." It is true that many of the students' theories were not empirical, and Zachary's report demonstrates this. However, the purpose of this assignment was to develop critical thinking skills, not to develop empirical arguments, and Zachary's argument demonstrated critical thinking. His father's comments may have increased his critical thinking, but may also have undervalued the successful critical thinking he had already performed.

Not all of the students demonstrated the same level of critical thinking as Zachary. Responses from some students indicate that this assignment presented challenges for them. Such students required extra attention from Mrs. Ursum and Mrs. Walters. For instance, Jaldev had to miss science class the day before the assignment was due in order to finish it on time. He said that he "didn't have any more ideas" and so he sat with Mrs. Ursum while she guided him through the end of the assignment. He said that Mrs. Ursum "told me to write Harris E, like the name, and then I write it down cause Mrs. Ursum told me to." However, when I asked Jaldev what Harris E had to do with the Lost Lemon Mine he wasn't able to explain it. In his discussion of how he drew his conclusions regarding the Lost Lemon Mine he said, "Like it is near Coleman AB, like I have an encyclopedia at home. Then I decided to search for information, then I went to the Lost Lemon Mine on Google, then I found the information that I found a story then I clicked

on mysteries of Canada and the Lost Lemon Mine came. I started reading it and then I scrolled down, they had a map where it is." In contrast to Zachary who demonstrated that he thought about the research process and synthesized information with his own ideas, Jaldev provided a step-by-step explanation of what sources he went to. His use of this information stopped at this point; no further analysis or hypothesizing took place.

Despite the fact that Jaldev did not demonstrate higher level thinking, he did say that the stories were "cool" and that he thought they "had lots of information that I can use." Even though Jaldev's critical thinking skills may not be as well developed as those of other students, he followed the steps of the research assignment. For example, he claimed that the work "got easier and easier" as time progressed because of his "jot notes and yeah and uh, the research that I did." This indicates that he went through the steps of this assignment, which would have involved going through the research process.

Other evidence of higher-level thinking exist. For instance, one day Shuvani offered the solution, "I think if we can find Blackjack's body we would know where the gold is." She also said, "you know how you told us about how Lemon came back? I thought why would he come back if he knew he might get caught?" These comments demonstrate Shuvani's analysis of the stories in an effort to find a solution to the problem. Other students expressed how the skills they learned from the storytelling program helped them with critical thinking in other classes. For instance, when I asked Daniel if this program helped him with his school work he told me, "I just like answering questions and stuff, like if

there's a tricky question it could have gave me a skill on how to answer." Similarly, in the boy's focus group Felippe said the program helped with social studies. He explained, "In social studies we got to figure out where the puzzles are so it's like it helped us learn to do other projects like that."

Finally, Mrs. Ursum and Mrs. Walters talked about how the students developed critical thinking skills in this project. Specifically, Mrs. Walters explained that "they really had to be able to take the storytelling clues and the information they found in print and online and bring it all together and that was really higher level thinking skills for them." Mrs. Ursum agreed, stating that the project, "really forced them to synthesize and use the higher level, the higher level thinking to filter through all the information they'd heard, they'd read, they'd collected or seen in different formats."

The points highlighted here attest to the fact that many of the students were critically thinking. This project required the students to analyze and synthesize information from many different sources and formats in order to form an argument. It was necessary for them to think critically in order for them to complete the assignment. While it is clear that for some students this came more naturally than others, a certain degree of critical thinking was required to simply complete the project. Naturally, I cannot describe exactly what kind of critical thinking each student performed. Nor can I determine how this assignment compared to the students' usual assignments in terms of the critical thinking required. Regardless, from analyzing the students' comments as well as the

teachers' comments, it is clear that this assignment engaged the students on a level that encouraged them to think critically.

Analyzing Sources Critically

Although there were promising signs that some students were beginning to consider their sources critically, overall the class did not demonstrate the ability to analyze the quality of their sources. This assignment necessitated the use of sources from many different formats. Furthermore, in the process of completing this project, the students were introduced to many new information sources, such as databases. As a result, the students were on a steep learning curve, acquiring new skills and being asked to find, understand and synthesize information in a way they were not previously accustomed to. In addition, many of the print and online sources available were written at a reading level that was challenging for these students. This required much one on one analysis of information with the teachers and the students. The students did acquire many new skills to help them deal with information; however, learning to distinguish between credible and non-credible sources was not one of them. This may have been due in part to the fact that they were already inundated with new skills to develop.

At the beginning of the program it was apparent that the students had not discussed the process of assessing credibility at length. On the first days of the program students consistently approached me to say that they knew where the Lost Lemon Mine was. Ramell was one of these students. After telling me he knew it was in Coleman, he explained that he knew this from looking it up online. The desire to find information online was prevalent among the students. On

research days it was common for approximately 13 of the 21 students to be on computers. It was also common for students to approach me at the beginning of a class to ask if we would be on the computers that day.

In our fifth session on October 25th I had an encounter with Bryan that further reinforced my feeling that the students needed extra help demonstrating credibility. What was particularly disheartening is the fact that only one day prior to this encounter I had taught a mini lesson on credibility. On this afternoon Bryan was doing research online. He found a site that he wanted to share with me. He raised his hand and asked me to come look at it. As I looked over the site Bryan found, it became apparent that it was not a credible source. Although it offered a great deal of information about the Lost Lemon Mine, the information was on a blog and the author was listed as 'Mother.' I asked Bryan how he had found this information and he told me it was "on the fourth page of Google."

I reminded Bryan of the discussion we had, had on credibility the previous day including the importance of examining the author and date listed on an information source. He then found the date and together we found the author, 'Mother.' I explained that this was not credible but that 'Mother' had provided her source, which happened to be a book that I had brought for the students. I recommended that Bryan use this book as opposed to the site, explaining that it was a more credible source. Minutes later Bryan called to me again to show me another site. He had found this one "on the fifth page of Google."

This is an example of the one student's limited ability to understand the concept of credibility and to distinguish between a valid information source and

an invalid one. As Mrs. Ursum explained in her interview, "when push comes to shove, they still want to go to Wikipedia, they still want to go to Google and look there first."

While it is true that the students demonstrated a desire to consult the Internet, they did confess to me that they are skeptical of information found on the Internet. In the mini lesson I taught on credibility I asked the students if everything they read on the Internet is true and they answered with a resounding "No!" Clearly they have been taught not to trust all online information; however, the behaviour I observed indicates that many of the students still need to learn how to determine credible sources on the Internet.

In the mini lesson I also asked the students if information in books is true and most answered affirmatively. It would appear that many students have been taught to trust books and not to trust the Internet, but do not have the skills necessary to determine what makes a source credible and what does not. Following these questions, we discussed how to determine credibility and went through some example web pages and books. Due to the fact that the mini lessons were a maximum of 20 minutes long, I believe that the students' ability to learn this information well enough to put it into practice was limited. In retrospect, I would have asked Mrs. Ursum to give a supplementary session on this topic. In addition, I would have built in more opportunities to reinforce this skill in future sessions.

Role of Stories

While the stories involved the students emotionally, they also involved them on an intellectual level. The students' comments indicate that the stories were a source of information for them. This was expected as the project was based on an uncommon legend. Still, it is interesting to see that a significant number of the students perceived the stories' main role as an information source. In addition to providing information, the students also indicated that the stories brought enjoyment to their school curriculum.

When asking the students questions such as how they would describe the Lost Lemon Mine program or what it was like to listen to the stories, the most common responses used the words interesting and informative. When Daniel spoke about the stories he said they were "interesting cause it gave some like information that I used in the story to tell if it's true." Similar comments came from many other students who indicated that not only did the stories present facts they could use, but the stories were also a springboard to help them find more information. For instance, Dylan said the stories "helped us find information cause you tell us new stories and we can look those stories up and research the Lost Lemon Mine." The stories gave the students more "clues" and because the students were engaged in the project this motivated them to conduct their own research. As Jessica put it, "I want to find out more cause I liked your stories." On one occasion, a student asked me where I learned the story I had told. This was not unusual, so I simply explained that it had come from a book. He told me he would like the book and asked me to show him where he could find it. I helped

him locate the book and he checked it out of the library. As this illustrates, the stories provided information for the students and also led to the students taking the initiative to find more information on their own.

