UNIVERSITY OF ALBERTA

Meaningful Research Projects: Perspectives from High School Students and their Teacher

by

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Abstract

This study explored what students in a large urban high school viewed as meaningful in a curriculum-based research project. The conceptual framework for this study was drawn from Kuhlthau's uncertainty principle. The interest corollary of this principle holds that the learner's interest increases as uncertainty decreases. An action research approach, in conjunction with a moderate hermeneutic orientation, guided the investigation of the experiences of one classroom teacher and nine students as they completed a curriculum-based research project in a senior level high school English course.

The design and process of the curriculum-based research project was based upon the students' shared definition and understanding about what comprised a 'meaningful' assignment. Choice, relevance, reflection and application were considered essential components by the students. They stated that choice ensured personal interest and relevance and that expressing personal opinions about the topic encouraged reflection and personal application. Further discussion and analysis revealed three contextual elements that also contributed to meaningful assignments: acknowledgement of feelings, professional and peer support, and student empowerment through choice and validation.

The findings from the study clearly indicate that there is value in listening to what the students have to say about doing research projects. Integrating these student understandings into the project design and instructional processes can contribute to more meaningful learning experiences for the students. Identifying the students' understanding of the research process prior to beginning a project

will help to ensure that students receive the professional intervention they require. This may include teacher or teacher-librarian modeling of the process and/or presentation format. Introducing the students to Kuhlthau's Model of the Information Search Process before beginning the curriculum-based research project and reviewing it regularly may help students cope with the feelings that accompany research.

Because this study explores the experiences of a teacher and students in one school and because each group of students and their teacher is unique, it is important for educators to remain open to differing definitions of 'meaningful' and to adjust the curriculum-based research assignment appropriately.

Dedication

This dissertation is dedicated to my husband, Wilfred Barranoik, for his unwavering love and support, and to my parents, Joseph and Florence Voegtlin, for their belief in the importance of education.

Acknowledgement

I would like to thank my supervisor, Dr. Dianne Oberg, for her assistance throughout this study. Her help and understanding as well as her probing questions made completion attainable. I would also like to thank Dr. Jennifer Branch for her support, her collegiality and her friendship throughout my time at the University of Alberta. I especially appreciate her positive affirmation of this study.

I believe that my sister, Thelma Voegtlin, and my friend, Rosemarie Pelz, need to be acknowledged as well. Thelma provided new ideas and clarified my thinking as we discussed Dewey and the implications of his ideas for our current educational system. Our conversations about Dewey were essential to my current understanding. Rosemarie took time from her busy schedule to discuss hermeneutics with me every Saturday morning for a number of weeks. It was most enlightening to dialogue about new understandings.

I would also like to thank my teacher and teacher-librarian colleagues for their interest and their questions. Many conversations with them helped to refine my thinking about research. I also wish to acknowledge the students and the teacher that were part of this study. Without their cooperation and their ideas, I could not have completed my work. Finally, I would like to thank all my students for their inspiration and their articulation about what really matters to them.

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Chapter 1 Introduction

"I am a part of all that I have met;
Yet all experience is an arch where-thro'
Gleams that untravelled world whose margin fades
Forever and forever when I move." (Ulysses by Tennyson)

Narrative - *The Road Less Travelled*

As a sophomore in college, I remember struggling with a research paper for which I felt ill prepared. Gradually I taught myself how to research and my feelings of competence and understanding were reflected in my work. After graduation and while working in elementary and junior high schools, I assumed that high school students were now receiving training in research until a family member found herself in a post-secondary institution, lacking the necessary research skills.

The process of opening a new high school library and hosting a number of visits from post-secondary students and teachers allowed me to informally ask students whether their high schools had prepared them for conducting research projects. Their responses confirmed my suspicions; these students did not feel adequately prepared for their research assignments in post-secondary institutions. Could this be due to the prevailing belief that "covering" designated curriculum content was considered more essential by their teachers or that the previous research completed by the students had little or no meaning for them? It was then I determined that the students in our high school were not going to leave without experiencing a curriculum-based research assignment. Although the teachers agreed that providing a research experience was important for their students, I began to wonder if lack of prior research experience was the problem, or if it was something more? Was I promoting research based solely on personal interest or was it a crucial piece of the "education puzzle" and an essential life skill? Why did I believe that students needed the opportunity to construct meaning and knowledge through their involvement with research and the research process?

I became even more determined to develop meaningful curriculum-based research projects when one high school student mused, "The last time I remember doing a research project was in elementary school. I just remember because they want to get you into the library when you're a little kid. Once you get to junior high and high school it's more structured. It's like the teacher has this curriculum and they teach you that ..."

Background

The importance of making learning meaningful and relevant to students is reflected in many current curricular reform initiatives. Hartzell (2001) states that the new American "frameworks in mathematics, science, social studies and language arts all call for connections with the real world and the application of specific concepts in the context of the student's experience and future goals" (p. 24). It appears that the Alberta curriculum reflects these changes as well. For example, the Alberta Senior High English Language Arts program has five general outcomes; two of these include "manage ideas and information [and] create oral, print, visual and multimedia texts, and enhance the clarity and artistry of communication" (Alberta Learning, 2003a, p. 8). The Senior High Science curriculum emphasizes that students develop their problem solving abilities and assume responsibility for their learning (Alberta Learning, 1994), while the Program of Studies for Senior High Social Studies states that

> the concept of learners as receivers of information should be replaced with a view of learners as self-motivated, self-directed problem solvers and decision makers who are developing the skills necessary for learning and who develop a sense of self-worth and confidence in their ability to participate in a changing society. (Alberta Learning, 2000, p. 1)

The Information and Communication Technology Outcomes for high school stress accessing, using and communicating information from a variety of technologies as well as investigating problems and using "electronic research techniques to construct personal knowledge and meaning" (Alberta Learning, 2003b, p. 1).

The ability to communicate within the subject area as well as understand the integrated relationship within the core curriculum is also emphasized. This application of concepts within the context of students' current experiences and future goals seems to imply an emphasis on meaning-making, on assembling new thoughts and ideas into a personally constructed knowledge base rather than merely regurgitating facts. Therefore, an understanding of how to access, evaluate, synthesize and communicate information is critical. In a recent address, Dr. David Schindler, a University of Alberta ecologist, stated that "the measure of a good scientist is not one who can demonstrate his or her prowess at recalling facts but how effectively he or she can communicate with their peers and the public" (Hoddinott, 2003, A19). In other words, what is learned needs to be shared. There is no such thing as knowledge in an isolated context.

Although the Alberta curriculum outlines the importance of research and the necessity for students to develop their own understanding, the pressure in outcomes-based education to meet external standards is very great. It appears that this emphasis "is actually having the unintended consequence of reducing time for teaching [and] diminishing the depth of acquired knowledge" (Wood, 2003, p. 195). Providing opportunities and time for students to construct personal meaning

may be viewed as less efficient and not allowing for the coverage of material deemed necessary to pass the final provincial examination at the end of the course. As a result, the requisite research component is often viewed by students and teachers as an add-on rather than integral to learning the course content and developing new understanding related to the subject area.

Students faced with daunting amounts of information need the skills to analyze, synthesize and evaluate what is relevant for the required task. Many students become overwhelmed by the task and simply quit. Others see it as a challenge. They are able to explore the question and focus the search, process the information and eventually make it a part of their knowledge base, thereby constructing meaning and developing understanding. Kuhlthau (1998) states that an emphasis on understanding will make both the research process and the information gleaned through this process more meaningful to the student.

In my practice as a teacher-librarian, I have observed that many young people do not see information as valuable to themselves. Because their topics are assigned rather than chosen, their use of information is simply seen as 'important to the task at hand' rather than as a fundamental way to enhance and increase their own knowledge base. Burdick (1998) states that "although information literacy is abilities, skills, knowledge and use, those essential components by themselves don't ensure information literacy. To use information well, there must be motivation: a reason to do so, some interest or desire that is lacking in the aliterate" (p. 13). Therefore, when educators design research projects for students in school, it is necessary not only to address curricular requirements and

information skills, but also to consider what is meaningful and relevant to students.

Statement of Problem

In our information-based society, teachers believe life-long learning and literacy are very important. Students need to be information literate, to be critical and creative thinkers with the ability to investigate, organize and responsibly communicate what is learned (Loertscher & Woolls, 1999). The ability to access and use information appropriately is a life-skill, one considered essential for careers in the 21st century (Alberta's Commission on Learning, 2003). Research has addressed the importance of both cognition and affect in the information search process (Kuhlthau, 1993b) and the value of motivational strategies to enhance instruction in information literacy and research (Small, 1999; Small & Arnone, 2000). However, student experience still needs to be examined more deeply: what do students view as meaningful in a research project? It is important to hear the voice of students since their formal school experiences strongly influence their adult engagement with literacy, and adults' alienation from literacy activities has economic, social and political costs.

Purpose of the Study

The purpose of the study was to investigate the experiences of one classroom teacher and six to ten students while they completed a curriculum-based research project in a senior level high school course. How students construct personal meaning and what they consider meaningful and/or not

meaningful when completing a research project became more evident through this exploration. Individual student interviews, co-operative inquiry groups and classroom observation contributed to an understanding of the students' experience. The experiences of the educators working with the students—one teacher and one teacher-librarian—were examined in order to help other professional educators design and carry out meaningful research projects and develop new understanding of the research process.

Through the study, I hoped to help student participants understand that their ideas and thoughts about learning in general and about research in particular were valued by teachers and other school personnel. Often students feel powerless within the school system (Fullan, 1991). In fact, high school students often feel the most alienated—one manifestation of this being a feeling of powerlessness (Hamler, 1995). The findings in studies concerned with student empowerment (Hay, 1998; Steinsieck, 1998) and student perceptions of effective schools (Hamler, 1995; Newmann, 1992) suggest that students yearn to be heard and desire opportunities to make decisions that matter. This action research study provided an opportunity for students to speak about school assignments and activities that they viewed as meaningful and, based on their recommendations, determine the composition of a curriculum-based research project. It is important for students to own their learning and develop a personal knowledge base that will enable them to make relevant life applications and informed future choices.

Research Questions

Consistent with an action research approach, this study addressed "How" questions (McNiff & Whitehead, 2002) related to instructional practice as well as "What" questions related to gathering data to inform and direct instructional practice. The following questions guided this research:

- **What do high school students view as meaningful in curriculum-based research projects?**
- **How can teachers and teacher-librarians design and carry out curriculum-based research projects that are viewed as meaningful by students?**

For this study, curriculum-based research projects were defined as assignments based on subject-specific course content requiring individual study and investigation through the use of multiple resources, resulting in a final product to be shared with both peers and teacher. For example, high school students in a Social Studies 33 class (Topic B) might be required to choose a dictator from the twentieth century and, based on an understanding of appropriate significant events obtained from a variety of sources, present their assessment of the dictatorial government to the class. Students in a Chemistry 30 class might be asked to choose an alternative energy (e.g., geothermal, photovoltaic, solar, tidal, etc.) and, after accessing numerous pertinent resources, write an essay addressing the alternative fuel source from technological, environmental and societal perspectives.

As a starting point for this investigation, 'meaningful' was defined as having current significance, purpose or relevance based on past experience and future application (Dewey, 1938). The definition implies that a meaningful activity is currently relevant, builds on prior experiences, and is applicable to future activities and/or learning. This initial definition was not shared with the participants in the study. Instead, the students and the teacher constructed their own definition for 'meaningful' based on numerous discussions about what comprised a meaningful assignment.

It was also important to listen to what students considered 'not meaningful' in curriculum-based research projects, since it cannot be assumed that these were in opposition to what students considered meaningful. Two examples from previous studies suggest that this assumption cannot be made. Kuhlthau (1993a) found that enablers for the successful implementation of a process approach to teaching information skills were not the opposite of inhibitors. Herzberg, Mausner and Snyderman (1959) found that job satisfiers related to the work itself were not the direct opposite of dissatisfiers which were related to the work environment.

Significance of the Study

Because the study combined the information search process from library and information studies with social constructivist learning theories from education, this work is likely to be of interest to researchers and scholars in education and in library and information studies.

I believe that this study will help teachers and students begin to understand that the integration of relevant research activities into the core curriculum will promote meaningful involvement on the part of students. When skills and process are taught in a way that makes sense to students, they become engaged learners and often achieve at a higher level of performance. It has been my experience that meaningful involvement contributes to improved school attendance, the understanding of the relevancy of course material, and skill transfer in the students' current and future learning. For example, when students created a visual representation of a poem with PowerPoint, more attention to detail in their writing was also evident. It has also been my experience that when high school graduates return to school for a visit, they often indicate that experiencing the research process while in high school has made them feel better prepared for the research components of post-secondary studies and/or work.

I also believe that this study will encourage readers from the educational community to hear the voices of young people, "and then to adjust our practice based on this learning" (McPhee, 1997, p. 243). It has long been the goal of gifted education programs to design learning experiences that incorporate "student interests, appropriately challenging curricula, meaningful choices and enjoyment" (Gentry & Springer, 2002, p. 192). However, many educators believe that this understanding about interesting approaches to teaching and learning should be for all students, not only those identified as academically gifted (Caine & Caine, 1994). This study focused on the high school students who, at times, have felt marginalized and who may not have consistently experienced academic

success. In fact, the setting for this study was a large urban high school designed specifically for students who, for a variety of reasons, were unable to complete high school (grades 10, 11 and 12) in the allotted three years. In a ten-month study that I conducted for the school which focused on student success and coursework completion, I found that many of these students indicated in their Exit and/or Course Withdrawal interviews that attending school and/or completing the requisite assignments was less than appealing and often viewed as irrelevant. From their comments it became evident that "the delivery of decontextualized curricula designed independently of the needs and aspirations of the recipients ... often impede[s] rather than facilitate[s] learning .... while simultaneously cultivating alienated and either self-doubting or rebellious identities in those who are unsuccessful" (Wells, 1997, p. 5). More attention needs to focus on learning activities that are of interest to all students. There is much we can learn from these students and it is imperative that we listen.

The introduction to the study presented in this chapter is followed, in the second chapter, by a review of the literature pertinent to the study. Kuhlthau's (1993b) uncertainty principle and, in particular, the interest corollary of this principle, provides the conceptual framework for this study. The third chapter discusses the methodology—both the theoretical and practical aspects of action research and moderate hermeneutics. Detailed discussion about the pilot study, participant selection, data collection and data analysis provides documentation about the process used for the study. The fourth chapter reports the findings of the study from the perspectives of the student participants and the teacher. The

components necessary for meaningfulness as well as the contextual elements contributing to meaningfulness are identified. The fifth chapter introduces a model based on the findings and discusses these findings in light of the literature reviewed by the researcher. The final chapter provides implications and recommendations for students, teachers, teacher-librarians, teacher educators and researchers in library and information studies. An epilogue concludes the study. References and appendices follow the epilogue.

Each chapter in the study begins with a personal narrative. Based on the researcher's experience, these reflections provide a context for the reader and an introduction to the content of the chapter that follows. The final narrative, an epilogue, provides a synopsis of the researcher's personal learning.

Chapter 2 Literature Review

"And this gray spirit yearning in desire
To follow knowledge like a sinking star,
Beyond the utmost bound of human thought." (Ulysses by Tennyson)

Narrative - *In Search of Meaning*

Although what I learned in high school did not always seem significant or interesting, I was fortunate to have parents who consistently encouraged me to apply what I had learned and who reinforced the importance of thinking about an idea or issue until a personal conclusion had been reached. Our dinner conversations, full of the day's happenings, also included discussing new ideas and current events. I was in high school the same time my father was completing an undergraduate university degree. His continual reading and writing exposed our family to new and different ideas. I watched him think and reason and struggle to make the new learning a part of his knowledge base. I began to realize that learning must be integrated into personal knowledge for it to be meaningful. I understood that synthesis and application required perseverance and that learning should make a difference and have some meaning for the learner. And finally, in college where I was given choice in my completion of assignments, I also began to discover that learning could be fun and intriguing when the interests and aptitudes of the learner were taken into consideration.

Since my own high school and undergraduate student days, I have heard and continue to hear many students express the following: " Why am I here? Am I a part of a bigger picture? What am I doing sitting in class reading books and plays and history written in words I barely understand by a bunch of dead guys? This work doesn't make any sense to me! I don't know why we have to do this. I can hardly wait until I am out of school and finally able to do what I want to do and what is of interest to me."

My experience with high school students has given me reason to believe that research projects can allow students to explore topics of interest and to

incorporate new learning into their current knowledge and understanding. For example, one student said "I found a lot of information on solar energy and I tried to apply that with my own thoughts on the issues and stuff that surround solar energy." Another student indicated that her thinking about Anne Frank had changed through her research. She commented "I'd have to say I was enlightened, I guess, because I didn't think such a young girl could be so wise." Even though personal experience led me to believe that research projects encourage student involvement and meaning-making, I knew that I needed to access prior research and theory to examine this belief.

Introduction

Literature from three areas relevant to this study has been reviewed: social constructivist theory, information search process, and effective research assignments. These areas address the various components related to meaning-making in research projects and contribute to understanding what is meaningful from the students' perspective. The conceptual framework for this study is drawn from Kuhlthau's uncertainty principle. The interest corollary of this principle holds that the learner's interest increases as uncertainty decreases.

The first section presents the work of selected key theorists whose scholarship contributes to social constructivist learning theory in education and applies to the information search process. Both the professional literature of school libraries and of school reform have emphasized social constructivist ideas. The second section presents Kuhlthau's uncertainty principle and discusses the interest corollary in more detail. The third section presents the current theory from library and information studies related to the information search process. The final section presents research outlining what makes research assignments

effective from the viewpoint of educators and students, in conjunction with contemporary ideas about inquiry-based learning. This discussion draws on the research and theory of education and library and information studies.

Social Constructivist Theory

Constructivism, a learning or meaning-making theory of knowledge with roots in philosophy and cognitive psychology, has gained prominence within educational thinking during the past decade. Constructivist approaches to education, in contrast to traditional transmission models, are seen as assisting with increased understanding, with supporting learners in making meaning for themselves. Although the individual construction of knowledge has been emphasized in constructivist theory, the social aspect of learning also needs to be addressed. Learning is not solely an individual activity, but involves relationships and interaction with others. Social constructivism, drawing on the work of Vygotsky, "emphasizes education for social transformation and reflects a theory of human development that situates the individual within a sociocultural context" (Abdal-Haqq, 1998, p. 2). In other words, human development is anchored in society and culture.

A social constructivist approach to education emphasizes the social nature of learning and cognitive development. In this context students, as active learners, are encouraged to own their learning and to make sense of their learning experiences both individually and collaboratively. Social constructivism "focuses on learning as sense-making rather than on the acquisition of rote knowledge that 'exists' somewhere outside the learner" (Oldfather, West, White & Wilmarth,

1999, p. 9). Making sense is accommodated through the categorization and organization of information into related groups and patterns. Vygotsky (1978) believed "that all human perception consists of categorized rather than isolated perceptions" (p. 33).

Prior to discussing his own theory regarding the relation between development and learning in children, Vygotsky (1978) summarized previous theories. He suggested that the relation between development and learning in children could be reduced to three major theoretical positions. The first is based on the assumption that the "processes of child development are independent of learning ... [learning] merely utilizes the achievement of development rather than providing an impetus for modifying its course" (p. 79). Therefore, development/maturation is viewed as a precondition to learning but never the result of it. "Learning forms a superstructure over development, leaving the latter essentially unaltered. The second major theoretical position is that learning *is* development" (p. 80). An example of this position is reflex theory, a theory that "reduced learning process to habit formation and identified the learning process with development" (p. 80). For example, one view of this theory suggests that developmental cycles precede learning cycles, whereas another view states that learning and development coincide. Finally, the third theoretical position tries to overcome the extreme viewpoints of the previous two by combining them. One new aspect of this theory is "that the two processes that make up development are mutually dependent and interactive" (p. 81). For example, the process of maturation makes possible a process of learning and "the learning process then

stimulates and pushes forward the maturation process" (Vygotsky, 1978, p. 81). Learning and development do not coincide in this theoretical viewpoint since one step taken in learning may stimulate two in development. "Learning is more than the acquisition of the ability to think; it is the acquisition of many specialized abilities for thinking about a variety of things" (p. 83).

Vygotsky rejected all three of these theoretical positions and composed a new theory based on two issues: the relation between learning and development and the features of this relationship for school age children. He defined two developmental levels: the actual developmental level and the zone of proximal development. The actual developmental level is "the level of development of a child's mental functions that has been established as a result of certain already completed developmental cycles" (Vygotsky, 1978, p. 85). In other words, the work that children can do independently is part of this developmental level. Vygotsky had a pronounced effect on learning theory with his concept of a zone where learning can be assisted. He stated that the zone of proximal development

> is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers. (Vygotsky, 1978, p. 86)

In other words, what can be done with assistance today can be done with independence tomorrow. Vygotsky (1978) stated that "the zone of proximal development permits us to delineate the child's immediate future and his dynamic developmental state, allowing not only for what already has been achieved developmentally but also for what is in the course of maturing" (p. 87).

Individuals are capable of learning and performance beyond their actual developmental level when assisted by those more competent and skilled. For example, students involved in the research process can not only construct their individual understanding, but can gain additional insight from working with others. Vygotsky proposed

> that an essential feature of learning is that it creates the zone of proximal development; that is, learning awakens a variety of internal developmental processes that are able to operate only when the child is interacting with people in his environment and in cooperation with his peers. (Vygotsky, 1978, p. 90)

Based on the theory proposed by Vygotsky, learning is directly related to development but it is not development. The two are never accomplished in equal measure or in parallel since development lags behind learning resulting in the zone of proximal development. Learning that is properly organized "results in mental development and sets in motion a variety of developmental processes that would be impossible apart from learning. Thus, learning is a necessary and universal aspect of the process of developing culturally organized, specifically human, psychological functions" (Vygotsky, 1978, p. 90). Vygotsky stressed the need for relevance, the necessity to make learning both participatory and personally significant. In other words, as learners attempt "to make sense with and for others" (Wells, 1997, p. 5), they make sense for themselves.

Dewey's view on teaching and learning was also "social constructivist in orientation" (Prawat, 2000, p. 1). When discussing education, Dewey felt that students develop personal understanding when confronted with new ideas and/or

new experiences through interaction with their environment and other members of society.

Dewey (1938) stated "that there is an intimate and necessary relation between the processes of actual experience and education" (p. 20). In other words, students must experience in order to learn. He also emphasized that "experience and education cannot be directly equated to each other" (Dewey, 1938, p. 25). In his opinion, all experiences could be plotted on an experiential continuum, ranging from experiences that are worthwhile educationally to those that are mis-educative. He believed that an experience was mis-educative if it had "the effect of arresting or distorting the growth of future experience" (p. 25). For example, mis-educative experiences are those that produce callous behaviour, those that land people in a rut, those that are immediately enjoyable but promote a slack and careless attitude, and those that are disconnected from each other and so produce a disintegrated approach to life. When learning is divided into specific bounded subject areas that appear to be disconnected, students may end up with a collection of unrelated information and may develop into citizens that see life in a piecemeal fashion. In this context, knowledge may be viewed as portions to be consumed rather than as the consistent and continual construction of personal understanding about self and society.

