LISTENING TO THE VOICES OF FOUR AT-RISK LEARNERS IN ONE

ALTERNATIVE ENVIRONMENT

by

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ABSTRACT

For many learners the school system works. Skills and knowledge are learned, social relationships are formed, and positive self-esteem and self-image as a learner lead to accomplishments such as a secondary school diplomas, opportunities for further education, and futures filled with a litany of choices. For others diplomas are not forthcoming, nor are futures bright with hope and opportunity. Schools in Ontario have struggled to develop engaging and meaningful programs for these other students; students identified as "at-risk" of not successfully completing secondary school. Making up nearly 30% of the secondary school population (King, 2004), these students struggle or fail to meet curriculum expectations often resulting in missed opportunities for the development of a solid framework for life-long learning.

Educators grapple with the question of how to support at-risk students in classrooms and schools. This study provides an often overlooked perspective to the existing literature on pedagogy, curriculum, and programming for at-risk students; that of the learner. It gives a voice to at-risk students and offers educators and policy makers insights into how at-risk students experience learning, how they feel they learn best, what they need from their school setting, and what they identify as meaningful to their lives and their learning. Listening to the voices of at-risk students provides an authentic perspective of how to best serve at-risk students. This thesis tells the story of four at-risk students (key informants) in an alternative educational setting. In addition, one educational assistant, identified by key informants, provided information about the setting and further insights into key informants' engagement in the curriculum and their learning.

This study reveals stories of at-risk learners and what they see as relevant and necessary for active engagement with school and learning.

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DEDICATION

This study is dedicated to my best friend, my confidant, and my closest ally, my husband, Paul DeLong. I thank Paul for his steadfast support, inspiring words, and passion for life, and for always finding a way to make the impossible, possible; the ordinary, extraordinary; the mundane, exciting.

"Here's another sheepskin for the wall!"

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CHAPTER 1

INTRODUCTION

My experiences as a struggling secondary school student in 1981 shaped my perceptions of what education and learning should be. I had always learned "differently", but at the age of 15, the principal called me into his office to share some of his observations. Concerned with my lack of academic success and my limited engagement in the academic courses I was taking, he asked me what I thought of school, and if I planned to "hang in there and graduate." Before I had an opportunity to reply, he decided to share some sage advice.

"You should," he said with a pained smile, "think about entering the workforce … soon." The principal, who was also my homeroom typing teacher, was letting me know that, given my current trajectory, I would probably not be successful in the academic track at secondary school; that I was, what is now commonly termed an "at-risk student." I felt frustrated with secondary school and longed for another way to learn.

The principal's message to me at this meeting left me feeling like a square peg in a community of round holes. No programming efforts were made on my behalf by the school or school board. Upon learning of my difficulties, my parents suggested I leave secondary school early and consider entering the workforce. My parents, who immigrated to Canada in the 1960's, felt a keen sense of disappointment. The "better life" they had wanted for their children, which in their minds included a university career, appeared to be out of my reach. The lack of support from the school and school board led to my

leaving school before graduation, and to a challenging journey of self-directed learning as I searched for my place as a productive and valued member of society.

I am now a full-time secondary school teacher and a graduate student at Queen's University. I teach in the Queen's University Bachelor of Education program as a graduate teaching fellow. Within the graduate program, my focus area is curriculum studies, with a specific interest in technological education. Technological education is presently a secondary school subject that encompasses both broad-based technology and computer studies programs.

In my role as a secondary school teacher, I teach students who have been identified as "at-risk." This term is used in a number of contexts in secondary school settings. "At-risk" can refer to a youth's current situation or to anticipated situations due to youth not receiving intervention and support at critical points in their lives (McWhirter, 2004). In the case of the students I teach, the term "at-risk" is used by school administrators to identify students with a potential inability to successfully complete secondary school due to limited academic abilities and/or poor social/emotional functioning in a regular secondary school setting. The academic performance of these at-risk students ranges from low-average to gifted as identified in their Individual Education Plan (IEP).[1] They are termed exceptional in their learning style and learning needs (Ontario Ministry of Education, 2000). In addition, some at-risk students must attend school as part of their Youth Criminal Justice program conditions.

The at-risk students I teach have taught me that in order for learning to occur, course content must be meaningful to their lives and appeal to their interests. When it

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[1] In Ontario, the IEP is an education plan developed for students identified by school board special education support teams.

does, they are motivated to learn and they are actively engaged in their learning. In response to their needs, I have developed an integrated curriculum that uses broad-based technology projects as a vehicle for hands-on, problem-based learning. This pedagogical approach is similar to the teaching and learning strategies of teachers who teach broad-based technology to mainstream secondary school students.

The classroom I teach in is located in a slightly run down physical education portable that measures 40 by 25 feet in size. In this classroom, I teach at-risk students who are in Grades 9-11. Students design and construct real-world projects using hand-tools and computers. These projects integrate the overall and specific expectations from various Grade 9 and 10 secondary school courses to create a learning environment that presents course content in an integrated approach; an approach meaningful to at-risk students (Newell, 2003). To complete these projects, students must apply, demonstrate, and meet the expectations of the Ontario secondary school curriculum in the areas of integrated technologies, mathematics, English, science, and social sciences (citizenship, careers, and guidance education).

As a teacher, I have been curious about how to create and implement curriculum at the secondary school level to keep at-risk students engaged and eager to learn. Teaching at-risk students and having been an at-risk student myself, I felt compelled to attend graduate school to investigate this concern. I was interested in conducting research to learn more about how at-risk students experience learning with an integrated curriculum approach, and what factors of this approach had the greatest effect on their learning. Thus, I chose to examine the educational experiences of four former students

who had transitioned out of the program to another secondary school, post-secondary institution, or workplace environment.

Purpose

The purpose of this study is to promote a greater understanding of what characteristics at-risk learners see as relevant and necessary for active engagement with curriculum; to offer suggestions as to how the research findings may be relevant to other educators; and to provide another perspective to the existing literature on pedagogy, curriculum, and programming for at-risk students – that of the learner.

Research Question

In the 1980's my perceptions of learning, and lack of engagement, self-worth, and competence as a learner, were shaped directly by my learning experiences in school. I wanted to examine how at-risk learners of today perceive their educational experiences. In keeping with my premise of giving a voice to at-risk learners, their supporters, and those who work with them, the following primary research question guided this study:

- What have been the effects of an alternative education program for participating at-risk students?

In this study, I examined how former students viewed their learning experiences at an alternative education program in eastern Ontario. Specifically, I examined what effects being a student in this program had on both their relationship with learning, and in their lives. This question was intended to be answered from three perspectives; that of a program graduate, a supportive adult, and an educator. As the research progressed, only

two perspectives were available: those of the program graduates and an educator who had worked with these former students.

Importance of the Study

Through my teaching experiences and personal history as an at-risk learner, I realized the importance of examining alternative methods of education for at-risk students. As a teacher, I have been curious about how to create and implement curriculum at the secondary school level to keep at-risk students engaged and eager to learn. This study offers new perceptions about how at-risk students experience learning in an alternative educational program that uses an integrated curriculum approach, and discusses what factors of this approach have had the greatest effect on learning for four at-risk students.

This research is intended to serve as a resource for administrators and developers of specialized programming for at-risk learners. It offers multiple perspectives of what at-risk learners identify as being important and meaningful to both their learning and their school experience, paying specific attention to what factors at-risk learners see as relevant and necessary for active engagement with the curriculum. This study also provides another perspective to the existing literature on pedagogy, curriculum, and programming for at-risk students – that of the learner.   By examining an alternative education program, which employs a broad-based technology integrated curriculum model as an alternative to the conventional subject-specific methodologies common to the regular secondary school classroom experience, valuable information is generated for use in the development of more interdisciplinary curriculum courses in Grades 9 and 10

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to complement current Grade 11 and 12 courses. As schools are constantly in a state of renewal and improvement, this study gives leadership teams and educators a sense of how at-risk students, and those who support them, interpret and value learning and what types of programming and learning experiences best suit their needs.

Limitations of the Study

My initial research plan involved examining two similarly designed programs in eastern Ontario staffed with teachers qualified in both technological education and special education. Unfortunately, I was unable to examine these programs for two reasons: (1) both programs had been re-staffed with secondary school teachers qualified to teach science and English curriculum, but not technological education and special education; and (2) the original project-based, broad-based technology integrated curriculum had been exchanged for the more conventional approach of remediation for at-risk learners. Upon further assessment of the two programs following these changes in staffing and pedagogy, I came to the conclusion that the sites no longer represented the learning environment that fit with my research plan. This change was unfortunate as the only remaining local learning environment was my own classroom. Therefore, out of necessity, I chose to examine the program I developed and the classroom where I was the teacher. To avoid concerns of power and possible conflict of interest, an independent researcher collected data on my behalf. In addition, my original research plan involved interviewing a supportive adult identified by each student in his or her interview. The students were, however, unable to identify such an adult. Thus the only information other

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than from the students was obtained from an interview with an educational assistant (EA) who had worked with them while they were at the program.

Thesis Overview

The first chapter of this thesis provided an overview of the study, the background that led me to this research, the purpose of the study, my research question, the importance of the study, and its limitations. Chapter two provides a review of relevant literature and a framework for the study. Three areas of literature are reviewed: (a) characteristics of at-risk learners, (b) school strategies, educational practices, and at-risk students, and (c) broad-based technological education. Chapter three, Methodology, outlines the methods used to conduct the study and describes the research site. In chapter four I report the perceptions of four at-risk learners who participated in and transitioned from the alternative education program. As well, I report the perceptions of the educational assistant who worked with the students at the alternative education program and literature. Finally, chapter five offers a discussion of the findings in relation to the literature, conclusions, and implications for research and practice.

CHAPTER 2

REVIEW OF THE LITERATURE

The purpose of this literature review is to examine relevant research that explores what it means to be an at-risk learner in an Ontario secondary school. The methods used by educators and school systems to identify at-risk students are discussed with attention to the provincial identification process and a working definition of "at-risk". This review attempts to offer the reader a better understanding of the difficulties and challenges that co-exist with the increasing numbers of disengaged students often referred to as at-risk students. This review works from the philosophical foundation that many factors place learners at risk of not experiencing success in school and that the confluent nature of these factors work in tandem with in-school factors placing these learners at even greater risk. With an emphasis on the demonstrated characteristics many at-risk learners possess, this review explores what the term at-risk means from an educational, social, and emotional perspective.

Having examined the characteristics of at-risk learners, this review then examines the school strategies and educational practices designed to reach at-risk students and promote school success. These factors include promoting a caring learning community, and integrating meaningful pedagogical and curricular approaches, such as those found in broad-based technological education. Making a difference in students' educational experiences can be cultivated by helping them feel a sense of belonging (Sanders & Sanders, 1998). As this literature review shows, effective programming for at-risk learners requires the collaborative efforts of educators, parents, and community members working together to address and meet the needs of those students at-risk.

Finally, this review examines the importance of incorporating student perspectives into the development of school policy and curriculum design. Student voices have traditionally been excluded by decision makers within the school system, and the implications of this omission are addressed.

Characteristics of At-Risk Students

In Ontario, a student may be formally identified as at-risk by an Identification, Placement, Review Committee (IPRC), or informally, as a result of demonstrated personal, cognitive, and/or socioeconomic factors. Most often students are referred to as at-risk because they are at risk of not succeeding in Ontario schools. The factors that affect whether or not a student is labeled at-risk are often cumulative. These include characteristics such as family structure, the parental level of education, and socioeconomic factors (Astone & McLanahan, 1991; Lee & Burkam, 2003). In addition, personal issues, cognitive factors, and, as Sagor (1999) purports, a mismatch with school structures, influence a learner's ability to demonstrate success in school.

The *Final Report of the At-risk Working Group* commissioned by the Ontario Ministry of Education (2003) defined at-risk students as:

> [S]tudents requiring different support strategies; elementary students who are performing below grade expectations; secondary students who would previously have studied at the modified or basic level; and secondary students who are performing significantly below the provincial standard, earning marks in the 50's and low 60's and who do not have the curriculum foundations to be successful. (p. 5)

King's (2004) double cohort study conducted for the Ontario Ministry of Education also examined graduation rates. He found that at the request of the Ministry of Education, school boards had established

at-risk committees in order to develop programs to improve the achievement and progress of mainly two groups of students indentified at at-risk: (1) students taking mostly Applied courses in Grades 9 and 10; and, (2) students taking Essential Skills courses in Grade 9. For the first group, the general approach taken to resolve the problems has been to design support programs involving remediation and upgrading. For the second group, one approach taken so far has been to develop a course sequence that may facilitate a transition to Grade 11 Workplace courses for these students. (p. iii).

King (2004) determined that upwards of 30 percent of the secondary school student population fell in to the category of at risk of not successfully completing secondary school.

In the province of Ontario, many at-risk students have undergone assessments to determine their areas of learning difficulties, their particular learning needs, and accommodations that will assist them in their school career. These assessments provide a starting point for the (IPRC) process, a process that identifies these students as exceptional and with different learning needs than those of their peers. A student's designated area of exceptionality is based on a profile of specific criteria as defined by the Ontario Ministry of Education. These Ontario Ministry of Education (2000) profiles include: behaviour, communication, intellectual, physical, and multiple (a combination of learning or other disorders). For the majority of at-risk students, multiple exceptionalities are identified, which are usually a combination of behaviour and communication disorders (Weber & Bennett, 1999). Once a student is identified as an exceptional student, an Individual Education Plan (IEP) is put into place to provide classroom teachers with accommodations and strategies to assist the student in achieving academic success (Ontario Ministry of Education, 2000). However, given the multiple learning challenges faced by these students, coupled with their personal risk factors, classroom

accommodations to the curriculum will only meet some of their learning needs (Manning

& Baruth, 1995).

To fully meet the needs of at-risk students, in-school accommodations need to be

coordinated with out-of-school interventions. Barr and Parrett (2001) have identified the

need for educators and schools to coordinate their efforts with social agencies to address

the complex issues at-risk students face. These issues may include: family instability,

parental education level, socioeconomic factors, personal issues, cognitive factors, and

learning systems.

Family instability (Frymier, 1992) is one of the key areas that can place students

at risk. Frymier (1992) noted that while frequent family moves, divorce, and the loss of a

parent are "out of control of the school" (p. 258), the end result of these factors often

places the student at-risk. In addition, students whose families have been marginalized

due to social and cultural barriers such as economic inequalities, alcohol and drug abuse,

violence and crime, and human hardships (Danforth & Smith, 2005) need additional

support to level the playing field with that of their more privileged peers.

Parental education level, particularly that of the mother, is strongly linked to

children's health, school readiness, and school achievement (Sticht, Beeler, & McDonald,

1992). Parents play an important role in their children's learning by not only determining

what educational resources are available in the home, but also through their attitudes and

values towards education in general. Educational research exploring the relationship

between parental educational accomplishments and student achievement suggests that,

while it is difficult to examine the home environment of each student, the educational

accomplishments, academic achievements, and activities of parents provide links

between the manner in which parents regard education and the level of educational support they provide for their children in the home (Bussière, Cartwright, Knighton, & Rogers, 2004).

It has been well-established in research literature that the strongest single predictor of educational achievement and academic outcomes is the socioeconomic status of the student's family (Gutman, Sameroff, & Cole, 2003; Levin, 2004). Living in poverty (Manning & Baruth, 1995) with a limited family budget and parents who are unemployed, unskilled labourers (Frymier, 1992), also places children at-risk of not achieving academically. Levin (2004) reports that, according to several different measures (poverty, high school dropouts, and the vulnerability index created from the National Longitudinal Study of Children and Youth), an estimated 25 percent of students in Canada have some notable level of risk impeding their successful completion of secondary school. Within this group, 10 to15 percent will experience significant challenges to their success in the education system. Levin (2004) suggests that this percentage could be much higher for students from low socioeconomic communities. In addition to academic challenges, socioeconomic factors have a direct effect on academic achievement and personal issues such as self-esteem, placing economically disadvantaged students at risk not only in their school careers but later in life as well (Steinberg, Brown, & Dorenbush, 1996). Manning and Baruth (1995) found that children who arrive at school in poor health, or undernourished as a result of low socioeconomic status, have a higher incidence of anti-social negative school and peer interactions. Furthermore, personal issues such as low self-esteem, poor self-image as a learner, and the lack of a sense of belonging are hindrances to the at-risk learner's probability of

success in school. Often these issues contribute to substance use, attempted suicide, and criminal activity (Karlsson, 1996). The latter are often the result of the cumulative effect of other characteristics associated with at-risk identifications. However, Karlsson (1996) cited several factors which counter these negative influences: personal goals, self-worth, self-regulation, self-determination, and family values and beliefs. Similarly, Barr and Parrett (1995) argued, "any child may become at-risk" (p. 16) by way of life situations. It is resiliency, the ability of the child to be responsive, flexible, empathic, and prosocial (Barr & Parrett, 1995) that determines his or her ability to cope with challenges and overcome severe problems.