An unexpected reaction the students had to the stories is their perception of the storytelling as a respite from their usual workload. Several of the students' comments indicated that the storytime was a break for them. Kristi explained that storytime was fun for her "because you don't have to read it and then someone is telling it to you." Daniel's opinion was comparable; he said that it is "easier listening to stories than doing research in books and on the computer." While there were many factors that contributed to the students' enjoyment of the storytelling sessions, this one was common. The storytelling program as a whole was not a break from academia. On the contrary, many of the skills needed for the project were new to the students and as Mrs. Walters explained, "it was challenging for them to take the information and use it in persuasive writing." Despite the fact that the storytelling sessions were part of a program that challenged the students to learn many new skills, they still associated them with having a break from work. This opportunity to feel that they were allowed to rest, even for just ten or fifteen minutes, seemed to make a difference to the students.

In addition to being a break from the students' routine, they perceived the stories as exciting and funny and several of them said the stories made them happy. Stewart said, "it's probably the funnest thing I've ever done" while another boy said, "it was cool at school." A couple of the students made specific mention of the expression and emotion in the stories commenting that it made

them enjoyable. On many occasions when I arrived at the school students would stop me to ask if I was going to tell stories that day. When I replied with a yes, they would smile or say, 'yes!' under their breath. It is certain that the stories gave the students something to look forward to.

By providing the students with an experience that made their studies fun or cool, the storytelling sessions helped the students enjoy school. In addition, these sessions gave their academic schedule variety. Although the program challenged the students academically, using storytelling as a method of instruction engaged the students in a new way and provided a sense of relief from the rigors of their routine. As Kristi put it, "it's fun, instead of doing spelling or reading or anything." Furthermore, the storytelling sessions delivered a substantial amount of information. The students were able to learn this information and were also motivated by the stories to learn more.

Emotional Involvement

Constructivism and the Authenticity of the Query

Storytelling is an exchange of information and therefore, listening to a story is a not passive activity. A good storyteller will engage her listeners by enticing them to take part in the story cognitively and affectively. Being part of this experience requires listeners to temporarily suspend their disbelief. Doing so enables listeners to engross themselves in whatever idea or belief is being presented. By choosing this medium my intention was to engage the attention and emotions of the audience and cause them to suspend their disbelief. By inviting the students to suspend their disbelief I hoped they would feel that their research

query was authentic and genuine. The nature of the story I based the program on lent itself to this purpose very well. Because the mystery of the Lost Lemon Mine is Alberta folklore, I was able to treat the research assignment as an attempt to solve an Albertan mystery.

As the storyteller, I made a concerted effort to encourage the students to suspend their disbelief. This effort was made to allow the students to enjoy the stories and to encourage them to use their imagination. By promoting the imagination, I believed that the students would become involved in the storytelling program on an emotional level and this would increase their desire to search for information. Comments made by the students indicate that they did suspend their disbelief. They treated the assignment like a mystery needing to be solved. As a result, their research query became a genuine inquiry. If the students had not been able to suspend their disbelief by using their imagination, this deeper level of interest in the research query would not have been possible. As Egan claims, the imagination is an important teaching tool and furthermore, presenting information with an emotional connection increases its affective meaning (2007, p. 4; 1989, p. 30). My goal was to encourage the use of the imagination through the suspension of disbelief. I felt that this would create a genuine query that would make the research assignment more rewarding and increase the students' motivation.

The students' reactions to the storytelling program indicated that they were willing to suspend their disbelief. For instance, on the first day of the storytelling program I told the most common version of the Lost Lemon Mine

story. Following the delivery of this tale, I asked the students how many of them thought the story was real. Almost every child raised their hand to indicate that they believed it was real. We then discussed the difference between a folktale and a legend, explaining that the Lost Lemon Mine is a legend and therefore, based on fact.

Asking this question at this point encouraged the students to believe in the truthfulness of the story. At this point in the storytelling program, the students had not had the opportunity to look at other information sources or to ask questions about the story. By asking them if they believed it was real, I indicated that they should already have formed an opinion. Furthermore, it is likely that some of the students may have perceived me as an authority figure simply because I was an adult offering instruction in the classroom. Although this particular exercise did not encourage critical thinking, it established the fact that the students were willing to suspend their disbelief. In addition, it provided a foundation for the remainder of the program. While nearly all the students claimed to believe the story at this point, I went on to demonstrate that the purpose of this research assignment was to either prove or disprove this story. Doing so pointed out the need to think critically as well as the possibility that the story is not true. It put the responsibility of determining the facts in the hands of the students.

Comments made by the students in interviews and focus groups indicated that they looked at this assignment as a mystery to be solved. Examining information in order to discover the location of the mine became a genuine pursuit for many of the students. For instance, during a focus group Felipe said that the

program "was interesting 'cause I got to try to find out where it is." Similarly, in another focus group Miley claimed that what she loved about the program was "the mysteries." Further reinforcing the idea of solving a mystery, several of the students referred to the stories' usefulness as relative to the number of "clues" they contained. For instance, in an interview with Flora she claimed she liked the first story best because "that was the one that had the most clues in it for me."

The fact that the students treated this as an effort to solve a mystery indicates the degree to which they suspended their disbelief. Other comments further illustrate their belief in the reality of the story. For instance, during the focus group Shuvani explained her plans to "go down to the North Saskatchewan River and when I am older I may look for it." Other girls in the group responded by telling Shuvani her idea was crazy because of the curse on the mine that has taken so many lives.

Because the students felt that this was a mystery needing to be solved, their research process took on added significance. For instance, in the middle of the program Zachary approached Mrs. Ursum to ask her if the Lost Lemon Mine really existed. Mrs. Ursum responded, "well, if I knew if it really existed why would we be doing this?" As Mrs. Ursum explained, this gave Zachary a sense that his inquiry was genuine. Later, Zachary approached other students, telling them "we wouldn't be doing this if Mrs. Ursum already knew the answer." This research assignment became a real quest for Zachary because he knew that his teacher was not expecting a set answer.

Mrs. Walters explained that in her classroom a typical research assignment has a guiding research question, is very structured, and tells the students where to look for information. In contrast, this project gave a great deal of freedom to the students, allowing them to solve the mystery in whichever way they pleased. Throughout the program I continually reinforced to the students that they could provide any answer they wanted, as long as they had sufficient "proof." As the teacher/librarian Mrs. Ursum stated, "they saw that it had value because there wasn't a set answer. When the kids—when we know where we're going, in some ways it's not truly authentic because we know all the steps that they will go through. We (as the teachers) know the end result." This loosely structured assignment created a genuine inquiry, thereby motivating the students.

In addition to creating a genuine inquiry, having a loosely structured assignment fostered a constructivist approach. The assignment was framed with the overarching question *where is the Lost Lemon Mine?* Besides number of sources, formatting, and structure there were no other restrictions. The objective of this method was to encourage the students to define the project by the process as opposed to the result. Some students' responses to questions indicate that this attitude was adopted. For instance, when Daniel was asked how he would describe the Lost Lemon Mine program replied, "It would be hard to describe it, but probably in the steps that I did it. I would go from the first step to the last step in order telling how I did it and stuff."

While a constructivist approach is one of the factors of a successful information literacy program, it is possible my attempt to follow this model was

not effective for every student. Some students' comments did not convey a sense of process over product as clearly. However, this difference could have been the effect of the interview. In the case of Susan, many comments were made throughout the interview to indicate that she felt insecure about her work and wanted to please me. For instance, she offered to take her project home and add more information. She also asked if it was okay that she did not have a title page because she had forgotten to print hers off, and she asked if her bibliography was done correctly. Her comments demonstrate an emphasis on the product as opposed to acknowledging the value of the process she went through.