The quality of experience in education is very important for students and dependent upon the immediate aspect of being agreeable or disagreeable to the students, as well as its influence upon later experiences. The central problem of an "education based upon experience is to select the kind of present experiences

that live fruitfully and creatively in subsequent experiences" (Dewey, 1938, p. 28). It is not the events themselves that matter as much as the meaning attached to them or what is made of them.

According to Dewey, fundamental to the constitution of experience are two principles: the principle of continuity and the principle of interaction. The principle of continuity is based upon the concept of habit. The term habit implies automaticity and unreflective behaviour, but also covers the formation of attitudes, both emotional and intellectual. "If an experience arouses curiosity, strengthens initiative and sets up desires and purposes that are sufficiently intense to carry a person over dead places in the future, continuity works in a very different way. Every experience is a moving force. Its value can be judged only on the ground of what it moves toward and into" (Dewey, 1938, p. 38).

The principle of interaction assigns equal right to external and internal conditions. Internal conditions refer to our needs and desires while external conditions acknowledge that experiences do not occur in a vacuum. They are influenced by the physical world and our social relationships. The role of the educator is to regulate and directly influence the experience of others. Dewey (1938) stated that it was the educators' duty to determine "that environment which will interact with the existing capacities and needs of those taught to create a worth-while experience" (p. 45).

The needs of those being taught, according to Dewey, need to be foremost when organizing an activity or learning experience within the school environment. Because an activity worked well with students in the past does not

guarantee that it will be effective in the future. Application of Dewey's basic premise that there is an intimate and necessary relation between experience and education, suggests that what is structured for the students needs to be carefully thought out and needs to make sense within the context of the students' learning environment. "The principle of interaction makes it clear that failure of adaptation of material to needs and capacities of individuals may cause an experience to be non-educative quite as much as failure of an individual to adapt himself to the material" (Dewey, 1938, p. 46). One of the main goals of traditional education was to prepare the young for the future and for ultimate success through acquiring a prescribed body of knowledge. Traditional education deemed the future more important than the present. However, because we live in the present, Dewey believed that the experience must be meaningful in the present as well as a preparation for the future. Each present experience needs to have a worthwhile meaning in the educational continuum and needs to be relevant to the student. Experiences that are educational promote growth and maturity within the student.

> Such focus on student experience, according to Dewey, begins with the examination of the continuities students build to the classroom. This type of investigation is crucial because the connections students build from home life to school life determine their interest in the curriculum, the way they interact with it, and the extent of their effort to understand and use it. Interest and effort are, thus, for Dewey, the linchpins of quality student experience and work. When pupils find reasons for using the curriculum, it takes on meaning. It becomes a *means* to valued ends. Just as important, when students find goals they can reach by using the curriculum, they experience drama in the classroom, the sort of enriched experience crucial to remembering and making the curriculum their own. (Fishman & McCarthy, 1998, p. 54)

According to Dewey (1933), learning involves the process of reflection. He believed that reflective thinking includes a state of doubt or perplexity and an act of searching or inquiring to find the information that will settle the doubt and remove the perplexity. The basis of questioning and inquiry learning is reflective thinking. The five phases of reflective thought include:

> (1) *suggestions,* in which the mind leaps forward to a possible solution; (2) an intellectualization of the difficulty or perplexity that has been *felt* (directly experienced) into a *problem* to be solved, a question for which the answer must be sought; (3) the use of one suggestion after another as a leading idea, or *hypothesis,* to initiate and guide observation and other operations in collection of factual material; (4) the mental elaboration of the idea or supposition as an idea or supposition (*reasoning,* in the sense in which reasoning is a part, not the whole, of inference); and (5) testing the hypothesis by overt or imaginative action. (Dewey, 1933, p. 107)

Reflective thought takes time and requires concentration. Students need to be given time to muse and to reflectively consider their learning experiences in order to construct personal meaning from them.

Bruner (1973) claimed that the act of learning involves the acquisition of new information, the transformation of knowledge to fit new tasks and the evaluation of whether or not the information was adequate to the task. This process involves interpretation. "Interpretation is based on personal constructs built from past experience that enable students to go beyond the information they locate to create something uniquely their own" (Kuhlthau, 1993a, p. 12). People tend to learn the information most important to their perspective and to their current need. Bruner believed that perception is the basis of making meaning. "The perceiver is not seen as a passive and indifferent organism but rather as one who actively selects information, forms perceptual hypotheses, and on occasion

distorts the input in the service of reducing surprise and of obtaining valued objects" (Bruner, 1973, p. 3). The active involvement of the learner promotes understanding as well as successful recall. Bruner (1973) stated that "in general, material that is organized in terms of a person's own interests and cognitive structures is material that has the best chance of being accessible in memory" (p. 412).

Based on social constructivist theory, learning is "an interpretive, recursive, building process by active learners interacting with the physical and social world" (Fosnot, 1996, p. 30). This view of learning has implications for students involved in curriculum-based research projects. Students need to be active participants in the construction of new understandings through their involvement in the information search process by building on past experience, testing alternative ideas, owning both the problem (question) and the solution, forming a personal perspective and sharing new insights with others.

Uncertainty Principle

Because "construction involves the total person" (Kuhlthau, 1993b, p. 15), Kelly's work is important for understanding the affective nature of this study. In his Personal Construct Theory, Kelly (1963) proposed that people build personal constructs based on their own experience to help with understanding both their current and future world. Building these constructs involves both affect and cognition. His phases of thinking and feeling include: confusion/doubt, mounting confusion, tentative hypothesis, testing and assessing, and restructuring (Kelly, 1963; Kuhlthau, 1993a). Kelly believed that we continually construct and

reconstruct meaning throughout life as we have new experiences. Learning takes place when learners are confronted by new ideas that do not fit into their current constructs. For example, when students are confronted with a question or novel concept that does not fit into their current perspective, it will be necessary for them to consider and explore new possibilities and ideas. Students involved in personal construction through research assignments need to realize that learning begins with uncertainty (Kuhlthau, 1989).

Kuhlthau (1993b), a library and information scholar, began her research in the 1980s with high school students and focused on the difficulty of getting them involved in the research process. She realized from her studies of the student perspective of information seeking that there were two different and somewhat conflicting perspectives at work: "the library perspective emphasizing order and organization and the student perspective emphasizing confusion and uncertainty" (p.16). The foundations of Kuhlthau's uncertainty principle and information search process model are the constructivist theories of Dewey (1933), Kelly (1963), Bruner (1973), and Vygotsky (1978).

The principle of uncertainty, developed by Kuhlthau (1993b), provides a theoretical framework for library and information services. "Uncertainty is a cognitive state that commonly causes affective symptoms of anxiety and lack of confidence" (Kuhlthau, 1999a, p. 4). Information specialists have traditionally viewed uncertainty in the library user as a negative state of mind that should be diminished and/or curtailed as soon as possible. Kuhlthau (1999a), however, suggests that uncertainty is a necessary part of the information search process and

should be seen "as a natural, essential characteristic of information seeking rather than regarding the reduction of uncertainty as the primary objective of information seeking" (p. 6). In other words, lack of clarity accompanies uncertainty and initiates the active pursuit of knowledge and understanding; seeking clarification begins the search for relevant information and, ultimately, assists with the construction of personal meaning.

The uncertainty principle has been expanded by six corollaries: process, formulation, redundancy, mood, prediction and interest. Most pertinent to this study is the "interest corollary" which holds that the learner's interest increases as uncertainty decreases. "Motivation and intellectual engagement intensify along with construction" (Kuhlthau, 1993b, p. 122). The research process is therefore a process of construction and meaning-making. As the topic is understood by the individual, intrinsic motivation comes into play and "directs the individual's action toward a satisfying conclusion" (Kuhlthau, 1993b, p. 123). In other words, when the topic is personally understood, interest increases and the learning task becomes meaningful to the student. She also found that "extrinsically motivated learners have higher levels of anxiety than do intrinsically motivated learners" (p. 124).

Information Search Process

Survival in our world of rapid communication and abundant information requires that students develop their intellectual curiosity by learning how to access information and explore possible answers to pertinent questions (Loertscher & Woolls, 1999). The underlying assumption is that this is a

meaningful process requiring both the skill to access information and the will to analyze, synthesize and evaluate the information once it has been located.

Information seeking and use are central to sense-making. Dervin (1983), a communication scholar, viewed sense-making as both internal and external behaviour which allows people to construct and design their movement through time-space. Information seeking and use "are posited as 'constructing' activities—as personal creating of sense. It is assumed that all information is simply the sense made by individuals at specific moments in time-space" (Dervin, 1983, p. 5). Therefore, information seeking as sense-making is "initiated when individuals encounter gaps in their knowledge that may impede their progress ... the sense that they ultimately construct from the information they obtain provides a bridge which helps them reestablish their forward progress" (Thomas, 1999, p. 67).

Kuhlthau (1993b) focused on the feelings and attitudes of students as they worked through the research process and identified the general elements of successful programs. She stressed the importance of intervention in the process of information seeking and used the concept of the zone of intervention to help librarians and teachers determine when to intervene with students and when to leave them alone.

> The zone of intervention is a concept analogous to the zone of proximal development which relates to intervening in the learning of others. Vygotsky (1978) ... developed the concept of an area or zone in which intervention would be most useful to a learner. (Kuhlthau, 1993b, p. 155)

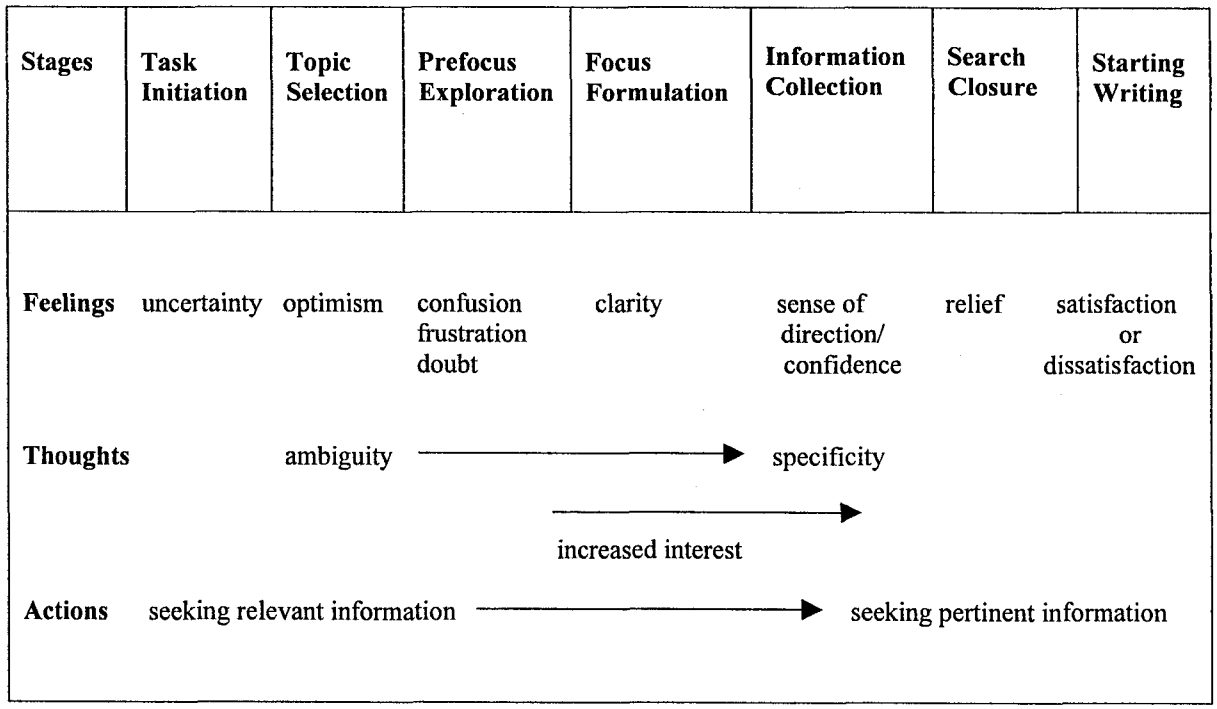
Kuhlthau's model of the information search process (Figure 1) identified the importance and necessity of exploration prior to collecting information and composing the final product. This model includes six stages in the search process: task initiation, topic selection, prefocus exploration, focus formulation, information collection, and search closure. Task initiation takes place when students first receive an assignment and recognize that information must be collected in order to complete the assignment. Feelings of uncertainty accompany this stage. During the topic selection stage, a student selects a general topic and does a preliminary information search. Once a topic has been selected, optimistic feelings often follow. The third stage, prefocus exploration, includes the task of investigating and becoming more informed about the general topic in order to form a focus. Students often experience feelings of confusion, frustration and doubt during this stage and some choose to abandon the search. Focus formulation, the fourth stage, includes the task of forming a focus based on the information already gathered. Students often feel more confident once a focus has been established. The fifth stage, information collection, includes gathering pertinent information. A sense of direction and confidence accompany this stage. Search closure, the sixth stage, often brings feelings of relief to the students as the search for information is concluded and possibilities for presentation are considered.

Although this model appears linear, it is important to remember that learning is recursive and that students will move backwards and forwards through the process. It is also important to remember that the greatest amount of time

needs to be spent on the first three stages: task initiation, topic selection and prefocus exploration. Students should be encouraged to take time to thoroughly explore their initial topic selection prior to forming a focus. This will assist with enhanced understanding and clarification of their final selection.

Figure 1 provides an overview of the model.

Figure 1. Model of the Information Search Process (Kuhlthau, 1993b, p. 43)



Students will move at different rates through this model, revisiting the various stages, especially the first three, as necessary. They will begin to understand that "the research process is not an end in itself, but an avenue of discovery" (Kuhlthau, 1999b, p. 15).

Effective Research Assignments

Research assignments are considered effective by teachers and teacher-librarians when such assignments help the students to learn the course content and to develop new understanding related to their studies. Effective research assignments meet the goals of the curriculum, encourage new learning, have current significance for the students and prepare them for the future. The professional literature in library and information studies and in education identifies key elements in effective research assignments. These include: understanding the information search process; comprehending the subject area; asking an authentic question based on personal choice of topic; enhancing cognitive development; balancing process and product; promoting relevance by linking to coursework and everyday life; receiving evaluation; and being part of the 'research community.'

Understanding the Information Search Process

Students need to understand what is included in the information search process prior to beginning research projects. Different information search models adequately identify the steps involved in the information search process: topic selection, information location, information use, and product creation. However, the format of the models is often linear (see, for example, Irving, 1985; Stripling & Pitts, 1988; Eisenberg & Berkowitz, 1990; Joyce & Tallman, 1997). The implication of a linear model is that the research process is also linear and follows a sequential order of steps. Unfortunately, when teachers and teacher-librarians do not completely understand the information search process themselves, they

may mislead students regarding the nature of the research process resulting in both student and teacher frustration when expectations for the project are not met. Stripling (1995) also suggested that basing investigation on a linear problem solving model may lead to trivialization of thought. In other words, once students have completed an investigation based on a linear model, they may believe that they now have the final, ultimate answer and therefore do not need any further exploration of that particular topic.

An essential part of the information search process is collecting information appropriate for the topic. Goodman (1984) indicated that "one aspect of perception that must be understood is that learning what not to pay attention to is as important as learning what to attend to" (p. 1125). Although he stated that this is important in reading, it is just as important in the research process. A student must learn to select the most useful and appropriate information for a particular topic. Therefore, information search skills need to be taught within a relevant and meaningful context (Todd, 1995).

Comprehending the Subject Area

Prior to developing an authentic question, one based on "solving real-world problems" (McGregor, 1999, p. 37), the students need a clear understanding of the area to be researched. When teachers provide a clear explanation of the curricular area, the students feel more comfortable with the curriculum-based research project. In fact, Thomas (1999) indicated "that specific research topics ought not to be selected until information on the general topic has

been obtained or an overview of the subject has set the stage for the information-seeking tasks that are to follow" (p. 108).

Asking an Authentic Question Based on Personal Choice of Topic

Part of topic selection involves composing a question about a new idea in order to explore an unfamiliar or different area. Authentic questions require "students to actively produce, rather than reproduce, knowledge" (Wehlage & Smith, 1992, p. 111). Therefore, students who own their learning must own their questions (Donham, Bishop, Kuhlthau & Oberg, 2001). However, what is most important is the attitude of the student, not the origin of the question. If a question asked by others creates a genuine 'need to know' within the student, then it is owned by that student (Wells, 1997). Asking the question may be the most difficult part of the assignment. "Questions are intended to provoke thought and inspire reflection, but all too often the process is short circuited by the simple answer, the quick truth or the appealing placebo" (McKenzie, 1999, p. 6).

Goodman (1984) found that informational reading, the kind most common in research, needs a purpose. When students read information without clarity of purpose for their research, they struggle with understanding and do not construct personal meaning.

Wells (1989), a language and curriculum specialist, identified four essential characteristics of classrooms that enable students to take ownership of their learning. They are:

1. problem-oriented activities,
2. activities that encourage making connections between different areas of knowledge and experience,

3. opportunities for students to take initiatives in the selection and definition of tasks, and
4. availability of appropriate support. (p. 257/258)

The assumption underlying the third characteristic is that tasks are most meaningful when chosen by the learner. Kuhlthau (1994) confirmed this when she stated that "the most successful and meaningful research assignments are those in which students choose something that captures their interest" (p. 7). A two-year investigation into the literacy activities of forty-nine young males in middle school and high school by Smith and Wilhelm (2002) also found that choice was key. Students in the study pointed out that teachers need to "give students choices" (p. 197).

Enhancing Cognitive Development

It is also important to design learning activities that require mental development; "good learning is that which is in advance of development" (Bruner, 1986, p. 73). Educators often create activities and projects that students can complete independently and there is nothing wrong with this. Independent practice is needed by students to practice and consolidate what has recently been learned. However, in order for new learning to take place, it is necessary to design and promote activities that build on past experience and understanding while being ahead of the students' developmental stage. This will set "in motion a variety of developmental processes that would be impossible apart from learning" (Vygotsky, 1978, p. 90).

While it is important to consider the students' developmental stage when designing learning activities, it is also necessary to pay attention to the difference between novice and expert learners. Pitts (1995) examined the decision-making

process used by students when accessing and using information. The framework for her study was mental model theory. Based on this theory, novice learners' "personal understandings are fragmentary, based on a limited perspective, subjective, often accessed and used inappropriately, and either accurate or inaccurate" (p. 2) whereas the expert learner has more connected ideas or mental models based on a global perspective. "Movement from novice to expert brings about a change in the organizational nature of the prior learning" (p. 2). The major finding of the study suggested that students used prior learning to help solve problems.

Based on this understanding, a model may be one way to assist with comprehension and learning, particularly when designing and completing curriculum-based research projects. Donham (2001) points out that models can function as:

- a curricular scaffold to assist with organizing instruction;
- an affective gauge to acknowledge feelings;
- a common lexicon for communication among students and teachers;
- a guide for students in the research process; and
- a means of monitoring student progress.

Balancing Process and Product

Students also need to understand that process and product comprise the research project and that one is not more important than the other. Balance must be the goal in both the design and the completion of the project. When students and teachers value product over process, little personal meaning is constructed. In

a study conducted by McGregor (1995), a relationship between the complexity of students' thinking and their orientation to either research process or product was identified. "The students who evidenced some process orientation showed more involvement in a process of making sense for themselves, of transferring information into long-term memory" (McGregor, 1995, p. 32).

Another study interested in finding the students' point-of-view and concerned with identifying elements associated with meaningful research tasks found that process instruction was very important to the students and that it was one of five elements related to satisfaction with the research process (Garland, 1995). This research, conducted in 18 classrooms with 387 high school students studying a variety of subject areas, also found that students were more satisfied with the research process if their topics were clearly related to the course content. That is, they were more satisfied when their research experience built on and was part of the work in class. These students also found choice of topic, group work, and clarity of goals and means of evaluation to be related to satisfaction with both the research process and their achievement.

Promoting Relevance by Linking to Coursework and Everyday Life

Research assignments should be currently relevant to the life of the students both inside and outside of school. "Acknowledging students' histories, the stories that inform their lives, and weaving such information into webs of meaning that link the everyday with the academic is a powerful way to make knowledge meaningful" (Giroux, 1999, p. 35). Delpit (1995) suggested that "some youngsters may become more engaged in school tasks when the language

of those tasks is posed in real-life contexts than when they are viewed as merely decontextualized problem completion" (p. 66).

In a previous study about meaningful research projects in high school (Barranoik, 2001), students stated that the research was especially relevant and meaningful to them when they chose a topic that had personal and contemporary value. One student participant stated that she had always wanted to learn about cystic fibrosis since her cousin had it, but had never before had the time. Now that it was part of a Biology 30 research project she felt that this was an opportunity to explore an area of personal interest as well as increase her knowledge about the disease.

Another way to make research projects relevant to everyday life is using the tools and techniques of popular culture. Beaudoin (1998) stated that "popular culture is a major meaning-making system" (p. xiv). Therefore, it may be beneficial for students to have the opportunity to master the skills and technology of popular culture. Often they become so involved with the production of a final electronic product that the actual research process is seen as an important and valued means to an end, rather than an activity to be endured.

Student engagement naturally follows student perception that classroom activities are interesting, significant, and related to personal life. Gentry and Springer (2002) completed an initial validation study of an instrument used "to assess student attitudes toward their educational experiences in secondary school classrooms with regard to interest, challenge, choices, enjoyment, and meaningfulness" (p. 193). The survey included four factors: meaningfulness,

challenge, choice and appeal. Meaningfulness described student perceptions about how the teacher and the classroom material related to his or her life. Challenge focused on the intellectual abilities of the student. In other words, was the class perceived as intellectually stimulating? Choice included assessing student perception of ownership and personal responsibility for learning. Appeal focused on enjoyment and interest of the material in the class. The researchers concluded that "such instrumentation can allow teachers to learn about their classroom from the perspectives of their students and then make adjustments to their teaching strategies to accommodate individual needs" (Gentry & Springer, 2002, p. 201). I believe that the use of this or a similar instrument could also assist with the design of relevant curriculum-based research projects.

Receiving Evaluation

Students want to know how they are being assessed (Garland, 1995). Part of the pay-off for students should be in the form of increased understanding and not merely the final grade for the project. "Where grades are used as a substitute for the reward of understanding, it may well be that learning will cease as soon as grades are no longer given – at graduation" (Bruner, 1973, p. 423).

Being Part of the Research Community

Finally, the idea of the literate community is applicable to what I am calling the 'research community.' Just as

> Discourses are not mastered by overt instruction (even less so than languages, and hardly anyone ever fluently acquired a second language sitting in a classroom), but by enculteration (apprenticeship) into social practices through scaffolded and supported interaction with people who have already mastered the Discourse. . . the most you can do is let them practice being a [researcher] with you. (Gee, 1989, p. 7)

It is important that students be given the opportunity to practice being a 'researcher' with the teacher and the teacher-librarian. This is a powerful way to help students become researchers and develop their ability to derive meaning from the information obtained while conducting research. However, teachers and teacher-librarians must feel comfortable with the research process, and they

> must realize that inquiry takes time, it is messy, and the work must be performed by the students themselves. Teachers cannot carry out the process of inquiry for the students, although they can support and facilitate that process. (Stripling, 1995, p. 9)

This process support and facilitation by the teachers and teacher-librarians is best accomplished through understanding intervention as defined by Kuhlthau (1993b). Assistance is given only as needed, when students are unable to proceed on their own.