Cognitive factors also contribute to at-risk identification. Students with impaired cognitive functioning, such as learning disabilities and behavioural disorders, struggle with self-monitoring skills and the ability to integrate learned skills and processes to their prior knowledge. According to Sosin (1996), at-risk students do not automatically tie new learning to previous knowledge, incongruously using declarative knowledge processes. Moreover, a lack of engagement or motivation to learn is another commonality across at-risk students (Karlsson, 1996).

A disparity between the student's needs and abilities and the school's standards-based achievement criteria is also a marker for an at-risk identification. Sagor (1999) defined at-risk as being a mismatch between the learner and the learning system. These students require more time and varied opportunities to experience success in the school environment. As suggested by McPhail and Freeman (2005), students who experience this mismatch are often conceptualized as "deficient" oftentimes without consideration to the nature of the schools, the pedagogies employed, and the curriculum (p. 261). They

also argue that diverse students are underserved and often marginalized by the standard curriculum in schools. Learning opportunities rich in context fostering inclusion, to allow for students' diversities to be viewed as learning differences rather than learning deficits, are needed (p. 264). As identified by Johnson (1996), not fitting into the school system can also result in anti-social behaviour problems – a response to the constant frustration experienced at school. Students identified as at-risk are often those who do not fit the mainstream mold; their learning styles, learning disabilities, and/or life experiences may be factors in low achievement or behaviour considered unacceptable within the context of the classroom (Kerka, 2003). In addition, the subject-specific disciplines of secondary school do not always affirm the implicit connections between subjects necessary for optimal learning. Students who struggle in school are more negatively affected by such fragmented learning systems.

As concluded by Adams and Ryan (2000), there are multifaceted and cumulative influences on students' interests and success in school. Several general factors put all children at risk for antisocial behaviour. These include a learning disability or disabilities that may be co-occurring with external factors. External factors associated with at-risk students include family stability, socioeconomic status, personal issues, and cognitive abilities. In-school factors include the institutional approaches of the school system and an inability of these students to perform academically. These factors are further exacerbated by fragmented learning systems, underscoring the notion that many at-risk students may require additional stability, support, and innovation in the school environment (England, 2004). In addition to government mandated academic accommodations and program placements (Ontario Ministry of Education, 2000),

students who are at-risk need cooperation on the part of the stakeholders to succeed: cooperation among the learner, the teacher, the family, and the community (Manning & Baruth, 1995).

<center>School Strategies, Educational Practices, and At-Risk Students</center>

The Learning Community

Creating a supportive learning community for at-risk students can be achieved in several ways. One way is to establish a supportive classroom environment that includes orienting the physical classroom to foster a sense of pride and ownership among students. Such a classroom environment develops a caring and supportive classroom culture, where the context of the learning community becomes a place where learning is cooperative in nature, caring in practice, and relevant in action (Newell, 2003). This context promotes a learning environment that engages at-risk students, encourages academic risk-taking, and supports learning as a positive and meaningful experience. Some ways of promoting a supportive learning community include: physical arrangement, classroom culture, classroom community, and a relevant project-based curriculum that promotes interest and engagement.

The physical arrangement of a classroom profoundly affects the kind of learning that takes place within its walls. This fact is true for all students. However, as Newell (2003) has pointed out, at-risk students benefit by having their own workstations and open common spaces. Individual workstations allow at-risk students to develop a sense of ownership in their learning, while open common spaces promote small group and cooperative learning with peers.

In addition to physical accommodations to the classroom layout and class size, the culture of the classroom as a cooperative and supportive learning environment (McDermott & Varenne, 1995) has been shown to positively influence the at-risk learner. McDermott and Varenne (1995) have cited the impact of culturally-constructed value statements imposed on at-risk students. The authors ask the question: "what if the very act of saying there is something wrong with their lives, if improperly contextualized, makes their situation worse?" (p. 330). For students working and living in a culture that defines success as conforming to a set of standardized norms rather than specific criteria, being identified as at-risk draws attention to the deficits the student possesses, rather than drawing attention to the impediments constructed by the school culture. The culture of the learning community must be one of support (Barr & Parrett, 1995), emphasizing both social and academic needs, while connecting both social and academic responsibility. Students who have been unsuccessful in traditional classrooms are often very successful in instructional programs where learning is personalized. Such programs, focusing on a culture of care, allow students to work at their own pace and focus on their instructional needs with teachers as facilitators.

It is unfortunate that at-risk learners are seen by some as apathetic and unwilling to learn. Attention should not focus on the student's deficits, but on changing the culture of the learning community to support the needs of the student. Perhaps more than any other population of learners, at-risk learners need caring and concerned adults in their lives, who willingly make the effort to understand them and who believe in them. At-risk students need to feel cared for and cared about. As identified by Freeman and Hutchinson (1994), students must feel valued and have a sense of belonging to their classroom

culture. The mutual respect between students and their teachers helps to reinforce the students' presence in the classroom, validating them as important members of their school community (p. 144). According to Conrath (1994), developing this culture of care should be the primary objective of educators. Schools should be places to help children build their self esteem, self-confidence, and internal sense of responsibility. He tells individuals working with troubled youths to always remember "the most important work in the world is going on: learning; gaining self-reliance; participating in the culture" (Conrath, 1994, p. 44).

The classroom community, as defined by Kohn (1996), is a place where students feel cared about and are encouraged to care about each other (p. 101). A classroom community led by a teacher who regards all students positively, recognizing and acknowledging their needs, allows students to feel supported (Walsh, 2006). Church (2006) found that, "it's important for children to see and feel that their ideas and answers are not being judged" (p. 5). The need for a sense of value and respect is also noted in *For the Love of Learning* (Begin, Gerry, Bharti, Glaze, & Murphy, 1994). The authors state that the school experience can be disconnected, irrelevant, and alienating for these students. "If school is to be a place worth staying in it must be a place where connections are made, where learning is meaningful and where people learn more about coping with the complex realities of their many communities" (p. 31). A classroom community based on mutual respect between staff and students, where academic risk-taking is encouraged through cooperative project-based learning activities, offers at-risk students a renewed sense of intrinsic motivation (Newell, 2003), allowing them to view school as a positive and meaningful experience. A caring classroom community, constructed over time to

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reflect a common purpose, fosters a commitment to one another and a desire to engage deeply with what is being learned (Kohn, 1996).

Disaffected students, students who lack the desire to learn and are resistant to engaging in the learning process, require a different approach to curriculum and pedagogy. At-risk students are resistant to learning and have chosen not to learn. This choice is often not due to inability, but rather because they lack interest in what they are learning (Riley & Rustique-Forrester, 2002). According to Karlsson (1996) and Sosin (1996), curriculum and instruction for at-risk students must also address issues of engagement and motivation with the ability to maintain the learner's interest over time.

The literature examined here looks at the effect of the learning community on the at-risk learner. The interventions and strategies suggested (Barr & Parrett, 1995; Begin et al.,1994; Church, 2006; Karlsson, 1996; Kohn, 1996; McDermott & Varenne, 1995; Newell, 2003; Riley & Rustique-Forrester, 2002; Sosin, 1996; Walsh, 2006) stem from the perspective of how teachers and learning systems view the at-risk learner. Research focusing on the learning community from the students' perspectives is scarcer. Hill and Smith (1998) in their study of students participating in an Ontario secondary school technological education program found that the project-based learning environment increased students' self-confidence, creativity, self-esteem, and overall motivation to learn. The Hill and Smith (1998) study is of particular importance to this researcher as it stands as one of the few which examine the learning community from the learner's perspective. Just as Hill and Smith (1998) examined how the project-based learning environment influenced technological education students' understandings and motivation to learn, this study examines how the learning of at-risk students is influenced and

affected by the learning community. By examining the learning experiences of four at-risk students from their own unique perspectives, this study directly examines features of the learning community that at-risk students identify as having the greatest effect on their learning. Working from the orientation of the at-risk student rather than that of educator, this study offers a new lens with which to view the complexities faced by at-risk learners, a lens focused squarely from the perspective of the students.

Pedagogical approaches

The Ontario Ministry of Education and O'Conner (2003) posit that one of the primary and essential pedagogical approaches currently used to support at-risk students in Ontario schools involves the common instructional practice of remediation. Nevertheless, constructivist perspectives (Dewey, 1943) are also recognized and considered essential in the development and implementation of programming for at-risk students (Ontario Ministry of Education & O'Conner, 2003). The pedagogical approaches of remediation; project-based, cooperative, contextualized authentic learning; and authentic assessment are examined here.

One pedagogical approach frequently used with at-risk students is remediation. King (2004) found that an estimated 30 percent of Ontario high school students are at risk of not graduating. As King states, these "at-risk students are already well behind in credit accumulation" (p. 71), resulting in the need for remediation of essential skills such as literacy. A focus on remediation is not a new alternative instructional practice to assist at-risk learners. Manning and Baruth (1995) cited remediation at an early age as one characteristic of effective programming for low achievers. The At-Risk Working Group's study (Ontario Ministry of Education & O'Conner, 2003), with support from the

Education Quality and Accountability Office (EQAO), the Ontario Ministry of Education, and The Council of Ontario Directors of Education (CODE), recommended specific interventions to support at-risk students at the secondary school level. One recommended intervention was remediation in the areas of literacy and numeracy. Other recommendations included the use of assistive technologies, literacy tutors, mentors and coaches for remediation, and community partnerships.

The pedagogical approach of project-based learning promotes creativity and meaningful learning, connects new learning to prior knowledge, incorporates authentic self-assessment and reflection, and instills lifelong learning patterns (Eckert, Goldman, & Wenger, 1997; Wankat & Oregovicz, 2000). According to Dede (1993), "the more traditional classroom-based, discipline-focused, learning-by-listening approaches" must change to "just-in-time, life- and work-focused, and learning-while-doing approaches" (p. 3) linked to everyday situations. At-risk learners often possess a specific learning style that is not always cohesive with the Socratic orientation of a traditional classroom. A project-based classroom provides a creative and real-life approach to learning that is meaningful and relevant, offering at-risk students multiple opportunities to demonstrate their learning (Hill & Smith, 1998).

Cooperative learning is a pedagogical approach that employs varied groups of students working together to achieve a common goal (Kagan, 1994). Students engaged in self-directed, cooperative learning have a role in deciding what will be learned, and how they will go about learning it. Often this approach is achieved through small group work, which requires students to work together, to exchange ideas, to make plans, and to propose solutions. Self-directed, cooperative learning involves students in the decision-

making process – a critical skill for the at-risk student. Benefits of cooperative learning approaches include an effort to achieve, quality of relationships, and psychological health (Johnson & Johnson, 1989).

Pedagogical approaches such as open-ended problem solving, learning by doing, and relevant contextualized learning experiences (Dewey, 1943; Ontario Ministry of Education, 1999) are used in broad-based technological education. Such approaches align well with Shapiro's conception of the confluent curriculum (as cited in McNeil, 2005), a curricular approach based on Gestalt psychology. This approach focuses on the present as a means with which to create knowledge and interpret meaning. It addresses the importance of: learner participation; interaction and integration of thoughts and feelings associated with the learning experience; relevance of the subject matter; using one's self as an object of learning; and a sense of purpose or goal allowing for the development of the whole person. Hill and Smith (1998) found that, by engaging students in student-centered, student-constructed community-based projects, students' learning was enhanced and a sense of meaning was given to classroom-related tasks. Lave and Wenger (1990) submit that this sense of meaning comes not only from the social relationships surrounding contextualized learning, but through the process of social participation within the context of learning.

As posited by Hill and Smith (2007), the qualities of authentic learning-mediation, embodiment, distribution, and situatedness encourage students to see themselves as active participants in their own learning, making connections between their experiences and real-life situations through their exploration and interaction with one another and their learning. McPhail and Freeman (2005) agree with authenticity as a

pedagogical model to support students with learning disabilities arguing that, "learning occurs within activities structured through collaborative interactions between people, and the mediational tools that they use" (p. 262) as they work toward a shared goal.

Coupled with authentic learning (Lynch, 1997), students' assessments must reflect their actual accomplishments. Authentic assessments must mirror the authentic learning experiences. The learning portfolio is one example of an authentic cumulative assessment tool for hands-on performance tasks. The portfolio offers evidence of accomplishment and improvement over time, and is much richer in detail and substance than a mere list of scores (Pratt, 1994)

The pedagogical approaches of remediation; project-based, cooperative, contextualized authentic learning; and authentic assessment examined here offer insight as to how educational experiences can be structured to support the at-risk learner. What is not known is just how at-risk learners themselves perceive these experiences. While it would seem logical and prudent to adopt tried and proven pedagogies supported through the research (Eckert et al,1997; Dede, 1993; Johnson & Johnson, 1989; Kagan, 1994; Manning & Baruth, 1995; Ontario Ministry of Education & O'Conner, 2003; Wankat & Oregovicz, 2000), it would seem irresponsible if one did not consider how students viewed these pedagogical approaches in respect to their learning. Three studies examined in this review, the studies of Hill and Smith (1998, 2007) and Lynch (1997), offer insight into what pedagogical approaches students identify as having had an affect on their learning. In these studies (Hill & Smith 1998, 2007; Lynch, 1997) students clearly articulated their perspectives of how pedagogical approaches to learning such as project-based, cooperative, and contextualized authentic tasks followed by authentic assessment

affected their learning. This study attempts to build on these findings (Hill & Smith 1998, 2007; Lynch, 1997) to construct an image of what effects these pedagogical approaches have for the at-risk learner. By examining the experiences of four at-risk students, this study strives to determine what pedagogical approaches these learners see as having an effect on their learning.

Curricular Approaches

Curriculum approaches developed to encourage reflective and authentic demonstrations of the knowledge and skills learned help to support the at-risk student. Characteristics of curricular approaches to support at-risk students are experiential in practice and grounded in meaning-making to offer relevance for the at-risk student. Curricular approaches rich in these characteristics include: backward curriculum design, negotiated curriculum, experiential and workplace curriculum, and integrated curriculum.

Many educators today think of assessment first and then design their curriculum to accommodate desired outcomes. Wiggins and McTighe (1998) referred to this model of curriculum design as the backward design process. Here, curriculum is formulated specifically with the end in mind. It starts with the questions: What are learners required to understand? What will be accepted as evidence of their understanding? What learning experiences and teaching practices will facilitate this understanding? (Wiggins & McTighe, 1998).

Another curricular approach that supports at-risk students is the negotiated curriculum. This approach seeks to build a cooperative learning community and facilitates the learning process by encouraging cooperation among students (Heywood, 1990). It also enhances students' abilities by focusing attention on the social processes

that ultimately contribute to learner happiness, health, and well-being. Rather than using secondary sources for information, Newell (2003) proposed that materials and data developed by students with their teachers using a project-based approach allow for the development of the dispositions and skills needed for lifelong learning: reflection, problem solving, organization, and decision-making.

Negotiating curriculum requires the teacher to become sensitive to the concerns and questions of the learners (Boomer, 1990). This teacher behaviour and the resulting atmosphere of the learning community encourages students to develop social skills and inter-group relations essential to academic success. Hunter and Park (2005) support this theory suggesting that, when curriculum is negotiated through dialogue and the active "making" of knowledge, students learn to frame their own understandings, rather than acting merely as passive recipients (Hunter & Park, 2005). Negotiated curriculum provides students with an opportunity to communicate with each other and encourages the development of social, academic, and communication skills leading to a strong sense of self within the group. With these improved skills, at-risk students can begin to see themselves as agents of their own success, reaching beyond the walls of the classroom to become part of a larger community (Shumer, 2001).