After each of Susan's comments I assured her that her assignment was done well and not to worry about her final product. However, statements like this and other behaviours such as colouring on her hand in the interview and making jokes led me to believe that she was uncomfortable with the interview process. I made an effort to be relaxed and reassure her with positive comments, however she continued to appear uncomfortable. The interview ended somewhat early.

Because of Susan's apparent discomfort with the interview process, I am hesitant to take her sometimes-short responses as an indication that she was not fully engaged by the program. It is true that her interview lacks the descriptions of thought processes that other students had; however, this may have resulted from nervousness. At one point in the interview I asked, "If next year someone gave you a research assignment on a different topic, what do you think you would do to start out with the assignment?" to which she replied, "I don't know." This was a common response from her. Of course, I began every interview by assuring the

students that responding 'I don't know' is perfectly acceptable. Thus, I am pleased that Susan was comfortable responding this way, and must interpret her responses as an indication that many of the steps we took in the storytelling program were not clear to her. Another indicator that this was the case is her paper, which was quite short and offered only one piece of supporting evidence to prove her theory.

This storytelling program was designed to help each student be fully engaged in the research process by appealing to them with story. As is the case in all levels of academia, reaching each individual is very difficult. This is seen with the case of Susan who appears to have struggled with this program. In most cases however, it is apparent that students were able to suspend their disbelief and therefore, found this storytelling program engaging inasmuch as they believed that it presented an authentic research query.

Visual Perception of the Stories

Each week the students in this program listened to several image-filled tales that contained new "clues" to aid them in their search for information. The students' reactions to the stories clearly demonstrate that they were absorbed by and enjoyed the experience of listening to stories. What is interesting to note, is the effect the stories had on their imaginations and the role the students' imaginations played in their research. Several of the students consistently referenced the images the stories produced in their minds and cited them as a source of information. This indicates that a visual awareness of the stories impacted some students' interpretation of the information conveyed in the story.

In addition, their visual interpretation of the story became a source of information for them.

The students who referenced their imaginations and the images they perceived were all female. Six girls cited their imaginations; five of them were from the focus group and one had, had an individual interview. The common trend in each of these girls' discussions was their visual perception of the stories. As Flora explained in her interview, "Um, like when you were storytelling like a little mini movie was running in my head and that's just where all the ideas came from." Similarly, Shuvani described it in her focus group by saying, "while you're telling the stories there'd be a film in your head." It is clear that for some of the girls, the experience of listening to stories became a visual exercise for their imaginations. As the story unfolded for them with words, a parallel story unfolded in their minds. Miley depicted this process when she said, "a couple times when I was listening I kind of saw some pictures in my head about what was happening."

The images the girls perceived in their minds became a source of information for them as they attempted to solve the mystery. For these girls, visual information processing was an essential aspect of their problem solving process. Ashley's claim that "my imagination helped me the most because of the pictures in my mind when you told stories" illustrates the important role of the imagination. The ability to picture the stories helped the girls better understand them and have more confidence in their interpretation of them. As Shuvani said, "if you didn't really think about it in your imagination and picture these people

and how they looked you wouldn't be so sure." Another girl claimed that if you did not imagine it, "you'd get less information."

The girls' ability to imagine the stories enabled them to take ownership of them. This is an important part of the storytelling process. When a listener takes ownership of a story they are able to use the story in the context of their life and transform it to meet their needs. In this storytelling program, the students who were able to mold and transform the stories to solve the mystery demonstrated that they had taken ownership of the stories. In many cases, this resulted in the students using components of the stories to write small stories in their final papers as a response to my stories. Exchanging a story for a story is a common practice and demonstrates that the students embraced the storytelling tradition.

After hearing a tale and interpreting it in their minds, the girls could use their mental interpretation as a platform for solving the mystery. The fact that this occurred is demonstrated by the girls' work in their final papers. Flora's paper cites specific images from multiple stories, combining characters and events to form a theory of where the gold is hidden. It states, "In Jilliane's stories Lemon left the gold because he got scared. Well, I think after Lemon left, Bobby came and took it. Bobby found a trail of gold that led him to the mine. Lemon's sac was probably open and the gold was falling out. And there was also a hill near the gold when the bear came." She uses images and events from several stories and combines them in a theory to solve the mystery. Flora's paper demonstrates that her main source of information in solving the mystery was her memory of the stories and in particular, the images she retained in her memory from listening to

the tales. While her paper lacks critically analyzed sources of information, it points to her ability to treat the stories as malleable clues to be worked out in order to solve the mystery. This ability highlights the constructivist nature of this assignment. Flora's citation of the images in the stories makes it clear that her visual interpretation was a central element in her process of understanding the information. The visual information contained in the stories enabled Flora to find meaning in the project and her ability to use this information to create an argument validates her method and demonstrates critical thinking.

Relying on the physical description of the story was a common theme in the students' work. Many students based their whole theory on the physical components described in the story. In this way, their visual interpretation of the story actually became a source of information for them as they solved the mystery. Shuvani claimed, "Your imagination is one resource." These students sent a clear message that they feel the imagination is an important component of the information search process.

Affective Involvement

Involving the students affectively was a major focus of this project. Firstly, it was my belief that using stories as a method of instruction would increase the students' emotional engagement. Through this I hoped the students would be motivated to learn and have an improved ability to absorb new information (Egan 2007, p. 13-19). In addition, I focused on observing the students' emotional involvement in order to determine whether or not they went through the steps outlined in Carol Kuhlthau's process approach (1989). Many

different emotional responses were expressed in interviews or recorded in the observations of the students. These would indicate that the students did become involved in this program on an affective level.

Feelings expressed about listening to the stories were overwhelmingly positive. Adjectives used to describe what it was like to listen to the stories included fun, cool, exciting, interesting, terrific, etc. In discussing the storytelling sessions, the students often shared short anecdotes that indicated their emotional involvement. One student said listening to the stories made him nervous. When asked why, he explained that the element of suspense and surprise in one of the stories had put him on edge. Another student said that when she got to the end of the assignment she was sad "cause I knew that if we were on the number six question then you would like not tell any more stories and it would be done already."

While it is safe to say that the students enjoyed listening to the stories and were emotionally involved, whether or not this is different from a typical class for the students is necessary to prove that storytelling had a special effect. The students explained that the storytelling program was different than their usual lectures. Kristi said, "no one at [our school] got to do this before." Furthermore, comments like this one from Zachary who said, "it's more funner than all the other stuff from social," would indicate that this was unique and enjoyable for the students. When asked if the students have had other opportunities to take part in storytelling programs like this one, both Mrs. Walters and Mrs. Ursum explained that although the school may hire a professional storyteller on rare occasions, this

type of storytelling is not used at their school. Furthermore, when asked if the level of involvement the students had in this assignment is typical of them, Mrs. Walters said, "I think it varies, but because this one was probably heightened because of the stories and their interest was sparked with that—was really noticeable. Right, but it was highly motivating for them. They were intrigued with it at all times as I said to you, I mean, spellbound when you were telling the stories...."

When discussing the way the students responded to the program on an emotional level Mrs. Walters and Mrs. Ursum highlighted two main themes. According to them, the program captured the students' interest and motivated them. Because the stories were entertaining and unique, they engaged the students. Mrs. Walters said by beginning each session with stories, the classes "started with that focus to draw them [the students] in." She went on to say that the stories "captured their attention immediately, and sparked their interest in a topic." Furthermore, Mrs. Walters claimed that the stories "created an interest and maintained it throughout, so that waning [or loss of interest] that goes 'are we ever going to finish this?' it was, when is Jilliane coming? Is she going to tell us stories? So it kept their interest throughout the whole project." By involving the students affectively, the stories were able to help the students maintain their interest throughout the project and motivate them to complete their research assignment. As Mrs. Ursum recalled, "I remember the one day when we were in a class and you said "should we do research" and they went "yeah!" and I thought by this time they're going to be sick of research. You'd think they'd be bogged

down, but they were all pumped up because again, you'd given them another reason to go do research, you know, and they thought, 'well now I have to find out if that's true!'" This example illustrates that the students' enthusiasm for doing research increased after having listened to a story.