Being part of the research community implies an understanding of inquiry and inquiry-based learning. Some people may equate inquiry-based learning with traditional research projects. However, "misunderstandings arise when the traditional research project is equated with inquiry-based learning. The distinction between a project-centered approach and an inquiry-based approach lies in the underlying motivation and objective" (Kuhlthau, 2001, p. 9). The traditional research project is most often concerned with the end product, whereas inquiry-based learning focuses on the process and the sharing of knowledge with others.

Inquiry-based learning is neither teacher-centered nor student-centered, but learner-centered; both the teacher and the students are learners together. The

emphasis is on developing a personal understanding about a topic or question, based on extensive research using numerous primary and/or secondary sources. Smith and Wilhelm (2002) suggest that one form of inquiry-based learning might require students to take a position on an issue and then decide what kind of social action should be taken as a result of the position chosen.

Inquiry-based learning within the research community promotes collaboration among students, teacher and teacher-librarian in a non-traditional way. Authentic problems provide the basis for instruction and promote connections with society. Students, supported by teachers and teacher-librarians, come to grips with competing and conflicting information while reflecting excitement and a general enthusiasm for learning (Alberta Learning, in press).

Summary

It is evident from the discussion of the literature that the age-old rule still applies: 'students who do the talking and the doing do the learning.' Although it is important for students to understand the accomplishments of the past, it is also necessary for them to continually explore new ideas to ensure both individual and societal growth and development. Students need to construct or create new ideas, not merely acquire facts for the purpose of reproduction. Therefore,

> the assignments we give students and the tasks we ask of them have a great deal to do with their development into thoughtful, lifelong learners ... Assignments should be created with an eye to the real world. In short, assignments should be meaningful. (Rehmke, 1999, p.181)

Due to the overwhelming amount of information available to our students, making meaning is harder than it has ever been. Many appear to be "floating on the sea of information" (Haycock, 2003) without the necessary skills to take

control and make the information work for them. Seeking information by asking questions does not imply that there is one right answer, but encourages students to seek the most appropriate answer. The better students become at "interpreting the data and challenging the assumptions behind them" (McKenzie, 1999, p. 3), the better equipped the students will be to participate in, and contribute to, life in the 21st century.

Chapter 3 Methodology

Narrative – *Choosing the path*

Choice, that decisive act based on knowledge and experience, implies rational understanding and emotional commitment to the final selection.

Although I was interested in a variety of research methods, I knew that the methodology chosen must fit the research framework being proposed. I believed that research was about making a difference and informing practice. Too many theses and dissertations in the educational field were sitting untouched and unused once completed. I did not want that to happen to mine. Perhaps I am egocentric enough to believe that my research will be valuable and applicable to everyday practice. Or perhaps I identify once again with the writing of Tennyson:

"How dull it is to pause, to make an end,
To rust unburnished, not to shine in use! (Ulysses)

Because of my belief that my research must inform practice, I decided that action research, based on the practical lived experience of the school community, was the most appropriate methodology to use to answer the questions I was asking.

However, choosing the methodology was only one part of the process. It was also necessary for me to remember that research, and in particular qualitative research, can be an uncertain venture. Getting rid of preconceptions and misconceptions involves hard work, careful thought and being willing to take a risk. Prior to beginning my research, it was necessary for me to understand that I was indeed embarking upon a process fraught not only with uncertainty and risk, but also the potential for surprise, illumination and increased understanding. I had to be willing to question my own assumptions, to put my values and beliefs under a reflective magnifying glass, and to realize that the resultant analysis might produce discomfort and a need to 'let go' as I stepped out of my comfort level. Although my expectations were tinged with uncertainty, I looked forward to the journey over previously (at least to me) uncharted territory.

Introduction to the Study

"The Celtic people insisted that their teachers were poets. Why? Because knowledge that is not passed through our hearts is dangerous" (Heard, 2000). Not only is such knowledge dangerous, I suggest it is pointless. Until information is meaningful and becomes part of either the researcher's or reader's heart and mind, it will neither be remembered nor make a difference. Qualitative research has the capacity to represent research and life in a holistic way. Inherent in its very design is the ability to touch both the heart and the mind of the recipient, thereby increasing and promoting understanding. However, this only happens if, and when, the recipient is open to new ideas and ways of knowing.

Qualitative research has no theory or paradigm that is distinctly its own; it does not belong to a single discipline (Denzin & Lincoln, 2000). The key philosophical assumption "upon which all types of qualitative research are based is the view that reality is constructed by individuals interacting with their social worlds" (Merriam, 1998, p. 5). The important concern for the researcher is to understand the phenomenon of interest from the participants' perspectives. Therefore, "qualitative researchers are interested in understanding the meaning people have constructed, that is, how they make sense of their world and the experiences they have in the world" (Merriam, 1998, p. 5). This requires both the time and the willingness on the part of the researcher to listen, to engage in conversation with the participant (Carson, 1986) and to understand the responses as stories that should not be suppressed (Mishler, 1986).

Since interpretation is a very real part of conversation, hermeneutics is essential to this study. Keeping in mind the writing of Gadamer (1975), Smits (1994) states "hermeneutics is not a method, but a way of coming to understanding; the hermeneutic experience has the quality of conversation or dialogue, where meaning and understanding emerge in communication between interpreter and interpreted" (p. 61).

Action research provided a framework for this qualitative study and, in conjunction with moderate hermeneutics, guided the study of 'meaningful curriculum-based research projects' as viewed by one group of high school students and their teacher. Over a thirteen week period in 2002, a practical action research approach was used to investigate the experiences of the participants while completing a curriculum-based research project in a senior level high school English course. Data were collected through audiotaped semi-structured interviews, observation field notes and audiotaped conversations held in co-operative inquiry groups (Baldwin, 2001), groups formed to assist with developing a shared understanding of 'meaningful' among the participants. These data provided the basis for planning, acting and observing, and reflecting by the participants and the researcher.

Moderate Hermeneutics

Moderate hermeneutics provided the orientation within which the study was conducted. Benjamin (1923) said, "All human knowledge takes the form of interpretation." The branch of knowledge that deals with interpretation and the theory of interpretation is hermeneutics. Although textual interpretation has

dominated hermeneutics, Gadamer (1975) advocates a broader understanding: "the way that we experience one another, the way that we experience the natural givenness of our existence and of our world, constitutes a truly hermeneutic universe" (p. xiv). The concept of interpretation developed by Heidegger and Gadamer includes three characteristics:

a) interpretation is existentially comprehensive ... it is not something that can be limited to cognitive performances; every human activity involves interpretation;
b) interpretation is always constrained ... meaning is always constituted 'under the guidance of a point of view', conditioned by practical interests, and within the constraints of human finitude; and
c) interpretation is a process that we already find ourselves in ... to some extent it is a process that we do not entirely control. (Gallagher, 1992, p. 44)

"Philosophical hermeneutics argues that understanding is not, in the first instance, a procedure- or rule-governed undertaking; rather, it is a very condition of being human. Understanding is interpretation" (Schwandt, 2000, p. 194).

Four distinct approaches to hermeneutics have been identified; these include conservative, moderate, radical and critical (Palmer, 1969; Gallagher, 1992; Smith, 1999). Gadamer (1975) and Ricoeur (1974), theorists of moderate hermeneutics, contend that meaning is not transparent but emerges from discussion and is constructed in social situations. It would therefore appear that moderate hermeneutics promotes the concept of a socially constructed truth through dialogue, leading Gallagher (2002) to rename this approach as 'dialogic' hermeneutics. Meaning and/or understanding is arrived at "referentially and relationally" (Smith, 1999, p. 38), through agreement based on dialogue. "If hermeneutics is generally conceived to be seeking meaning, truth, or consensus

through interpretation modeled on conversation or dialogue, it reflects an optimism or trust that in some sense truth will be found" (Gallagher, 1992, p. 22). However, due to limitations based on personal history and language, interpretation cannot be complete or objective. Gadamer (1975) suggests that "in the process of understanding there takes place a real fusing of horizons" (p. 273). According to Richardson (2002), "such a fusion can take place only if the traditions and experiences of all the participants in the hermeneutic circle can be brought forth" (p. 29).

Historically, the idea of the hermeneutical circle is that the interpreter "engages in a back-and-forth of studying parts in relation to the whole and the whole in relation to parts" (Kincheloe & McLaren, 2000, p. 286). There is an interplay between current comprehension, termed the whole, and the new parts that surprise or challenge. Gadamer (1975) suggests that modern hermeneutics has applied this idea to

> the art of understanding. It is a circular relationship in both cases. The anticipation of meaning in which the whole is envisaged becomes explicit understanding in that the parts, that are determined by the whole, themselves also determine this whole. (p. 259)

Therefore "understanding consists in a circular tension between the familiar and the strange" (Kerdeman, 1998, p. 7).

Understanding new experiences also involves listening to others, the willingness "to be sensitive and perceptive to what others are trying to say" (Garrison, 1996, p. 5). It is not necessary to abandon personal prejudgements, but to acknowledge them while being open to understanding others in their terms. Hermeneutic listening, therefore, may be considered triadic. "It is a trinity of I,

Thou, and what Gadamer ... called 'the miracle of understanding', that is, the creative production of understanding and not mere reproduction of meaning" (Garrison, 1996, p. 23).

Interpretation is always local, part of specific situations and therefore cannot function as a metanarrative. Understanding the local helps us to better understand the universal. As Smits (1997) notes, a worthy goal of research is "to better understand the relationships of knowledge, experience, and practice in terms of situated lives and situations" (p. 287). Conversation viewed as a hermeneutic activity attempts to understand the question prior to directly researching the problem (Carson, 1986).

Moderate hermeneutics underpins this study. Implicit in the question that asks what students view as meaningful in a curriculum-based research project is the assumption that, through dialogue with others in a group, it is possible to interpret personal research experience and thereby attain a shared understanding of 'meaningful.' Because my research was concerned with what students find meaningful and/or not meaningful in a curriculum-based research project, group consensus was best arrived at through interpretation modeled on conversation or dialogue. Although a possible definition for 'meaningful' was initially provided in my dissertation proposal, it served merely as a starting point for discussion. The understanding of what students view as 'meaningful' had to be constructed from deliberation in our co-operative inquiry groups (Baldwin, 2001) and had to be mutually agreed upon and understood. However, it was important to remember that this understanding was localized to one setting.

I had to be aware of my own prejudices, of my passionately held belief in what constitutes 'good research practice' in order to try to ensure that students were not unduly influenced by my personal understanding. Therefore the goal of my research had to be to create conditions that promoted a shared understanding of the research process, not to reproduce my own understanding. However, owning my prejudices did not necessarily mean that they would have a negative impact upon interpretation. "To interpret means precisely to use one's own preconceptions so that the meaning of the text can really be made to speak for us" (Gadamer, 1975, p. 358). That is, it is not only the text that can be made to speak for us, our preconceptions provide us with a schema to assist with the interpretation and understanding of our new experiences in a meaningful way.

It is only in identifying and owning personal biases and/or prejudices that it is possible to arrive at a shared meaning constructed through dialogue in a relational way. Those involved in the co-construction of meaning must be genuinely willing to understand one another without suspicion. Trust is essential. Achieving trust and openness is not only a necessity for successful collaboration but suggests ethical consideration, perhaps even a new understanding of shared responsibility and obligation (Carson, 1996).

It was also important to keep in mind the principle of power since "interpretations never completely escape the power structures which define them, but they constantly transform those structures" (Gallagher, 1992, p. 350). Involving students in the interpretation of 'meaningful' research was designed to assist with the possible transformation of the classroom power structure and to

assure students that their opinions were indeed heard and valued. Therefore, the numerous power relationships—teacher to student, researcher to participant, and adult to adolescent—needed to be carefully considered when analyzing the data and developing the shared definition of 'meaningful.' Prior to each co-operative inquiry group discussion, verbal reassurance that personal opinion, experience and understanding of all participants was both sought and valued, was necessary. However, I do not believe that the power relationships can ever be totally eliminated; they had to simply be acknowledged and kept in mind throughout the study.

Action Research

Kurt Lewin has been given credit for coining the term "action research" in 1944. He stated "No action without research, no research without action" (Adelman, 1993, p. 8). Lewin focused on conditions in the workplace, but did not go further to examine institutional processes (Adelman, 1993). According to two of Lewin's former students "action research was the means of systematic enquiry for all participants in the quest for greater effectiveness through democratic participation" (Adelman, 1993, p. 7). This research was different from other research of the time in that it was participatory, self reflective and committed to social change. Action becomes research when it is rigorous, self-reflective, and made public (Stenhouse, 1975). More recently, action research has also been directed toward individual change (see, for example, Carson & Sumara, 1997). Currently, a fundamental concern of action research is 'who owns the question?' This implies a concern that action research may exascerbate relationships of

power and control, that are "deleterious for humanity and especially pernicious for education" (Kerdeman, 1998, p. 16).

Grundy (1988) has identified "three modes of action research: technical, practical and emancipatory" (p. 353). She has suggested that these three modes can be viewed as either distinct types (dominating a project) or as phases of a project (beginning with one mode and changing as the project progresses). These modes differ in focus and in location of power.

Technical action research often focuses on the industrial workplace and promotes more effective or efficient practice. Because this mode of action research is product centred, the action is designed to produce something. Since the outcome for the research already pre-exists in the mind of the facilitator, the power lies with the person(s) in charge, commonly regarded as the 'expert' (Grundy, 1988).

Practical action research is more concerned with situated change. "Practical action research seeks to improve practice through the application of the personal wisdom of the participants" (Grundy, 1988, p. 357). Although the power is shared between equal participants, individual power for action is also emphasized. In an educational setting, teachers would reflect on their practical wisdom (phronesis) to ascertain what is best in their situation and would rely on the help of a facilitator or cooperative group of colleagues to assist with the process. Or, as in the design of this study, teacher(s) and students could together reflect on ways to improve curriculum-based research projects.

Emancipatory or socially critical action research arises out of the Deakin School of action research in Australia. This mode of action research, founded in critical theory, is directed toward social or educational systems as well as individual practice. It "does not begin with 'theory' and end with 'practice', but is informed by theory and often it is confrontation with theory that provides the initiative to undertake action research" (Grundy, 1988, p. 358). In this instance, the power resides within the group and, in fact, the research process may cause a shift in power relationships within the group.

These three modes of action research combine both action and research, and demonstrate that action research is systematic and reflective (planning/ acting/ observing/ reflecting), practical in orientation, focused on action not passive observation, and democratic when participants become equal owners in the project. Action research is a way to both understand and improve an educational situation (Carson, Connors, Ripley & Smits, 1989). Because action research is practical and focuses on real life problems, it invites collaboration and systematic reflection among colleagues.

In the 1990s a fourth mode of action research began to emerge. This is known as post-structural action research (Carson & Sumara, 1997). The major focus of this mode of action research is on interpretive knowing and developing a situated understanding of the complexity, ambiguity and interdependence of our personal and professional lives (Richardson, 2002). One of the strengths of this mode of action research is the possibility for personal change and enlightenment. However, it is important to remember that, although personal perceptions are

changed, this 'new understanding' must be made public or the work is not considered action research. The risk here is that post-structural action research may become so introspective that there is a retreat from social obligation. Although the power for change in post-structural action research resides with the individual, there is also an inherent responsibility to society that remains a focus of traditional action research.

It is evident from the previous discussion that there are two cultures of action research (Judah & Richardson, 2002). The first seems to be more concerned with control and improvement. For example, research within this culture is focused on changing practice through a process of action and reflection, the final outcome being a more socially responsible application of knowledge in the workplace. The second culture is identified as "action research as a living practice" (Carson & Sumara, 1997). In this view, action research is not as concerned with methodology but is more an attempt to understand how to live a life of action research. Therefore,

> any form of inquiry that seeks to learn about the complexly formed, ecologically organized relations of lived experience are, of course, forms of inquiry, forms of research. When these forms of research are specifically organized around questions of learning, understanding, and/or interpretation, they are, in the broadest sense, concerned with education and, thus, may be considered educational. When they self-consciously attempt to alter perception and action they are transformational. Any form of inquiry that fulfills these three criteria, we believe, constitutes a form of action research. (Carson & Sumara, 1997, p. xxi)

Action research, then, involves making choices based on personal and/or societal values. The research about ways to improve curriculum-based research projects undertaken in this study is "currently working within an existing but

problematized value system" (Tripp, 1990, p. 162). The systemic problem is evidenced by the tension felt by teachers between what is outlined in the Alberta curriculum regarding the importance of research and helping students to construct their own understanding, and the pressure that is inherent in outcomes-based education, to meet external standards. Providing opportunities and time for students to construct personal meaning is often seen as less efficient and may not allow for the coverage of material deemed necessary to pass the examination at the end of the course. As Kerdeman (1998) notes, while "education for lived understanding encourages situated dialectical exploration of existential meaning, epistemologically based education objectifies goals, persons, and even knowledge itself" (p. 15).

This tension is addressed by Aoki (1991) in his discussion of curriculum-as-plan and curriculum-as-lived. Curriculum-as-plan provides a framework about what teachers and students should do, which resources to use and how to best evaluate the outcome. In contrast, curriculum-as-lived "is the situated world of ... face-to-face living" (Aoki, 1991, p. 7) with students in the classroom. Teachers find themselves dwelling in the "Zone of Between" (Aoki, 1991, p. 8), the place between the horizons of curriculum-as-plan and curriculum-as-lived. For Aoki, such

> in-dwelling dialectically is a living in tensionality, a mode of being that knows not only that living school life means living simultaneously with limitations and with openness, but also that this openness harbors within, risks and possibilities as we quest for a change from the is to the not yet. (Aoki, 1991, p. 9)

However, he suggests that just as violin strings need to be properly tensioned to produce music, being alive "is to live in tension. This tensionality ... is a mode of being a teacher, a mode that could be oppressive and depressive, marked by despair and hopelessness, and at other times, challenging and stimulating, evoking hopefulness for venturing forth" (Aoki, 1991, p. 8). Because external pressures, especially mandatory high stakes testing does require that students are able to construct written answers on specific issues, focusing curriculum-based research projects on exam-related issues may be one way to help the students become literate researchers and to ease the tension felt by teachers.

Although an initial goal of this study was to develop new research practices rather than modifying existing ones (Tripp, 1990), I now believe that adjusting existing research practices in high schools is a more reasonable approach since it allows students and teacher to reflect and build on prior research experience. Throughout this study, my emphasis has been on a practical action research approach as we sought to improve research practice "through the application of the personal wisdom of the participants" (Grundy, 1988, p. 357).

This study was designed to provide a forum for discussion by students, teacher and researcher about meaning-making and the research process. Initially, more time seemed to be spent "developing a common language ... than discussing the actual problem or planning action" (Grundy, 1988, p. 362). Because conversation was an essential part of this study, I tried to keep in mind the words of Gadamer (1975) when he notes that "the more fundamental a conversation is,

the less its conduct lies within the will of either partner. Thus a fundamental conversation is never one that we want to conduct" (p. 345). He suggests that although conversations may be guided, they also follow their own path. Because the power in collaborative research is shared, the researcher needs to be willing to relinquish control as defined in a negative, repressive way while remaining "open to the possibility that one's position may be misdirected" (Kerdeman, 1998, p. 21). I found that conversations in the individual interviews were most enlightening when I relaxed and acknowledged that what the participants wanted to discuss took precedence.

The research context is very important in all qualitative research, not only action research. Physical, social and political contexts all influence the collaboration and the mindset of the participants. "In action research, how self, other and context interact in the research is a constant question. Action researchers need to reflect carefully on their own identities, the identities of their research participants, and the settings in which their personal and professional lives are played out" (G. Richardson, 2001, Lecture handout). Even though changing the physical context may not appear to make much difference on the social and political contexts of the research environment, it is the one aspect most easily altered and does influence how people feel. Therefore, since a school setting implies an institutional hierarchy of power, the co-operative inquiry groups were conducted in an informal style in a non-classroom setting in order to enhance the possibility for a feeling of equality among the participants.

The Pilot Study

In the fall of 2000, I conducted a pilot study with six teachers and thirteen students. The objective of the study was to determine which factors appeared to encourage students to successfully complete their research and develop confidence in their ability to create meaning from their findings. Successful completion was defined as finishing the assigned project and creating meaning from the findings. The study was also designed to hone my skills as a researcher and test some of the techniques that I planned to use for my dissertation work. Data were collected through student journals, interviews with students and teachers, and observation in the learning resource centre. Preliminary analysis of the pilot study data identified four factors that appeared to encourage students to complete their research and develop confidence in their ability to create meaning: access to information, task perception and understanding, the research purpose, and time. This pilot study, based on prior research conducted in the area of student information search processes, confirmed the importance of listening to the voice of students when designing research activities for use within the curriculum.

Although all six teachers involved in my pilot study read the final report, only one indicated that he would integrate what he had learned into his next research project for students. Therefore, I could not claim that my pilot study made a difference to all the people involved, although it did help me with my own acquisition of knowledge. My goal with the current study was to make the final outcome meaningful and applicable to more than myself—to students, teachers,

teacher-librarians and teacher educators in the field as well as researchers in the area of library and information studies.

Design of the Study

As stated previously, I used an action research approach to explore the experiences of high school students within the research process. My study provided a forum for discussion by students, teacher and researcher about the research process and the construction of meaning. Data, collected through audio taped semi-structured interviews, student and teacher reflective journal interviews, observation field notes and discussion in co-operative inquiry groups provided the basis for replanning, acting and observing, and reflecting, the steps common to action research (Carson, Connors, Ripley & Smits, 1989). However, throughout the study I kept in mind that as experiences unfold, plans and expectations continually change (Gadamer, 1975).

A. *Setting of the Study*

I conducted the research in a large urban Canadian school serving fourth and fifth year high school students. The school, initially designed as a school for students in transition between high school and post-secondary institutions or the world of work, was in its fifth year of operation. Students from districts both in and around the urban centre made up the student population of approximately 2300 per semester (fewer students attend in the second semester). Upon admittance, the students in the school held a range of high school credits: from less than sixty to over one hundred. (Students must have at least 100 credits in the subjects required by the provincial government to complete a high school

diploma.) Approximately one-third of the students already had their high school diplomas and were simply upgrading. Another one-third needed a few courses to get their diplomas, and the last one-third had fewer than 60 credits and were considered at-risk. The school counsellors were closely involved with these at-risk students and their teachers. Many of these students were on contracts monitored by the school counsellors. Approximately eighty-five percent of the students attending the school worked at part-time jobs and many lived independently.

After I received permission to conduct research in the school, I made arrangements to begin on February 15, 2002. However, due to the provincial teachers' strike, the research did not begin until March, 2002. Although the atmosphere in the school appeared to be 'business as usual' when I began the study, I was cognizant that the recent strike would mean completing the research and working with the students and the teacher would require sensitivity and flexibility on my part. Both the teacher and the students were very open to the research proposal when I presented it in a senior level English class. I indicated why I was interested in completing the study and how my previous experience as a teacher-librarian at the school had made me realize the importance of listening to students.