According to Riley and Rustique-Forrester (2002), vocational curriculum, with an experiential approach, is a key factor facilitating disaffected students' success. They suggest that the introduction of national vocational qualifications with extended work experience has worked well in a number of schools in the United Kingdom. Using expanded work experience as a curriculum foundation, Ontario's cooperative education model offers students opportunities to work toward secondary school credits while

engaging in real-world learning in a workplace setting. In addition, Ontario's cooperative

education model offers students flexible timetables and extended links with tertiary

colleges. Much like Ontario's articulation programs, a unique model of

government/industry/university collaboration (Ontario Ministry of Education, 2000), the

cooperative education model has had the greatest effect on successful completion of

secondary school for disaffected students.

Through the humanistic context of experiential and workplace curriculum,

educators may provide students real-life contextual frameworks within which to learn

essential skills: problem-solving, creativity, innovation, and self renewal (McNeil, 2005).

As indicated by Sowel (2005), experiential and workplace curriculum requires the

educator to view the student as interactive within his or her learning environment. The

teacher's role in this conception of curriculum is one of facilitator and mentor providing

the scaffolding that supports the learner (Fogerty, 1997). In order to design these

instructional learning environments, effort must be taken to ensure that the learning

experiences remain relevant to the learners' life both in and outside of the classroom.

Perhaps one of the most influential factors to arise as a result of experiential and

workplace learning is the positive personal relationships youth build with an adult. When

designing and implementing experiential and workplace learning experiences for at-risk

students, the educator should consider the effects mentoring may have on the learning

process. By anticipating and working toward a positive relationship between the student

and the adult on-site, the educator can develop a curriculum rich with reflection exercises

that promote this relationship. The At-Risk Working Group's study (Ontario Ministry of

Education & O'Conner, 2003) indicates that provincial and local programs and models

should "promote and validate the importance of school to work programs and recognize the self-esteem issues of the students as soon as possible" (p. 20). Barr and Parrett (1995) have supported this hypothesis, suggesting that successful programs must consider not only the academic needs of young adolescents, but their developmental needs as well. This multidisciplinary approach challenges educators to ensure that the curriculum and instruction offered encompass the needs of the whole child. As suggested by Walsh (2006), "Paying attention to areas of interest, emotional states, frustration levels, and behaviour patterns provide access points into their [at-risk students'] worlds"(p. 7), enabling educators to get to know their at-risk students and reengage their learning process.

In keeping with the diverse recommendations of The At-Risk Working Group's study (Ontario Ministry of Education & O'Conner, 2003), multiple approaches for addressing the needs of at-risk students have found a common thread in integrated curriculum. *Learning Through the Arts* (Upitis & Smithrim, 2002), a Canadian study that examined the integration of math, sciences, and the arts, was implemented in 170 schools with over 6000 elementary students. Results showed an 11-point increase in student math scores. Teachers found that students were more engaged in their lessons, and children reported being happier going to school. Integration through one central theme, such as an arts theme in the Upitis and Smithrim study, is one approach to curriculum integration. There are a variety of models that represent an integrated curriculum where content in one subject is reinforced in another.

Jacobs (1989) and Drake and Burns (2004) have identified five models of curriculum integration:

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1. Crossdisciplinary: interpreting one subject discipline through another.

2. Multidisciplinary: a juxtaposition of several subject disciplines focused in one area with no attempt to integrate.

3. Plurdisciplinary: subject disciplines which share related concepts and skills.

4. Interdisciplinary: an approach which consciously applies methodology and language from more than one subject discipline to examine a central theme, issue, problem, topic, or experience.

5. Transdisciplinary: a paradigm shift in which curriculum is organized around student driven questions and interests, then applied in a real-life context.

Research by Drake and Burns (2004) showed that students respond to integrated curriculum in very positive ways. "Students are for the most part enthusiastic about their learning. They talk about three distinct aspects: learning content, learning social skills, and doing interesting activities" (p. 26). Hartzler (2000), in her meta-analysis of 30 studies, concluded that students in integrated programs outperformed students in traditional classes on national standardized tests. A study titled *The Effects of Curriculum Integration* (Ross & Hogaboam-Gray, 1996) examined the effects of curriculum integration on student learning. The study compared a Grade 9 program that offered science, technology, and math in an integrated format to a traditional program in another secondary school that taught the three subjects separately. This study asked two questions: (1) Did curriculum integration lead to changes in how math, science, and technology are taught? (2) Did curriculum integration have an effect on student learning? Ross and Hogaboam-Gray (1996) found that students who attended the integrated program had higher levels of achievement, had a better understanding of the concepts that

were shared by the three disciplines, and were more likely to apply concepts that were mainly taught in mathematics. They also found that female students performed better on science concepts when taught with an integrated curriculum approach. In addition, students were able to work effectively with peers. They were more comfortable working in groups, less anxious about assessment, and developed an ability to work together and exchange ideas about how to solve problems collaboratively.

Teachers stress that an integrated program approach such as that examined in the Ross and Hogaboam-Gray study (1996) helps to meet the needs of a diverse student population. Reid and Romanoff (1997) have identified integrated curriculum as a means with which to address the learning needs of gifted learners, while Vaille (1997) observed that learning through integrated programs builds on the students' strengths rather than limiting their learning to remediation. When examining student learning in an outdoor education program, Horwood (1992) found that students learned that transcendent qualities are independent of the disciplinary context. However, Reid and Romanoff (1997), Ross and Hogaboam-Gray (1996), and Vaille (1997) all examined integrated learning from the educator's perspective. The voice heard in these studies is that of the teacher and the researcher, not that of the at-risk learner. The at-risk students' experiences with integrated curriculum are not as well understood. In this study, the nature of learning through integrated curriculum approaches is examined from the at-risk learner's perspective.

A variety of curricular approaches such as backward curriculum design (Wiggins & McTighe, 1998), negotiated curriculum (Boomer, 1990; Heywood, 1990; Newell, 2003) experiential and workplace curriculum (McNeil, 2005; Riley & Rustique-Forrester,

2002; Sowel, 2005) and integrated curriculum (Drake & Burns, 2004; Hartzler, 2000; Ross & Hogaboam-Gray, 1996; Upitis & Smithrim, 2002) offer insight from the educator's perspective of how these approaches affect the learning experience for at-risk students. However, the confluent effect of these curricular approaches for the at-risk learner remains largely unexplored, especially from the perception of the at-risk learner. Moreover, an examination of integrated curriculum approaches and the cumulative effects of backward curriculum design, negotiated curriculum, experiential and workplace curriculum, and integrated curriculum for at-risk learner remains largely unexplored. To address this quandary, this study examines the cumulative and confluent effects of curricular approaches for the at-risk learner in an attempt to offer educators further insight into how the curricular approaches they use in their practice affect the at-risk learner from the learner's point of view. By examining these factors from the at-risk learner's perspective, it is possible to explore and develop new interventions and alternative methods of practice to support at-risk students.

<div align="center">Broad-based Technological Education</div>

Pedagogical and curricular approaches used in broad-based technological education programs have many characteristics that offer the at-risk student a means with which to experience complex academic concepts in an applied manner. Learning by doing, activity-based, and project driven approaches offer at-risk students opportunities to develop their theoretical knowledge through applied learning tasks. This applied learning philosophy is outlined in the broad-based technological education curriculum guidelines (Ontario Ministry of Education, 1999):

> The philosophy that underlies the teaching of broad-based technology is that
> students learn best by doing. The curriculum in this area takes an activity-based,

project-driven approach to learning that provides students with knowledge, skills, and experiences in communication, construction, design, hospitality and tourism, manufacturing, personal and health services, and transportation. Each area of study is based on a broad, systematic framework of ten concepts that describe the different types of technological knowledge and skills. It is important for students to understand and use these concepts, which can assist them to analyse and classify technological problems and to identify the most effective ways of solving those problems. (Ontario Ministry of Education, 1999, p. 4)

Broad-based technological education encourages students to use technology and/or adaptive technologies to accommodate literacy and numeracy weaknesses as well as the integration of technology into the regular routines of the classroom in a cooperative learning milieu. Additionally, broad-based technological education programs encourage students to mentor one another. From novice to expert, the goal is to transform learners' views of themselves and the learning process (Ontario Ministry of Education, 1999). The characteristics of broad-based technological education (Ontario Ministry of Education, 1999) include: integrated learning to link several subject areas; open-ended problem solving; the use of a particular process or group of techniques to solve problems; project-based learning; learning by doing; and using a student-centered format. These practices are identified in the literature (Hill, 2004; Reid & Romanoff, 1997; Ross & Hogaboam, 1996; Vaille, 1997) as positive teaching practices for at-risk learners. In addition to positive teaching practices, Hill (1998a, 2008) found that, when students used technological problem-solving to design and produce a prototype for a real-life context, they developed interpersonal skills and a stronger sense of self. In addition, Hill and Smith (1998) posit that technological education offers the educational system a means with which to expand traditionally-held values of school success toward a more inclusive and holistic definition of scholastic achievement. Reaching the holistic ideal of scholastic achievement includes not only the perspective of the educator, but that of the learner as

well. The student must become an active learner (Miller, Cassie, & Drake, 1990), to truly benefit from his or her educational experiences. To understand the students' perspectives on their learning experiences, educators must learn to hear the students' "creative voice within" (Miller et al., p. 67) to broaden traditional learning to include the complexities of one's being.

Student Perspective

In the literature examined for this study, few studies examine the learning experience from the at-risk learner's perspective. Student perspectives and the term "student voice" have been increasingly in the forefront of school reform literature. Neito (1994) argues that it is essential to listen to students' perspectives on school policy and practices, and that for the most part the students' voice has been largely unheard. Gaining insight into the student perspective provides clarity and a deeper understanding of the needs of at-risk learners. By listening to the voice of the at-risk student, researchers can examine more closely how to improve and facilitate school change (Mitra, 2003). Mitra and Frick (2004) argue that an important element is missing from the discussion of school reform; the question of ownership. Specifically, Mitra and Frick (2004) ask, Who gets to define what the problems of a school are? and Who has the power to improve them? They suggest those in education ask for student opinions, and listen to student voices. By integrating an understanding of the student experience into their teaching practice, educators can develop an appreciation for the unique knowledge and perspectives students possess about their schools and their learning experiences. In respect to the voice of the at-risk learner, Mitra and Frick (2004) suggest that school improvement is

positively affected by listening to student experiences, particularly the experiences of those who are alienated and struggling, such as at-risk learners. While the value of the student perspective is becoming more recognized, it is still the voice of teachers, educators, and administrators that inform school policy and practice. In response to the limited research in the area of learning from at-risk students' perspectives, perceptions of their learning, and policy developed based on the student voice, this study attempts to listen to the voices of four at-risk students who discuss their educational experiences. They describe their school experiences and talk about learning experiences they see as meaningful to their education.

Summary of Literature Review

This chapter serves to examine research concerned with at-risk learners, and secondary school strategies and educational practices intended to help serve these learners. Common sentiments shared by the authors in this literature review were that of compassion, sensitivity, and acceptance for at-risk learners. Studies showed that the characteristics of at-risk students are multifaceted, cumulative, and include both outside school and school-based factors. Aspects of complexity that frustrate the at-risk learners' school experience include factors such as family instability, poverty, poor health, skill deficiencies, and low self-esteem. As well, at-risk learners can be victims of substance, physical, sexual, and emotional abuse, or simply youth who feel they have no hope for the future. The literature revealed that becoming "at-risk" is often a side effect of changing family dynamics and resulting declines in socioeconomic status. Family instability is one of the key factors placing a child at-risk. Frymier (1990) pointed out

that along with the changing family comes confusion in one's role and responsibility in the family.

The literature indicated there is a stigma associated with children labeled at-risk. McDermott and Varenne (1995) stated that, in addition to this stigma, are the culturally constructed biases many at-risk learners face, which suggest that they are unable or unwilling to learn. Conrath (1994), Freeman and Hutchinson (1994), and Barr and Parrett (1995) cited the importance of the culture of the learning environment, emphasizing the need for a caring culture in schools where the leaner feels valued, supported, and cared for.

The literature indicated that pedagogical approaches, such as remediation and project-based, cooperative, and contextualized learning offer at-risk learners a chance to refine and hone new skills. Proponents of remediation Manning and Baruth (1995) advise that at-risk learners benefit most from remediation at an early age; however, the literature remains largely focused on the perspectives of educators and learning systems rather than those of the learners themselves. When learners' perspectives were explored, students identified pedagogical approaches such as open-ended problem solving, learning by doing, and relevant contextualized learning experiences (Hill & Smith, 1998, 2007) as engaging. In addition, students said that this enhanced engagement gives a sense of meaning toward their learning while developing social relationships (Lave & Wenger, 1990).

The literature also cited the importance of curricular approaches to engage and challenge at-risk students. Wiggins and McTighe (1998) referred to backward curriculum design-planning with the end in mind as a means with which to design and deliver

curriculum in a more confluent manner. Using reflection as a form of assessment, Boud and Walker (1993) assert that learners can validate the learning experience and appropriate it and make the learning experience their own. Building a cooperative learning community (Heywood, 1990) with a negotiated curriculum (Boomer, 1990) allows teachers to become sensitive to learner needs, and the learners to focus their attention on curricular tasks they find relevant to their lives.

The concept of finding relevance and meaning for at-risk learners is a sentiment expressed by much of the literature. Be it the experiential context of workplace curriculum (Sowell, 2005) or models of curriculum integration (Drake & Burns, 2004; Jacobs, 1989), the need for real-world, authentic approaches to curriculum delivery (Hill & Smith, 2007) remains at the forefront of curricular approaches for at-risk learners.

One such model explored in the literature was that of broad-based technological education curriculum. The Ontario Ministry of Education (1999) describes characteristics of broad-based technological education as: integrated learning to link several subject areas; open-ended problem solving; the use of a particular process or group of techniques to solve problems; project-based learning; learning by doing; and using a student-centered format. These characteristics encompass many of the characteristics identified in the literature.

In sum, throughout this literature review, a clear consensus among the authors emerged. At-risk learners are part of our educational system and have both in-school and out-of-school issues which affect their educational experiences. The authors highlight the need for accurate and early identification, system improvement, school reform, curriculum innovation, diverse pedagogy, and a wrap-around community/school based

approach when endeavoring to support the 30 percent (King, 2004) of our student population in Ontario identified as at-risk.

What remains unclear in much of the literature reviewed are the relationships between the various personal characteristics and school-based characteristics placing learners at risk. This omission begs the question; just what interventions and responses are schools using to effectively address these intersecting characteristics? In addition, specific pedagogical and curricular approaches have been cited as beneficial in assisting the at-risk student, at least from the perspective of the educator; however the confluent relationships between the at-risk child's personal risk characteristics, the school interventions, and his or her academic success remain largely unexplored. School strategies and educational practices are discussed in great detail; however, literature focusing on at-risk students' personal traits and their perspectives of, and experiences with, such interventions is limited.

Much of the research surrounding how educational strategies and practices affect at-risk students are derived principally from the perspectives of teachers, researchers, theorists, policy-makers, and standardized norms-based provincial educational assessments. To truly appreciate how the intersecting issues of in-school and out-of-school factors affect at-risk learners, it is this researcher's premise that further investigation into the complexities of the compounding variables at work in conjunction with the practices and interventions used by schools to address them must be considered more critically. To effectively examine this phenomenon, the individual perspectives of at-risk students who have experienced school-based systems, practices, and interventions must be analyzed and scrutinized to encourage further research and development of more

effective solutions to meet this growing population of students' needs. This thesis is one

such study. Next, chapter 3 provides the methodology and research method for this study.

CHAPTER 3:

METHODOLOGY

This chapter describes the methodological approach used in this study. Further, it describes the research setting, participant selection and description, data collection, and data analysis. The study was conducted using qualitative research methodology, specifically the case study method (McMillan, 2004; Yin, 2003). The case study method is recognized as a rigorous and thorough form of qualitative analysis. While the method may lack conventional scientific procedure, it compensates by providing a means for a rich analysis of context and detail (Yin, 2003). Case study research values specific, context-dependent findings (Flyvbjerg, 2006), and, as such, is not intended for generalization to other cases. The primary research method for this case study is qualitative semi-structured interviews (Bogdan & Biklen, 2006; Fontana & Frey, 2000). Using qualitative data from formal interviews in a case study orientation lends significance to this study in its intention to obtain "rich" data from the participants and to inductively distil their stories into meaningful themes. From these themes, understandings will develop giving rise to an increase in knowledge about the learning experiences of at-risk learners from their perspectives.