As Mrs. Ursum pointed out, the students had a desire to "find out if that's true" after listening to the story. This desire to discover the answer motivated them to carry out their research. The idea of solving a mystery was embedded in this storytelling program. It was embedded in the stories and in the students' assignment. In this way, the stories were a metaphor for the students' research assignment and the research assignment was a metaphor for looking for hidden gold. Nearly each story I told had a plot line that included characters searching for lost gold. Because many of the students were able to envision such images and identify with them, they became emotionally involved in the program. As Egan points out, "Our emotions seem tied to these mental images; when we imagine something we feel as though it is real or present, such that it seems that our "coding" and "access" to images is tied up with our emotions" (2007, p. 8-9).

Conclusion

By conducting this storytelling program, I was able to consider the usefulness of story in guiding grade four students through the research process. This research process was based on Kuhlthau's process approach. I have synthesized the information from my observations, interviews, focus groups and the students' work in order to answer my research questions. These questions

focused on the successful incorporation of the process approach, critical thinking and the students' emotional involvement in the storytelling program.

In considering my research questions I have demonstrated that the storytelling program was successful in incorporating the process approach. Having a school with supportive staff and a storytelling program that incorporated the curriculum objectives were important elements to the success of the program. In addition, enabling the students to develop an awareness of the process approach was highly dependent on utilizing tangible representations of the research model. These included a visual aid and a red booklet that guided the students through the assignment.

The data collected demonstrated that for many students, this program helped them develop critical thinking skills. The story of the Lost Lemon Mine invited the students to treat the assignment like a mystery. Many of the students felt compelled to prove whether or not the mystery was real and they treated the information collected as "clues." Synthesizing this information to form a persuasive argument required higher-level thinking and therefore, the students did develop critical thinking skills. Unfortunately however, they did not learn to distinguish between a valid information source and a non-credible information source. In retrospect, I have considered the possibility that the students may not have learned to analyze information sources critically because of the storytelling environment that engenders the suspension of disbelief as opposed to a critical approach to the validity of information sources.

The students' level of emotional involvement was well documented in observations as well as their own comments. The data demonstrates that through their imagination and their ability to suspend their disbelief they were engaged and motivated by the stories. This resulted in the overall enjoyment of the program, and also increased the students' belief in the authenticity of their research inquiry. Overall, the data collected from the storytelling program demonstrates the value of storytelling as a pedagogical tool.

Chapter Four: Conclusions

This thesis has explored the use of storytelling in a grade four classroom. In particular, it has examined how storytelling can be used to demonstrate the process approach to researching. In this final section, each research question will be addressed, potential for future research will be discussed, the research process will be considered, and finally practical implications will be suggested.

Summary of Findings

1. *Can a storytelling program incorporate the process approach successfully?*

The storytelling program was successful in incorporating the process approach. Comments made by the students as well as observations of their advancement through the assignment, demonstrate that the process approach guided their work. Students' emotional responses indicate that they experienced the feelings of doubt and confusion common early in the stages of the process approach; however, these feelings gave way to feelings of confidence and relief as the students approached the completion of their projects. In addition, observations of the students show that they began by exploring many ideas and slowly moved to focus on one idea. Finally, the comments made by the teacher and teacher/librarian state that the students moved through all the stages of inquiry in this project.

2. *Can participating in a storytelling program raise grade four students' awareness of the stages of the process approach?*

Comments made by the students indicate that their awareness of the stages of the

process approach did increase. Although the students did not directly reference the names of the stages, they did imply an understanding of the process approach model. The students were aware that there are steps to research. Furthermore, they expressed an appreciation for the process approach model and the guidance that it gave them as they worked through their project. They claimed that they needed the model to help them know what to do as they carried out their research. Daniel stated that he thought it would be helpful to memorize the steps, but that the words used to name the steps were too big to recall. Much of the students' awareness of the steps of the process approach was due to the visual aid used to depict the steps of the process. The students were able to recall the visual aid and associated it with the steps they took as they moved through the research process.

3. *Will students participating in a storytelling program learn how to analyze sources critically?*

The program was not successful in teaching the students how to analyze sources critically. Although a mini lesson was taught on determining credibility, this skill was not developed. The students' teacher and teacher/librarian both indicated that they did not believe the students could determine the credibility of sources. Observations of the students throughout the project would also indicate that in many cases the students did not determine credibility effectively.

4. *Will students participating in a storytelling program be able to approach the research process critically?*

Critical thinking was an integral part of the research process for the students in

this program. All the data sources indicate that the students adopted a critical approach. Many conflicting facts were presented in the stories that created an attitude of questioning. Throughout the program the students adopted the attitude of solving a mystery, comparing facts and ideas, and asking questions. In their final papers they express strong opinions and offer unique hypotheses as a solution to the problem. Their description of arriving at these solutions demonstrates a process of critiquing ideas and creating solutions.

5. *Will students become emotionally involved in the information literacy program?*

The students were emotionally involved in this program. Not only were they engaged in the stories, but this engagement carried over into their research process. As a metaphor for searching for gold, the research process echoed the stories of the miners. This provided a stimulus for the students' imaginations. As a result, many students became involved in the process on multiple levels. Some students' comments indicate that they were visually engaged in the program, claiming that the pictures they could see in their minds as the stories were told contributed to their research. Others indicated that they found their role as detectives in a mystery exciting and engaging.

The students' ability to suspend their disbelief in the stories was an important part of their engagement. Because they believed the stories, their role as researchers became more important. The teacher/librarian emphasized this effect, claiming that their involvement in the process was heightened by their sense of the authenticity of the query.

The experience of listening to stories had a great effect on the students. Because the students found the stories exciting, they looked forward to my visits and associated positive feelings with the project as a whole. The teacher and teacher/librarian both indicated that the students' motivation and engagement in the program was heightened and maintained because of the effects of the stories. This is verified with observations of the students as well as their comments.

Potential for Future Research

This research has generated many questions for further research. One question posed by this research is how stimulating a student's imagination with storytelling can help create a more authentic inquiry. While several of the students indicated that this research experience was meaningful to them because they felt it enhanced the authenticity of their query, our knowledge of this could be increased by conducting further studies examining research queries given to students and their perceived role as researchers. In addition, the role of students' imaginative visualizations on their research process needs further research. Students indicated that their imagination was a source of information for them. Furthermore, it is clear that some students' visualization of the stories implicated their decisions in the research process. The students' imaginations were a significant factor in their information processing and therefore, this area needs further research.

Reflections on Research Process

Many efforts were made to attend to details that may impede the students' successful completion of their research project and affect the quality of data collected; still, there were areas that called for improvement. Both the teacher and

teacher/librarian expressed regret that the students were not provided with a graphic organizer that would have allowed them to keep track of their sources as they went through their research process. Although blank pages were provided in their red notebooks, the students required something more directive.

After conducting the focus groups, I believe the quality of data collected from them would have been improved by taking a few small steps. Dominant participants as well as multiple people speaking at the same time affected the data in both focus groups. Although I started the focus groups with a brief explanation of the purpose of a focus group and what I expected to obtain from it, I would have made this discussion more extensive and ensured that the students understood the goal of the focus group better by asking them questions afterward. I also would have stated specifically that I expect the students to be respectful, take turns speaking and give everyone a chance to voice their opinion.