B. *Participant Selection*

I returned to the school where the pilot study was conducted to build on the previous findings in the hope that the two studies would indeed 'make a difference.' Based on my pilot study and the interest shown by one teacher in

both the findings and the implications for practice, my intent was to conduct the proposed study with this teacher and six to ten self-selected students in the class. The choice to be part of the proposed study was left up to the teacher and the class after the invitation had been issued both verbally and in writing (see Appendix A and B). The self-selection of participants allowed me to work with the teacher and the students who were committed to exploring their personal research experience through collaborative self-reflection. This also enabled all the participants to work through a number of action research cycles (plan, act and observe, reflect) and to provide a depth to the study that appeared to be missing in the pilot.

Initially sixteen students, eleven female and five male, indicated that they were interested in being part of the research project. When the teacher reviewed the names of these students, she pointed out that this self-identified group comprised a good cross-section of the class. As Garrison (1996) notes "dialoguing across gender, race, and ethnic difference provides precisely the sort of strangeness and familiarity that hermeneutics requires" (p. 7). In my pilot study I had found that male and female perspectives on research were different and this provided a more 'complete' understanding of the research process for me as researcher. The perspectives of students from different ethnic backgrounds also had assisted me in my understanding.

C. *Role of the Researcher*

Initially my role was that of participant-observer (Boostrom, 1994) and facilitator. Because of the nature of action research, I worked collaboratively with

the teacher and the students involved in the study. Since I am a qualified teacher-librarian, I assisted the teacher and the students with their research experience by helping with the co-operative construction of a pathfinder, the use of appropriate resources, and the organization of collected data. At other times I observed the students and made field notes. The 'field,' the natural environment of the investigation for this study, was the school's Learning Resource Centre. The field notes based on these observations were made in a double entry journal that allowed for personal reflection beside the observation notes to try to ensure that pertinent reflective data were neither forgotten nor lost. However, I found that assisting students with their search for information took more time than anticipated and left little time for observation. I realized that my role had become much more that of participant than observer. Although being an observer might have provided a more objective view of each participant's approach to forming a research focus, a more participative role became necessary as the students' lack of research experience became evident in their search for pertinent information.

I also acted as a discussion facilitator during the co-operative inquiry group sessions. During these sessions, all the study participants shared in the exploration of 'meaningful' and in the mutual creation of knowledge (Baldwin, 2001). It was my responsibility to maintain a project diary throughout the study as well. The project diary provided a written organizational record of, and for, this study. It included a weekly summary of the progress of the study, meeting times, places and participants, as well as key points discussed, questions for further study and tasks to be completed by the researcher and study participants

prior to the next meeting. It also provided a place for the researcher to reflect on the process and indicate possible areas of concern.

D. *Data Collection*

Since I was the primary instrument in data collection, it was important to keep in mind the attributes necessary for a qualitative researcher: tolerance for ambiguity, sensitivity to context and data, and good oral and written communication skills (Merriam, 1998). Because moderate hermeneutics is a hermeneutics of ambiguity, Gallagher (1992) proposes "phronesis (practical wisdom) as a way of coping with the ambiguity" (p. 346). In other words, I relied on my educational experience and understanding as one way to cope whenever the path chosen for this study became somewhat obscure.

I collected data through two audiotaped semi-structured interviews, observation field notes and audiotaped co-operative inquiry groups. Our purpose for meeting in the groups was "the mutual creation of owned and usable knowledge" (Baldwin, 2001, p. 291) with regards to meaningful curriculum-based research projects. As indicated in the previous section, a project diary was also kept.

I conducted one semi-structured audiotaped interview with each participant at the beginning of the study. These interviews began with a number of 'researcher-designed' questions but I tried to remain open to the interests and concerns of the students and the teacher being interviewed. I believe that these semi-structured interviews obtained the data this study required much better than the more structured ones I used in my pilot study. This is because my

preconceived notions about student research contained in the pilot study questions helped to shape the student and teacher responses. Therefore, rather than formal interviews, the use of conversation as a mode of research appeared to have the most potential for increasing understanding and making meaning (Carson, 1986).

Initially I asked all the participants to keep a reflective journal about the process. This requirement was designed to encourage all participants to stop and analyze any change in their language about research, their activities during the research process, their understanding of the research process and, in particular, their interpretation of 'meaningful curriculum-based research projects.' The students involved in this study felt overwhelmed with the idea of reflective journaling but, upon completion of their curriculum-based research project, they were willing to participate in a 'reflective' interview. After consultation with my supervisor, appropriate questions were composed and used for a reflective interview (see Appendix D). These final interviews provided the individual perspective of the participants to the study.

I designed this collaborative approach to ensure that the research questions posed for this study could be answered, as well as to assure the students involved that their comments and insights were important. Students were involved in this study because I value their voices and wish to honour their contribution. However, unless students understand that their potential and possibilities are at stake, "the best designed experimental situations and the best attempts to motivate the student will not lead to learning" (Gallagher, 1992, p. 164). Therefore it was

critical that the students' preferences be accommodated during the data collection phase of the study.

I anticipated working with the students and the teacher over a six-week period. Due to the teachers' job action and the resulting revision of goals and objectives by the teacher for the English class, the study took place over a thirteen-week period.

E. *Data Analysis*

The identification of key ideas in the data analysis and reflection on the processes provided the basis for replanning, acting and observing, and reflecting, the steps common to action research (Carson, Connors, Ripley & Smits, 1989).

Data analysis was ongoing throughout the research project. I collected and collated the data regularly in order to provide feedback for the study participants and to plan the next step in the action research cycle. Since one of the aims of the action research was to identify what was meaningful to the participants and to increase their understanding, it was important that the analysis completed by the researcher be understood and used by those involved in the study.

Initially, the discussions on meaning and what was 'meaningful' to students focused on reaching a shared understanding about what they considered 'meaningful.' Individual interviews were conducted, transcribed and reviewed by each participant prior to the first cooperative-inquiry group session. The transcription about what the participants (including the researcher) considered 'meaningful' was made available to all group members. Part of the process was to pick out key phrases and look for similar patterns in our understanding until we

reached a group consensus. We used the forward and backward arc of the hermeneutic circle. As Ellis (1998) suggests,

> one uses 'fore-structure' to make some initial sense of the research participant, text or data. That is, one uses one's existing preconceptions, pre-understandings or prejudices—including purposes, interests, and values—to interpret; this initial approach is unavoidable. But in the backward arc, one evaluates the initial interpretation and attempts to see what went unseen before... This re-examination may require charts or summaries or lists in order to uncover patterns or relationships difficult to discern when one considers a large amount of information simultaneously. In this process it is just as important to ask what is absent in the data as what is present. (pp. 26-27)

Our discussions were taped and transcribed for each session until we arrived at a shared understanding of 'meaningful.' We then ascertained how our shared definition and understanding of 'meaningful' would be translated and implemented into the curriculum-based research project being completed by the students. Although weekly discussions between the study participants and the researcher regarding the implementation of the new ideas were planned, I became aware that it was more productive to meet as issues arose, rather than on a set schedule. This part of the methodological evolutionary process required flexibility and a willingness to 'let go.'

As mentioned previously, qualitative data analysis is continuous and iterative. The data analysis for this study consisted of "three concurrent flows of activity: data reduction, data display, and conclusion drawing/verification" (Miles & Huberman, 1994, pp. 10-11). Data reduction included writing summaries, coding, finding themes and/or making clusters. Data display, an organized compact form of the information, included matrices, graphs and charts. Conclusion drawing/verification included "noting regularities, patterns,

explanations, possible configurations, causal flows, and propositions" (Miles & Huberman, 1994, p. 11). Throughout the analysis, I kept a written record of emerging questions and new unanticipated ideas.

It was essential that these patterns and themes were determined from the data and not from any preconceived ideas held by me or by the participants in the study. I identified supporting evidence for each of the major themes in the transcripts of the student interviews and the co-operative inquiry groups to try to ensure understanding and clarity. A multivoice report found in the findings, Chapter 4 of this document, included both the researcher as co-participant and the participants as co-researchers. There was "a deep attentiveness to language itself, to notice how one uses it and how others use it" (Smith, 1991, p. 199). I carefully considered the language used in the report, remembering that all writing is open for new interpretations and new relationships with the reader (Gadamer, 1975).

Conducting the Study

The steps common to action research include: planning, acting and observing, and reflecting. These steps were used as a guideline rather than as a prescriptive model since "models are not necessarily representative of the realities practitioners ... experience" (McNiff & Whitehead, 2002, p. 52). The initial focus of the study was conceived by the researcher; however, the ideas, actions and reflections of the study participants shaped the study. It was important for me as the researcher to hear what the participants were saying and to follow their lead regarding what needed to be changed in the process and what activities would assist them with completing the curriculum-based research project they had

helped to design. Each new cycle of action research was begun after reflecting on the actions and observations of the previous cycle although, in reality, the process was more fluid than outlined in the following discussion.

The first cycle began with my proposed study that was designed to define what students viewed as meaningful in a curriculum-based research project. The plan for the study was based on a concern identified by me regarding the 'less than enthusiastic' response of students to research assignments. Three classes of high school students and their teacher were invited to participate in the study and, once the self-selection was completed, semi-structured interviews were conducted with each participant. I highlighted phrases in the transcribed interviews to identify what students and their teacher considered meaningful. These ideas and phrases were collated onto one chart to provide the basis for reflection and discussion in the first co-operative inquiry group. My goal for the students was to help them reach a consensus about what was, and was not, meaningful in order to formulate a shared definition for 'meaningful.' During this cycle each student in the class was given an envelope (3-hole punched) as an organizational tool to keep in their binder. The beginning of a group pathfinder (a guide to possible and credible sources of information – see Appendix E) was written on one side and a possible list of issue-based research topics was written on the other. The students were also introduced to Kuhlthau's Model of the Information Search Process (see Figure 1). This cycle was completed over a period of five weeks.

During the second action research cycle, the student participants used the chart developed from their initial interviews and debated the ideas expressed by

others in the group. As the facilitator, I encouraged the students to reach a shared definition of 'meaningful' but they did not always agree on what made an assignment and/or classroom activity meaningful. The numerous definitions developed by the student participants were audio-recorded and transcribed. Each of the student-developed definitions focused on meaningful assignments and, upon my further reflection of the transcribed discussion(s), it became apparent to me that a shared understanding about what comprised a meaningful assignment provided a comprehensible framework for what students regarded as 'meaningful' in a curriculum-based research assignment. This cycle was completed over a period of one week.

During the third cycle, in my role as facilitator, I took different elements from the numerous definitions constructed by the students, and constructed the final, shared definition for 'meaningful assignments.' The students agreed that this final definition incorporated the most important ideas from their prior definitions developed during co-operative group discussions. Based on this definition, the teacher and the teacher-librarian/researcher, created a curriculum-based research project for the students. Prior to project development, the student participants had agreed that the presentation format for the curriculum-based research assignment would be a research paper. Once the assignment was presented to the class, the student participants' reaction to the composition of the assignment was expressed during another co-operative inquiry group discussion. As the students discussed the design of the curriculum-based research project, they indicated that they were happy with the requirements of the assignment but

needed time for in-class group discussions regarding topic selection and focus. This cycle was completed over a period of one week.

Based on the reflection of the student participants, in-class time was given to the students for the discussion of topics and a possible focus for their research. This activity comprised the fourth action research cycle. No direct instructions about what to discuss were given; the teacher simply told the students that the time was to be used to discuss possible research topics and/or anything else pertaining to the curriculum-based research project. Neither the teacher nor the teacher-librarian/researcher took part in these group discussions. The students seemed to prefer talking to one another without any outside facilitation. As the students began to choose their topics and access information, it became apparent that they were having difficulty identifying relevant information and composing a thesis statement for their research paper. The teacher and the teacher-librarian/researcher concluded that the students needed more assistance and, after consulting with the student participants, decided to increase direct instruction and model the research process. This cycle was completed over a period of two weeks.

During the fifth cycle, a pathfinder outlining possible and credible print and nonprint resources, was more thoroughly developed with the entire class. The teacher recorded the information and the teacher-librarian/researcher facilitated the discussion. The teacher-librarian/researcher modeled how to choose a topic, form a focus and compose a thesis statement based on choice (see Appendix F, Example #1). As the students began to choose their topics and write their thesis

statements, they also began to struggle with the composition of the required sections for the research paper. At this point the teacher and teacher-librarian/researcher decided the students needed more assistance on how to write the research paper. This cycle was completed over a period of two weeks.

Throughout the sixth cycle, the teacher-librarian/researcher modeled how to write the paper by composing and sharing the draft of one section every other day. The complete paper was comprised of five sections: introduction, novel examples, current examples, personal opinion, and conclusion (see Appendix F, Example #3). Following the presentation and discussion of each section's draft, the students brought their written section to discuss with the classroom group and/or the teacher. The students appreciated the prototypes, but many of them found writing to be hard work and, at times, tedious.

The research papers were completed and handed in to the teacher-librarian/researcher for assessment. During the final cycle of action research, the teacher's and the student participants' reflections about the study were audiotaped. This cycle was completed over a period of two weeks.

Although the cycles in an action research study are ongoing, closure becomes necessary. Because the curriculum-based research project was completed and the school year was near its end, the action research cycles for my study concluded. After the final reflective interview, I thanked each of the participants for their contribution to the study and for taking time from their busy schedules to be part of my study.

Participants in qualitative studies are often given pseudonyms to ensure anonymity while acknowledging individual contributions to the study. However, the participants in this study were not identified in this way. The use of 'names' seemed to put more emphasis on personal understanding and to detract from the concept of a shared understanding about what was 'meaningful' within a curriculum-based research assignment.

Summary

The narrative preceding this chapter implied that conducting research entails risk. Nevertheless, it is only in risk and relation that we can "clarify who we are" (Kerdeman, 1998, p. 22) and become accessible to others, a real and necessary part of qualitative research. I began this chapter by discussing the merits of qualitative research. However, as researcher and co-participant in this study, I cannot naively assume that all the 'good' (i.e., in-depth understanding and empowerment) that qualitative research purports actually took place. In fact, I discovered that my preconceived notions about the outcome of the study and what was actually uncovered were contradictory. Nevertheless, "uncovering contradictions helps us all to see those spaces in which strategic rather than naïve or idealistic action is possible" (Brennan & Noffke, 1997, p. 40).

As I conducted my research, I had to keep in mind that the proposed methodology for this study changed and evolved as the study progressed. Sumara and Carson (2001) suggest that "action research practices are deeply hermeneutic and postmodern practices, for not only do they acknowledge the importance of self and collective interpretation, but they deeply understand that these

interpretations are always in a state of becoming" (p. xviii). Tripp (1990) holds a similar view and proposes that "action research involves a process of reflection on reflection, but it can never be exhaustive, can never 'arrive' at an end point of full understanding" (p. 160). Based on the previous statements, it is evident that, although the data collection for this study has been completed and the findings reported, the interpretation of the data and the reflection on the interpretation will continue.

Chapter 4 Findings

Narrative – *Letting the Participants Speak*

When I began my data collection, I had some notions about what the students would tell me. I was certain that they would want choice in their research assignments and that they would want to be able to use a variety of formats in their presentation. However, during the discussions about what made assignments 'meaningful,' I realized that these students brought a sophistication of thought and an insight into learning that I had not anticipated. They knew what was important to them and were able to clearly articulate their understanding. I was humbled, and I knew that in order to truly understand I had to listen carefully. I was no longer the "teacher" and I needed to constantly remind myself that I was there to learn rather than inform. However, as I transcribed the tapes of the group discussions, I realized that it was very easy for me to slip back into the role of teacher and inform, rather than facilitate. Even though I wanted the student participants to feel free to express their feelings and they often did that without reservation, I found that they would look to me as someone who would or should have the answers rather than someone who was learning and exploring with them. This meant that I had to continually recognize and own my biases and prejudices and accept that my personal opinion was just that—an opinion.

Therefore, I had to realize, as many other researchers had before me, that it is necessary that the participants are encouraged to speak and that the findings and conclusions drawn are based on what was being said, not what I wanted to hear. In order for this to happen, it was necessary for me to be aware of my personal biases and prejudices and to understand that only when one listens carefully will a difference in teaching and learning be made. "Too often research is undertaken simply to advance a professional agenda rather than to make a difference in teaching and learning ... as a consequence, researchers make overblown claims, minimize and misrepresent the work of other researchers,

develop general instructional prescriptions that are insensitive to the nuances of human behavior, and oversimplify the messiness and complexity of teaching and learning" (Smith & Wilhelm, 2002, p. 184).

As the data collection neared completion, I realized that although I had initially believed that certain aspects of teaching and learning could be simplified for ease of instruction, I was equating the process of teaching with the process of learning. They are not the same and are dependent upon the individuals involved. Nothing is simple when working with people! In fact, reaching a mutual understanding and consensus about what constitutes curriculum-based research assignments that are 'meaningful' was time-consuming and required much thought and perseverance from all involved. Was the final definition satisfactory or did the time constraints of the project force us to move forward? Had I listened carefully enough to what the teacher and student participants had told me? Would my belief in the importance and necessity of teaching the research process to students color my analysis of the data and simply promote my own agenda?

Introduction

The findings from this study reflect the practical action research process used for data collection and analysis. The identification of key ideas in the data gathered from the students and teacher provided the basis for replanning, acting and observing, and reflecting the steps common to action research. The first section of this chapter discusses how the definition for meaningful assignments was reached. The second section presents the classroom context and the research assignment developed from the students' and teacher's definition. The final two sections present student and teacher perceptions of 'meaningful' based on their definition for meaningful assignments. Both the students' and the teacher's perception of 'meaningful' have been divided into two sections for ease of

discussion: components necessary for meaning and contextual elements contributing to meaning.

Defining Meaningful Assignments

Individual student and teacher participant interviews began March 11 and concluded April 19, 2002 (see Appendix C for questions used in the interviews). The interviews were audiotaped and transcribed. Transcripts were reviewed to find all references to 'meaningful.' The references were highlighted and categorized. The categories identified for meaningful assignments and sample participant responses are found in Figure 2.

Figure 2. Categories Based on Participant Responses

Categories	*Participant Voices*
• Choice	"... it's something of personal interest"
• Can relate to it	"... it's something that you can relate to"
• Previous experience	"... you can take what you already know and build on it"
• Presents personal opinions	"... it's important that you get to put a little piece of your own opinions ... into it because if you don't then you're just regurgitating facts and that's not meaningful"
• Something that makes you think	"... it has to be something that will make me think a lot"
• Helps you understand the way the world is	"... because there's lots of points of view being thrown out and you get to look at things in a new light all the time"
• Increases understanding of self	"... it should be about getting to know yourself"
• Variety	"... you need to have more variety ... it's too repetitive"

What was considered '**not** meaningful' was also identified during the initial participant interviews. One participant suggested that "[in] junior high and high school we took notes and we read textbooks and that's it, and I didn't learn. I mean I memorized and that's it and I didn't really take anything out of it." Following this line of thought, she indicated, "I don't remember anything I've ever written down on a worksheet." One student stated "Why regurgitate something that somebody else wrote that doesn't teach you anything?" Multiple choice tests, memorization, regurgitating facts, and completing worksheets were most often identified by students as school activities that are not meaningful to them.

After the participants were interviewed, they were given their transcripts to read and initial. They had to check for typographical errors and clarification of comments, as well as ascertain whether individual definitions of 'meaningful' had been identified through a color-coding process. Once the students had positively verified the accuracy of their interview transcripts, all ideas for 'meaningful' assignments and activities were compiled and placed on a large chart. The chart was organized in the following manner:

1. What meaningful assignments include
2. Activities that are course-related, interesting and help with learning
3. Activities that are not meaningful

This chart (see Figure 3) formed the basis for our initial co-operative inquiry group discussions on April 19, 2002. Due to student participants' timetables and work schedules, and after discussion with my advisor, it was

decided to hold three smaller co-operative inquiry groups rather than one large group. Each of the group discussions was audio-recorded and transcribed by the researcher.

Figure 3. Discussion Chart

Meaningful Assignments

- Choice
- Can relate to it
- Previous experience
- Present personal opinions
- Something that makes you think a lot
- Helps you understand the way the world is
- Increases understanding of self
- Variety

Meaningful Activities

- Discussion
- Debates
- Hearing other perspectives
- Essays with personal ideas
- Visual
- Oral presentations (group)
- Process oriented

Activities that are NOT Meaningful

- Process oriented
- Oral presentations (individual)
- Multiple choice
- Memorization
- Regurgitating facts
- Worksheets

As the participants discussed what was and was not 'meaningful,' it became evident that there were some additional ideas that needed to be added to the chart. For example, one group felt that it was imperative that ***variety*** be included in the section designated as 'meaningful assignments.' Although it had not appeared in the original chart, it was added as we discussed what was considered 'meaningful' in an assignment.

At times the discussion became philosophical, rather idealistic and insightful. One participant suggested that

> All these things tie in together because something that makes you think a lot will help you understand the way the world is and it'll increase your understanding of the way you are ... so use your previous experiences and, of course, you'll relate to it and you'll choose something that you're interested in.

Another participant commented that

> I think that, if you look at black and white, then you can't understand why people do the things that they do for the reasons that they have. So if you kinda have a broader understanding, then you understand others and you understand yourself.

One student's summary for 'meaningful assignments' was stated in a most intriguing way and offered a realistic appraisal of the school-based world while providing an unusual and thoughtful approach to living life outside of school.

> That about sums it up probably. Like, variety is not important to me. Multiple choice is a necessary evil. But presenting personal opinion, I think, is the one thing that makes an assignment meaningful. Like, I don't care what topic a person gives me as long as it's an issue that I can debate because then you get to say "this is me, this is what I believe" and at the same time I understand and accept what you believe but I disagree. Agree to disagree. And I think the thing that makes that so meaningful to me is I think if everybody learns to live their life like you write a discussion paper the world would be a better place to live in. You know what I mean because you're taught in Social 30 that you always have to say "Although this was a bad idea, this is the reason why they support it" like for

> communism or fascism or whatever, right? And if people ran their lives saying "you're different from me but I empathize with that" and everybody was like that, then you know, you learn that when you're writing papers, so it would be better.

After much discussion among the student participants in the three co-operative inquiry groups, the following ideas about meaningful assignments were generated by the groups:

Group 1:

- Meaningful assignments allow choice, encourage personal interest and ideally allow the expression of personal opinion.
- Meaningful assignments help you figure out what it is that you think about life in general.

Group 2:

- Meaningful assignments make you think a lot, encourage personal interest and involve something that you can relate to.
- Meaningful assignments encourage you to think and make decisions about the world and yourself.

Group 3:

- Meaningful assignments encourage the presentation of personal opinions and the opportunity for you to learn and grow as a person.
- A meaningful assignment has enough sides to it so that you can present your personal opinion, think things through and will help you understand yourself as well as the rest of the world.

The various definitions developed by the co-operative inquiry groups identified cognitive processes (i.e., "make you think a lot, think things through"), personal development (i.e., "opportunity for you to learn and grow as a person, help you understand yourself as well as the rest of the world") and relevance (i.e., "encourage personal interest, involve something you can relate to") as important

to making meaning and contributing to 'meaningful' assignments. These ideas were then presented to the whole group and combined by the researcher into one complete definition:

> **Meaningful assignments are open-ended, thereby allowing for choice, personal interest and the expression of personal opinions, while encouraging thought and decision-making about the world and yourself.**

The students agreed that the definition given above captured their ideas regarding meaningful assignments and that the design of the curriculum-based research assignment in their English class should be based on this definition.