Setting

The setting of this case study was an alternative education program, the Axis Program[1] (Appendix A), located in a district learning centre for at-risk adolescents. Students are admitted to this program on a referral basis. Parents or guardians of

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[1] The Axis Program is a pseudonym for the alternative education program examined in this study.

identified students are consulted by high school administrators, and if the parents (or guardians) approve, the student is then referred to the program's placement committee.

The placement committee is made up of district secondary school administrators. Each child's case is reviewed, and placement is determined by the level of need demonstrated by the student's behaviour, in relation to the needs of other applicants. Referral to the Axis Program is determined through a review of:

1. Academic achievement: Early reports and report cards from elementary and secondary school are examined in conjunction with anecdotal notes submitted by teachers and support staff working with the referred student.

2. Problem in-school behaviours: These behaviours may include documented records of non-compliance, refusal to comply with adult requests, and a pattern of behaviour in violation of the school's and school board's codes of behaviour.

3. High-risk anti-social behaviour: The student's poor peer relationships and/or illegal activities, such as the use of illegal or illicit substances at school, are considered, along with Youth Criminal Justice records as a result of high-risk behaviour at school and/or in his or her community.

4. Non-attendance reports: Regular student absences are considered, especially those related to truancy, school-refusal, and school suspensions or limited expulsions. Such absences can be due to medical conditions, poor family supports, negative relationships at school, bullying, and physical violence or threats of physical violence against fellow students and/or staff.

The Axis Program uses the broad-based technology philosophical framework (Ontario Ministry of Education, 1999), a framework that focuses on activity-based,

project-driven approaches to learning. These approaches are intended to provide students with knowledge, skills, and experiences in broad-based technological disciplines and core curriculum subject disciplines to create a learning community that presents course content devoid of the constructed subject boundaries common to most secondary school courses. This curricular approach is a balance between what Drake and Burns (2004) identified as transdisciplinary and interdisciplinary curriculum integration. This approach results in a learning community that supports:

- a focus on interdisciplinary skills and concepts with essential understandings across disciplines;
- the conception of knowledge as interconnected and interdependent; and
- subject disciplines based on real-life contexts of importance to the student.

Subject integration in the Axis Program is strong. Here the teacher acts as a facilitator, is knowledgeable about numerous subject areas, teaches all subject area courses, and uses a curricular approach of subject integration to highlight connections across courses. All courses offered in this program are taught with a constructivist epistemology where knowledge is symbolically co-constructed by the participants (Hatch, 2002).

Participants

Adolescents attending the Axis Program range in age from 13 to 16 years. The gender ratio at the program is one female to every four males. Using purposeful sampling (Patton, 1990), the study focused on the experiences of four former students aged 16 to 18 who had transitioned from the Axis Program. This age criterion was intended to allow students an opportunity to participate in the study of their own accord, although parental

permission was required by the school board. The age criterion was relevant given that, at the time of the interviews, the province of Ontario had legislated that students must remain in school until the age of 18. As of December 20, 2006, all students under 18 years of age are required to be in attendance at school unless they have already graduated or are otherwise excused from attendance at school (Ontario Ministry of Education, 2007). This new legislation, known as *Bill 52-Learning to Age 18* (Ontario Ministry of Education, 2007)*,* has increased the early school leaving age by two years from 16 to 18 years of age.

Upon transitioning out of the Axis Program, students regularly, and by their own volition, request to stay in contact with program staff. Contact information including telephone numbers, email addresses, and home addresses are offered on the part of the students to ensure staff can reach them for a variety of reasons. Such reasons include: opportunities for employment, programming feedback, and volunteer opportunities. All participants in this study had at one time or another expressed a keen desire to "tell" their stories and talk about their school experience.

An initial list of potential participants included 27 former Axis Program students who had transitioned out of the program and who had voluntarily left their contact information with the centre. The criteria for participation in this study were as follows: the participant must have transitioned out of the program within one secondary school semester (5 months) of his or her interview; must be at least 16 years of age at the time of the interview; and have parental/guardian consent to participate in the study. Only eight potential participants fulfilled the criteria. Of these, two students had moved out of the province and contact was lost. Therefore, a total of six former students were invited to

participate in the study; four accepted and two others declined. The anticipated sample size of four key informants, or participants, was met and interviews were planned. A larger sample was not needed as this study did not attempt to generalize its results (Patton, 1990), but to thoroughly examine participants' insights about their experiences (Flyvbjerg, 2004). Interviews with the four key informants were conducted so they could tell their stories: their stories about themselves, their experiences in the Axis Program, and the effects of this setting on their development as young adults.

Near the end of each interview, key informants were asked to identify a supportive adult (a parent, guardian, teacher, educational assistant, coach mentor, social worker, probation officer, or any adult the student viewed as supportive). The intent was to identify and interview a supportive adult to offer further insight into each key informant's perspectives; to obtain descriptions of the curricular and pedagogical approaches used in the Axis Program, to describe how key informants engaged in their alternative educational environment, and to provide insight into what aspects of the program had the greatest effect on key informants' learning and their lives. Only two of the four key informants interviewed were able to identify a supportive adult in their lives. The fact that two others were unable to identify an adult considered supportive in their lives became particularly relevant as data analysis progressed. It also raised the immediate question, is lack of a supportive adult, or perhaps the lack of the key informants' ability to name a supportive adult, in some way related to their being at-risk? More telling perhaps, was that neither of the supportive adults identified by two of the key informants responded initially to phone messages left by the third party interviewer.

Finally, one of the identified supportive adults did respond but did not wish to

participate in the study. Fortunately, during their interviews, all four key informants identified an educational assistant (EA), also a child and youth worker (CYW), who worked with them while they were at the program. At the time of the interviews, the EA had just completed the second year of her non-contract placement at the program, and was not expecting to return. Support-staff working without a contract often have frequent changes in their work placements and rarely return to the same placement year after year. The EA expressed that she felt very fortunate to have had two years at the same placement. The fact that she enjoyed her work and had developed a rapport with program students may have also been the reason why all four key informants chose her to be the educator interviewee; they knew and trusted her.

Data Collection

Ethics clearance to proceed with this study was received from the Queen's University General Research Ethics Board in February 2008. In order to have my research approved by the overseeing school board – there were concerns about issues of power or bias - I was required to appoint a third party to act as interviewer for the study. The third party interviewer would contact and interview key informants. The school board suggested to me that I appoint an individual who had solid communication skills and an easy rapport with young people. I complied and approval for the request to conduct the research was granted by the governing school board in May 2008.

A graduate student was referred to me, whom I felt was perfect for the position. She was articulate, seemed kind, and clearly cared very deeply about education for marginalized children. We met and shared information about the aims of the study, and she agreed to assist me with the interviews. Unfortunately, just before she was to make

initial contact with potential key informants, she suffered a family tragedy and was unable to follow through with the interviews. Time was not on my side as I searched for another competent and caring interviewer.

I had been involved in a fundraiser for Multiple Sclerosis, and the woman who organized the event struck me as an ideal candidate. She was young, only 23, close enough in age to the participants that I felt they would comfortably open up to her. She had also worked as a volunteer with the Boys and Girls Club,[2] developing a program for at-risk female adolescents, and with Pathways,[3] as a group leader. I contacted her, and she agreed to act as the third party researcher and conduct the interviews on my behalf.

So, as requested by the school board, a third party interviewer was appointed to make contact with potential key informants and conduct the interviews. Potential key informants were contacted at home and work, in person, and by telephone (Appendix B). The third party interviewer explained to each of the four key informants that they were free to withdraw from the study at any time, and that during the interview they could choose not to answer any question that made them feel uncomfortable. The students, key informants, who agreed to participate, were given a Letter of Information (Appendix C), which outlined the research, and a Letter of Consent (Appendix D) to sign and return.

From initial contact with potential key informants in early May 2008 to the receipt of the last signed consent form at the end of June 2008, many strategies were employed to encourage and facilitate participation. Bus fare was provided for two of the key informants, and the third party interviewer made follow-up reminder phone calls to

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[2] Boys and Girls Club programs provide services to young people and families in high-need communities where many children are considered to be "at-risk."

[3] Pathways for Children and Youth is a mental health agency dedicated to strengthening and supporting the emotional well-being of children and families.

each of the key informants before each interview. On two occasions, one of the key informants arrived without a signed consent form. Hence, the interview was postponed twice. The third scheduled meeting was successful and the interview was completed. Each of the four key informants was interviewed once by June 30, 2008.

Based on my personal experience working with at-risk youth, I elected to conduct one in depth interview per key informant rather than several shorter interviews. My experience has shown that oftentimes multiple interviews are not always possible as many at-risk adolescents have fragmented lives. In the case of this study, key informants had a range of life issues that did not favour a multiple interview approach. Specifically, some key informants were homeless during the interview period, while others did not have access to transportation to and from the interview site. In addition to these logistical issues, my experience working with at-risk adolescents has taught me that many have a great deal of difficulty committing to a longer-term activity because of their fear of commitment and difficulty with responsibility to others.

The interviews took place at a local coffee shop near the Axis Program.The interviewer and key informants agreed on this setting, as it had been a popular and familiar gathering place for the students while attending the program. When the proprietor learned that the purpose of the educational research was to improve the school experiences for at-risk youth, he generously gave his permission to have the interviews conducted in his place of business and insisted on providing the participants with refreshments. The owner disclosed that he had been identified as an at-risk student and how he very much "wished someone would have asked" him about his school experiences. He was pleased to offer a neutral and quiet space, free from interruption, in

which to conduct the interviews. Interviews were individual, modeled on the key

informant interview approach (McMillan, 2004), and digitally recorded.

Melanie[4] was the first key informant to be interviewed. This interview took place

on June 10, 2008. She was in Grade 11 and had recently transitioned out of the Axis

Program. The second key informant, Kayla, arrived as planned for her interview, but had

forgotten to bring her signed consent form. The interview was rescheduled. She missed

this second meeting as well. Finally, 10 days after the initial attempt to set up an

interview, Kayla arrived for her interview. The interview took place on June 11, 2008.

Carly, a 16-year-old former student of the Axis Program, was also interviewed on June

11, 2008. The final interview was with Jackson on June 18, 2008.

All four key informants identified the same EA. On June 19, 2008, this EA was

given a Letter of Information (Appendix E) and a Letter of Consent (Appendix F) and

agreed to participate in the study.

Following the four key informant interviews, I held a debrief meeting with my

third party interviewer. The interviewer said she was surprised at how relaxed and well

spoken the participants were. She also told me that the participants did not seem to "fit

the mold" of at-risk adolescents. She said they were polite and thoughtful with their

responses, and that they appeared to genuinely care about their learning experiences; they

were, she felt, eager to share their perceptions. At one point during our debriefing, a tear

came to her eye when she was relating the responses of the key informants in respect to

naming a supportive adult for a follow-up interview: "Knowing that a child is at-risk is

one thing … hearing that they can't identify anyone, an adult they can count on, was

heartbreaking." Clearly the third party interviewer had an easy rapport with the youth, a

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[4] All names used are pseudonyms.

criterion suggested by the school board, and was touched by their stories. The request for a third party interviewer could have been potentially problematic. It was not in this regard, but it was in another way. As a teacher of at-risk youth, I knew that there was a certain potential for incomplete or fractured interview responses from the key informants, particularly if the third party interviewer was unknown to the participant. And this is exactly what occurred. Data transcription, carried out by this researcher, revealed that key informant data were very "thin" in comparison to that of the EA.

The final participant interviewed in the study was Autumn, the EA identified by each of the four key informants as the person to whom they could speak to about their experiences while they were in attendance at the Axis Program. Autumn was interviewed five times over a 2-day period by the third party interviewer. In the first interview on June 26, 2008 at 9:10 am, Autumn provided information about the Axis Program and her role when working with attending students. Four subsequent interviews approximately 60-75 minutes each in length were conducted, one for each key informant (transitioned student). The interviews about Melanie and Kayla were conducted on June 26, 2008. The interviews about Carly and Jackson were conducted on June 27, 2008 . Figure 1 displays a summary for the interviews and data collection.

THE

AXIS*

PROGRAM

an alternative
educational program
for
at-risk adolosecents

*AXIS is a pseudonym

Key Informants
1 interview each

MELANIE
06-10-2008

KAYLA
06-11-2008

CARLY
06-11-2008

JACKSON
06-18-2008

Third
party
Interviewer

DATA

5 EA Interviews

AUTUMN (EA)
06-26-2008

MELANIE
06-26-2008

KAYLA
06-26-2008

CARLY
06-27-2008

JACKSON
06-27-2008
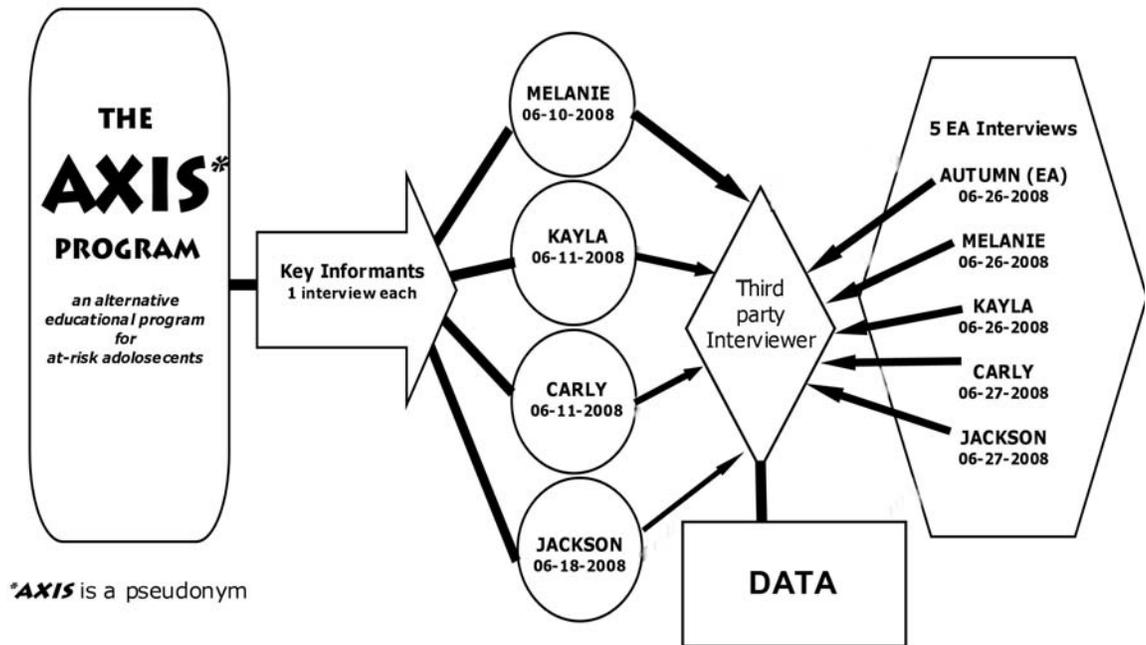
Figure 1. Interview and data collection summary.

In preparation for this study, my questions were formulated and informally tested

through a course assignment in one of my M. Ed. research courses. This informal trial

helped me to formulate and modify my interview questions for this study. I interviewed

students asking them unstructured and structured questions about their learning, their

school experiences, and how they felt the technological education course they were

taking affected their learning. Additionally, I interviewed a teacher who worked with

these students to gain a better understanding of how to structure the EA research

questions.

Interview questions for this study were in the form of an interview guide

(Appendices G and H). Semi-structured interviews were used to collect qualitative data

because they both guided interviews and allowed the respondents time and scope to talk about their learning experiences at the Axis Program. The objective of these semi-structured interviews was to understand the respondent's point of view rather than make generalisations about the Axis Program. Open-ended probes were used as suggested by the researcher ("Tell me about…"), and some arose naturally during the interview ("You said a moment ago…can you tell me more?"). During the trial conducted in my research course, it was shown to be crucial that the interviewer attempt to build a positive rapport with the participant. It was found that the more positive the rapport between the interviewer and the participant, the richer and more thoughtful the participants' responses became. In this study, the third party interviewer tried to build a rapport with the participants and approach the interview like a conversation rather than a question and answer quiz.