Because the mood in both focus groups was cheerful and most of the participants were eager to share their opinions, I believe that breaking them into boys and girls was successful in eliminating tension. However, it did not eliminate the problem of an unequal distribution of speaking time. As a result, I believe conducting focus groups with better purposive sampling and a maximum of four participants would have provided more students with an opportunity to voice their opinions more completely.

Several of the students who were not able to be part of an interview or a focus group expressed regret that they were unable to participate in this stage of data collection. However, in the initial stages of completing ethics documentation

I was unsure of how many students would be in the class and therefore, was unaware of how many interviews and focus groups to expect. In addition, I was sensitive to the time I would be requiring from the teacher by taking her students out of class. As a result, I placed my estimates low. In retrospect, I would place my estimated interview numbers higher rather than lower in the event that more students have a desire to participate. In this case, there were only four students who were not able to participate. If all students could have participated, I would have broken the focus groups into four as opposed to six. This would have meant running four focus groups with four participants in each instead of two focus groups with six participants. Although it would have required more time, I believe the quality of data would have been improved and the students would have each had the opportunity to participate if they chose to.

Finally, it is important to note that my ability to tell stories was integral to the success of this project. I have been an oral storyteller for eight years and I have extensive experience entertaining children with my stories. Without this experience and skill level, the project would not have been possible. In reflecting on the program, Mrs. Ursum noted, "it's not a simple thing to tell a story like that and how engaging it was, cause it was really quite powerful." She went on to express her regret that she had not video taped each of the stories in order to reuse them with the students. While my experience was important in carrying out this program, many people are gifted storytellers and furthermore, storytelling is a skill that can be developed.

Practical Implications

Storytelling proved to have many pedagogical benefits for the students in this program. Thus, putting this program into practice is recommended. Although the program designed in this study was very specific and targeted to a specific class with a teacher/librarian, the principles in this program can be transferred to fit many age groups and different curricula. The following descriptions illustrate methods of transferring this program to meet a variety of age groups and curriculum:

Grade Seven Social Studies

a. The theme of this curriculum is the government and history of Canada. A program for this class could be developed by telling stories of Louis Riel and the Métis rebellion. Because this is a controversial story with many interpretations and perspectives, a multiplicity of tales would be available with varying opinions expressed. This would encourage critical thinking and lend itself to the process approach. The students could be asked to take a side and articulate their opinion with verified information sources.

Grade Ten English

a. Letters, journals and anecdotes of many famous poets and authors exist. These provide scope for many stories that could be shared before reading that author's work. After listening to these stories students could be asked to analyze

an author's literary works or write a paper about that author.

b. Many stories are available on the life of William Shakespeare. Some question the reality of his existence, while others pertain to his romantic life. These could be told prior to research assignments challenging the students to prove whether or not Shakespeare was a real person.

Theoretical Implications

This research has confirmed many of the ideas presented in the literature review. It has reinforced principles of constructivism, the effectiveness of the process approach and the use of storytelling as a teaching method (Kuhlthau 1993, 1989; Egan 19889). The theories of Kuhlthau and Egan provided the framework for this storytelling program. Prior to this study, combining Kuhlthau's process approach with a storytelling model had not been researched. Thus, examining the theoretical implications of this new model presents a new perspective on information literacy instruction.

As Egan highlights, using the imagination to involve children affectively in the teaching process enhances their memory, improves motivation to learn, and helps them think objectively (Egan 2007). Concurrently, Kuhlthau adopts a constructivist view of learning and emphasizes the need to inspire life long learning and critical thinking (1995). Her model must be taught with a constructivist approach with an emphasis on the research process as opposed to the product.

Combining Kuhlthau's model with Egan's theories demonstrated the ability of storytelling to motivate and inspire children to conduct research. It is clear that storytelling is a natural method of teaching with a constructivist approach. Because stories invite listeners to interpret information as they are told, storytelling becomes an exercise in audience participation. Listening to stories then becomes a process of discovering meaning. Furthermore, as a tool for inspiring the imagination, storytelling becomes a source of information. Images and ideas fill participant's minds as stories are told. This information is all attached to emotions and as a result, listeners are involved affectively and are motivated to conduct research.

What this demonstrates is the power of storytelling as a teaching method. In particular, the value of storytelling is seen in its ability to introduce an affective dimension to learning. Stripping emotion from pedagogy prevents students from connecting to new information in a meaningful way. Without this connection students will be unable to find motivation to learn. Inspiring children's imaginations invites them to place information in a context that is meaningful to them. This introduces affective meaning and allows children to discover the significance of that information independently. In other words, it fosters constructivist learning.

Storytelling promotes constructivist learning. It inspires the imagination and this introduces an affective dimension to education. By involving children's emotions and engaging them in the learning process, storytelling acts as a

motivator. All these elements support the objectives of Kuhlthau and Egan, the theorists this research was based on.

Conclusion

This research project aimed to discover how storytelling could be used to teach information literacy. This was determined by conducting a storytelling program that included nine storytelling sessions that were connected to a research assignment. The stories and the assignment were based on a common theme. Carol Kuhlthau's process approach was an integral part of this research project, which sought to incorporate it as a means of conveying the principles of information literacy. Furthermore, the program was delivered with a constructivist framework. Observations were conducted throughout the program and following the completion of the storytelling program interviews, focus groups and the students' final papers were used as data.

Because the students were involved in the storytelling program on an emotional level, their desire to conduct research increased. They indicated that their research query had more authenticity and therefore, it became more important to them. In addition, several of the students found that the stories created images in their minds that acted as a source of information for them. A great deal of information was available to the students through the stories, books, the internet, maps, etc. which successfully inspired the students to think critically in order to solve the mystery. All of these elements helped the students in working their way through the process approach, which acted as a step-by-step guide to completing the research assignment.

As a final note, I would like to speak to the experience of offering this storytelling program. As previously mentioned, I have been a storyteller for 8 years. I am passionate about this occupation and find it fulfilling. Telling stories always has the effect of filling me with energy and this situation was no different. As I shared my stories with the students I was excited by their enthusiasm and appreciation for what I had to offer. The students' willingness to embrace the project and their whole-hearted desire to solve the mystery was inspiring to me. Watching their facial expressions as I told stories enhanced my ability to captivate them. In that way, they were as much a part of the storytelling as I was. I found the experience of delivering the program very rewarding and believe that inasmuch as the students were involved affectively, so was I.

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Appendix A – Sample interview questions for students

1. What was it like to listen to the stories?
2. How did the stories make you feel?
3. Do you think the stories helped you with your school-work?
    a. If yes, how?
    b. If no, why not?
4. Tell me about the story you remember most.
    a. Why do you remember it?
5. What was your favorite part of the storytelling?
6. How did you decide where the Lost Lemon Mine was?
7. What was it like to decide? i.e. was it easy, hard, fun, boring, frustrating etc.
8. Did any of the stories help you decide?
    a. How did they help you decide?
9. What did you do to help prove where you thought the Lost Lemon Mine was?
10. Did any particular story help you prove where the Lost Lemon Mine was?
    a. If yes, how did it help you prove it?
11. What kinds of information did you use to help you prove your point?
12. How did you find that information?
13. How did looking for information make you feel?
    a. Did the stories help you find information?
        i. If yes how?
        ii. If no, why not
14. How did you decide what information to use?
15. Did the red booklet I gave you help you with your assignment?
    a. If yes how?
    b. If no why not?
16. How did writing the assignment at the end of the project make you feel? (eg. Angry, frustrated, happy, sad…)
    a. Why did it make you feel that way?
17. Was there a particular story that you really liked or disliked?
    a. Why did you feel that way about it?
18. Next time you do research like this, what are some steps you will take?
19. If you had to describe what we did in this Lost Lemon Mine program to someone else (like maybe your mom or dad) how would you describe it?
20. Because we were doing research, I talked to you about something called the "Process Approach" a lot. Do you remember me talking about the Process approach? (Basically, it outlines the steps to take in doing research). Did me talking about these steps make a difference to you when you had to do the assignment?
    a. How did it make a difference?
21. How do you think the other kids in your class affected your work on this assignment?