This definition for meaningful assignments provided a context for the students' view of 'meaningful:' personal interest in conjunction with the expression of personal opinions were considered essential to making meaning. For these student participants, a curriculum-based research project was 'meaningful' when they were personally interested in their topic and were encouraged to think about themselves as well as how the topic related to society in general. Giving the students choice of topic enabled them to select something that was of personal interest and stimulated thought about individual and societal applications.

Developing the Research Assignment

Prior to the development of the research assignment, the students had been reading and exploring the novel, *The Great Gatsby.* Large and small group discussions had examined the development of characters as well as encouraged the students to express personal views regarding the novel's plot, text and theme.

The students had written an essay about the novel; however, their teacher wanted them to experience a formal research assignment before entering a post-secondary institution or choosing a line of work. The teacher knew that understanding and working through the research process is a life skill, not only a curricular requirement. Therefore, she was adamant that the students in her senior level English classes be given the opportunity to conduct research. However, the teacher's experience made her realize that many of these students had previously been unsuccessful in their senior level English and had never before completed a curriculum-based research assignment. In fact, one of the student participants indicated that while attending another high school, only "half the class—not even—would complete the [research] assignment." It was evident that, to ensure completion, student interest needed to be initiated and maintained; students needed to find the project personally 'meaningful.' Therefore, the research project designed for these students needed to be based on their understanding and perception of 'meaningful.'

After the students had reached an agreement about the definition for 'meaningful' and about what constituted a meaningful assignment, the teacher and the researcher created the following assignment (see Figure 4) based on the definition. The student participants were given the opportunity to discuss the assignment once it had been designed and to make suggestions for change if it did not match the criteria provided in their definition.

Figure 4. English 30 Research Assignment

1. Choose an issue of interest to you that is found in *The Great Gatsby*. You will need to read the book carefully, perhaps more than once, in order to do this.

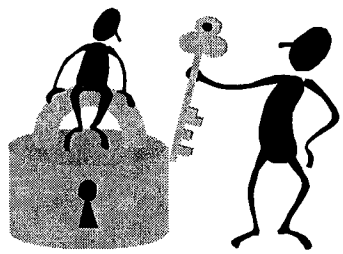
2. Begin collecting various pieces of information about that issue. Sources may include dictionaries, quotations online or in print, encyclopedias, magazines, newspapers, and interviews as well as the book itself.

3. Focus on one aspect of the issue in order to write your thesis statement.

4. Your final product is a research paper of approximately 1000 to 1500 words typed (4 to 6 pages) that covers the following:

    - Introduction to the issue
    - Discussion and examples from the novel
    - Discussion and examples from current life
    - Personal opinion about the issue
    - Conclusion

5. The research paper mark will be based on a rubric and will be worth 20% of the major assignment category.



The assignment was introduced to the class and all the students were encouraged to ask questions and/or make suggestions. During the second round of group discussions, one student participant remarked, "Actually everything is very good. You have prepared it [the assignment] very well for us." Another stated, "Well from what I read, it's exactly what we talked about." When asked about the assignment, one student reflected

> I think the assignment is really a meaningful assignment. Like when I first got the assignment I was like, hey, well, this kind of sucks. And then I started doing research and then like started thinking about my thesis statement and then all of a sudden I had like too many ideas and not enough pages, instead of not enough ideas and too many pages which is good. So yeah, I think the assignment turned out really well.

After completing the curriculum-based research assignment, one of the student participants commented about the importance of personal opinion. He said "Well, I got to write about something that I was able to speak out against, you know. I could actually put my personal opinion in there and I could actually say what I felt, instead of what the teacher wants to know." Although the majority of student participants (eight of the nine) felt that the curriculum-based research assignment had been based on their definition of 'meaningful,' one student commented on the choices involved.

> I think that my own actual complaint about the whole assignment is that we got, like, we got a choice on, like, the topic but we actually didn't get a choice on like [the book], like I would never choose *The Great Gatsby,* as a book ... but yeah it's a lot better that we can, like, that we have a choice on what topic to write on and stuff like that.

Of interest was the range in definitions students had for 'choice'—from choosing absolutely everything to choosing the perspective and approach to the topic.

Eight days after the curriculum-based research assignment was given to the class, an evaluation rubric for the assignment was provided. Although it would have been best to design the rubric with the students, it was decided that, in the interest of time, the teacher and the researcher would design the evaluation rubric (Cleveland Municipal School District, 2002; Schools of California Online Resources for Educators, 2002). Initially I felt that the students were overwhelmed by the expectations. However, their teacher told them not to worry

but to look at the **exemplary criteria** and aim for that. In a later discussion, one student participant indicated that this rubric was easier to understand than the one provided for the provincial Grade 12 diploma examination essays and that 'our' rubric was "more clear than that, like you kind of have a better idea of what you need." One example provided by this student was the use of the term 'insightful' on the diploma rubric: she asked what was meant by this term? It was evident that students prefer clear, well-defined indicators and felt more positive about an assignment when they understood what was required.

When discussing assignments during individual interviews and/or co-operative inquiry groups, it was noted that students were unable to successfully assess their work prior to receiving a grade from their teacher. It became apparent that previous experience with grades and assessment had left them puzzled and unsure about what comprised good work and how grades were given. One student even believed that grades were given on a subjective basis. He was worried that "if someone strongly doesn't support it they could read my essay and go 'well give him a bad grade', it was just that whole what's someone else going to think of it ... I guess I'll see when I get my mark. I'll see whether I was right or wrong." Another student participant indicated, "I'll write something and I'll do really well on it and I'm shocked you know ... I didn't think it was that good." Ideally, students need to be part of the assessment design as well as the research design. When students help to develop criteria for assessment, they better understand what is required, fulfill assignment expectations more successfully,

and find it easier to assess their own work. A copy of the assessment rubric is shown in Figure 5.

Figure 5. English 30 Research Paper Assessment Rubric

CATEGORIES	Beginning – 1	Developing – 2	Accomplished – 3	Exemplary – 4
CONTENT • Pertinent/ on topic • Elaboration/ detail • Examples evident: from book and current life	• Minimal idea development, limited and/or unrelated details • Information is off topic, trivial or inaccurate	• Idea development reflects a general understanding • Supporting details and examples are few and/or repetitious	• Idea developed in depth; supported by relevant details and examples • Reflects a comprehensive understanding of the topic	• Depth and complexity of ideas supported by rich, engaging and/or pertinent details and examples
PERSONAL OPINION • Depth of analysis and insight • Clarity of thought • Logical (based on examples)	• Information provided about issue, but little evidence of personal insight • Opinion is unclear	• Evidence of some analysis and insight into issue • Opinion is stated, but needs more clarity	• Evidence of adequate analysis and insight into issue • Clearly stated opinion	• Evidence of in-depth analysis, reflection and insight • Clearly stated opinion
MECHANICS • Grammar • Punctuation • Spelling • Sentence structure • Vocabulary	• Numerous mechanical errors evident • Incorrect and ineffective wording and/or sentence structure	• Frequent (10 – 15) mechanical errors noted • Simplistic and/or awkward language and sentence structure	• Some (5 – 10) mechanical errors are evident • Controlled and varied sentence structure	• Very few or no mechanical errors evident • Language use and sentences are appropriate to audience and topic
REFERENCES • Variety of sources (5 – 8) • Bibliography in requested format • Reference citations in text	• Numerous errors and/or missing bibliography and reference citations • Too few sources used	• Many errors in bibliography and reference citations • Minimum number of sources used	• Few errors noted in bibliography and reference citations • Sources used are adequate	• Bibliography and reference citations are error-free • Sources used exceed expectations
FORMAT/ PRESENTATION • Cover • 4 to 6 pages • Typed: 12 pt./ double-spaced • Bibliography	• Many errors in format; presentation is sloppy	• Some errors in format are evident; specific guidelines are not followed carefully	• Evidence of attempt to follow specific guidelines but one requirement is missing	• Format follows specific guidelines; nothing is missing

After receiving the marks for their research papers, the student participants still perceived the curriculum-based research assignment as 'meaningful' although they spoke about being grateful that they had been 'given' a good mark rather than acknowledging that the mark was an accurate indication of the work they had completed.

Students' Perception of Meaningful

A. *Components Necessary for Meaning*

Once the students had defined what a 'meaningful assignment' was, and the definition was used to develop a curriculum-based research assignment, it became evident that the agreed upon definition:

> **meaningful assignments are open-ended, thereby allowing for choice, personal interest and the expression of personal opinions, while encouraging thought and decision-making about the world and yourself**

was comprised of four components: **choice, relevance, reflection and application.** In other words, the students' view about what is 'meaningful' in a curriculum-based research assignment included relevance and personal interest in conjunction with expressing personal opinions. Giving students choice ensured personal interest and relevance, while expressing personal opinions about the topic encouraged students to reflect on their topic and personally apply what they had learned. A discussion of the findings for each component follows.

Choice:

Being given choice was very important to the student participants. However, as previously noted, the definition of choice varied considerably and

indicated a range in sophistication of thought and understanding. One student believed that it should include the choice of the book to read as well as the topic (i.e., "we got a choice on like the topic but we actually didn't get a choice on like [the book]"). At the other end of the continuum, another student felt that being allowed to express personal opinion provided sufficient options since a variation in perspective ensured that there was choice in the expression of ideas. For example:

> As long as you're allowed to express your personal opinion, it's still your paper, it's still your life and your opinion so even if the assignment is chosen for you or the topic or whatever, there's still a lot of room if you're allowed to put personal opinion in there. It's still up to you what you're going to write about because every issue has, especially big complex issues, have about four or five sides. Four or five different opinions, different things that you could write on ... so even if the topics chosen for you, you still have choice as long as you can put your opinion in there.

Although the students' interpretation about what constitutes choice varied, the final consensus was that choice was an essential part of 'meaningful' assignments. One student summarized this in the following manner: "Like, if you choose what you get to do, it's meaningful to you and you can do what you want. Obviously you wouldn't choose something you didn't want to do. Yeah, that's pretty much it."

The topics chosen by the students varied considerably and, for many of the participants, changed at least twice before a final focus was selected. Students were given time to explore numerous possibilities and were encouraged to access relevant material, both print and nonprint, in the school library prior to making a final choice. During this time of exploration, students either quietly conversed

with their peers or investigated on their own. For example, one student participant stated

> Well first, initially, I chose to do hedonism. That was my initial what I was going to do and because I had a couple ideas on what to do and I was just kind of playing with that in my mind and then I decided that I wanted to, actually, to do fate. I changed my mind because I had more ideas with fate ... but there was one problem with fate. I couldn't find current life examples of fate because I mean there's no real proof that fate exists ... so at that point I was kind of stuck and then I saw murder on the sheet and all these thoughts popped in my mind, things I could do and that's it. I mean I just got like a rush of ideas and that's when I decided what I was going to do.

Based on the issues identified in the novel and listed by the class, student participants gathered information and wrote papers about justifiable homicide, murder, prohibition, drunk driving, hedonism (defined as the absence of goal setting), family values, the influence of war upon life after war, and the power of money. The issues chosen by the students demonstrated not only the divergent views of the group, but also suggested an underlying interest in ethical living and a concerted effort to understand those members of society who demonstrate behavior considered unacceptable by the majority.

More than one student indicated that being given choice and choosing a topic of personal interest helped to make the process of writing and assignment completion easier. For example, one student stated

> I think actually because I was able to choose the topic, it was easier to write about rather than something that, like, I think that's what made it flow so easily because it was something that I wanted to write about and so I was just kind of like ready to write it. Rather than like, today we wrote an essay in class and I didn't really want to write it and I got stuck for about 15 minutes at the beginning, just sitting there thinking about what I was going to write but, it's because I didn't have a choice.

Another student indicated, "If you can, like, pick a topic like this and do something that you're interested in, then it's like reading a book in your spare time ... it doesn't seem like work." It was evident from the discussion and participation that, for these students, **choice** was a component necessary for making meaning.

Relevance:

Student participants indicated that 'meaningful' assignments needed to be currently relevant to their life both inside and outside school. Ideas for discussion and/or research need to be "things that I can actually relate to in life" and topics that actually have "something to do with you" and that help with understanding "the way the world is." Students viewed an assignment as 'meaningful' if it "makes you think right away and understand it because you're put in that situation." One student commented that when an assignment is 'meaningful,' it "also affects you in real life. I mean outside the classroom, it's something that you could take outside the classroom so I mean years from now I'll still remember doing this project and be able to pertain things in life to it."

A common complaint about school expressed by the students was that "it's so distant and like when am I ever going to use this and why should I care? Like it has nothing to do with me." This belief in the importance of relevance appeared to be based upon student understanding that the goal of schooling should be about getting to know yourself better. One student suggested that school should provide an opportunity for you to learn and grow as a person. Another student felt that "school should be about getting to know yourself and what you're

good at, and what you want to do." When asked whether this meant that it was necessary to enjoy the journey as well as the destination, the reply was "Well, the journey is the destination." Therefore, based on the understanding demonstrated by the students in this study, **relevance** is integral to making an assignment 'meaningful.'

Reflection:

Student participants believed that being allowed to express personal opinion(s) in an assignment increased personal meaning but they also required time for contemplation and deliberation. Part of this reflection process, based on student suggestion, involved having two 10 to 15 minute blocks of class time per week for students to discuss their choice of topics and possible perspectives with other group members. During this time the teacher and the teacher-librarian/researcher circulated among the groups but did not participate in the discussion unless invited. The students spent this time sharing the information they had found and clarifying their focus. The group conversations were very focused and often intense; it was sometimes difficult to refocus the students on the teacher's lesson for the day. However, this time for discussion was considered valuable because it was "going to force people to make sure that when they're looking at an issue that they're looking at all sides of the issue." It was incorporated into the project after a recommendation was made in one of the co-operative inquiry group sessions. One student remarked that

> I think if you talk about your issues I think a lot of people are going to be opened up to a lot of things that they didn't think about putting in their paper but that would be a bonus to it.

Hearing the perspectives of other students was considered essential by the students and contributed to their construction of personal meaning. According to the input provided by the student participants, **reflection** requires adequate time to think, cannot happen in a vacuum, and is elemental to assignments that are considered 'meaningful.'

Application

Although making application to personal lives is an extension of relevance and encourages personal construction of meaning, student participants indicated that before applying what had been learned to themselves, they had to be given the time to reflect and ascertain what was significant for them. One student suggested that "to really learn something you have to take something, a topic or whatever, that's got sides to it, roll it around in your head, look at the different perspectives and figure out from that what your place is." Another student indicated

> I think maybe before the project, and I think possibly maybe other students as well, didn't, may have felt that it would not affect them in real life or affect them themselves out of the classroom. But I was amazed how afterwards or during the process of research, it very slowly changes you. Not changes you where to believe in things or to not believe in things but to gain different perspectives and ... a better understanding.

The same student then went on to elaborate that "years from now I'll still remember doing this project and be able to pertain things in life to it." It would appear that for some students, personal **application** does not necessarily end upon completion of the project. It is ongoing and, as such, basic to the construction of knowledge and meaning.

Students indicated that the curriculum-based research project designed and based on their definition was, indeed, 'meaningful' because they were allowed choice, encouraged to express personal opinions, and focused on relevance through locating current examples for their area of interest.

B. *Contextual Elements Contributing to Meaning*

Throughout the semi-structured interviews and the co-operative inquiry groups, student participants consistently referred to three basic elements that contributed to their success with the assignment and the construction of personal meaning. These included acknowledgement of **feelings**, professional and peer **support,** and student **empowerment** through ownership and increased understanding. A detailed discussion of each element follows.

Feelings:

Although I understood that feelings of uncertainty accompanied the initiation of a research project and that feelings needed to be considered throughout the research process, I had not anticipated how often the students would refer to their feelings. There were over 400 references to feelings, both positive and negative, made by student participants during group discussions and interviews. Although more positive than negative feelings were expressed by the students, it became apparent that students experienced an emotional reaction to the assignment and they freely expressed this. For example, their positive expressions about school activities and research assignments included the verbs: enjoy, like, love, value, and the adjectives: fun, excited, deep, profound, interesting. Their negative feelings were expressed with phrases that included the

verbs and adjectives: "freaked out," overwhelmed, annoyed, nervous, anxious, hassled, confused and afraid.

Slightly more expressions of feelings, both positive and negative, were associated with the process rather than with the product and/or content. Eight of the nine participating students indicated that they lacked prior experience and were uncomfortable, as well as unsure, about the process of research. Since prior experience contributes to feelings of confidence with process, it is not surprising that initially students were more concerned with the "how" of research, than with the final product.

As students became interested and formed a focus for their curriculum-based research assignment, their negative feelings about research changed. They began to feel more positive about what they were doing. As interest in the chosen topic increased, so did student willingness to complete the project. Passion and interest in the topic promoted sustainability and project completion. However, students still needed assistance with the research process because it was unfamiliar to them. In this study, feelings of uncertainty not only coincided with lack of interest, but also accompanied lack of experience with research. One student indicated, "you're so unsure because you don't do it very often."

Personal feelings played a very important role in the choices made. For example, students commented on the necessity "to do something that affects me personally and something that I can write on passionately," the importance of doing something that "was deep and profound and really interesting," and the idea that "if it appeals to you, you'll learn about it." One student also discussed the

positive feelings that come with the reassurance that "a lot of people think like I do." This confirms the importance of discussing and identifying feelings throughout research (Kuhlthau, 1993b) and identifies the immense influence feelings have upon cognition (Damasio, 1994, 1999, 2003).

Support:

Students also indicated that support provided by the teacher and the teacher-librarian/researcher was important. Developing the group pathfinder, a guide to possible and credible sources of information, provided ideas for beginning the project. They indicated that "when you have an example, it helps you." The student participants also appreciated the modeling re: the writing and organizational process for the finished product that was provided by the teacher and teacher-librarian. One student suggested that "it was helpful that you came to some of our classes. You showed us an example and it was kind of like if I hit a brick wall and I didn't know how to cite something, I knew that I could come see you or that there was information to be had." Another student stated that it was positive "especially when you wrote the essays with us. I liked that because it helped me get the idea of how to start my essay and stuff" (see Appendix F). More than one student appreciated the help with the process and felt that previous teachers had "just expected us to know that ... nobody ever took the time to teach it [the research process]." Because students felt the support, it appeared that "a lot of people seemed really excited about what they were doing" and completed the project.

Peer discussion was also viewed as supportive, "talking about what other people were focusing on, and just suggesting answers back and forth." The final product belonged to the individual, but each student agreed that the product had grown "through the help of others." This support can be viewed as cognitive apprenticeship (Collins, Brown & Holum, 1991) and reinforces the importance of appropriate intervention as identified in Vygotsky's (1978) zone of proximal development.

Empowerment:

Often students have expressed a feeling of being powerless within the school system (Fullan, 1991; Hay, 1998). However, involving students in the interpretation of 'meaningful' research was one way to assure students that their opinions about school and learning were heard and respected. Throughout this study, it became evident that student participants began to feel empowered. They began to understand that their ideas and thoughts about learning in general, and about research in particular, were valued by their teacher and other school personnel. They began to take ownership in their educational endeavours and expressed excitement about learning something new, about teaching themselves, about "discovering things in the library, discovering books and stuff that we never had a chance to discover before." One student remarked that doing research "makes you feel smart and gives you confidence too," an indication that the student was developing a sense of self-competence, a powerful basis for action and motivation (Newmann, Wehlage & Lamborn, 1992). In other words, they felt

empowered "as they grew in autonomy and a realization of their self-hood" (Sahni, 2001).

Students also stated that they believed that this experience had prepared them for post-secondary education. Receiving adequate time and continuous professional support throughout this research assignment provided the students with a detailed, comprehensive view of research practice and the groundwork for the next stage in their educational journey. One student stated, "When the time comes in university when it needs to be a longer research paper, I'll be more prepared." Another student said, "It's manageable now. Like I can do a research project when I get another one ... I know how to do this ... I know the steps." In other words, the student participants felt that experiencing a curriculum-based research project provided them with a template for future research. Therefore, rather than feeling distressed whenever 'research' and/or a research project was mentioned, they understood that taking ownership of their topic, their time and the process, ensured successful completion and a positive feeling of accomplishment.

Teacher's Perception of Meaningful

A. *Components Necessary for Meaning*

The teacher participant realized that personal interest was part of **choice**, one of the components necessary for meaning. When she began studying *The Great Gatsby* with the students, she "encouraged them to start thinking about issues that came out of that work that appealed to their sense of curiosity or an interest to research that idea further." This interest in, or curiosity about an issue, would form the basis for the choice of topic to research.

The teacher also identified **relevance** as one of the key components in a 'meaningful' assignment. This included relevance to the students' current lives as well as relevance to the course. The teacher believed that

> stories that happen in real life that they see in the media or that they know of personally, where they start to see similar issues and there's crossover and connection between literature and what's happening in their real lives is important and meaningful to them.

This teacher also stated

> that if I'm asking them to sacrifice other time to do something, then I want them to walk away at the end with a sense that this was worthwhile because it gave [them] a chance to work on a skill that [they] need to work on ... it has to have relevance to the course.

In other words, if the students had to use personal time outside of the prescribed school day to complete a class assignment, it was important for them to understand that, "in fact, [English] was about ideas and the expression of ideas and there was a social relevance to literature."

The teacher thought that the focus should be on **process** rather than product, especially when completing a curriculum-based research assignment and that the process needed to be presented over a period of time and in "baby steps" to ensure manageability. Also, when assessing the assignment, the teacher maintained that it was necessary to remember that

> this is an 18 year old ... and so sometimes the product, the end result might look superficial, it might not have depth or an insight to it. It might, but chances are it might not because there's not a lifetime of experience ... and so the focus, I think, has to be on process.

Some of the students indicated in their group discussions that they did not have a positive view of process-oriented activities. The teacher understood this but felt that an emphasis on the 'process of research' would be most beneficial

and would assist the students in their future endeavors at post-secondary institutions. She wanted to "take the fear out of the process and break it down into manageable steps and practice those steps in a situation where you can get a lot of help." She understood that negative emotions accompanied the students' lack of experience and wanted to assist with their understanding of process prior to their post-secondary education. She stated that their "end product can only get better as they get more experience."

B. ***Contextual Elements Contributing to Meaning***

It was apparent that the teacher participant was aware of the primary role of **feelings** throughout the research project and that initially, both the students and teacher experienced anxiety. For example, the teacher indicated that

> every semester when the research component comes up, I am always anxious and it's not for myself, but it's for the students. I see on their faces the trepidation, the terror, their unwillingness to even approach the research project and it always, I always then have a feeling of dread because I am aware of how much work it will take on my part to get them interested and excited and through the research component and hand it in so that I can actually give them a mark. So it, for both my students and myself, it has always been a time of dread 'cause hard work is looming.

However, it was noted that because of the approach taken in this study, the students

> were still apprehensive but because we gave them so much time this semester and because we broke it down into baby steps, I found that those feelings of confusion and dread for my students were alleviated and more students felt more comfortable.

The teacher found it "almost comic in some circumstances" that, when choosing a topic, some students "were afraid that they would make the wrong choice" but eventually these students felt much happier because "their interest,

their curiosity was the compass for their research project." In fact, there was "an excitement from the students who had decided ... an excitement to discuss their issue ... they were enthusiastic about what they had found so far and they wanted to show it."

The teacher commented on the value of providing **support** for the students through modeling the process.