Each interview began with a brief description of the research topic and the reasons for it. Participants were told that their perspectives and opinions mattered to the researcher. This introduction served several purposes. First, it allowed for a "warm-up" period where the interviewer tried to build rapport with the participant. Based on my trial, I knew this connection was essential if the interviewer was to gather the participant's thoughts and understandings (Fontana & Frey, 2000). Second, participants listened to a reading by the interviewer of my description of the study to better understand what the project was about, its focus, and its language. According to Fontana and Frey (2000), "the use of language, particularly the use of specific terms, is important in the creation of 'shared meanings' in which both interviewer and [participant] understand the contextual nature of specific referents" (p. 660). Questions and prompts had been prepared in the

form of an interview guide. However, the interviewer was encouraged by the researcher to not only ask the prepared questions (Appendices G and H), but also questions that occurred to her during interviews. The wording of questions was not necessarily the same for all respondents, but the topics of interest and underlying themes of the questions were. The semi-structured interview allowed the participants to talk freely about issues because the predetermined questions were not intended to constrain their responses (Bogdan & Biklen, 2006; Fontana & Frey, 2000).

Key informant interviews were semi-structured, digitally audio-taped, and were between 30 and 65 minutes in length. In order to lessen the potential for bias (McMillan, 2004), a second set of five interviews was conducted with the EA identified by the key informants. Each of these five interviews also was semi-structured and digitally recorded. Each lasted between 60 and 75 minutes in length. The data collected during these interviews assisted with the exploration of relationships (McMillan, 2004) between the data obtained from the key informants' responses and the EA's responses. EA interviews also provided data to support convergent evidence of factors affecting the transitioned participants' learning experiences.

<center>Data Analysis</center>

The digital audio-taped interviews were transcribed verbatim by this researcher. The digital audio recording of each interview was imported into the NVivo 8 Research Software program. The NVivo 8 software allowed me to import, sort, and analyze my audio files and my transcriptions of each interview. Using the NVivo computer software allowed me to work with or without my transcriptions; to analyze data straight from audio files to grasp the tone and cadence of each interview. As I was not permitted, due

<center>49</center>

to ethical concerns of the school board, to conduct the individual interviews myself, the digital audio recordings were critical to my development of inferences and understandings of the non-verbal communication within the interviews. I coded all nine interviews; one from each of the four student participants (key informants) and five from Autumn, the EA. Coding was very efficient using this computer program.

Initially, the interview data were coded and organized into themes and categories. First a series of categories was identified based on frequency of occurrence in the interview data. These categories were then grouped into themes based on the literature review as well as common traits that emerged from the interview data. I then re-organized the data into themes and categories to explore connections and relationships between key informant interviews and the EA's interviews. As I worked with the data in this way, determining emergent and research-based themes and categories with the collapsed student and EA data, it became clear to me, my supervisor, and my committee member that the voice of the at-risk learner was getting lost in two ways. First, there was more EA data than key informant data in the themes and categories. Second, the themes and categories fragmented the key informant voices. It was pointed out to me by my committee that my goal was to "tell the stories" of four at-risk students, to "hear their voices" and to recommend changes based on the perspectives of these individuals. Therefore, I once again re-organized the data, and reconceptualised the approach to reporting and analyzing the data.

Key informant data were organized into case files for each participant: Melanie, Kayla, Carly, and Jackson. This approach to data organisation for key informants facilitated the conceptual approach I chose for reporting findings; a section each for

Melanie, Kayla, Carly, and Jackson's individual stories. In this way, their voices are highlighted and can be "heard" by the reader. Themes, common and discrete, were identified for each case. These themes guided how the researcher told each story.

A different approach to data organisation was used for EA data. Data analysis involved summarizing the data into themes and categories identified in the literature, using procedures recommended by McMillan (2004) and Schram (2003). I chose to code key words, phrases, and events that stood out. I analyzed the coded data to look for semantic or meaningful relationships within the themes and the categories for each theme. The process of coding was intended to make the data more accessible. "Classifying and coding qualitative data produces a framework for organizing and describing what has been collected during field work" (Patton, 1990, p. 465).

Next, chapter 4 presents the four key informants' stories, and findings from interviews with the EA.

CHAPTER 4

FINDINGS

Guided by my research purpose, to give a voice to at-risk learners and those who

support them, I have organized this chapter into two main sections. The first section,

Voices of At-Risk Learners, tells the individual stories of four at-risk students, or key

informants, who had participated in the Axis Program. The decision to report students'

stories from their own perspectives evolved from what Mitra (2003) described as the

need to listen to the voice of the at-risk student as means through which to facilitate

school change. Using an interpretive approach (Kagan & Kagen, 1990), this section

reports the experiences of the four at-risk students, or key informants in this study:

Melanie, Kayla, Carly, and Jackson. Each story is organized into sections that correspond

to themes that emerged from the data, the literature, and categories that evolved for each

theme. In this section, the key informants' stories inform the findings; for the most part

findings are based on key informants' data, but where data is "thin" or the depth of the

response from the key informant was lacking in the form of text, researcher interpretation

of expression in the oral data were also used, as were the EA's observations. In some

cases, reporting of findings were related to existent literature with the goal of offering an

enhanced and broadened interpretation. The second section, The Axis Learning

Community: An Educator's Perceptions, explores the learning experiences of these four

at-risk students from the perspective of an Educational Assistant (EA) who was identified

by the key informants in their interviews. This second section is organized into three

subsections: (a) Insights, an EA's perceptions of four at-risk learners; (b) The Learning

Community, a description of the Axis Program; and (c) Pedagogical and Curricular

Approaches, the EA's perspective of educational practices in the Axis Program. These

subsections are based on themes identified in the literature, and categories related to each

theme.

Prior to interviews, key informants chose pseudonyms for purposes of

confidentiality. These pseudonyms are used in chapters 3, 4, and 5. When quotations

from interview data are used in this chapter, the data are identified by the participant's

pseudonym, and the line number(s) of the transcribed interview. Thus, a reference to

Melanie with the attached information "Melanie.40-63", indicates an interview with the

key informant pseudo-named Melanie with the quotation being found in lines 40 to 63 of

her transcribed interview. (see Appendix I for a partial transcript for key informant,

Melanie). For the case of EA interviews, the data is identified by the EA's pseudonym,

Autumn, the key informant's pseudonym, and the line number(s) of the transcribed

interview. Thus, a reference to Autumn with the attached information, "Autumn/Melanie.

55-60" indicates an interview with the EA, Autumn, who was interviewed about the key

informant Melanie with the quotation being found on lines 55-60 of that interview (see

Appendix J for a partial transcript for EA, Autumn). Author comments or clarifications of

student comments appear within brackets of quotations.

Voices of At-Risk Youth

At-risk can mean a number of things as explained in the literature review in

chapter 2. In this chapter, the term at-risk refers specifically to the four key informants

you, the reader, are about to meet through their stories. Each of the four attended the Axis

Program to develop skills and strategies to cope with the challenges in their lives. As the interviews show, these learners cared very deeply about their learning, and all were considered "capable" students upon referral.

As the literature indicates, there is often a stigma associated with learners being labeled at-risk. For many students an at-risk identification may contribute to how they view themselves and how others view them as learners and members of the learning community (Freeman & Hutchinson, 1994). There are widespread misconceptions about at-risk learners, including the perception that these students can't learn, don't want to learn, and don't like learning (Riley & Rustique-Forrester, 2002). Low-self esteem and low self-image as a learner can act as a self-fulfilling prophecy for many at-risk students, and, as they age, they become further disaffected and alienated from the school experience (Begin et al., 1994). The key informants in this study were chronic non-attenders, disenfranchised from the school experience, and struggling with personal issues and addictions. Data from their interviews revealed that a variety of characteristics, circumstances, and, in most cases, cumulative effects of these combined factors, led to their at-risk identification and subsequent referral and placement in the Axis Program. Upon referral from their high school administration, contact was made with the students and their parent/guardians to facilitate entry into the Axis Program. In the case of the key informants who participated in this study, all were reluctant to accept the idea of a special program placement. Also, as in the case of these key informants and many others who have attended the Axis Program, the provincial court for Youth Criminal Justice had initiated court orders requiring them to attend some sort of educational placement or face additional youth justice charges; most opted to try the Axis Program (for a full

description of the Axis Program, see Appendix A). As the perceptions of these key informants unfold, what is noteworthy is that many common misconceptions are just that, mistaken beliefs or misunderstandings around how at-risk students feel about, engage in, and connect with their learning. We must all ask, "What do their voices teach us?"

Melanie's Story

Based on one interview with Melanie, four themes emerged that together provided a coherent, thoughtful, and concise description of her perceptions of the Axis Program experience and its effects on her as a learner: (a) the classroom community, (b) contextualized learning, (c) self-directed learning, and (d) outcomes.

At the time of the interview Melanie was 16 years old. She attended the program for four semesters from Grade 9 to the end of Grade 10. Melanie had recently moved in with her boyfriend's family because she said her family's house was too crowded with her other siblings. Melanie's parents were divorced, and she had 14 brothers and sisters. Six of these siblings, all under the age of 15, lived in her mother's home. Her mother was the sole provider for her children and received social assistance to help cover costs when the wages from her job at a local department store could not make ends meet. Melanie was planning on going to Calgary to visit her father and other siblings for the summer of 2008 and was working full-time to pay her way. However, at the same time, she had to pay to stay at her boyfriend's home and was not sure she would be able to afford the bus fare to Calgary. Before meeting her boyfriend, Melanie had not used drugs and was not sexually active. Shortly after moving in with his family she was using alcohol, marijuana,

and ecstasy[11] regularly. At the time of the interview, Melanie was planning on returning to her regular high school in September 2008.

Melanie expressed frustration at not being able to cope with the pressures and stress associated with daily life. Growing up in a large family should have been a safeguard for Melanie; however, her family life was fragmented, as were her relationships with significant adults. She grew up living with her maternal grandmother and her biological father on and off for the first 12 years of her life. When she was 13 years old, she moved with her father to Calgary, Alberta and began middle school there. Later that year Melanie's mother also moved back to Calgary, but was placed in a drug rehabilitation program (rehab) to deal with her heroin addiction. Ten half and full brothers and sisters resided with her in her father's modest home, two lived on their own, while the two youngest boys resided in a provincially run foster home. Her father was an alcoholic who had been in and out of treatment, but still maintained a family home for his children. All of the children in Melanie's family had been placed in foster care at one time or another and were monitored regularly to manage differing crises as they arose. When she turned 14, Melanie chose to move back to Ontario to live with her maternal grandmother. Melanie began high school but found that she had difficulties adjusting to her new life in Ontario:

> [I] didn't really do my work and I rather just fooled around and do what ever I wanted. [W]ell kind of failed, well it's not that I failed a grade, but they held me back. I didn't have the credits, so it was boring, 'cause I already learned all of it. I got suspended a lot, expelled, got to do a grade over again, and I didn't really think I should have. (Melanie.15-19)

Children and adolescents require fundamental supports to be successful in school, such as healthy food, a safe and supportive home, and adults they can turn to for help

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[11] Methylenedioxymethamphetamine, a psychedelic drug sold under the street name "ecstasy."

(Frymier, 1992). While Melanie did not identify a specific problem or issue within her family life, when asked to reflect on it, Melanie said, "[I] just kind of jumped from house to house. So it was kind of like, if I wanted to go to school, I had to do it all on my own and be my own support" (Melanie.163-164).

The classroom community. In her interview, Melanie described a caring and supportive classroom culture as an important element for her learning in the Axis Program. The importance of this type of classroom culture is found as well in the literature, as a "culture of care" (Conrath, 1994), and "caring in practice" (Noddings. 1999). Melanie described the Axis Program classroom as different from conventional schooling she had experienced, and perhaps this is what Melanie meant by supportive and caring. She described teaching strategies that were important to her success as a student:

> There's more one-on-one with the teacher and it wasn't so fast paced where like, it was more slow and steady and it just worked a lot better for me. I don't know, before was like school was boring and I didn't want to do it, and like now it's like I actually want to go to school and like get my Grade 12. (Melanie.35-36)

Melanie said that she felt the smaller class size gave her more one-on-one time with the teacher, and this individualization helped her build confidence as a learner. It also built a culture of care which helped Melanie build her self-esteem, self-confidence, and internal sense of responsibility:

> [W]ith classrooms, there are a lot more people and it's a lot harder to pay attention, where as [this] class, there's less people and it's like [the educator] has more patience with you, where other teachers like 20 kids and they can't pay attention to just you. [M]y confidence was way better and it was like, yeah I really wanted to go to school I didn't want to sit at home like I normally would. (Melanie.75-76)

In interviews, the EA described a flexible classroom schedule as one of the principal features of the Axis Program. The classroom schedule allowed the program

staff to meet the needs of the students as they arose, but also offered a varied pace of

instruction that key informants said helped them learn. Melanie described how she

preferred the "slow and steady" (Melanie.36) pace of the program day, which she felt

helped her in her learning.

According to the EA, the classroom community at the program stressed

acceptance and tolerance as building blocks for a healthy learning environment. Melanie

explained how her views about herself and others changed as a result of her experiences

in the program:

> Probably that I'm not so like, I don't judge people before I know them anymore,
> now I actually get to know them. Then if I don't like them I can say you know,
> and I dunno, I'm a lot more tolerant with people. I have more patience with a lot
> of other people, and different kinds of people. And for me it's just, I have more
> patience with myself and I understand myself a lot more. (Melanie.111-114)

Melanie expressed the caring culture and supportive learning environment as primary

factors in helping her be successful in her learning. She said that being able to explore her

own strengths in a supportive classroom culture helped her understand that to work at the

best of her ability, she needed to dedicate time to school work: "I was more patient, and I

learnt better and whatever. I took more time on what I did" (Melanie.29-30).

Contextualized learning. Learning in context, that is, learning about concepts and

issues of real concern, is paramount for the at-risk learner. Melanie discussed how

making a real-life application to math helped her understand it better. She said:

> [The teacher] would take like real-life experiences in like with math. I can count
> money, so she'd like do it as money, so it was a lot easier. I don't know, she was
> more one-on-one, and she like actually sat there and like paid attention to you and
> helped you out." (Melanie.68-69)

Melanie mentioned that being able to work with her own strengths and competencies helped to create an enjoyable learning atmosphere: "They showed that like, school can be fun and like you just have to make it the way you want it" (Melanie.131).

Learning in the context of the workplace also helped Melanie earn Ontario Secondary School Diploma (OSSD) credits. A broad-based technology (BBT) placement in the hospitality and tourism industry allowed Melanie to use the interpersonal and academic skills she developed at the program in a real-world context of the workplace. She gained confidence in her ability to enter the world of work at large and help others. "English is my big thing that I like and I'm good at it. And that kind of made me want to go into being a social worker. Also working with the different types of kids at the learning centre" (Melanie.106-108).

Self-directed learning. Melanie described how working on remedial and correspondence work allowed her to "catch up" on some curriculum she had missed. The idea that she could set her own pace and regulate her own learning was appealing to Melanie. Manning and Baruth (1995) cite remediation as a valuable curriculum option for at-risk learners, but it was the ability to self-select the pace of instruction that worked for Melanie. "It was like correspondence, I was allowed to take it home and work on it at my own pace and it was just a lot easier for me 'cause it wasn't like a date that I had to bring it in and it all had to be done" (Melanie.91). Melanie also felt that working toward her OSSD through self-directed study was a worthwhile effort and worked hard to recover all of her Grade 9 credits in one semester. She said she was proud of "[g]etting, like, a lot of credits in such a short amount of time. I did, like, my Grade 9 year in a semester" (Melanie.87).

Outcomes. Melanie described her feelings about school, what she perceived as her

academic strength, and how her experiences in the Axis Program motivated her to want

to become a social worker:

> I like going to school now, and there are still days where obviously 'ahhh,
> school,' but for the most part I like going to school and working. English is my
> big thing that I like and I'm good at it. I was more patient, and I learnt better and
> whatever. I took more time on what I did. And that kind of made me want to go
> into being a social worker. Also working with the different types of kids at the
> [program]. (Melanie.119-123)

When asked where she thought she would be had she not participated in the

program, Melanie said she did not think that she would have been on the same

educational path: "I probably still would've been in Grade 9, and with no credits and not

even been in school, probably been a drop out by now" (Melanie.127).