22. What parts of this experience did you like?
    a. Why?
23. What parts didn't you like?
    a. Why?

Appendix B – Sample focus group questions

1. How did sitting in the cozy corner listening to stories make you feel?
2. What was your favorite part about the storytime?
3. Do you think that the stories helped you with your school-work?
4. How did you guys decide where the LLM was?
5. Was there a particular story that helped you decide where the LLM was?
6. How did it help you decide?
7. What did you guys do to help you prove where you thought the LLM was?
8. How did you find the information that helped you prove your solution to the mystery?
9. What do you think helped you more than anything to decide where the LLM was?
10. When did looking for information make you feel? Was it exciting or frustrating or did it make you anxious, etc?
11. So how do you think these stories made a difference to you when it came to looking for information?
12. I talked a lot about something called the process approach and I used the colored wheel to explain it. Did this make a difference to you in doing your research?
13. What difference did the red booklet make to you when you were doing the assignment?
14. When you were doing the research and writing your paper did you find it hard or easy or confusing or fun or boring? Why?
15. What difference do you think having other kids around you working on the assignment made?
16. How did your imagination make a difference to you with your research?
17. Next time you have to do an assignment similar to this what do you think some of the first steps you would take would be?
18. What parts about this program did you like?
19. What parts did you guys not like?

Appendix C – Sample interview questions for teacher and teacher/librarian

1. How much extra instruction did you give the students to supplement what they were learning in class?
2. How many of the research skills required for this project do you think were new to the students?
3. How challenging do you think this project was for the students in comparison to a typical assignment?
4. What function do you think the stories played in guiding the students through this research project?
5. How often do the students in this school have opportunities to participate in story-times like the ones we had here?
6. How different was this research program from what the students would typically do in class?
    a. What were the differences?
7. Do you believe that using the "process approach" as a framework for this assignment made a difference to the students?
    a. What differences did you perceive?
8. How did the "Process Approach" vary from what the students typically use in information searching?
9. Do you believe the students acquired new skills as a result of this assignment?
    a. What skills?
10. Was the student's information searching behaviour different in this assignment than in typical assignments?
    a. If yes, how?
    b. If now, why not?
11. Do you think the stories I told changed the student's approach to this assignment in any way?
    a. If yes, how?
12. How do you believe the students influence each other in the search process?
13. Do you believe the students became emotionally involved in this research process?
    a. Is this level of involvement typical?
    b. How did this affect their research process?
14. How effective do you think this program was in guiding the students through the research process?
15. Do you believe the students were able to develop critical thinking skills as a result of this process?
    a. If yes, how and what type?
    b. If no, why not?
16. Do you believe the students in this assignment increased their ability to determine the credibility of information?
    a. If yes, how?
    b. If no, why not?

Appendix D – Information letter for students regarding the storytelling program, observation, interviews and focus groups

Dear Students,

You are invited to participate in a research project. This project will try and find out how teachers can use storytelling to help you learn. Also, it will try and find out if storytelling can help you learn how to find and use information in the library.

The researcher's name is Jilliane Yawney. She is a University student at the University of Alberta in the School of Library and Information Studies. That means she is becoming a librarian. She is doing this for her thesis, a big research project.

Participating in this project means you will watch six to eight storytelling sessions that will be either 62 or 90 minutes long. You will also have an assignment to complete. This assignment will be part of the storytelling sessions. It will ask you to use the information in the library to write a short report.

You will be asked to help with the research in three ways.

1) Observation: throughout the storytelling sessions Jilliane will observe all the students in the class. As you look for information in the library, Jilliane will watch and take notes on what you do to help you research. She will use these notes to help her understand whether or not the storytelling sessions are helping you.
2) Interviews: after the storytelling sessions are done, Jilliane will interview five of the members of the class. The students interviewed will be randomly chosen. If you are asked to be interviewed you do not have to say yes. If you say yes and decide later you don't want to be interviewed you can change you mind. If you are being interviewed you don't have to answer all the questions. You can leave an interview any time or just answer the questions you like. The longest an interview will be is thirty minutes.
3) Focus Groups: for this project a focus group is when about four to six students get together with a researcher and talk about questions. Two focus groups will be conducted. Students will be randomly selected for participation in the focus groups. The focus group session will last about forty minutes. If you are asked to be part of a focus group you do not have to say yes. If you say yes and change you mind later you can back out. If you are in a focus group session and decide you want to leave that is okay. You do not have to answer all the questions asked in the focus group.

The University of Alberta has rules to protect people who take part in research and Jilliane will follow these rules. These rules are called the University of Alberta Standards for the Protection of Human Research Participants.

If you are part of this research you might feel uncomfortable when you are being observed or while you are asked questions in an interview or a focus group. Because of this you do not have to participate. If you decide to participate and change you mind later on that is okay.

Taking part in this research will let you be part of a unique storytelling program and learn more about research. It will let you tell a researcher your opinion. What you say will be used in her thesis and may be used in articles and presentations that will be viewed by many other people. It will help many people learn about storytelling and how to teach students to find information and use the library.

Everything you tell the researcher will be private. She will not tell anyone what you told her without first removing your name. She will keep copies of all the information she collects for a minimum of five years. This information will all be locked or protected with a password.

The plan for this study has been reviewed for its adherence to ethical guidelines and approved by the Faculties of Education, Extension and Augustana Research Ethics Board (EEA REB) at the University of Alberta. For questions regarding participant rights and ethical conduct of research, contact the Chair of the EEA REB at (780) 492-3751.

If you have any questions about this project please contact the researcher, Jilliane Yawney at... You can also contact her supervisor, Dr. Heidi Julien, at... Finally, you can contact the director of the School of Library and Information Studies, Dr. Anna Altmann, at...

Sincerely,

Appendix E – Assent form for students' participation in storytelling program, observation, interviews and focus groups

To

I have read the information letter and understand the purpose of this study. I was able to ask questions and my questions were answered. I know that my participation is voluntary and that I can quit whenever I want to. If I decide to quit I don't have to explain why and I won't be punished for quitting. I know that everything I say and do will be kept private. I don't have to answer every question. All the information the researcher collects will be kept secure for up to five years and then it will be destroyed. This information will be only be used for the things explained in the letter.

I agree to participate in this storytelling program and research project.

Signed:

Name:

Date:

Appendix F – Information letter for parent/guardian regarding participation in the storytelling program, observation, interviews and focus groups

Dear Parent and/or Guardian,

Your child has been invited to participate in a research project. This purpose of this project is to determine whether or not storytelling has educational benefits. Specifically, this research project will examine whether or not a storytelling program can help grade four students learn how to find and use information in the school library. This research will be conducted by Jilliane Yawney, a Master's student at the School of Library and Information Studies (University of Alberta) and this work will contribute to her thesis.

As participants in this research project the students in this class will take part in a special storytelling program. The storytelling program will consist of six to eight 62 or 90 -minute storytelling sessions. In each session at least one story will be told which will support the social studies curriculum. These stories will be designed to guide the students through the research process and will be connected to an assignment that will require the students to find and use information.

Throughout each storytelling session the researcher will observe the students and take notes recording their behaviour. These notes will help to determine what affect the storytelling sessions are having on the student's researching methods. The researcher will only observe the students during the time that they are in the library taking part in the program. The students will be informed that they are being observed and that their behaviour may be recorded, however, the researcher will be discreet in her note taking so as to minimize her interference in the student's activity. Following the storytelling sessions, five thirty-minute interviews will be conducted one on one with students who participated in the program. Also, two forty-minute focus groups will be run with four to six participants in each. Participation in the interviews and focus groups will be entirely voluntary and students will be randomly selected for participation.