> Giving them that concrete thing that they could hold on to, I think, helped them tremendously. And maybe a concern would be that, oh well, they're just copying or they're just using a cookie cutter example. I would say to anyone "no, that is not true" ... the model gave them a foundation but what they built and created was definitely individualistic ... it gave them a sense of security. It gave them a footing and from that footing they were able to climb higher. So perhaps we provided them with the basic blueprint but they were the architects, they created their own design and they came up with their own building.

Students were also encouraged to seek clarification and/or assistance from either the teacher or the teacher-librarian/researcher. The teacher observed,

> I think the fact that they had more than just one person to go to for help was really good. That they had two people that they could ask for assistance, that they could bounce ideas off of. I know that some of my students who were reluctant to talk to me for whatever reasons, were very excited to be able to go to you to talk and I thought that that was good for them.

She believed that working with a teacher-librarian gave the students the best research experience possible since they were given the combined expertise of the teacher (curriculum) and the teacher-librarian (research process) throughout the project.

Being a part of this study had also made the teacher aware of the importance of modeling bibliographic citations within the text as well as providing references for the resources used. She stated,

> I will be providing more examples, not in the research component, but in all of the components. I'm going to start modeling more for my students how to actually refer to other works or how to use quotations in text.

According to the teacher participant, one of the benefits of the curriculum-based research project was "that it gave them a taste of the independent learning that will be required of them in their post-secondary institutions and it gave them some confidence." In other words, the teacher believed that the research project had **empowered** the students and that the examination of issues based on personal values had "given them the kind of knowledge and wisdom they need to do really well at university."

Summary

Based on the student participants' interviews and co-operative inquiry group discussions, a curriculum-based research project that is 'meaningful' includes four necessary components: choice, relevance, reflection and application. The students believed that choice and relevance were especially important. The teacher indicated that interest and curiosity should form the basis for choice and believed that it was most important for the students to focus on relevance and process.

The students also recognized that the acknowledgement of feelings, professional and peer support, and empowerment through having their opinions valued by the teacher and the researcher contributed to their view that the curriculum-based research assignment was, indeed, 'meaningful.' The teacher was also aware of the primary role of feelings, the necessity to provide support,

and the resulting student empowerment as they began to take responsibility for their personal learning.

It is important to remember that because these students were part of the study, their perception of the given assignment as 'meaningful' may have been influenced not only by the inclusion of the components considered necessary for meaning, but also because they had been listened to and heard. Their ideas had been acknowledged and incorporated in the design of the research project. In other words, they had voice and, for a period of time, had influenced classroom activity and assignment development.

Chapter 5 Discussion

Narrative – *Developing Meaningful Assignments*

I am often struck with how high school assignments tend to be controlled and regulated, allowing for a specific outcome, but not often encouraging the use of creative, imaginative thought. While discussing this idea with a colleague, she related a story about shopping for a birthday present with her son. They had decided to buy some Lego for a younger cousin. As they were browsing all the possibilities, the young man became quite incensed that all the packages contained just enough pieces for the construction of one object and did not allow for much variation. He remarked that this did not encourage imagination and wondered whether this was good for young children.

Ever since hearing this story, I have been thinking about how as adults, we are often told to "think outside the box" and yet as children and young adults, there are so many regulations that, at a very young age, we lose our ability to "think beyond the expected." It is true that it is much more efficient and much tidier to "use up all the pieces" and to successfully complete a project based on step-by-step instructions. Yet, what does that teach us about life as we know it with all its messy complications and its possibility for joyful surprises and discovery? How is the imaginative use of our minds encouraged? Perhaps we need to reconsider and rethink our priorities and become more willing to have 'leftover pieces,' to experiment with ideas in new and unusual ways, to understand that much can be learned when things don't proceed as planned. Although this approach to learning appears to take more time and may be viewed as inefficient by some, the outcome is often a self-confident learner who views complications and dilemmas as challenges rather than barriers. The teacher participant in the study expressed a concern about students' lack of curiosity. Perhaps this seeming disinterest is, in part, a result of irrelevant and unimaginative school assignments. How often do we, as educators, ask our students for their input and, based on what they tell us, design assignments? If

students are viewed as equal partners in their education, why don't we listen more carefully to what they have to say?

Introduction

This chapter examines the process and findings of this study in light of the literature review and studies I searched out during the data analysis. Keeping in mind that research is never neat and tidy, unexpected results and unanticipated discoveries required that additional relevant research be accessed to assist with my analysis and interpretation. A developing model, based on the findings of the study, is presented for consideration. One student participant spoke about how a visual model assisted with understanding a physics concept—it made the invisible visible. His comments stayed with me and I decided that developing a model based on the findings would assist with understanding the composition of curriculum-based research assignments that are considered 'meaningful' by the students. The last two sections of the chapter reconsider the idea of process and product and review the initial definition for 'meaningful' in light of the definition developed by the student participants and the teacher.

Defining Meaningful Assignments

The first interview with student participants asked about course-related activities that were most interesting to them as well as what makes an assignment meaningful to them. All assignments contain activities, but not all activities are part of an assignment. Asking about activities helped to explore the context, opened up the inquiry process and provided indications of the students' preferred learning styles. The discussion about classroom activities helped to not only

clarify what the student participants considered interesting, but also assisted with the design of the curriculum-based research project. Knowledge about what classroom activities the students considered 'meaningful' and 'not meaningful' ensured the use of those activities viewed positively by the student participants.

When the students viewed and considered the discussion chart (see Figure 3, p. 73), it is intriguing that statements made by the students about 'meaningful' assignments were general, process-oriented statements such as, "makes you think a lot, helps you understand the way the world is, and increases understanding of self." The 'meaningful' activities were those that provided a context for the process and, according to the student participants, enhanced understanding while developing higher level thinking (Krathwohl, Bloom & Masia, 1964; Hamler, 1995). In contrast, activities that were 'not meaningful' were those that appeared to have no purpose other than basic recall of facts. In other words, "meaningless patterns are isolated pieces of information unrelated to what makes sense to a student" (Caine & Caine, 1994, p. 89). One student even suggested, "All that you're doing is giving your wrist a good workout" when completing worksheets. The students agreed that "repetition is good until a certain point ... but like, after you've done it enough, you've learned it ... and there's got to be a point where you've learned enough to be able to expand on it." This expansion could be interpreted as having the opportunity to analyze and synthesize the information—in other words, to 'make it their own' through the creative construction of personal knowledge.

During my observations of the student participants as they were working in the library and gathering information, some interesting gender differences began to appear in the way they worked through the research process. The female participants were willing to discuss the project with me, to express concerns and frustrations as well as those aspects considered positive, especially with regard to the formulation of the thesis statement. However, the male participants appeared to feel more comfortable working on their own and indicated a preference to discuss the project with their close friends. They were not as willing to discuss their thought processes, especially when composing a thesis statement.

Based upon these observations and upon a review of the activities students considered 'not meaningful,' it became apparent that process-oriented activities were considered 'meaningful' by most of the female participants (four out of five) but were regarded as 'not meaningful' by the male participants (four of four). Perhaps this was simply an indication of different methods used for problem solving or it may suggest that once process is internalized, it no longer needs to be a major focus. It was also apparent that understanding the research process allowed students to be more systematic when accessing relevant information and to successfully manage their time in the Learning Resource Centre.

Co-operative inquiry groups were used to discuss the ideas and activities identified as 'meaningful' and 'not meaningful' in the initial individual interviews. It was important to me that all the student voices were heard and that, as facilitator, I remained in the background. However, upon closer examination of the transcripts from the co-operative inquiry groups, it became evident that

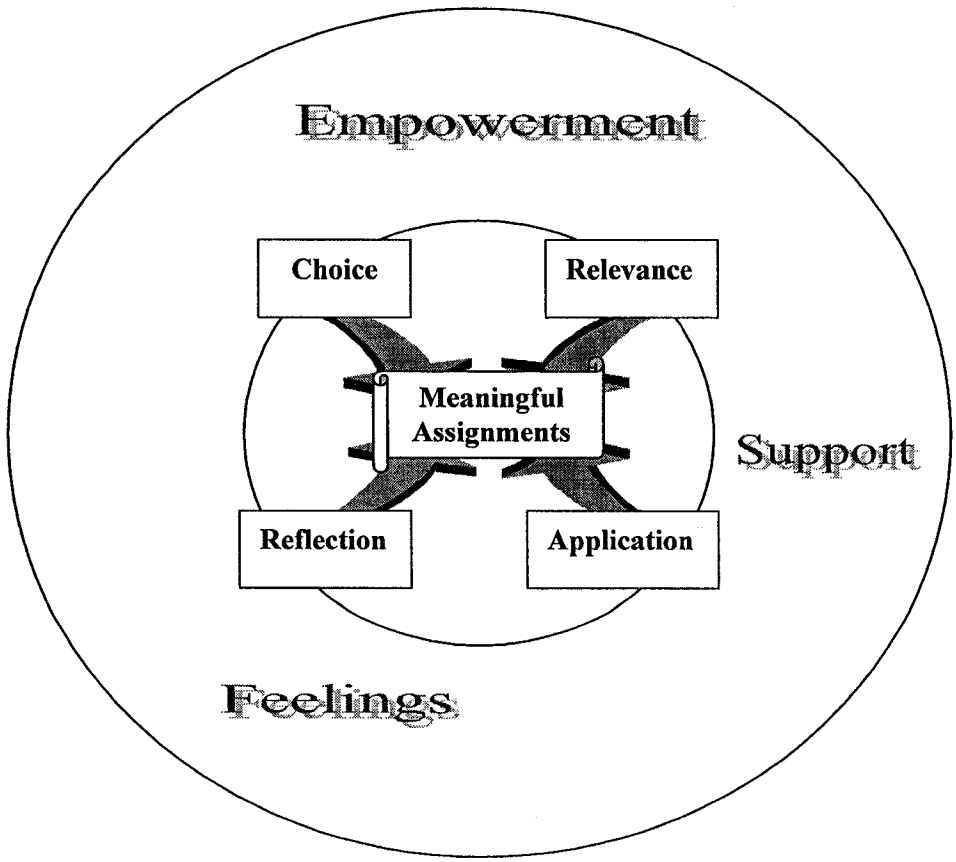
throughout the six group discussions, I often felt the need to 'teach' and instruct, as though in a classroom. Perhaps it was because the students asked many questions, or perhaps I found it difficult to relinquish control. As a researcher and as a group member, I felt it was necessary to remain open to the exploration of alternatives (Kerdeman, 1998) and to discard the role of 'teacher' in the co-operative inquiry groups. Nevertheless, in the same way that what is observed by the researcher "is conditioned by who *he* or *she* is" (Angrosino & Mays de Perez, 2000, p. 689), I realized that my teaching experience significantly influenced my interaction with the students in a group situation. Therefore, throughout the analysis of the material recorded during the co-operative inquiry group discussions, I kept this understanding foremost in my mind to ensure that students' voices had indeed been heard and to "use, rather than deny" (Angrosino & Mays de Perex, 2000, p. 690) my point of view and experience as a teacher.

A Developing Model--Making the Invisible Visible

Based on student and teacher participant comments, a model of pedagogical design (Figure 6) was developed to guide the design of 'meaningful' curriculum-based research projects. It is important to remember that the model is localized to one setting and represents one situation, based upon the interpretation of the researcher. Because interpretation requires a framework for the construction of meaning, interpretation can be "both constrained and enabled by the practical interest, previous knowledge, experience, linguistic ability, and the social, cultural, and economic situation of the interpreter" (Gallagher, 1997, p. 10).

As outlined in the findings, **choice, relevance, reflection** and **application** were identified as essential components to consider when creating assignments viewed as 'meaningful' by the students. Upon further analysis, it became apparent that the underpinnings for these components were three contextual elements that included the acknowledgement of **feelings,** professional and peer **support,** and student **empowerment** through choice and validation. All three contextual elements are interrelated and were identified by students as requisite to their successful completion of the project and the construction of personal meaning. A discussion incorporating prior research considered relevant to each part of the model follows.

Figure 6. A Developing Model



A. *Components Necessary for Meaning*

In this study, student participants associated assignments that were 'meaningful' with **choice, relevance, reflection** and **application**. In a study focused on secondary student perceptions of their class activities, Gentry and Springer (2002) identified meaningfulness, challenge, choice, interest, and enjoyment as the constructs "shown in the literature to be central to learning" (p. 193). However, in their student survey, Gentry and Springer used only four constructs: meaningfulness, challenge, choice, and appeal. Their definition for meaningfulness was "having relevance to the student's life" (p. 196), one of the essential components identified by the students in my study. My student participants also perceived choice as contributing to 'meaningful' learning activities.

Choice:

Student participants in this study considered choice to be of utmost importance when completing a curriculum-based research project. When students were given choice, they were able to pursue a topic of interest to them and began to feel more control. Positive feelings about the curriculum-based research project accompanied choice (Garland, 1995). Although many secondary students perceive that effective schools are those that allow students to make choices (see, for example, Hamler, 1995), the teacher participant in my study noted that some students in my study were uncomfortable with being given choice. They were more concerned with making "the right choice" rather than the choice that was

"right for them." In a group discussion, one student confirmed this fear, "I think everyone's still scared about doing something the wrong way." Perhaps the student participants' prior experience with choice was negligible, or perhaps their fears were based upon their belief that there was one superior alternative and/or upon their need for validation (Daley, 1999). This concern with the "right choice" may also be an outcome of the effect of prior failure since, as indicated, these students had not consistently experienced academic success.

Allowing choice may initially seem risky but, as with any new foray into unfamiliar territory, the end result is often worth the uncomfortable beginning. Students want to be given choice (Smith & Wilhelm, 2002). One student suggested that choosing something "passionate to me" was paramount. Once the choice had been made, everything else seemed to "come to me nicely." As indicated in Kuhlthau's (1993b) Information Search Process Model, once a focus has been formed, feelings of clarity and confidence follow, and the students can more easily identify pertinent information.

Relevance:

Student participants stated that 'meaningful' assignments were those with current relevance to all their life experiences. Linking the "everyday with the academic" (Giroux, 1999, p. 35) is an effective way to make learning meaningful. One student displayed a positive attitude towards research but suggested that "it's just some of the stuff they make you research, it's like, well, what the heck." Gentry and Springer (2002) recognized that "classroom activities that are practical and related to the students' daily lives facilitate connections and learning" (p. 194)

and contribute to the construction of personal meaning. Unfortunately, "students do not often get involved in projects where they and their classmates set and achieve goals that are important to them" (Goodlad, 1984, p. 192).

Garland (1995) found that student satisfaction was based upon a clear relationship between the research assignment and the course content. My pilot study found that students' positive feelings appeared to be tied into choosing a topic, within the course content, that was applicable to their daily lives as young adults and students (Barranoik, 2001). Vygotsky (1978) stated that many studies have proved that learning in one area has very little influence on overall student development. He stated that

> pedagogical movements that have emphasized formal discipline and urged the teaching of classical languages, ancient civilizations, and mathematics have assumed that regardless of the irrelevance of these particular subjects for daily living, they were of greatest value for the pupil's mental development. (p. 82)

In order for the students in this study to make meaning for themselves, they needed to know that what was being learned was purposeful, applicable and made sense in all of their life, not just one aspect of it. Perhaps the focus on feelings and personal relevance was a necessity because students who are considered at-risk are much more vulnerable emotionally than those who have consistently experienced success in their school life.

The necessity for relevance was acknowledged and incorporated into the research assignment. Students were required to provide current societal examples for their chosen issue. One student suggested that identifying the current relevance of the topic also influenced her choice of topic: "Would I be able to

write about it? Towards the way I feel, and does it reflect people on a day-to-day basis?"

Reflection

Student participants believed that being allowed to express personal opinion(s) in an assignment increased personal meaning but also necessitated adequate time for considering, pondering and assimilating new learning. "Inquiry takes time" (Stripling, 1995, p. 9). Because sufficient time is required for students to complete projects to their potential (Kuhlthau, 1993b), it is necessary for the teacher and teacher-librarian designing the curriculum-based research project to "assist with time-management skills, as well as give the students time to integrate new information into their current knowledge" (Barranoik, 2001, p. 43).

Reflection is one of the steps common to action research, the methodology used for this study. According to Kemmis and McTaggart (1988), "reflection seeks to make sense of processes, problems [and] issues; reflection is usually aided by discussion among participants" (p. 13). The student participants identified the importance of being given time to make sense of their issue and requested time for discussion with group members. These students knew, apparently intuitively, that having the time to reflect and discuss their issues would both illuminate and inform their personal thinking while contributing to the construction of personal meaning (Damasio, 2003).

Application

Application, as specified by the student participants, included not only making use of the knowledge learned in another situation, but also embodied

analyzing, synthesizing and evaluating. Prior to discussing personal opinions in their paper, the relationship between ideas needed to become clear and judgements needed to be made (Krathwohl, Bloom & Masia, 1964). Making a personal application encouraged students to construct or create ideas, not merely acquire facts for the purpose of reproduction (Wehlage & Smith, 1992). Using discipline knowledge from English and from Library and Information Studies assisted them with this process by expanding and offering new tools with which to interpret personal experience and apply what had been learned. For example,

> what students learn as they read one text can be applied when they read the next. Moreover, when students have a stake in using texts to grapple with a question that matters, they'll be very motivated to learn the reading strategies, search techniques, or data collection tools they need. (Smith & Wilhelm, 2002, p. 191)

Students were able to compose an issue-based thesis statement supported by their experiences with essay writing in English. Based on the findings in my pilot study, I realized that students needed "to have a comprehensive knowledge of resources available, as well as knowing how and where to access relevant information" (Barranoik, 2001, p. 43). Therefore, in conjunction with the teacher and the teacher-librarian/researcher, the students developed a pathfinder (a guide to possible and credible sources of information) to assist with accessing information. After brainstorming resource possibilities, one student pointed out that "having that to follow was really good ... that was really helpful. I mean, like even just looking for definitions first." The next time a research project is assigned, this student will have an idea about how and where to begin.

B. *Contextual Elements Contributing to Meaning*

My initial analysis focused on the definition of assignments the students considered 'meaningful.' However, as students discussed what was and was not working for them throughout this study, it was evident that 'meaningful' assignments could not develop from a vacuum; they needed a foundation, a footing, an underpinning. Based on frequency and patterns noted in the transcripts, the acknowledgement of **feelings,** professional and peer **support,** and student **empowerment** through choice and validation were identified as the contextual elements contributing to meaning and the development of a 'meaningful' assignment.

Feelings

As depicted in the findings, students demonstrated an emotional response, both positive and negative, to the research project and freely expressed how they were feeling. It became apparent that the way the students felt about the curriculum-based research assignment influenced their choice of topic as well as their successful completion. Primary or basic emotions such as fear, anger, sadness and happiness were expressed more often than the social emotions of sympathy, embarrassment, pride, gratitude and admiration (Damasio, 2003). Damasio argues that feelings are preceded by emotions and that "feelings are the mental manifestations of balance and harmony, of disharmony and discord" (p. 139). In other words,

> the process of learning and recalling emotionally competent events is different with conscious feelings from what it would be without feelings. Some feelings optimize learning and recall. Other feelings, extremely painful feelings in particular, perturb learning and protectively suppress

> recall. In general, memory of the felt situation promotes, consciously or not, the avoidance of events associated with negative feelings *and* the seeking of situations that may cause positive feelings. (Damasio, 2003, p. 178)

Kuhlthau's (1993b) Model of the Information Search Process was the first inquiry process model to recognize a primary role of feelings throughout the process and to identify that feelings were a part of each stage in the research process. Familiarizing the student participants with this model encouraged them. One student stated,

> It provided comfort, much comfort because then I understood it's alright to feel this way because other people feel it too and it's a normal process. It's okay to feel that way because, you know, if you sit side-by-side with a person who already knows what they're doing ... you feel lost ... but yet you aren't because you just haven't had a focus yet and once you do, it's just a breeze because you've already collected all your information and then you start to put it all in order, you know what you want.

Throughout the research project, students consistently referred to the model and began to use the language associated with each stage and its corresponding feeling(s). Rather than suggesting that the project was 'stupid' and becoming disillusioned with research, the student participants were able to identify how they were feeling and to pinpoint why, based upon the model, they were feeling that way. Introducing Kuhlthau's Model of the Information Search Process prior to beginning the curriculum-based research project and reviewing it regularly with the students increased student understanding of the research process and prevented the misreading of feelings. "A misreading of feelings as a signal of failure is likely to occur when users do not have an understanding of the affective component of the constructive process of information seeking" (Kuhlthau, 1993b, p. 118).

Feelings were also identified by student participants as being pivotal to the sustainability and completion of the research project; passion for the topic selected was a must. For example, one student expressed an interest in writing about infidelity, but decided that "I don't know that I feel passionately enough about infidelity ... I didn't really feel that I could argue it as well so I left that alone." This implies the necessity for an emotional commitment to the chosen research topic. Damasio (1994), a neurologist, states

> I see feelings as having a truly privileged status. They are represented at many neural levels, including the neocortical, where they are the neuroanatomical and neurophysicological equals of whatever is appreciated by other sensory channels. But because of their inextricable ties to the body, they come first in development and retain a primacy that subtly pervades our mental life. Because the brain is the body's captive audience, feelings are winners among equals. And since what comes first constitutes a frame of reference for what comes after, feelings have a say on how the rest of the brain and cognition go about their business. Their influence is immense. (pp. 159-160)

In other words, emotions and feelings are "an integral part of the rational decision-making process in each one of us" (Goodison, 2002, p. 219).

During the initial interviews for this study, students fondly remembered elementary school as a time for doing research and projects that were interesting. Educators in elementary schools have always recognized the impact that feeling and emotion have on cognitive learning and, therefore, they often place precedence on teaching the individual over teaching content. However, educators in secondary schools have emphasized covering course content and have placed less priority on addressing the emotional needs of individual students. As a result, students' engagement with and commitment to, course content is often negligible.

Support

Both professional and peer support were viewed by student participants as vital to the successful completion of the curriculum-based research project. Providing adequate time for the students to research, to think, and to reflect, encouraged a thorough analysis of their chosen topic. One student pointed out,

> I don't have the best attention span in the world and I think that you can stay interested in something and do your best work if you can do it a little bit at a time. Because I think if you would have said, "Okay, it's due next week," you would have had a lot of sloppy papers and a lot of research that doesn't really relate back to the theme. But with the amount of time that you gave us, you didn't have to take the first quote you found. You had time to say, "Well, I don't know if that's really quite right" and really dig for things that related to your theme, which, had we had less time, I don't think there would have been as much of.

Students also suggested that introducing the curriculum-based research project at the beginning of the semester and revisiting it periodically throughout, was advantageous. One student reflected

> We were given so much time. From the day we started in English we were told that we had this project to do and we were told like a few weeks before, "Okay well you have a month to do this." We were told from day one, "You have this long to do this, you better be prepared now because it's this important," and it prepared you because you had all that time to think and then you weren't sitting there a week before, "Oh, what do I do, what do I do?"

Another student remarked, "As long as I give myself time, it's totally fine." The students no longer considered procrastination a viable option. Time management in conjunction with sufficient time are critical to completing a research project to the students' potential. Unfortunately, students often miscalculate the amount of time needed to complete a project (Kuhlthau, 1993b), as was the case with one student in this study. When asked why the curriculum-based research project was

unfinished, this student stated that "some stuff came up that it seemed at the time more important, but clearly it wasn't ... and then by the end it was like I have no time left." In retrospect, mismanagement of time may not have been the only issue since this student was also unable to formulate a focus and kept changing his topic. Perhaps the right support had not been given or perhaps the student's sense of time did not mesh with school time (Smits, 2003).