To understand what effect participation in the Axis Program had for Melanie, she

was asked what advice she would give to a friend who had been referred to the program.

Melanie said she would suggest the friend be accepting and tolerant of others, and

explained what the learning experience was like for her at the program:

> I'd go in and honestly like not judge people that are there, because some of them
> will look weird to you or whatever, but all the kids I've met are great so…I don't
> know, I would just go in with a positive attitude and see where things take you.
> Just that it was great; it was a great experience for me. I got to do; I got a whole
> bunch of marks that I didn't think I'd ever get. Umm, I got to meet a bunch of
> people that I didn't think I'd ever get along with. And the strategies that they used
> – they were more one-on-one for kids. It's not all book work, it's actually hands-
> on and it's a lot easier to learn like that, for most kids anyways. And I just thought
> it was a great program, at least for me. (Melanie.137-144)

Kayla's Story

Based on the transcript of one interview with Kayla, four themes emerged that

jointly provided an account of her perceptions of the Axis Program and how it impacted

her as a learner: (a) the classroom community, (b) contextualized learning, (c) self-directed learning, and (d) outcomes.

At the time of the interview, Kayla was 17 years old. She had attended the Axis Program for six semesters from Grade 9 to Grade 11. Kayla lived with her 23-year-old brother in a small subsidized housing flat near the program. She moved in with her brother in February 2008 after she had been arrested. Kayla's mother was not able to cope with Kayla's behaviour and would not let her move back home. At the time, Kayla also had addictions to marijuana and alcohol. Her biological father died from a drug overdose, and she had struggled with her relationship with her mother since then. Kayla's mother and brother were also substance users. Kayla had been involved with Youth Criminal Justice from the age of 13 and had been "clean"[12] since March 2008. During the interview, Kayla revealed that she was 12 weeks pregnant. She told the interviewer that she was expecting a baby girl in December 2008 and had hoped to complete her OSSD requirements at a district learning centre before giving birth.

Kayla was only 10 years old when she found her father overdosed on the kitchen floor of her parents' subsidized housing apartment. She recalls that her older brother, who was 16 at the time, had just been suspended from school that day and was home when it happened but unable to help. This experience alone would be enough to be of concern for Kayla's well being; however, there were other complications that led to her life circumstances that were in addition to the death of her beloved father. Kayla's mother drank alcohol and smoked tobacco when she was pregnant with all of her children. Both of Kayla's brothers had severe behavioural disorders, and both had been unsuccessful in

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[12] Drug and alcohol free

completing their school careers. All members of Kayla's family had been involved to varying degrees with the legal system, as perpetrators and victims of violence.

The at-risk identification came early in Kayla's life. In Grade 1 she was identified as having high needs - behaviourally, socially, and emotionally. Her anti-social behaviour began in Grade 3 when she engaged in regular bullying of her siblings and peers. Kayla was arrested at her Grade 8 graduation for being under the influence, fighting, and assaulting a staff member and the arresting officer. A culture of violence was the norm for Kayla. She did not feel her family life was one of hardship in terms of how she coped with life and school in general. She felt that what created issues for her in her school and personal life was the result of "[j]ust a whole bunch of everything" (Kayla.120). These responses suggest that chaos and crisis were in fact a regular way of life for Kayla, and, as such, she saw her family life as "normal."

The complex issue of child poverty was not addressed formally in key informant interviews; however, Kayla's interview illustrates how poverty may have been instrumental in becoming an at-risk student. From the time Kayla was 13 years old (when she began Grade 8), she had worked full-time to support her family financially. The added pressure of not having an economically stable home with adequate income to support the family created extended hardships for Kayla. While more economically stable peers were free to engage in the school community and develop social ties, Kayla's elementary school day ended with another 8 hours of work washing dishes rather than with peers where she would have normally learned the complex social skills and life lessons needed to be a happy, healthy adult later in life. In the literature, Steinberg et al. (1996) note this importance of informal interaction with school peers for later adult life.

Kayla's social and emotional deficits were revealed in Grade 9 when the anxieties of not fitting into the complex social system of school led to Kayla's referral to the Axis Program.

The classroom community. Kayla discussed her school experiences prior to the Axis Program, summing up her thoughts about school by saying, "I've just never liked school, until I came here. I just wasn't interested in it" (Kayla. 67-68). While she was unable to clearly articulate exactly what it was about the program that she found beneficial, when asked what the main differences between her old school placement and the program placement were, Kayla said, "[j]ust working at your own pace in a smaller class" (Kayla.72).

Contextualized learning. Kayla also remembered learning math in context, saying much of the real-life math she needed for her job as a night manager at a sandwich shop was learned at the program. She believed that the math skills she developed at the program were similar to those she needed in her workplace. She explained: "The measuring, and learning about fractions, and also learning about purchasing those things and supplies. So we did a lot of like money and monetary arrangements" (Kayla.274-275). By building transferable skills in an authentic way, and in a real-world context, Kayla felt her learning was relevant and meaningful to her life situation. The literature (Hill & Smith, 2007) indicates that authentic, real-world contexts are important to student learning, and data from Kayla's interview confirm this. As a student, she enjoyed learning situations that were in context. When asked what she enjoyed about the program, she said she enjoyed hands-on learning and learning collaboratively with her peers. "[H]ere you get to learn hands-on and at your own pace" (Kayla.55). This data from

Kayla's interview is consistent with findings of McPhail and Freeman (2005) who

identified these aspects of a learning environment as important. These authentic,

contextualized pedagogical approaches helped Kayla complete several OSSD credit

courses. Kayla discussed that, if she had not had the opportunity to gain OSSD credits

through her hospitality and tourism work placement at a local sandwich shop, she would

not have been able to accomplish as much as she did. "I probably wouldn't be as far as I

am now" (Kayla.107). She also stated that, without the work placement, she would not

have been able to find employment, a primary need for Kayla. "I probably… I don't think

I would even have a job" (Kayla.111).

Self-directed learning. One of the primary and essential pedagogical approaches

currently used to support at-risk students in Ontario schools involves the common

instructional practice of remediation through Independent Learning Credits (ILC's)

(Ontario Ministry of Education & O'Conner, 2003). EA interview data indicated that the

Axis Program used this self-directed pedagogical approach. Kayla said that it allowed her

to vary the pace of instruction around her busy out-of-school life, and described her

experience with it as flexible and supported, with assistance when needed:

> [I] just like[d] correspondence work. So that like, it was all at your own pace. You
> got to work on it at your own level. So, but in a normal classroom or a different
> school, if I were to do correspondence I'd have to take it home and I wouldn't get
> any help on it. You get the help that you need at [the program]. (Kayla.88-92)

Outcomes. While at the Axis Program, students earn OSSD graduation credits as

required by the Ontario Ministry of Education. The students' home school guidance

departments work closely with the program to design individual academic programs that

enable students to work toward graduation requirements. When asked what

accomplishment she was most proud of, Kayla said, "Getting all the credits that I've

gotten" (Kayla.77). Kayla also described her plans to complete secondary school and pursue a college education. "My goal was really just to come to school and get credits to go to college. Probably take a little, a couple years or a year off. Behavioural Science is a course that I was looking into" (Kayla.156-158). When asked if she thought she would have stayed in school, she said, "Probably not" (Kayla.109). She concluded, that she would tell other students about the program and "It [the Axis Program] is a good learning experience" (Kayla.169).

Carly's Story

Based on the transcript of one interview with Carly, four themes emerged that together provided an honest, articulate, and reflective description of her perceptions of the Axis Program experience and its effects on her as a learner: (a) the classroom community, (b) broad-based technologies, (c) differentiated instruction, and (d) outcomes.

Carly had been in the program for two semesters – semester 2 of Grade 9 and semester 1 of Grade 10. At the time of the interview, she had been re-enrolled for semester 2 at her previous high school but stated that she had not been as successful as she had hoped. Carly's parents never married, and she never met her biological father. For most of Carly's elementary years, she lived with her mother, her little brother, and her grandmother in her grandmother's home. At the start of Grade 9, Carly's mother met a new boyfriend and moved in with him. Carly tried to stay at her grandmother's but could not adjust to her mother not being there. In the middle of Grade 9, just after starting the program, Carly moved back in with her mother, her little brother, and her mother's new boyfriend. All went well for a few weeks until Carly's mother told her she was

expecting another baby. Carly did not cope well with this news and began seeing

regularly the Child Youth Worker (CYW) at her high school. Children's services had

been involved with Carly's family on and off for several years, and now Carly decided

she wanted to go into foster care. This plan did not work out well for Carly. Therefore,

for most of Grades 9 and 10, she lived here and there, sleeping on friends' couches, in

cars, and on living room floors. She also spent several nights in a dumpster to stay warm

when she could not find anywhere else to go. Carly had substance use issues; she drank,

smoked marijuana, and used ecstasy regularly. At the time of the interview, Carly was

looking for a new job and planning on returning to school in September 2008.

Typical of many adolescents considered at-risk, Carly struggled with the daily

demands of teenage life and had been involved in some illegal activity. She was

frequently truant and often "skipped" her classes. When Carly was referred to the Axis

Program, her mother expressed great relief that she would be able to get some support for

Carly. Carly, however, had difficulties accepting her at-risk identification, feeling she

was coping with things on her own. She did seek counselling, but said she often only

went to the CYW's office at her school to get out of classes. Carly said, "I just skipped.

Skipping was like a drug, and it was my addiction" (Carly.81). This addiction was

invariably not the one that prompted Carly's final placement; she was suspended for

being under the influence of marijuana, and her referral to the Axis Program was fast-

tracked.

When asked how she felt about her school experiences before coming to the Axis

Program, Carly expressed disappointment with her prior learning environment. "I

couldn't work in a large class with everybody and I have to like, work at my own pace. So the principal sent me to [the Axis Program]" (Carly.51-52).

The classroom community. An enjoyable and supportive learning experience should go hand-in-hand with a supportive personal life; The EA articulated that Carly craved such stability. She delighted in the program being enjoyable and supportive. Carly said, "Just like I said, the atmosphere. It was always happy-go-lucky so. Like it's not just a classroom it's a place. [B]asically it just lifts your spirit" (Carly.208-210). For Carly, the small class size was an important element to her sense of "place". Students who attended the Axis Program experienced class sizes of a maximum of 8 students. The student to staff ratio of 4 to 1 allowed for substantial behavioural and academic support for Carly. She described the smaller class size as a protective factor. She felt that program staff could better ensure the safety of the students, "[be]cause it's a fairly small classroom and you can tell when everything's going on, and what's going on" (Carly.328).

Although the program was located in a free standing portable 40 feet by 25 feet in size, just off school property, Carly said students felt like it was "not just a classroom, it's a place" (Carly.269), a place of their own. This sense of belonging (Freeman & Hutchinson, 1994) may have been influenced by the physical arrangement of the classroom, as suggested by Newell (2003). Carly described the layout of the class as a place where learning was more relaxed and easier. She described the program classroom as homey, comfortable, and less intimidating than a regular classroom setting:

> It basically sounds like you're living at home. There's already a kitchen. There are several places you can hang out. There's couches and stuff like that. So. And if you don't want to sit on the couch you can type it up on the computer. Sort of deal. Sometimes I get nervous about meeting new people. They're [the other Axis Program students] all pretty good. Some of them are a little bit different. (Carly.321-328)

For at-risk students, the learning community's culture must be a supportive one (Barr & Parrett, 1995), emphasizing both social and academic needs, while connecting social and academic responsibility. Carly said being able to talk about her problems was one of the things she valued most in the program. "It's just talking to people about things, like you have someone to talk to. And it helps to have someone to talk to. It's just basically that" (Carly.297-299). Having this type of support, also identified in the literature as important (Conrath, 1994), offered Carly a classroom community as a place where she felt cared about and was encouraged to care about others.

Broad-based technologies. Students who participate in a project-based learning environment, such as that found in broad-based technological education, tend to show increased self-confidence, creativity, self-esteem, and overall motivation to learn (Hill & Smith, 1998).When asked about what types of learning activities she engaged in at the program, Carly described an experience she had with a broad-based technology (BBT) project:

> [T]here's a music credit [Communications technology] that I had to do, which wasn't actually like playing an instrument or anything, it was creating like music beats type deal, which I enjoyed doing. It was just, went online and found some different beats and strung them all together. Whatever you call it. I can't remember what it's called. So you add it all together and make a sound. (Carly.136-138)

Carly also discussed how trying-out different broad-based technologies (BBTs) gave her more confidence to pursue her interests and a desire to stay in school to learn new skills in different subject disciplines:

> Well, with the Auto [Transportation technology], for a while now I've always had an infatuation with like, putting together cars like you know the little model cars? I used to always want to do that. Like I still wanna do one. When I had my meeting at [the educational placement], she [the business owner] gave me a

couple options, it was some motorcycle I could do work on, it was cars, it was anything. So it was just what I liked.

At-risk learners often possess a specific learning style that is not always cohesive with the Socratic orientation of a traditional classroom. Carly spoke to the benefits of learning real-world skills through a BBT work placement:

Cause it's a job placement. You're not really gonna need half the crap you learn in school. But when you're in that job placement you're learning what you need to do, instead of history which you're not really gonna need. (Carly.40-41)

When asked if she was interested in trying another BBT course, Carly said that, based on her past experiences, she would like to try another BBT course, "Just from that experience but, right now I'm not quite sure. Um, I have a little knack for photography. Which I might just take a class for; to find out if I like it or not" (Carly.193-201).

The BBT curriculum with its project-based approach provided Carly with a creative, real-life approach to learning that was meaningful and relevant (Hill & Smith, 1998), offering her multiple opportunities to demonstrate her learning.

Differentiated instruction. Interview data from EA interviews indicated that the interdisciplinary curriculum model (Drake & Burns, 2004; Jacobs, 1989) used at the Axis Program allowed learners to negotiate curriculum (Boomer, 1990) with their teacher. Students determined what they would learn, and how they would achieve course expectations and demonstrate their learning. Carly, a self-described auditory learner, said, "you get to choose, you get to choose what skills you want to learn, and you get to choose how you want to learn them" (Carly.44). In addition, Carly tried to articulate just how the program educators went about creating the negotiated curriculum and developing opportunities for her to explore and use her preferred way of learning. "Everybody

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already does have different needs. So it really doesn't matter. That fact is ... they [the educators] take different – I don't know how to say it … [approaches]" (Carly.311-314).

Hunter and Park (2005) support this negotiated curriculum model as a more relevant and meaningful approach to learning. When curriculum is negotiated through dialogue and the active "making" of knowledge, students develop an ability to distinguish and develop their own understandings, as opposed to passively receiving information (Hunter & Park, 2005). Negotiated curriculum provides students with an opportunity to communicate with their teachers and peers to develop more sophisticated social, academic, and communication skills. With these improved interpersonal and communication skills from the negotiated curriculum experience, Carly felt empowered as the agent of her own success, and the literature deems this important for student learning (Shumer, 2001). Carly recalled her learning experiences at the Axis Program as "fun" (Carly.70). When attention was paid to her learning styles and strengths, and she was provided the opportunity to help decide how she would learn things, Carly felt more at ease and had fun with her learning. The use of differentiated instruction based on Carly's personal learning style suggested that she developed the ability to self-evaluate how she learned best. EA data indicated that evaluation and problem-solving were nurtured in the program through the Technological Process, and that students appeared to transfer these abilities to improve their lives.