The researcher, Jilliane Yawney, is bound by the University of Alberta Standards for the Protection of Human Research Participants. As such, the identity of the participants will remain anonymous. The potential harms of participating in this research could include feeling pressure to participate, discomfort with the interview process, discomfort with being observed, and/or discomfort while being part of a focus group. Each of these potential harms will be addressed by informing participants that they may opt-out at any time and need not answer any question they do not feel comfortable with.

Potential benefits of participating in this research include having the opportunity to take part in a new and unique storytelling program, being able to voice an opinion to an adult who is willing to listen and having that opinion reach a wide audience. Furthermore, this research will allow participants to gain a greater

understanding of how research is conducted as well as how to use information in a library.

No student is obligated to participate. The school will provide another activity for students who choose not to participate. Students may withdraw from participation at any time without penalty. A choice not to participate will not implicate further opportunities to participate in research. All data collected will be kept for a minimum of five years after completion of the research. It will be kept in a locked file and/or password protected. This research may be used in the publication of research articles and presentations and the identity of all participants will remain anonymous.

The plan for this study has been reviewed for its adherence to ethical guidelines and approved by the Faculties of Education, Extension and Augustana Research Ethics Board (EEA REB) at the University of Alberta. For questions regarding participant rights and ethical conduct of research, contact the Chair of the EEA REB at (780) 492-3751.

If you have any questions regarding this project please contact Jilliane Yawney at... You may also contact Dr. Heidi Julien, who is supervising this thesis at... Finally, you may contact the director of the School of Library and Information Studies, Dr. Anna Altmann at...

Sincerely,

Appendix G – Consent form for parent/guardian in regards to participation in storytelling program, observation, interviews and focus groups

To the parent/guardian of:

In signing this consent letter I acknowledge that I have read the "Information Letter" and understand the purpose of this study. I have been given the opportunity to ask questions about the study and these have been satisfactorily answered. As the parent/guardian I understand that my child's participation is voluntary and he/she may withdraw at any time without any explanation for doing so or any negative consequences. I understand that my child's identity will be kept anonymous. I understand that my child is not obligated to answer any particular question. I understand that the data collected from this project will be kept in a secure location for up to five years and thereafter will be destroyed. I understand that the data collected will not be used for any other purpose than is stated in the letter.

I agree to have the above noted child participate in this storytelling program and research project.

Signed:

Name of parent/guardian:

Date:

Appendix H – Information letter for teacher and teacher/librarian regarding participation in interviews

Dear

You have been invited to participate in a research study investigating how storytelling can be used to help grade four students find and use information in the library. Jilliane Yawney, a student at the University of Alberta, is carrying out this research. She will use this research to write a thesis for her Master's of Library and Information Studies.

In addition to other data collection methods used, Jilliane would like you to participate in one approximately one-hour long interview. This interview will be recorded with a MP3 player and/or a tape recorder and will then be transcribed by Jilliane.

Jilliane will comply with the University of Alberta Standards for the Protection of Human Research Participants. Any other research personnel involved with the project will sign a confidentiality agreement. There are no foreseeable harms or benefits arising from participation in this interview.

A report on this research will be written and delivered to Jackson Heights Elementary School upon the completion of this project.

You have the right to not participate in this research project. You may withdraw at any time without any adverse affects. Withdrawing will not limit your opportunities to participate in research in the future. You may opt out of this project without penalty and any data collected will be withdrawn from the data base and not be included in the study. Your privacy will be protected; your name will be replaced with a pseudonym in all of the reports on this research. Data will be password protected and/or kept in a locked cabinet at all times. Data will be kept for a minimum of five years after which it will be destroyed. You have the right to the disclosure of any conflict of interest on the part of the researcher.

This data will be used for the purposes of writing a thesis and may be used for other purposes such as the publication of research articles, presentations, teaching etc.

If you have any concerns in regards to this project you may contact Jilliane Yawney at... or you may contact Jilliane's supervisor and professor at the University of Alberta, Heidi Julien at...

"The plan for this study has been reviewed for its adherence to ethical guidelines and approved by the Faculties of Education, Extension and Augustana Research Ethics Board (EEA REB) at the University of Alberta. For questions

regarding participant rights and ethical conduct of research, contact the Chair of the EEA REB at (780) 492-3751."

Appendix I – Consent form for teacher and teacher/librarian to participate in interviews

Dear

In signing this consent letter I acknowledge that I have read the "Information Letter" and understand the purpose of this study. I have been given the opportunity to ask questions about the study and these have been satisfactorily answered. I understand that my participation is voluntary and I may withdraw at any time without any explanation for doing so or any negative consequences. I understand that my identity will be kept anonymous. I understand that I am not obligated to answer any particular question. I understand that the data collected from this project will be kept in a secure location for up to five years and thereafter will be destroyed. I understand that the data collected will not be used for any other purpose than is stated in the letter.

I agree to participate in this interview.

Signed:

Print Name:

Date:

Appendix J – Information letter for students regarding use of their reports

Dear Students,

You have been part of a research project on storytelling for a couple months now. The point of this project has been to see of storytelling can help you with research. The first time I asked you to be part of this project I asked if you would let me observe you and I asked if you would be part of interviews and focus groups. I didn't ask if I could use your reports in my research. Now I realize that your reports would really help me with my research. So, I am asking you if I can use your reports in this research.

As always, I won't use your real name when I use your reports. Your identity will be kept safe and confidential.

You already know this, but my name is Jilliane Yawney. I am a University student at the University of Alberta in the School of Library and Information Studies. That means I am becoming a librarian. I am doing this project for my thesis—a big research project.

The University of Alberta has rules to protect people who take part in research and I will follow these rules. These rules are called the University of Alberta Standards for the Protection of Human Research Participants.

You don't have to let me use your report. If you don't want me to that is fine. Even if you say I can use your report and decide later that you don't want me to that if fine. Just tell your teacher or phone me and tell me. If you decide not to let me use your report you won't be punished and it will not affect any opportunities to take part in research later on.

If you decide you want me to use your report, I may quote it or use ideas from it in my thesis. I also might use parts of it in papers I write or in presentations I give. I may parts of your report to teach other people about what I learned from this research project.

I will not tell anyone anything from your report without first removing your name. I will keep copies of your reports or at least five years. I will keep them in a locked file or in my computer where they will be kept private with a password.

The plan for this study has been reviewed for its adherence to ethical guidelines and approved by the Faculties of Education, Extension and Augustana Research Ethics Board (EEA REB) at the University of Alberta. For questions regarding participant rights and ethical conduct of research, contact the Chair of the EEA REB at (780) 492-3751.

If you have any questions about this project please call me (Jilliane Yawney) at... Or, you can call my supervisor, Dr. Heidi Julien, at... Finally, you can call the director of the School of Library and Information Studies, Dr. Anna Altmann, at...

Sincerely,

Appendix K – Assent form for students regarding the use of their reports

To

I have read the information letter and understand the purpose of this study. I was able to ask questions and my questions were answered. I know that my participation is voluntary and that I can quit whenever I want to. If I decide to quit I don't have to explain why and I won't be punished for quitting. I know that everything I say and do will be kept private. I don't have to answer every question. All the information the researcher collects will be kept secure for up to five years and then it will be destroyed. This information will be only be used for the things explained in the letter.

I agree to participate in this storytelling program and research project.

Signed:

Name:

Date:

Appendix L – Information letter for parent/guardian regarding the use of their child's report

Dear Parent and/or Guardian,

A few months ago your child was invited to participate in a research project. This purpose of this project has been to determine whether or not storytelling has educational benefits. Specifically, this research project is considering whether or not a storytelling program can help grade four students learn how to find and use information in the school library. This research will be conducted by Jilliane Yawney, a Master's student at the School of Library and Information Studies (University of Alberta) and this work will contribute to her thesis.