Student participants recognized the value of having a model for the information search process. When the teacher and teacher-librarian/researcher conducted research on the topic of hedonism and modeled the stages in the research process, students began to understand how to manage their time and organize their own research project. The provision of illustrative examples for the writing process and the identification of expectations for the final product reassured students about what was required, presented necessary information and guidance in manageable chunks, and encouraged the use of a common language. Throughout this study, the Model of the Information Search Process functioned as a curricular scaffold, an affective gauge, a common lexicon, a guide for students, and as a means of monitoring student progress (Donham, 2001).

The student participants knew that they could access either the teacher or the teacher-librarian/researcher for help throughout the research project. However, one student indicated that even though she was experiencing difficulty with the organization of her paper, she did not come to the teacher or teacher-librarian/researcher for help because "I hate asking for help ... I hate admitting like 'help me.' And also I'm so scared that whoever is helping me will write my

paper for me." Even though support was offered, this student preferred to remain independent and struggle on her own. A preference for autonomy and self-sufficiency is not uncommon among students completing research projects. One advanced placement high school student in Kuhlthau's (1993b) study did not access help and two students in my pilot study also chose to complete their work independently (Barranoik, 2001). They believed that it was important to be self-reliant and preferred to work alone. Seeking help from teachers may also be viewed as working within the "boundaries prescribed by others to succeed in high school, which is quite different from setting one's own goals and working with others on a plan to achieve those learning goals" (Hay, 1998, p. 237).

The students in this study regarded peer support as fundamental to developing personal clarity about a chosen topic as well as to refining their thesis statement. Having discussions with fellow classmates in a group setting encouraged students to ask questions and to elucidate their thoughts and ideas about their topic. It also provided an opportunity for students to discuss their concerns within a safe and orderly environment and facilitated student voice and empowerment (Hamler, 1995).

Empowerment

Often students in our schools feel powerless (Fullan, 1991; Hay, 1998) and believe that their school experience has little to do with their development as young adults. Although the interview questions in this study did not explicitly ask about power in the school, in retrospect, asking the student participants to define 'meaningful' within the context of classroom assignments provided an

opportunity to design their own learning, an experience associated with empowerment that few secondary students have had. "In attempting to improve schools, efforts to broaden or otherwise alter the range of course offerings may be less significant than changing the ways existing courses involve students in shaping their learning" (Hay, 1998, p. 235). Throughout the study, the student participants talked about feeling valued for their input regarding what was 'meaningful' and identified the importance of learning about their topic. They believed that they were making a difference for their classmates and felt confident about expressing opinions and making decisions. In a nutshell, these students felt empowered. Based on personal observation and analysis of the students' statements, empowerment became a key contextual element for the findings of this study.

As the study progressed, the students began to realize that their ideas were respected. This experience was a 'power with' the teacher rather than the traditional 'power over' concept (Kreisberg, 1992). Affirmation of the students' ideas by the teacher and the researcher, in conjunction with a positive curriculum-based research experience, left students feeling that they had some control over school-based decisions that affected them. In a study about the role of empowerment in teaching sculpture to adolescents, Steinsieck (1998) argued that an empowering framework would have three major components: external supports, internal supports and mediated supports. The external supports are those that have an impact on the learning and experience students will have with a particular teacher. In an art class, the external supports include the teacher's

understanding of art as well as artistic development. The internal supports are "the needs, interests and life experiences which temper students' responses to the learning environment" (Steinsieck, 1998, p. 20). The mediated supports are the collaborative interactive moments between the external and internal supports. Through numerous interactions in the mediated zone, the learning experiences empower both students and teachers. This requires teachers to be sensitive to the students and to be reflective about their teaching practices. Steinsieck's mediated zone is comparable to Kuhlthau's zone of intervention. Both Steinsieck and Kuhlthau (1993b) emphasize the necessity of mediation or intervention as a component of empowering learning experiences.

During the individual interviews and the co-operative inquiry groups, students articulated the importance of being allowed to express personal opinions about a topic. "As long as you're allowed to express your personal opinion ... presenting personal opinion, I think, is the one thing that makes an assignment meaningful." Strong, Silver and Robinson (1995) found that, when students were asked about what they considered 'engaging' work, they stated that the opportunity to express themselves was vital.

It was important for the student participants to understand the assessment criteria and procedures prior to completing the research assignment. Although it would have been much better to engage the students in the development of the assessment rubric, in the end they felt confident in their ability to meet the requirements. One student remarked,

> You pretty much know exactly what you have to do to get a good mark and I like that because then when I get it back or even before I hand it in, I can kind of guess. Well, this is how much effort, these are the kind of things that I'm good at so this is probably where my mark should be. So I like that.

However, two other students indicated a concern about assessment and suggested that they could not always accurately predict the marks they would receive. Perhaps this is because many students may measure success based on standards set by the teacher rather than standards set by themselves (Hay, 1998).

Students believed that as their knowledge and understanding about their chosen topic increased, they were more in control of their personal learning. Increased understanding contributed to feelings of ownership and power. In fact, the word "understand" with its derivatives (understanding, understood) and a synonym, "know," were mentioned 28 times by the students in statements associated with empowerment. Students equated understanding with empowerment.

Rethinking Process and Product

When working through a research project with students, teachers and teacher-librarians have often debated where to place the emphasis and spend the majority of the time. Traditionally, the focus was on completing an acceptable product, often a research paper. In recent years however, more attention has been placed on process to ensure that students increase personal understanding and make meaning for themselves. A research study completed by McGregor (1995)

identified that

> students who evidenced some process orientation showed more involvement in a process of making sense for themselves, of transferring information into long-term memory. Their goal was not only to produce a satisfactory product; it was also to process the information they were encountering to deepen their understanding of the topic. (p. 32)

Upon further reflection, one is not more important than the other. Since both are necessary in order to fully comprehend and experience research, it may be that to dichotomize process and product is an old idea. Perhaps it would be better to consider them as parallel and equal components of research. Just as "mind and body would spring in parallel from the same substance, fully and mutually mimicking each other in their different manifestations" (Damasio, 2003, p. 209), so too could process and product be considered as different manifestations of research. Without process, the product has little or no meaning and, without a product to display what has been learned, there is little benefit to the students conducting the research or to their peers. "Learning is not internalized or owned by students until it is reorganized, transformed, and represented in a new set of signs that is the students' own" (Smith & Wilhelm, 2002, p. 191). Rather than debating whether to emphasize process over product or vice versa, the teachers and teacher-librarians may need to rethink how curriculum-based research projects are designed.

Based on the findings in this study, a well-designed research project incorporates both process and product in a way that encourages students to construct personal meaning. Although the questions used to initiate research must be essential and authentic, it is also necessary that a requisite part of the final

product be an authentic expression of personal opinion(s) and/or perspective(s). Being able to provide a personal point of view requires students to assimilate new information and formulate a more in-depth understanding of the topic. The final product is important and, as the teacher participant suggested, the "end product can only get better as they get more experience with it." This does not negate a process orientation but suggests that process and product must work hand-in-hand for meaning to be made. "What we refer to as knowledge is thus both the enhanced understanding of the problem situation gained by the participants, on the one hand, and the representation of that understanding that is produced in the process, on the other" (Wells, 1997, p. 11).

Reviewing the Definition for 'Meaningful'

As a starting point for this study, 'meaningful' was defined as having current significance, purpose or relevance based on past experience and future application (Dewey, 1938). The student participants defined 'meaningful' in the context of a meaningful assignment; it is open-ended, allowing for choice, personal interest and the expression of personal opinions, while encouraging thought and decision-making about the world and yourself. At first glance the student definition appeared to focus on current relevance with little regard for the future. However, upon closer examination of the transcripts from the reflective journal interviews, it became apparent that students understood the importance of taking the time to discern the way the world works as one way to plan for the future. One student remarked

> In the end it makes you think, helps you be a better person, helps you with life more when you get older. It'll help me when I'm trying to help my kids when I'm older, help them understand the way I understand now.

Another student suggested "I mean it could give you an idea of what you want to do in the future too." Five of the nine students felt that being required to complete a research project had prepared them for the requisite research component in post-secondary courses. These students had friends currently attending post-secondary institutions. They indicated that research papers and assignments were an integral part of course work for which many of their friends felt ill-prepared. The teacher also believed that it was important "that their understanding of the world be broadened."

Damasio (2003) proposed that "feelings generate a concern for the individual experiencing them. The past, the now, and the anticipated future are given the appropriate saliencies and a better chance to influence the reasoning and decision-making process" (p. 178). The student participants in this study did not have much prior experience with research and found the concept stressful. They openly expressed their feelings about research and indicated that anxiety always accompanies the unfamiliar, in this case, a curriculum-based research project. This lack of previous experience meant that the students' feelings of apprehension, confusion and dread needed to be addressed immediately. Most cited elementary school as being the last time they remembered completing a research assignment that was personally significant. One student pointed out, "You're so unsure because you don't do it very often ... I really wish I did research projects before this." Another indicated "I never learned that I had to do

that until this year." It is evident that past experience does significantly influence current learning and future application. Teachers and teacher-librarians cannot assume that all students have consistently experienced research while attending school. Based on this discussion, the definition for 'meaningful' constructed by the students and the teacher within the framework of meaningful assignments is similar in intent to the definition originally provided by the researcher.

Summary

Developing curriculum-based research assignments that are viewed as 'meaningful' by the students is not an easy task. The discussion in this chapter indicates that teachers and teacher-librarians both recognize and understand that students want choice, they desire relevance, they need time for reflection, and they make personal meaning through application. Because past experience significantly influences current learning and future application, teachers and teacher-librarians need to assess students' prior research experience and build on it. A well-designed research project incorporates both process and product in a way that encourages students to construct personal meaning and develop skills that will better prepare them for the information challenges of the 21st century.

Vygotsky (1978) suggested that "in actuality, there are highly complex dynamic relations between developmental and learning processes that cannot be encompassed by an unchanging hypothetical formulation" (p. 91). Similarly, there are difficulties with the model proposed. If we state that the format for every meaningful curriculum-based research assignment needs to based upon this model the fact that there are highly complex dynamic relations between an individual's

view of meaningful, their ability to make meaning, and the socio-cultural context of classrooms focused on inquiry-based learning is negated. Dynamic implies change and continual interaction. Although the model does assist with making the invisible visible, it cannot be applied indiscriminately to all situations and contexts.

Chapter 6 Conclusion

Narrative – *Architects of Meaning*

An architect is often a visionary—visualizing and designing structures where none have been before, or replacing those that have been lost due to manmade and/or natural disasters. I listened to an architect discussing his proposed design for the World Trade Centre site and was impressed with the careful thought and regard for visual meaning that had gone into his plans. I was also most interested in his assertion that an architect must always believe in hope.

I began to wonder if hope was also a necessary part of meaning-making. Could students construct meaning without possessing a desire to know, a belief in the importance of reaching for the stars, and a confidence in their ability to make a difference? How could we encourage students to be visionary in their approach to learning, to think about content material in creative ways, to actually become architects of meaning? Was I 'way out' in my thinking, or was there another way to consider research? Would a focus on, and understanding of, inquiry-based learning encourage our students to develop an attitude of wonder and curiosity? Perhaps viewing our schools as "communities of inquiry" (Wells, 1997) would best support students as architects of meaning, but what does it mean to be a community of inquiry?

Architects look forward to new horizons of design while understanding the necessity for building a framework and structure that remains stable within a particular natural environment, based on a solid foundation. Perhaps by providing experience with inquiry and research, students will also begin to comprehend the necessity for both expanding their horizons and creating new ideas within a framework of past and present understandings, the accumulated knowledge of society. Therefore, when students become architects of meaning they are both constrained and liberated by their prior knowledge and experience. However, by working with others and "incorporating the insights of others" (Crusius, 1991, p. 39) into their prior understanding, their horizons are enlarged

and more possibilities become evident. Does this mean that all students, having experienced research and inquiry-based learning, will automatically become architects of meaning? Or, does the quality of the experience also matter? Dewey (1938) suggested in his discussion regarding education and experience that not all experiences are educationally worthwhile. Can a less-than-perfect research experience be educationally valuable as long as the participant's attitude is positive?

Introduction

The concluding chapter for this study begins with a discussion of students as architects of meaning (Shaw, 1997). How can we encourage students to become architects of meaning? What role do teachers and teacher-librarians play in this scenario? The second section develops the concept of communities of inquiry as one way to support students in their search for meaning. The third section introduces several implications and recommendations for teachers, teacher-librarians and teacher educators, based on the findings of this study. The final section identifies questions for further study. As expected, more questions arose from the study and provide a basis for ongoing research regarding what students view as 'meaningful.' It appears I've "only just begun!"

Students as Architects of Meaning

A statement by the teacher participating in this study stimulated my thinking about students and research. In the final interview she asserted that although "we provided them with the basic blueprint, they were the architects, they created their own design and they came up with their own building." Although the teacher and teacher-librarian/researcher assisted students with

accessing information, the students' final products reflected a personal understanding of their self-selected issue and demonstrated their unique approaches to the construction of meaning for themselves.

The literature review for this study identified effective research assignments as those that encourage learners to make meaning for themselves. Research projects, even those designed by well-intentioned teachers, that required students to access information and complete products often lacked student buy-in and did not consistently promote the personal construction of meaning. Lack of time and/or disinterest in the topic(s) resulted in the reproduction of knowledge rather than the production of new and personal knowledge. It became evident through this study that students who were involved in the design and development of the research assignment were able to construct meaning, integrate new learning into their knowledge base, and were eager to share what had been discovered with their learning community, the English class. In other words, they were **architects of meaning**; they were involved in the design and development of the project as well as the final construction of personal understanding and knowledge. Rather than teachers concentrating on adjusting and refining the traditional research project, their focus on inquiry-based learning through the collaborative planning of students and the teacher may be one way to ensure that students become architects of meaning, rather than merely consumers and technicians of information. Further discussion about a possible way to incorporate this into the classroom is found in Implications and Recommendations.

All of the student participants felt that the curriculum-based research assignment was 'meaningful' and expressed more confidence about completing research in general. One young woman said throughout this study that she continuously told her friends "she was making a difference." Her statement made me wonder about the lack of a social action component in many of our curriculum-based research assignments. When young adults are 18 and 19, the age of the student participants, they want to know that their actions are making a difference and that they are making a positive contribution to society. As Smith and Wilhelm (2002) indicate

> The topic of inquiry can be negotiated with students. But even if the teacher or curriculum determines the topic of inquiry, students will still be able to make choices about how to approach their inquiry, what to make of what has been learned, what position to take on the issue (since issues always have multiple perspectives), how to present findings to others, and what kind of social action should be taken as a result of a position. (p.191)

Personal understanding gained through research and inquiry may, at times, be followed by relevant social action. Social action requires students to apply their understanding as they "address real dilemmas" (Barab et al, 1999, p. 4) and to contribute to the learning community in ways that matter and make a difference. "As long as educators continue to separate content from context, information from application, learning from participation, knowledge from experience, they will sever the essential connection that facilitates the learner in developing meaningful relations in the world" (Barab et al, 1999, p. 4).

However, the artificial structure of school time (Smits, 2003) and school curriculum is not always conducive to the development of in-depth understanding. It is important for teachers and teacher-librarians to remember this and to provide

the appropriate amount of time to enable students to work through the research process. They must be willing to live in the "Zone of Between" (Aoki, 1991, p. 8), the place between the horizons of curriculum-as-plan and curriculum-as-lived.

Developing Communities of Inquiry

It was interesting to note the trust and community that had been established in the class and especially with and among the participants since the study began. I think this was because the students felt that their ideas mattered and they were eager to share their learning and discuss their research experience in more depth. I was able to complete all the final interviews I needed in three days, whereas it had taken me over a month to do the initial interviews with the student participants. Even the one student who did not complete the paper felt that the process had been a learning experience. This student indicated that it had been due to personal bad choice—"just some stuff came up that it seemed at the time more important, but clearly it wasn't." This student also stated that the modeling and help provided by the teacher and teacher-librarian/researcher "was good, it helped" and that "by the end it was like I have no time left." It was still up to the student to make the final choice as to completion. Eight of the nine student participants wrote the required research paper. Although this may be partially attributed to the Hawthorne effect—individual behavior and production is altered because of being studied—it is also important to realize that listening carefully to students does make a difference. When students feel valued, they respond positively. It is also important to note that the teacher participant used the curriculum-based research assignment designed in this study with all three of

her senior level English classes. The completion rate for these classes, including the classes not being studied, was much higher than the usual completion rate for research projects in English courses in the school.

The final papers written by the student participants left me with a positive feeling about the young people who had been a part of this study. Discussing issues and stating personal opinions provided an opportunity for students to really think about life, about their values, and about what it means to be mature. As one student suggested,

> It's like almost every issue has to do with maturity and immaturity and most of the topics had to do with being in an immature state of mind and I realized that when I was writing my essay that a lot of these topics have to do with people who are stuck in an immature state of mind.

This is an interesting idea and one that, in my opinion, merits further exploration. It was evident that these students had decided, either from personal experience or from talking to others, that caring about others and making decisions that were unselfish was the best way to go and denoted maturity. As stated in the introduction to this study, there is much to be learned from these students. Because they know what it is like to struggle and to be marginalized, they understand the importance of working together and helping others. They also feel a responsibility to share their learning with their fellow students (Kuhlthau, 2001).

The two preceding paragraphs provide an example, based on this study, of developing a community of inquiry. Because the students felt valued, they were willing to take risks and to express what they thought rather than what they perceived the teacher wanted to hear. Student participants, the teacher and the teacher-librarian/researcher formed a collaborative group and together discovered

what was 'meaningful' in a curriculum-based research project. The focus was on learning together; the development of relationship based on mutual trust and respect allowed this to happen. We got to know one another "affectively, as well as cognitively, which constitutes relational knowledge" (Park, 2001, p. 83), a knowledge that helps to both develop and sustain community.

In a view of the classroom as a community of inquiry, Wells (1997) states

> Collaborative group work, dialogic knowledge building, and an inquiry-oriented curriculum are essential and interdependent components of a vision of education that, rising above the age-old conflict between traditional attempts to transmit basic knowledge and skills and progressive emphases on individual discovery, recognizes that both convention and invention are necessary for the development of society as well as for its individual members. (p. 22)

Focusing on inquiry learning may be one way to ensure that students view formal school-based learning in a positive light rather than something to be endured until they meet all the requirements and passed the mandated examinations. One student participant indicated that she believed the "journey was the destination." If that is the case, it is imperative that the 'journey' is viewed as 'meaningful' and engaging.

Implications and Recommendations

As stated in the introduction, it was my hope that this study would encourage the educational community to hear the voices of young people and, based on what was learned, make adjustments to educational practice. Choice, relevance, reflection and application were identified as essential components of assignments considered 'meaningful' by the student participants. However, due to the unique composition of each class, the teacher and teacher-librarian need to

remain open to differing definitions of 'meaningful' and adjust the curriculum-based research assignment appropriately, remembering that feelings significantly influence student learning.

Conducting action research within the context of practice often generates a tension between researcher-as-researcher and researcher-as-practitioner. Learning to live within this tension requires an understanding of the complexity of both research and practice as well as the ability to identify 'who' is speaking.
The following implications and recommendations for teachers, teacher-librarians and teacher educators are offered as invitations for educators to reflect on or to take action on, in the spirit of a community of inquirers.

A. *Teachers and Teacher-librarians*

The findings clearly indicate that there is value in listening to what the students have to say about doing research projects and hearing what their personal interests are. Integrating these student understandings into the design and instructional processes can contribute to more meaningful learning experiences for the students. A strategy for assessing the interests of the students at the beginning of a new semester may be requiring that students do a piece of writing as a form of introduction of themselves to the teacher. Varied formats could be used: a reflective journal entry, a letter, or a brief essay. This piece of writing would include the activities and assignments the students found most interesting and meaningful throughout their formal schooling. Indications of personal hobbies and examples of how they learn best should also be included. Prior to creating a curriculum-based research project, the teacher and teacher-librarian

would then read the students' work and, based on their interpretation, ascertain what would be most 'meaningful' for that class. It is important that students have the opportunity to provide feedback on the design and requirements of the curriculum-based research assignment prior to commencing with the task. Although this strategy may be viewed as time-consuming, it is one that fosters the development of relationship between teachers and students deemed "central to the experience of learning" (Smits, 2003, p. 13).

The findings from this study suggest that identifying the students' understanding of the research process prior to beginning a curriculum-based research project will help to ensure that more experienced students are able to proceed on their own and that less experienced students receive the professional intervention they require. Ascertaining knowledge and ability could be accomplished through asking about information search experience or through using strategies such as Bibliographic Bingo (see Appendix G) and will assist with teaching skills as needed in context (Todd, 1995; Barranoik, 2001).

The influence of feelings "is immense" (Damasio, 1994, p. 160). As mentioned earlier, high school students often feel powerless within the school system. However, throughout this study, student participants began to understand that their ideas and thoughts about learning in general, and about research in particular, were valued by the teacher and the teacher-librarian/researcher. They began to take ownership of their learning and expressed excitement about learning something new, about teaching themselves, about "discovering things in the library, discovering books and stuff that we never had a chance to discover

before." One student remarked that doing research "makes you feel smart and gives you confidence too." This study found that students felt more comfortable with their research when feelings (both positive and negative) were acknowledged and when the teacher and teacher-librarian/researcher took the time to identify and discuss how students were feeling. Introducing the students to the Model of the Information Search Process (Kuhlthau, 1993b) prior to beginning the curriculum-based research project and reviewing it regularly may assist with this process and help to prevent the misreading of feelings by the students and their teachers.

Experiencing curriculum-based research projects in secondary school may help prepare students for post-secondary education. One student stated, "When the time comes in university when it needs to be a longer research paper, I'll be more prepared." Another student said, "It's manageable now. Like I can do a research project when I get another one ... I know how to do this ... I know the steps." In other words, the student participants felt that experiencing a research project provided them with a template for future research. Rather than feeling distressed whenever 'research' and/or a curriculum-based research project was mentioned, they understood that taking ownership of their topic, their time and their process was likely to ensure both a successful completion of the project and a positive feeling of accomplishment. Giving students experience with research and inquiry more than once a year and in a variety of subject areas may be one way to encourage the development and application of skills in information retrieval, analysis and synthesis.

Modeling the writing process may be one way to help students feel comfortable with presenting their understandings in a text format. Throughout the study, it was emphasized that the example provided was useful for this particular curriculum-based research assignment and that research papers may vary. It is important that students are encouraged to speak to their teachers and/or to their professors to identify the requirements for a final product. When skills and process are taught in a way that makes sense to students, they become engaged learners and achieve at a higher level of performance. Modeling assists with transfer and "transfer is enhanced when training involves multiple examples and encourages learners to reflect on the potential for transfer" (Anderson, Reder, & Simon, 1996, p. 7).