Outcomes. Carly discussed how working toward the program's objectives helped her set her sights on the larger goal of getting her high school diploma:

> I'm more willing to try new things than before. Before it was, no I'm doing it. It's my way or nothing at all. Now I'm just ready to go try things. So that's why I can try a few new things right now and figure out a different way to get my high school diploma. (Carly.187-191)

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Carly was also very optimistic about her plans for her education and her life in general. However, she described how going back to high school after she left the program did not work out the way she had expected. She said she struggled with Grade 10 and continued skipping classes at her high school and at her cooperative education placement:

> Like after I got out of there, my Grade 10's gone down the drain. Basically 'cause like, I've basically failed it. 'Cause I was always skipping. I got co-op and then I skipped that. Then now I'm going to school as correspondence. So I don't know. (Carly.243-247)

Although Carly's educational track was not going as she had expected when interviewed, her optimism shone through when she discussed her life choices and outlook on life:

> My biggest accomplishment was probably just my life. Like the way I look at it. There's this thing that you look at the glass. And the glass has water in it, and it's half full or half empty, so it's all about the way you look at life. More fun and just love life. That's been good for me. Half full! (Carly.236-241)

Carly did not attribute her positive outlook to the Axis Program experience. When asked what effect participation in the program had on her life, she revealed that she felt it had had a marginal effect. However, Carly revealed some positive personal changes had occurred in her life while she was in the Axis Program and these remained in place at the time of her interview:

> It was personal, definitely quitting drugs. Cause I used to be somewhat hard into it and then it got harder so I quit. 'Cause I was going like, too far so I quit. I quit doing drugs. That's it mainly, mainly because it just, a different way to think about life, then sitting there smoking dope all day. So it's just different. [T]here was a small influence. With people telling me, oh it's bad you gotta stop doing that [using drugs]. [The teacher] and I would talk sometimes about it. Stuff like that, so it was just help, you know. (Carly.213-221)

When asked what she would tell a peer who had been referred to the Axis Program, Carly, who felt the effects of the program for her were marginal, had some sage advice to share:

First off I'd tell them to go there. Second off it's a good place, and thirdly I'd tell them it's something that helps a lot. Basically, working on whatever parts you need to do. It's just…simple. But still complex at the same time. Maybe some don't realize that [i]f they don't understand a subject then they get help. That's it. (Carly.302-307)

Overall, Carly said she was pleased with her academic achievement while at the Axis Program. She described how she was able to accumulate one and a half credits beyond the eight usually achieved in a regular Grade 9 classroom, saying, "I enjoyed doing the math booklets, [g]etting more credits than I should've. That's an accomplishment I think. Nine and a half" (Carly.136-137). When asked what she would be doing if she hadn't come to the Axis Program, Carly said, "[I'd] probably be doing something stupid. Probably living with, I dunno. Probably being kicked out of my house for being stupid" (Carly.292-294).

Jackson's Story

Based on the transcript of one interview with Jackson, three themes emerged that together provided a concise account of his perceptions of the Axis Program experience and its effects on him as a learner: (a) the classroom community, (b) broad-based technologies, and (c) outcomes.

Jackson, who spent most of his childhood in the Jane-Finch[13] area of Toronto, had been at the program since the beginning of Grade 9. Due to school safety concerns, school officials referred him to the program at 13 years of age. An assault against a peer had resulted in Youth Criminal Justice issues, and Jackson was unable to attend a regular

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[13] The Jane-Finch community has one of the largest concentrations of criminal gangs of any area in Canada. It also has "one of the highest proportions of youth, sole-supported families, refugees and immigrants, low-income earners and public housing tenants of any community in Toronto" (A Report of the Jane-Finch Street Involved Youth Issues Coalition, December 2002, p. 5).

secondary school for full days. He spent four semesters at the Axis Program. Jackson

tried going to high school for half days during semester 1 of Grade 9, but, after an

incident occurred between Jackson and another student, he elected to attend school only

at the Axis Program for the following three semesters. Jackson stated he did not have any

issues with drugs or alcohol, but was suspended twice for suspicion of being under the

influence of marijuana.

A quiet but charismatic boy, Jackson struggled with anger management issues

from a young age. As a very private person, Jackson rarely mentioned his early years in

his interview, but did mention that he had been in a number of educational placements to

address his anger and aggression toward others. When asked why he thought he had been

referred to the Axis Program, Jackson justified his anti-social behaviour, citing the assault

of a peer as a minor infraction of school policy, rather than the serious criminal offence

that it was. When asked what brought him to the program he said, "[I] don't know. I got

into a tiny little beef there [at school], and I didn't really wanna stay there. 'Cause

nothing really major happened there" (Jackson.52-53). Jackson's failure to demonstrate

appropriate social skills might have contributed to his behaviour at school. As a new

student to the area, Jackson might have not fully developed a sense of belonging (Sanders

& Sanders, 1998) to his school community.

Out-of-school factors also contributed to Jackson's difficulties in school. Frequent

family moves, known to lead to family instability (Frymier, 1992), within ghettoised

communities likely contributed to his at-risk status. Further, instability, coupled with

these social and cultural barriers such as those cited by Danforth and Smith (2005), for

example, the economic inequalties realted to growing up with a single, unemployed

mother might have affected Jackson's ability to maintain the familial and community supports needed for success in school (Barr & Parrett, 2001). Growing up in a single parent home headed by his mother who had not succesfully completed high school might have compounded the potential for Jackson to be at risk of not successfully completing secondary school (Sticht et al.,1992). Educational research examining relationships between parental educational accomplishments and student achievement suggests that, while it is not always possible to examine the educational achievements of parents, a link is evident between the manner in which parents regard education and the level of educational support they provide for their children in the home (Bussière et al., 2004).

Jackson had spent his early years growing up in a violent and unforgiving environment. He had adopted a violent pattern of response to survive (Anderson, 1999) and saw himself as a survivor. He knew things were not ideal, but he had faith that things would improve. When asked if there was a moment when he realized he needed to change his behaviour he said, "Well yeah I guess but there's nothing, I got busted I guess. I grew up a bit, don't do stupid stuff anymore" (Jackson.163-162).

The classroom community. Although Jackson had participated in several early intervention programs for his anger and aggression, he did not find they helped him in the same way as his placement at the Axis Program had. When asked about his experiences in other behaviour placement programs, Jackson told the interviewer, "Well, if you're talking about like a school like this, like an anger thing, then this one is the best one I've been in (Jackson.71).

Jackson had made a clear distinction from his previous educational experiences and his experience at the Axis Program. He described the teacher in the Axis Program as

a teacher who regarded all students positively, and who recognized and acknowledged their individual needs. "Because the teachers [are] cool about it [accepting the students] and not trying to make you angry and stuff" (Jackson. 72). This student/teacher interaction allowed students to feel supported (Walsh, 2006) and accepted. This classroom culture and environment meant a great deal to Jackson in terms of his appreciation for a relaxed learning community with few tensions and a culture of acceptance. According to Jackson, "It's a lot better and cooler things like that. You can chill on couches, watch TV, and do your work" (Jackson.58-56). Jackson enjoyed the relaxed and comfortable environment of the classroom saying; "I don't know it's just cool and laid back" (Jackson. 71). He liked the freedom to "take a break whenever" (Jackson. 76), which he believed helped him manage his frustration with some academic tasks. EA interview data indicated that allowing students to vary the pace of instruction to meet their learning needs was an important practice in the program. Also, the program gave students the opportunity to practice skills, which would help them manage their frustration and anger, in a supportive classroom community.

    Broad-based technologies. In addition to the Axis Program culture, Jackson found that learning core skills, such as math, through BBTs was helpful as well. He described an integrated technologies and math project saying, "Well, I had to learn all the junk about measuring. Make sure it's all even, nail the wood, and sand it" (Jackson.136-137). Jackson had to work through the technological process of problem finding and problem solving when creating this project, a key feature of the Axis Program curriculum. Jackson identified that his grandmother couldn't see her alarm clock on her vanity table from her bed. He discussed this dilemma with her and came up with specifications and criteria to

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help solve the problem. He negotiated with her on all aspects of the table from size, height, type of wood, to the overall finish. The ability to learn core skills through a project-based interdisciplinary curriculum was often a preferred way of learning with students in the Axis Program, as revealed by Jackson when he said, "[I]t's just not sitting down having to do math stuff and yeah" (Jackson.92). This contextual and holistic approach to learning might have affected Jackson's desire to continue his education. During his interview, Jackson revealed that he had plans to work in the skilled trades. He described his plans for Grade 11, "I'm in school. To do this build-a-house program thing. Actually I'm going to be restoring houses. Stuff like that. Laying bricks and whatever" (Jackson.10-14).

Outcomes. Jackson was very clear about how he felt the Axis Program had affected his decision to continue his secondary school career and the choices he was now making as a result of his experiences there. Jackson said that had he not attended the program, he would not be heading to Grade 11; "[m]ight just of been lazy and stayed at home like all my other friends and not go to school. Yeah that's probably what would've happened" (Jackson.170-171). Jackson viewed his time at the Axis Program as a positive school experience saying, "[t]hat it is a very good program and everyone should go there to learn and stuff. Go to [the Axis Program]" (Jackson.181-183).

The Axis Learning Community: An Educator's Perceptions

To fully appreciate the effects of the Axis Program experience on the students who participated in it, it is important to consider how the learning community was structured and facilitated by the educators and staff at the program. The program can be

understood by examining how the educators at the Axis Program viewed the learners, what kinds of pedagogical approaches were used, and what curricular models were in place. In this section, the Axis Program learning community is examined from the perspective of an EA who worked there. It is organized into three subsections: (a) Insights, an EA's perceptions of four at-risk learners; (b) The Learning Community, a description of the Axis Program; and (c) Pedagogical and Curricular Approaches.

Insights

The EA (identified by all key informants in this study as someone they could talk to about their experiences) was interviewed to collect data that could be triangulated with the perceptions shared by the key informants in their interviews. According to Autumn, the EA, the demands of students in the Axis Program are extreme, intense, and at times challenging for staff. Responsive attachments between staff and students are encouraged because individual attention has been identified as critical to student success and the development of student confidence as a learner. Autumn described the typical profile of Axis Program students as students who may be considered competent learners, but are identified as at-risk for a number of reasons, many not related to the educational sphere:

> I think that a lot of our students come to us with poor school experiences. They also come from lower socio-economic families and have not had the, whether it be the discipline or the guidance to be successful in several areas of their lives. And that can lead to behaviour problems, in school and in the community. (Autumn.56-57)

On this topic, she spoke about each of the four key informants.

Melanie. According to Autumn, Melanie had always been a "borderline" learner. She was not considered at-risk, but the trajectory of her circumstances was leading toward an at-risk identification.

Melanie had been having difficulties living with her grandmother, and children's services were involved in her life. Family instability and circumstances "out of control of the school" (Frymier, 1992. p. 258), such as the frequent family moves and parental divorce, placed her at-risk. The human hardships (Danforth & Smith, 2005), combined social and cultural barriers of growing up in a family with alcohol and drug abuse, exacerbated her difficulties in school. In addition, Youth Criminal Justice charges prevented Melanie from attending her regular high school. It was at this time that the vice-principal recommended that she be referred to the Axis Program. Autumn described Melanie in this way:

> When she first came to us she was frustrated in her learning. [S]he had only had one opportunity to be in a secondary school and she really was [not] motivated and not as confident as she could be, but when she came to us she was knowledgeable and she was willing. (Autumn/Melanie.54-55)

The data collected in the interview with Autumn supports Melanie's story. In her interview, Melanie described her fragmented family life as one of the out-of-school factors placing her at-risk. She also described a sense of mismatch to the learning system, a feeling of not fitting in at her school, as an in-school factor that contributed to her being placed at-risk.

Kayla. When Autumn was asked about what may have been contributing factors to Kayla's at-risk status, she stated:

> Kayla comes from a [single parent] family, like I said before: Her father had passed away, and her mother was raising Kayla, her one older brother and one younger brother herself, while working full-time. So during the time that Kayla was at home, she was rarely parented. She has a very supportive mother, but, unfortunately, Mom wasn't always there because she had to support the family. In 2007, Kayla moved out of home and moved in to an apartment with her older brother. And she continues to live there now. She works full time to pay her rent while attending school. (Autumn/Kayla.210-213)

Similarly, Kayla described a childhood fraught with human hardship (Danforth & Smith, 2005). She spoke of growing up in what she felt was a loving but volatile environment where daily conflict was the norm. Poverty (Manning & Baruth, 1995), family instability (Frymier, 1992), and personal issues (Karlsson, 1996; Manning & Baruth, 1995; Steinberg et al., 1996) had a cumulative affect on Kayla's life, resulting in her at-risk identification (Adams & Ryan, 2000).

Autumn described the early days when Kayla first came to the program.

[W]hen I began working with her in 2006, I noticed that Kayla was eager but she was quite frustrated. She had difficulties with some of the tasks, some of the reading and writing components, and felt that some of her project-based learning was better [than some], and she required some assistance with some of the other projects. But generally, she was eager to learn, but became frustrated when she was approached with a challenge. [F]or new things or for things that were unknown. (Autumn/Kayla.58-61)

Kayla's understanding of "school" was based on her previous school experiences. In her interview, Kayla described that she was not interested in school and did not like school until she came to the Axis Program. At-risk students need support in a learning community led by a teacher who regards all students positively, by recognizing and acknowledging their needs (Walsh, 2006), or a sense of frustration and apathy (Church, 2006) can develop. When students do not feel supported, their sense of value as a learner deteriorates, leaving them with very little academic investment in their school experience. This lack of investment may lead to a school experience that is disconnected, irrelevant, and alienating for these students (Begin et al., 1994). Autumn described Kayla as a "willing but academically frustrated learner," a description Kayla's interview supported.

The EA's account of the contributing factors that placed Kayla at-risk was corroborated in Kayla's interview. Kayla experienced many of the factors known to place learners at-risk. From external factors, such as family stability, socioeconomic status, and personal issues, to in-school factors, such as the institutional approaches of school systems, the school experiences Kayla endured were fragmented at best. Kayla's story underscores the notion that many at-risk students require additional stability, support, and innovation in the school environment (England, 2004).

Carly. When discussing Carly's initial placement at the Axis Program, Autumn shared some of the problematic behaviour Carly engaged in.

> Carly came to us frustrated with her classes. She is a chronic non-attender. She was truant and was engaging in some anti-social behaviour, like bullying. [S]he was involved with the Youth Criminal Justice system. And so she came to us to help her with her behaviour. She was not truant for the most part with us. And she was able to focus on her studies. She didn't really buy into the idea of the Axis Program when she first came. She kind of isolated herself. (Autumn/Carly.45-53)

Autumn offered some insight as to the mitigating factors, which may have contributed to Carly's at-risk identification:

> When she arrived, she was engaging in several anti-social behaviours. Not only was she truant, but she was using substance, she was staying out all night, she was partying with her friends. Not the friends from [The Axis Program] she had made, but friends that she had had prior to coming to [The Axis Program]. There were a few instances where substance abuse did affect her learning at school. She had been under the influence at school a few times; she had been out all night, two or three nights in a row, then would come to school. (Autumn/Carly.531-535)

Carly's inability to rationalize and cope with her circumstances solidified her at-risk identification and her referral to the Axis Program.

When describing Carly's background, Autumn indicated that overall instability was a major factor in Carly's at-risk status. Her risk factors were multifaceted and

cumulative (Adams & Ryan, 2000), and included outside school and school-based

factors:

> Carly had come from a lower socio-economic family. But, she comes from a single mother who has one other child, who's significantly younger. And Carly had problems with her mother in terms of discipline and respect. So she often would live with her grandmother. And if her grandmother was having problems, she would live with friends or she would not go home a few days in a row. And maybe be on the streets. (Autumn/Carly.173-178)

Personal issues (Karlsson, 1996) compounded with other factors contributed to Carly

being placed at-risk. Autumn's response illustrates that rather than one specific factor or

incident being the tipping point placing Carly at-risk, complex combinations of factors

both in and out of school were to blame. Autumn discussed how a lack of attachment also

contributed to Carly's placement in the program:

> [T]he social environment that Carly came from, she didn't attach herself to peers. She didn't attach herself to a certain home even, or to a family member. [S]he was very independent. She didn't share her emotions. She didn't share her feelings. (Autumn/Carly.478-480)

In her interview, Carly described an unstable family life led by her mother (a

single mother of three) and at times her maternal grandmother. Never having met her

biological father, Carly described a childhood filled with transient "father-like" figures,

adding to fragmented family attachments with her mother, grandmother, and younger

siblings. Carly said she coped with this daily stress by using marijuana and alcohol. She

also said that she rarely attended school, "skipping" most of her classes, another

indication that Carly felt little connection to her school community. The data collected in

Autumn's interview further corroborated Carly's story of maladaptive behaviour related

to emotional issues.

Jackson. An in-school factor Autumn described as problematic for Jackson was

his mismatch to the learning system (McPhail & Freeman, 2005; Sagor, 1999). This

mismatch was explained further by Autumn as she discussed Jackson's short placement

in a regular high school for the second semester of Grade 9:

> Jackson really didn't have an opportunity to be successful in a regular high
> school. He did attempt it, the second semester he was with us, so it was February
> of 2007. He had attempted to go to secondary school and take two courses.
> (Autumn/Jackson. 526-528)

Jackson's lack of engagement in his previous school experiences stemmed from the lack

of context those learning opportunities provided. As a self-described "hands-on" learner,

working through remedial and correspondence booklets did not pique Jackson's interest.