As participants in this research project the students in this class have taken part in a special storytelling program. This program was designed to guide the students through the research process and was connected to an assignment requiring them to find and use information in the library.

Data was collected through observation, interviews and focus groups. The purpose of this research project was to determine how the storytelling program would help the students to find and use information. As such, the researcher, Jilliane Yawney, would like to include the students written assignment on the Lost Lemon Mine as part of her data. In the first consent form you signed to allow your child to be part of this research project, using your child's written work was not mentioned. This purpose of this form is obtain permission to use your child's written work in this research project.

The researcher, Jilliane Yawney, is bound by the University of Alberta Standards for the Protection of Human Research Participants. As such, the identity of the participants will remain anonymous. There are no potential harms or benefits of allowing your child's written work to be used in this research project.

You are not obligated to allow your child's written work to be used in this project. If you choose not to allow your child's work to be used there will be no penalty. A choice not to participate will not implicate further opportunities to participate in research. All data collected will be kept for a minimum of five years after completion of the research. It will be kept in a locked file and/or be password protected. This research may be used in the publication of research articles and presentations and the identity of all participants will remain anonymous.

The plan for this study has been reviewed for its adherence to ethical guidelines and approved by the Faculties of Education, Extension and Augustana Research Ethics Board (EEA REB) at the University of Alberta. For questions regarding participant rights and ethical conduct of research, contact the Chair of the EEA REB at (780) 492-3751.

If you have any questions regarding this project please contact Jilliane Yawney at... You may also contact Dr. Heidi Julien, who is supervising this thesis at... Finally, you may contact the director of the School of Library and Information Studies, Dr. Anna Altmann at...

Sincerely,

Appendix M – Consent form for parent/guardian regarding the use of their child's report

To the parent/guardian of:

In signing this consent letter I acknowledge that I have read the "Information Letter" and understand the purpose of this study. I understand that the researcher is asking permission to make my child's report part of her data. I have been given the opportunity to ask questions about the study and these have been satisfactorily answered. As the parent/guardian I understand that this is voluntary and my child's report does not have to be used. Not allowing my child's report to be used will not result in any negative consequences. I understand that my child's identity will be kept anonymous. I understand that my child's report will be kept in a secure location for up to five years and thereafter will be destroyed. I understand that the data collected will not be used for any other purpose than is stated in the letter.

I agree to allow the researcher, Jilliane Yawney, to use my child's report on the Lost Lemon Mine in her research project.

Signed:

Name of parent/guardian:

Date:

Appendix N – Summary of stories shared

October 11

- Harry and George
  - Harry and George travel to the Cariboo with Goldie their mischievous horse.
- How the Buffalo Left
  - First Nations tale about the disappearance of the buffalo. A First Nations woman witnesses them going into the side of a mountain.
- Lost Lemon Mine
  - As told by Senator Dan E. Riley. In this version Lemon and Blackjack find the gold, Lemon kills Blackjack and then goes back to Tobacco Plains to tell the Priest what happened. The priest sends John McDougall to bury Blackjack. After he buries Blackjack, two Stoney braves hide the burial site and body.

October 17

- Priest's Attempt to Find the Gold
  - The Priest tries to locate the mine by outfitting many parties of prospectors one of which was led by Lemon himself. However, Lemon is so upset by the memory of his crime that he goes insane.
- Lafayette French's Attempts to Find the Gold
  - Lafayette French tries his best to locate the gold. However, he is stopped by sickness, fire and other events. Eventually he dies right after writing a letter to his friend stating that he "had located it."

October 18

- Neil Nicholson Version
  - Neil Nicholson worked for the Northwest Mounted Police in the Fort MacLeod area and had heard the story of the Lost Lemon Mine. The way he tells it, Lemon and Blackjack most likely hi-jacked the gold and escaped to Fort Benton. However, on the way to Fort Benton Lemon killed Blackjack and then got lost. Lemon then encountered Chief Bearspaw and received directions from him. In his attempt to follow the chief's directions, Lemon was chased by someone and buried his gold somewhere around Dutch Creek.
- Jimmy White Version
  - Jimmy White was a prospector who met Lemon in Fort Steele in the mid 1880's. He says that "Bill Lemon" came to Fort Steele with a wounded leg and told the police that his partner Blackjack had been attacked. However, Blackjack had actually fled to San Francisco where he showed his map of the mine to a fellow named McIver. McIver then came up north to search with the map. He was found prospecting around Finlay Creek. The map showed the location to a cabin used by Lemon and Blackjack.

October 24

- A Miner in a Tight Spot
  - In this story a miner is on his way out of the goldfields when he decides to spend the night in the hollow of a tree. While there, two bushwhackers named Lemon and Blackjack come and set up camp right beside the tree. They start a fire and begin talking about something secretive. The mention something about gold. The next day the miner learns that three miners' gold was stolen.
- Stoney Braves Stay the Night with Colin Thompson
  - On their way to a trading post, two Stoney Braves stay the night with Colin Thompson to get away from the cold. Thompson asks the braves what they intend to trade at the post. The braves show Thompson some gold they obtained from their chief. Thompson questions them about where the gold came from and the braves become very secretive.

October 25

- King Bearspaw's Desire to Find the Lost Lemon Mine
  - Although his father and grandfather knew where the Lost Lemon Mine was, they never told King and he devoted his life to finding it. In 1931 interest in the mine was stirred and many people came searching for it. In particular, Fred Kennedy (a reporter for the Calgary Herald) was intent on finding the mine. Kennedy met King Bearspaw on the trial and together they traveled through the Livingstone Range. However their attempts to find the mine were foiled when they arrived at Livingstone Creek and found the creek bed completely dry.
- Dancing Bill and Jim Lemon
  - In this story Bill kills Jim Lemon and leaves him in their cabin. Miners find him lying there and see that before he died he wrote a note stating that his partner Bill had killed him and most likely fled to Fort Benton.

October 30

- Lemon Marries Cloud Walker
  - On their way to the goldfields, Lemon married Cloud Walker. After spending time prospecting, Blackjack killed Lemon. To avenge her husband's murder, Cloud Walker poisoned Blackjack causing him to fall asleep. She then used dynamite to bury Lemon and his mine under a pile of rocks.

November 1

- Bobby Find's a Cave of Gold in Southern California
  - While out looking for gold one day, Roberto (Bobby) finds a gold mine. However, he is chased by a Grizzly bear and in his fright cannot remember where the mine is and it is never found again.

Appendix O – Schedule for the storytelling/search process sessions

1) Initiation – Thurs. Oct. 11 ▪ Get-to-know-you game…*15min* ▪ Tell stories…*30min* ▪ Discuss assignment…*20min* ▪ Brainstorming sessions…*25min*	**2) Selection – Wed. Oct. 17** ▪ Tell stories…*15min* ▪ Lesson: note-taking…*20min* ▪ Library search time…*25min* ▪ Review of step 3…*5min*
3) Exploration – Thurs. Oct. 18 ▪ Tell stories…*20min* ▪ Lesson: keyword search…*20min* ▪ Explore library…*50min*	**4) Formulation – Wed. Oct. 24** ▪ Tell stories…*20min* ▪ Lesson: credibility…*20min* ▪ Formulate focus…*20min*
5) Collection – Thurs. Oct. 25 ▪ Tell stories…*20min* ▪ Lesson: databases…*20min* ▪ Search library…*50min*	**5) Collection continued – Wed. Oct. 31** ▪ Tell stories…*20min* ▪ Search library…*40min*
6) Presentation – Thurs. Nov. 1 ▪ Tell stories…*20min* ▪ Lesson: citing…*20min* ▪ Work on report…*50min*	**6) Presentation continued – Wed. Nov. 7** ▪ Tell stories…*20min* ▪ Work on report…*40min*

Assignment due date: November 14th

Appendix P – Lost Lemon Mine Bibliography

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