It is important to "celebrate the understood, not the found" (Todd, 2003, Keynote Address). The findings of this study suggest that the design of a 'meaningful' curriculum-based research project promotes the construction of personal meaning and understanding, not only the 'location' and 'use' of appropriate resources. To ensure that students construct understanding, a requisite part of the final product could be the expression of personal opinion, based on the information found and learned about the chosen topic. Issue-based research is one way to encourage students to think about what their learning means to them within the context of community both inside and outside school. Giving the students time to formulate a research focus and to construct meaning is a consideration that is sometimes overlooked and that may leave students feeling

rushed when completing projects (Smits, 2003) resulting in shallow comprehension.

B. *Teacher Educators*

As indicated in the findings of this study, students have much to tell us about high school and about what matters to them. Based on this understanding, "teachers-to-be [could learn] from students-who-are" (Cook-Sather, 2002, p. 231). My study provided a student perspective of the high school experience and developed a greater understanding in me, the researcher. However, after more than twenty years of teaching experience I think it is unfortunate that this understanding came so late in my career. Therefore, it may be important for pre-service teachers to understand the feelings and knowledge that high school students have about teaching and learning. Pre-service teachers could dialogue with students about mutually interesting educational topics for a semester and, based on these conversations, create a presentation about how these discussions have influenced their understanding of the role of the teacher.

Questions for Further Study

As expected, many questions arose from this study and these may provide a starting point for further research and for opportunities to improve professional practice. Action research provides a basis for the systematic analysis of educational practice (Stenhouse, 1975). I wonder if it is possible for our school communities, as part of a bureaucratic structure, to ensure that the voices of all young people are heard? Will creating curriculum-based research projects based on each classroom's definition of 'meaningful' assist with this process? What

does it mean when schools are viewed as communities of inquiry and how does that look in practice? What difference does this make on the training of pre-service teachers?

The findings of this study identified the four components necessary for meaning (choice, relevance, application, and reflection) in conjunction with the contextual elements contributing to meaning (the acknowledgement of feelings, professional and peer support, and student empowerment through choice and validation). It would be very interesting to explore the importance of the contextual elements with regard to 'meaningful' curriculum-based assignments. Would students consider an assignment 'meaningful' in a context that did not acknowledge feelings, provide support or validate students' perceptions? Can the search for what is viewed as 'meaningful' ever be completely separated from context? Are all of the contextual elements equally important? Would it be enough to have one of these without the others? For example, would the students find the research 'meaningful' if their feelings were acknowledged but their opinions were not affirmed and no support was provided? Would the importance of the contextual elements vary based on student experience? For example, the student participants in this study indicated that they had very little experience with research while attending secondary school and consequently needed considerable support. Would students with more research experience require the same amount of support?

There is still much work to be done. This study focused on the activities and ideas of a group of students and their teacher in one classroom over thirteen

weeks. Conducting similar studies in a variety of classrooms would present a more complete picture of what students regard as 'meaningful' and, perhaps, help to facilitate the view that students are partners in education and therefore valued.

Epilogue

A Contemplative Narrative

I began this study with high hopes and a focus on the importance of research. I wanted to make a difference, I wanted to validate students' ideas and perceptions about what makes learning meaningful and relevant to them, I wanted to listen to what students thought about research and the research process. I believed that curriculum was a "means not an end" (Wells, 1997, p.7) and that too often 'covering curricular content' was viewed as more important than understanding.

Having completed the study, I now find it necessary to think about what I have learned. Has it made any difference to me or will I, in my role as a teacher-librarian, continue to work with students and teachers in the way I always have? Will I listen to students more carefully and consistently invite them to be part of the research design as well as the completion? Am I willing to let go? Has my understanding of schools as communities of inquiry been enhanced through this study? These questions continually surface in my thoughts and cause me to consider the significance of what I 'uncovered.'

The first thing to consider is if and how the study has changed my practice. I have found that since completing this study I consistently allow for choice in my assignments at all grade levels. Prior to completing an assignment, evaluation criteria are always discussed with the students and, whenever appropriate, students evaluate their work using the agreed-upon standard(s). They are also encouraged to identify what they have learned that is new and useful to them. When completing a curriculum-based research project with a class, I try to consider the contextual elements that contribute to meaning as well as the components necessary for meaning. However, I believe that the most important thing I have learned is to listen carefully to what students and teachers are telling me—to understand that it is only through listening and collaboration that our schools will become communities of inquiry. Conducting this study has made me realize that I need to be less adamant in my statements regarding

education and more willing to "fall into conversation" (Gadamer, 1975, p. 345) with others: students, teachers, and parents. The process of change, initially seen as a necessity for others, has begun and continues in me.

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APPENDIX A

ELEMENTARY EDUCATION
University of Alberta

Research Information and Consent Form for Teachers

Study of Meaningful Curriculum-Based Research Projects with Senior High School Students

My name is Lois Barranoik and I am currently attending the University of Alberta doing research for my PhD in Education. This study has been designed for my dissertation research using an action research model.

As a teacher, you are being invited to participate, on a voluntary basis, in a study designed to investigate what high school students find meaningful in a curriculum-based research project. The ultimate purpose of this study is to help all students become more successful in their learning, research and meaning-making.

Six to ten students who are currently enrolled in a senior level course will be followed through their classroom research projects for six weeks during the spring semester of the 2001–2002 school year. Their ideas about research and the research project will be collected through one tape-recorded interview, student journals, researcher observation notes and participation in a co-operative inquiry group.

Your thoughts and feelings as a teacher are an integral part of this study. Your input, from a teacher's perspective, will be collected from one interview, your reflective journal and your weekly participation in a co-operative inquiry group composed of the students and researcher. This will require some extra time on your part, but it is designed to allow you to evaluate and reflect on the given research assignment and will provide an opportunity to work collaboratively with your students. In order to ensure confidentiality and anonymity for you in this study, a pseudonym will be used instead of your name. If you are interested in being part of this study, a consent form is attached. If you have any questions, please do not hesitate to ask me or contact me at:

Lois Barranoik
Department of Elementary Education
Faculty of Education
551 Education South
Edmonton, Alberta T6G 2G5

Phone: (780) 417-6857

E-mail: lbarrano@telusplanet.net

APPENDIX A

ELEMENTARY EDUCATION
University of Alberta
Research Consent Form for Use with Teachers

Study of Meaningful Curriculum-Based Research Projects with Senior High School Students

I, _____, hereby consent to be

- interviewed
- observed
- tape recorded
- and have my reflective journal read

by Lois Barranoik.

I understand that:

- I may withdraw from the research at any time without penalty
- all information gathered will be treated confidentially and discussed only with the researcher's supervisor at the University of Alberta
- any information that identifies me will be destroyed upon completion of this research
- I will not be identifiable in any documents resulting from this research

I also understand that the results of this research will be used only in the following:

- research thesis
- presentations and written articles for other educators and librarians
- presentations for graduate students and faculty

_____
Signature

Date signed _____

For further information concerning the completion of the form, please contact:

Lois Barranoik
Department of Elementary Education
Faculty of Education
551 Education South
Edmonton, Alberta T6G 2G5

Phone: (780) 417-6857

E-mail: lbarrano@telusplanet.net

APPENDIX B

ELEMENTARY EDUCATION
University of Alberta

Research Information and Consent Form for Adult Students

Study of Meaningful Curriculum-Based Research Projects with Senior High School Students

My name is Lois Barranoik and I am currently attending the University of Alberta doing research for my PhD in Education. This study has been designed for my dissertation research.

As a student, you are being invited to participate, on a voluntary basis, in a study designed to investigate what high school students find meaningful in a curriculum-based research project. The ultimate purpose of this study is to help all students become more successful in their learning, research and meaning-making.

Your thoughts and feelings as a student are vital to this study. Therefore, six to ten students who are currently enrolled in a senior level course will be followed through their classroom research projects for six weeks during the spring semester of the 2001–2002 school year. Your ideas about research and the research assignment will be collected through one tape-recorded interview, student journals, researcher observation notes and participation in a co-operative inquiry group. Although this will require some extra time on your part, it has been designed to increase your awareness of the research process through discussion with me during the interview, reflection in your journals, feedback from my observations, and discussion with your peers, your teacher and the researcher during the weekly group meetings. In order to ensure confidentiality and anonymity for you in this study, a pseudonym will be used instead of your name. If you are interested in being part of this study, a consent form is attached. If you have any questions, please do not hesitate to ask me or contact me at:

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APPENDIX B

ELEMENTARY EDUCATION
University of Alberta
Research Consent Form for Use with Adult Students

Study of Meaningful Curriculum-Based Research Projects with Senior High School Students

I, _____, hereby consent to be

- interviewed
- observed
- tape recorded
- and have my student reflective journal read

by Lois Barranoik.

I understand that:

- I may withdraw from the research at any time without penalty
- all information gathered will be treated confidentially and discussed only with the researcher's supervisor at the University of Alberta
- any information that identifies me will be destroyed upon completion of this research
- I will not be identifiable in any documents resulting from this research

I also understand that the results of this research will be used only in the following:

- research thesis
- presentations and written articles for other educators and librarians
- presentations for graduate students and faculty

_____
Signature
Date signed _____

For further information concerning the completion of the form, please contact:

Lois Barranoik
Department of Elementary Education
Faculty of Education
551 Education South
Edmonton, Alberta T6G 2G5

Phone: (780) 417-6857

E-mail: lbarrano@telusplanet.net

APPENDIX C

ELEMENTARY EDUCATION
University of Alberta

Possible Initial Interview Questions

Study of Meaningful Curriculum-Based Research Projects with Senior High School Students

1. Students: Describe the research project you have been given.
   Teacher: Describe the research project that you gave the students.

   - Probe: Reason for assignment?
   - Probe: Understanding of assignment process? e.g.,: nonlinear process

2. Students: Describe course-related activities that you find most interesting and that you believe help you learn.
   Teacher: Describe course-related activities that you believe students find most interesting and help them learn.

   - Probe: Basis for answer? e.g., fun
   - Probe: Rationale for choice? e.g., kinesthetic learning

3. Students: What makes an assignment meaningful to you?
   Teacher: What considerations do you have in mind when designing assignments and projects for the students in your class?

   - Probe: Interest in subject?
   - Probe: Application to other learning?
   - Probe: Relevance to daily life?

4. Students: What else would you like to discuss about research projects?
   Teacher: What else would you like to discuss about research projects?

   - Probe: Project design?
   - Probe: Project product?

APPENDIX D

ELEMENTARY EDUCATION
University of Alberta

Possible Questions for Reflective Interview

Study of Meaningful Curriculum-Based Research Projects with Senior High School Students

1. How did you choose your issue? Can you indicate the process you went through until you finally chose the issue you researched?

2. How did you finally form a focus? What kind of ideas and/or conversation helped you with this focus? Describe any feelings you had prior to and after forming your focus.

3. When you settled on an idea/issue/focus and hit a roadblock or dead end in your research, what did you do and why?

4. What were the positives of the research project for you?

5. What were the negatives of this research project for you?

6. Is there anything else you would like to add about this project? How do you feel or what do you think about research now?

APPENDIX E

ELEMENTARY EDUCATION
University of Alberta

Pathfinder Possibilities

Study of Meaningful Curriculum-Based Research Projects with Senior High School Students

1. Define keywords in your choice of issue: use a dictionary or www.Bartleby.com

2. Look at quotations about your issue: use Bartlett's quotations or www.Bartleby.com

3. Read through the assigned novel and note the pages that refer to your choice of issue.

4. Look at the encyclopedias in the Library's Reference area. Read an article about your issue in the encyclopedia for a general overview.

5. Daily newspapers; weekly or monthly magazines: browse the Table of Contents for pertinent articles.

6. Printed material related to your issue: use the Library OPAC to access books and other relevant material.

7. Electronic databases in the Library: search for information about your issue. Ask for assistance if unclear about how to conduct a search.

8. Talk to people about your issue: classmates, family members, professionals, general public.

APPENDIX F

ELEMENTARY EDUCATION
University of Alberta

Illustrative Writing Examples

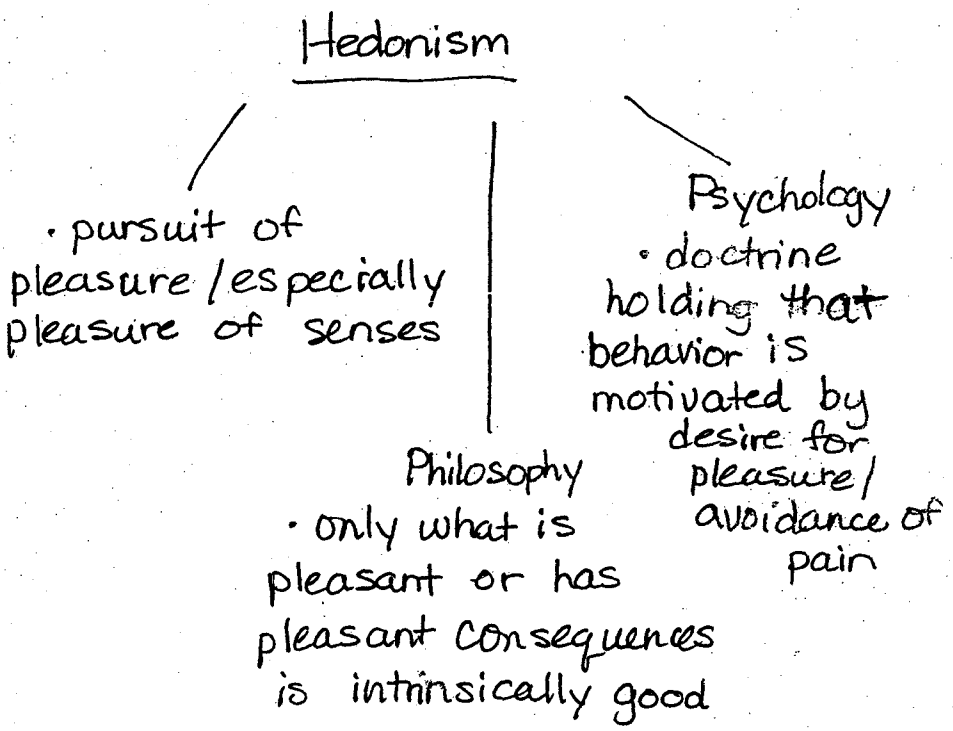
Study of Meaningful Curriculum-Based Research Projects with Senior High School Students

Example #1: Choosing the topic and constructing a thesis statement

Example #2: Composing the introduction to the paper

Example #3: Final paper in draft form

Hedonism, the pursuit of or devotion to the pleasure of the senses, is one of the reasons for a careless approach to life.



(2) While growing up in a community, it always seemed that too much pleasure and/or the consistent pursuit of pleasure was wrong. After all, working hard and following strict rules was viewed as good and goal attainment indicated a mature and reasoned approach to life. An example of this lack of maturity is evident in the novel Time Must Have a Stop, Eustace Barnack, suggests that one of the major happinesses in life is smoking cigars because it is more lasting than love and so much less costly and wear and tear emotionally. (Huxley, 1944).

Anything less was suspect. "Throughout the novel, his hedonism is made apparent by his continuous sucking on cigars. It is as though he were still an unweaned infant needy for the comfort of the breast." (The Columbia World of Quotations, 1996, p. 1)

Imagine ~~floating~~ & sailing among the Gulf Islands ~~or on the Mediterranean Sea in your own vessel~~ a ~~sea worthy~~ ~~small~~, with a soft breeze gently caressing ~~your skin~~ ~~your~~ golden ~~tanned~~ ~~tan~~ skin. ~~There is not a man made sound, nada~~ The only sound is the gentle lap of water against the hull as the craft ~~moves along~~ skims lightly ~~The only~~ over the water's surface.

~~What a relaxing place~~ ~~How relaxing~~ ~~almost hedonistic in fact, or is it?~~ ~~What a pleasant experience~~ What a pleasure for the physical senses! ~~a~~. Is ~~that~~ ~~a sense of well-being and~~ ~~a~~ this ~~concern with pleasure~~ wrong?

Love of ~~what is~~ "that which is pleasant"

Therefore it is my contention that hedonism, the pursuit of or devotion to the pleasure of the senses, is one of the reasons for an arrested ~~maturity~~ state of maturity ~~among~~ within society. ~~This state~~

This ~~belief statement~~ theme will be explored ~~further~~ in more detail through discussion of hedonism found in <u>The Great Gatsby</u> an examples of in current life, ~~these as personal based on these ideas~~ as well as statements of personal opinion.

Example #3

Hedonism

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English 30
May 28, 2002

Introduction

Imagine owning a twenty-seven foot sailboat and sailing around the Gulf Islands, a soft breeze gently caressing golden skin. The only sound is the gentle lap of water against the hull as the craft skims lightly over the ocean's surface. What a pleasure for the physical senses! What a delight for the soul! Can this love of 'that which is pleasant' be wrong?

While growing up in a rather morally rigid community, it seemed that too much pleasure and/or the consistent pursuit of pleasure was wrong. After all, working hard and following strict rules to ensure goal attainment indicated a mature and reasoned approach to life. Anything less was suspect! This idea has also been portrayed in literature. For example, in the novel Time Must Have a Stop, Eustace Barnack suggests that one of the major happinesses in life is smoking cigars because it is more lasting than love and so much less costly emotionally (Huxley, 1944). "Throughout the novel, his hedonism is made apparent by his continuous sucking on cigars. It is as though he were still an unweaned infant needy for the comfort of the breast" (The Columbia World of Quotations, 1996, p. 1). This suggests that a hedonistic approach to life may really be a form of catering to unfulfilled infantile needs. Therefore, it is my contention that hedonism, the pursuit of or devotion to the pleasure of the senses, is one of the reasons for an arrested state of maturity within society. This theme will be explored in more depth through discussion of examples found in The Great Gatsby and current life, as well as statements of personal opinion.

Novel Examples

In the novel, The Great Gatsby, Nick, the narrator, discovers that Daisy, a distant cousin, and her husband Tom Buchanan lead lives that are consistently in pursuit of something that will give them pleasure. For example, "they had spent a year in France for no particular reason, and then drifted here and there unrestfully wherever people played polo and were rich together" (Fitzgerald, 1926, p. 11). Although Daisy implies that moving to Long Island is a final permanent move, Nick "felt that Tom would drift on forever seeking, a little wistfully, for the dramatic turbulence of some irrecoverable football game" (Fitzgerald, 1926, p. 12). In other words, Tom, not fully ready to accept a lifestyle consistent with mature adulthood, is constantly striving for the excitement that he experienced when playing sports. He suggests that even when he goes off on a spree and makes a fool of himself, he always comes back to Daisy and in his heart he loves her all the time. His approach to love and life appears to be self-centered; he does not understand that mature love must be altruistic.

Gatsby's parties are notorious for their tendency towards hedonism, their overindulgence in the whims and fantasies of those attending, their pursuit of the celebrated, the new, and the unusual. There is always a great deal of champagne, food, dancing and swimming. His home overflows with both the invited and uninvited. It appears that through these decadent parties, Gatsby wants to impress Daisy and recreate the past. He wants to recover something, some part of himself that had gone into loving Daisy. Gatsby's development into a mature human

being has been slowed, perhaps even stopped, by an unfilled need in his past—the need to love and be loved by Daisy.

Current Examples

Today, as in Gatsby's time, people are often stymied in their personal growth towards maturity by a compulsive pursuit of a pleasure-filled life and a requisite need to be loved. Fulfillment of this perceived need is frequently sought through a quest for the exotic and/or erotic. Searching for the new and the unusual, for what is different can be a never-ending quest. Club Med vacation spots and numerous cruise lines promise fun for all ages with activities designed to please even the most discriminating taste. Retreats and conferences are habitually held at resorts or spas to ensure that even our work is surrounded by the possibility of pleasure. There is nothing wrong with either travel or relaxation, but, as the sole reason for existence and the main criterion for choice, this continuous search for that which is new and exciting focuses on self-gratification rather than personal growth and concern for others.

Seeking the erotic is another form of self-gratification. The word erotic, based on the Greek word eros, denotes sexual love (Barber, 1998). According to the Edmonton Journal (Trebay, 2002), the pursuit of hedonistic pleasure through sexual encounters is currently gaining popularity in Paris, France. Sexual liaisons with people one has just met are becoming more commonplace. As one patron of a popular club indicated, a person must live freely and for the moment because eventually everyone will die. Living for the moment of pleasure without focusing on consequences indicates an egocentric view of life and a simplistic attitude

about what really matters, especially when social actions are considered physically rather than psychologically (Kegan citing Kohlberg, 1982). Once again, individual needs take precedence over the needs of others.

Personal Opinion

It is possible to argue that fulfilling individual needs is necessary before the needs of others can be considered or even cared about. Therefore, it appears that self-interest and acts of self-gratification may simply be part of growing up and one stage in the maturation process. However, if this understanding is accurate, it is difficult to comprehend why seemingly mature adults find it necessary to own the newest toy, drive the fastest car, live in the largest house, wear the latest fashions and consistently experience what is most unusual. This focus on the physical and/or material seems to be one way to fulfill an adolescent need to be superior. Because I believe that physical, psychological and social maturation should go hand-in-hand, it is perplexing to watch adults obsessively pursue their 'lost youth' through hedonistic activities. It is my opinion that adulthood should equal maturity. According to The Canadian Oxford Dictionary (Barber, 1998), a mature person is one who is sensible and wise, and a wise person is someone who has experience and knowledge in conjunction with the "ability to apply them judiciously" (p. 1670). In other words, the decisions being made are sensible and prudent. They are not solely based on what 'feels good at the time' and is most pleasant.

Although the pursuit of pleasure need not be viewed as negative in itself, possibly the most alarming aspect of a hedonistic approach to life is the way it

appears to control decision making and focus on the pleasure of the individual without consideration for others. A notion that momentary gratification should take precedence over long-term planning indicates a lack of discernment about life itself and a lack of understanding about the importance of relationship within society.

Conclusion

It is evident from the previous discussion that hedonism appears to be indicative of an arrested maturity and an egocentric state of being. Three characters in The Great Gatsby (Ftizgerald, 1926) suggest that social and psychological maturity do not automatically accompany physical adulthood. Tom, Daisy and Jay Gatsby do not seem to see beyond their own immediate needs and what would make them feel good for a time, even to the point of once again longing for their youth. When life is remembered as being especially exciting and pleasant during adolescence, it is natural to want to return to a time when everything was viewed as fun and responsibility was not overwhelming. A continuous pursuit of the exotic and/or erotic also denotes the pursuit of what is fun for the individual with little or no responsibility demonstrated toward other members of society. Therefore, a society comprised of youth and adults focused on living a life based solely on personal pleasure without consideration for others may be in danger of losing that which is most essential to positive growth—relationship within community and wisdom based on a mature and thoughtful approach to life.

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APPENDIX G

ELEMENTARY EDUCATION
University of Alberta

Bibliographic Bingo

Study of Meaningful Curriculum-Based Research Projects with Senior High School Students

B	I	N	G	O
Bibliographic citations		Developing a pathfinder		Organizing relevant notes
	Accessing information using databases		Using Table of Contents and Indexes in print material	
Choosing a topic		**FREE SPACE**		Identifying what I want to know
	Taking notes using the RAP method		Composing a thesis statement	
Creating the final project		Using OPAC to access print resources		Organizing use of time for research

Possible Uses:

1. Students identify the research skills they already have by checking the appropriate boxes. As a group activity, students fill the blank spaces with other skills they have, or will need, in order to complete the project.

2. Prior to beginning research, the teacher and students identify the skills necessary to successfully complete the curriculum-based research project.