While some key informants relished the opportunity for self-directed, remedial learning,

Jackson, like most at-risk learners, needed a learning environment that offered learning

that was relevant to his life (Hill & Smith, 1998) and that was contextual and work-based

(Dede,1993; Eckert et al., 1997; Wankat & Oregovicz, 2000).

> But they didn't give him the same opportunities to be successful. He worked in a
> resource classroom on correspondence booklets. It wasn't set up specific to his
> learning style or his interests, so he was not successful. He was truant from those
> two periods at [high school]. (Autumn/Jackson. 528-530)

Although Jackson did have characteristics of being at-risk, he had developed

some skills to cope. When asked about Jackson's coping behaviour, Autumn said,

> [f]rom the time that he came to [the Axis program] until the time that he left, you
> could tell that Jackson was getting frustrated when he would begin to doodle. [H]e
> chose to do that from the time that he came here. A stress reliever when he was
> getting upset with a question or getting frustrated with an assignment. He'd stop,
> and he'd draw a little bit and then he'd go back to the assignment. [T]hat was a
> strategy that he put in place. (Autumn/Jackson. 348-352)

Schools are constructed around culturally-based value statements imposed on students (McDermott & Varenne, 1995). These institutional and cultural values do not always meet the needs of at-risk students. When academically frustrated, Jackson would work through his frustrations, by doodling. Due to the culturally constructed biases in the school environment, Jackson's coping mechanism, his graphic doodling and sketching, was often misinterpreted by educators and administrators alike as deviance, defiance, and/or an inability or unwillingness to learn (McDermott & Varenne, 1995). Jackson was seen by educators as off-task and not engaged when doodling; this activity did not fit the norms of what the traditional school culture viewed as good student behaviour.

While none of the participants in this study had been formally identified with cognitive delays or impediments, or learning disabilities, the need for clearly defined expectations and guidelines was evident. Autumn indicated that Jackson was "concrete" in his approach to learning. Autumn described an incident when Jackson's inability to work in a flexible or unpredictable environment was evident:

> I know that the first experience that I had with Jackson, he was
> working through some question and answer sheets, as part of an integrated Math
> and Construction Tech credit, and there was a page missing. The page had
> nothing to do with the next assignment, so I said, "Go on to the next assignment."
> "No, no." It went from page 16 to page 19, not to page 17, and that was, was
> actually something he struggled with to get through. (Autumn/Jackson.81-85)

According to Sosin (1996), at-risk students do not automatically tie new learning to previous knowledge, incongruously using declarative knowledge processes. This learning difference might have contributed to Jackson's at-risk identification (McPhail & Freeman, 2005). Students like Jackson, who learn differently, are often conceptualized as "deficient" (McPhail & Freeman, p. 261) oftentimes without consideration to the nature of the schools, the pedagogies employed, and the curriculum.

In addition to Jackson's learning differences, his lack of adaptability and flexibility might have been a result of a cognitive problem, but might also have been a response to living in an unstable world. Any child may become at-risk (Barr & Parrett, 1995) by way of life situations. Jackson's inabiltiy to be responsive, flexible, empathetic, and prosocial (Barr & Parrett, 1995) resulted in his inability to cope with challenges. This lack of adaptability or resiliency contributed to Jackson's stuggles in the school environment.

Jackson's story is supported with data collected from the program EA, Autumn. While Jackson struggled to pinpoint exactly what he found helpful and meaningful to his learning in his interview, the combination of his interview and Autumn's interview revealed the profile of an at-risk learner who had managed to slip through the cracks. Be it a result of poor resilience, an inability to cope well with change, or an undiagnosed learning disability, Jackson struggled with school. The data from his interview and the EA interview suggest that there might have been unidentified issues affecting his ability to be successful in school. Beyond the known factors of family instability, low socioeconomic status, and the hopelessness associated with the human hardships he faced, the struggles Jackson and Autumn described might have been related to an undiagnosed learning disability.

The Classroom Community

As the program EA, Autumn stressed that her role and the role of the teacher went beyond meeting the students' educational needs. Autumn described her role at the program as one of supporter and caregiver. She stressed that many of the children at the Axis Program did not have support networks in place other than their educational

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placement at the program. This notion, that at-risk students require support and care, necessitated an alternative curricular approach. The alternative approach involved a shift in the classroom culture from not only a culture of learning but a culture of care as well. Autumn described the culture of care at the Axis Program:

> They have support…for…any emotional or any crisis that should happen in the school. As well as just one-to-one support so that they can overcome whatever it is that they're having difficulty with and focus on being safe. (Autumn.33-36)

She explained this culture of care as a focal point for staff at the Axis Program; "our focus is to have the child's best interests in mind" (Autumn.14). In the case of the students at the Axis Program, their best interests include educational, social, and emotional support. Autumn stated that it was important for educators working with these students to coordinate their efforts with those of social agencies to address the complex issues of the at-risk students. "Any of their [the students'] areas that need developing, we work with the schools, with the parents, and with the community agencies to make sure that the child is always supported" (Autumn.17).

According to Autumn, staff at the Axis Program were expected to demonstrate competence, empathy, and an ability to promote the involvement and interaction of students to build a strong classroom community. This complex set of requirements was achieved by making the classroom more responsive to students' needs. Specifically, Autumn said that there was a concerted effort on the part of the program staff to continually develop and use any and all educational, emotional, social, or community supports available to improve students' learning experiences. One example of community

support included the partnership between the school board and the Food Sharing

Project.[14] Autumn discussed how such a partnership was facilitated at the program:

> I'm also a Child and Youth Worker, so I supported the kids in their social and
> other areas in their life. Academic as well as social, anything that would possibly
> block them from achieving as much as possible in school. We provide the kids
> with food if they are hungry, with drinks if they're thirsty. With snacks, and they
> have their break time [regularly]. (Autumn/Jackson.11-14)

Autumn described how one student who participated in the Food Sharing Project would

check in every morning before heading to her regular school for the day:

> Well she knew that she was cared about. When she came here she knew that if she
> came 10 minutes before class started that we could make her breakfast.
> (Autumn/Carly.584-585)

> This culture of care was facilitated not only by staff but through the

implementation of a peer mentorship structure. Peer mentorship was built on a foundation

of respect for one's self and respect for others. An example that demonstrated peer

mentorship was given by Autumn as she described how Kayla learned to support herself

and her peers while at the program:

> I think that just her being here from Grade 9 all the way through to Grade 11 and
> a half … that setting, maturing through school and living her goals, like day-by-
> day, that seeing herself in that position helped her to become more of a peer
> mentor. And when she was given that role in the classroom, she took it and ran
> with it. I think that her being in the program for the two and a half years that she
> was with us, she enjoyed it here, she felt that she was contributing to the
> atmosphere here, so I think that the process of starting in a behaviour program,
> overcoming so many things, and then being successful in the program, and then
> successful in her own personal social life, all tied together. (Autumn/Kayla.182-
> 183)

> Conrath (1994), Freeman and Hutchinson (1994), and Barr and Parrett (1995)

cited the importance of the culture of the learning environment. They emphasized the

need for a caring culture in schools where the leaner feels valued, supported, and cared

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[14] The Food Sharing Project is a partnership among the School Boards, the Food Bank, and many
community groups, businesses, service clubs, and individuals working together to feed children in schools.

for. Autumn discussed how staff helped students work through maladaptive issues by discussing the significance and ethics of care as part of the curriculum (Noddings, 1999). The purpose here was to help students learn to problem solve, make better choices, and build confidence:

> I think that a lot of the exercises that we did, we had to help her change her thought pattern. There were a lot of cognitive structuring activities that we worked on. And just to change her pattern of thinking, from 'oh I'll never do this,' to, 'I'm going to do this' or 'I will do this.' (Autumn/Carly.635-637)

Autumn also identified smaller class size as an important factor in students' learning, saying, "We were able to focus on the students because we had such a small class size. Which I think was an integral part of their learning" (Autumn/Melanie.124). She also revealed how the smaller class size gave students choices about how they wanted to learn and helped them develop leadership abilities to support peers:

> Well I saw Melanie in a leadership role with her peers. Which is something I don't think she would've had the opportunity to experience in a regular school setting. The student-to-staff ratio is quite good in [the program], four students to one staff. So if we had 8 students and 2 staff, there was always somebody to help. And there was always somebody to take on a different, you know if there was one student who needed one-to-one support, or if there was a group. Melanie liked working independently. [W]hen she required assistance she would get that one-to-one that she needed. Melanie was able to learn from the staff at [the Axis Program] and apply what we were working with, with her to other students and help them. (Autumn/Melanie.215-222)

The smaller class size allowed staff to have a better grasp of issues around student safety, while offering an opportunity for more one-to-one individualized assistance with academics when needed. According to Autumn, the smaller class size helped students develop leadership abilities and confidence by allowing them to assist peers with their learning if an educator was working one-to-one with someone else. Autumn also

discussed how Melanie became a peer mentor and how this experience built her

confidence as a learner:

> I think that given that this is a small classroom with very few peers here, she had some really great experiences with the other students she was able to become a peer tutor in her third semester or peer mentor. And I just think that given the experiences that she had here, maybe if she didn't have those experiences she wouldn't have the tolerance [or the] ability to work well in social situations, I think that that along with the other hands-on activities that we did, she was able to help. She was confident she knew how to do it. (Autumn/Melanie.83-84)

Another factor that contributed to students feeling confident and taking risks was

the physical arrangement of the classroom. Autumn compared the physical layout of the

Axis Program classroom to that of a traditional classroom. She described how the layout

met the needs of different learners, allowing some to work independently while others

worked cooperatively:

> The classroom [i]s set up in, in kind of 3 or 4 different sections. So there are sofas for the students who find it easier to work independently, in a kind of a comfy area over in the corner. There's also a large group work table for doing group activities if you need one-to-one support or have several questions or just you know, if you're used to a more traditional setting. We do also have little separate cubbies. Which Carly found more comfortable because it was kind of like a desk. And she could sit at her desk, isolated in the corner [a]nd there was a computer there. (Autumn/Carly.74-80)

In addition to the physical orientation of the classroom, Autumn discussed how a

flexible schedule was used to give students a choice and opportunities to make decisions.

For example, students would decide when they took breaks and when they worked. This

was also a classroom management strategy that was used frequently in the program.

Autumn described how this technique was used with a student who had low-frustration

tolerance, explaining how the student learned to use the technique to self-regulate her

behaviour:

[W]e put some programs in place that if she was having a bad day, she would just let us know, and she would have a no fault time-out, where she could exclude herself from the activity we were doing for a brief moment. [S]he actually was quite responsible with that, she wouldn't abuse it because she was afraid that if she took too many time-outs for herself, or left the classroom too many times that it would be taken away. And that was something that she needed, so she really only took advantage of it when it was required. (Autumn/Kayla.233-235)

Pedagogical and Curricular Approaches

Research-based pedagogical and curricular approaches were the foundation of the teaching practice and curriculum used at the Axis Program. In addition to a carefully constructed learning community (Barr & Parrett, 1995; Begin et al., 1994; Church, 2006; Karlsson, 1996; Kohn, 1996; McDermott & Varenne, 1995; Newell, 2003; Riley & Rustique-Forrester, 2002; Sosin, 1996; Walsh, 2006), pedagogical approaches of remediation (Manning & Baruth,1995; Ontario Ministry of Education & O'Conner, 2003) project-based cooperative contextualized authentic learning (Eckert et al., 1997; Dede, 1993; Hill & Smith, 1998; Johnson & Johnson, 1989; Kagan, 1994; Wankat & Oregovicz, 2000), and authentic assessment (Hill & Smith 1998, 2007; Lynch, 1997) were used to support at-risk learners. In addition to these pedagogical approaches, curricular approaches were used at the Axis Program to encourage reflective and authentic demonstrations of the knowledge and skills learned. Grounded in meaning-making (Hunter & Park, 2005), curricular approaches such as negotiated curriculum (Boomer, 1990), experiential and workplace curriculum (Barr & Parrett, 1995; Fogerty, 1997; Ontario Ministry of Education, 2003; Riley & Rustique-Forrester, 2002; Sowel, 2005), and integrated curriculum (Drake & Burns, 2004; Hartzler, 2000; Jacobs,1989; Reid & Romanoff ,1997; Ross & Hogaboam-Gray, 1996; Upitis & Smithrim, 2002; Vaille, 1997) provided relevance for the at-risk student. As shown here, these

pedagogical and curricular approaches increased students' self-confidence, creativity,

self-esteem, and overall motivation to learn.

Contextualized learning. Learning in context, that is, learning about concepts and

issues of real concern, is paramount for the at-risk learner (Karlsson, 1996; Riley &

Rustique-Forrester, 2002; Sosin, 1996). Autumn discussed what learning activities

seemed most engaging to students. She said:

> [Activities with] relevance. [T]hey [the students] are going to think about it a little
> bit more if it's something that they are going to use, or something that means
> something to them. They are going to think about it a little bit more and then use
> that skill when they are thinking about you know, designing something for their
> home. I think it's important for all students; to have a say in their learning and to
> express themselves through their learning style and through their interests. You
> know because it's their education, and it's what they are interested in.
> (Autumn/Jackson.254-257)

By engaging students in student-centered, student-developed projects, students' learning

was enhanced and a sense of meaning was given to classroom-related tasks. This sense of

meaning (Lave & Wenger, 1990) comes not only from the social relationships

surrounding contextualized learning, but through the process of social participation

within the context of learning. Autumn discussed how one key informant experienced

learning in context:

> It started as, you had to write one poem for Grade 9 English. A poem. And she
> integrated her poetry into song lyrics as she was working on her Communications
> Technology and began to work on music as part of her Comm. Tech[15] but also as
> part of her music curriculum. And so she learned on the computer how to use the
> mixer to make different songs and beats and she was really into rap. So she would
> write her own rhymes and record them. (Autumn/Carly.218-220)

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[15] Communication Technology is a Broad-based Technology course offered in Grades 10, 11, and 12 in
Ontario Secondary Schools.

Autumn also noted the sense of accomplishment and social implications that this key

informant, Carly, experienced when she presented her project to her peers. She discussed

how Carly embarked on the activity beyond the scope of the assignment:

> She got to make this CD of her own beats, and she played it over and over
> and over again for all of her peers. [H]er own beats; she made a few tracks on the
> CD, a few songs. She created the music. Everything from every beat of music she
> chose, what tone that music would be, she chose where that beat would go and
> then what made that beat. This was part of her Comm. Tech the integrated Comm.
> Tech and the English, all of it together. And so she made all of those beats and
> they were track by track, so to make a three-minute song, like she did several
> times, [it] took so much extra work. [S]he chose every beat herself and put it all
> together to compose this song. Then wrote her own lyrics, then recorded them, at
> school on the computer at [the program], then she burnt the CD and played it for
> her peers. And they loved it. She had to make one song and she did probably four.
> So she made one for her assignment and continued to do the extra work because it
> was something that she liked so much that she didn't view it as school work.
> (Autumn/Carly.347-356)

Autumn clearly believed that, by using a learning context relevant to Carly's

interests, namely, Carly's love of rap music and working with rhymes and lyrics, the

activity was more meaningful (McPhail & Freeman 2005). She believed that this ability

to employ her interest influenced Carly's engagement in this learning activity. Learning

in context made this student's learning a more real and meaningful endeavour (Hill &

Smith, 1998, 2007). Part of what also created meaning and gave value to the activity was

the cooperative, performance, and project-based approach to assessment. By using

authentic approaches, such as peer assessment and portfolios (Lynch, 1997; Pratt, 1994),

the curriculum provided an opportunity for students to help one another and celebrate in

one another's academic achievements.

Broad-based technologies. BBTs were the central feature of the interdisciplinary

curriculum used at the Axis program (see Appendix A). Other subject disciplines were

integrated with technological education, the latter serving as the focal point of the

curriculum. Using the Technological Process (Hill, 1998b, 2008, see Appendix I) and a

problem-finding and problem-solving (Lewis, Petrina, & Hill, 1998) paradigm, this

curricular approach gave students an opportunity to explore different BBTs through work

placements and to co-construct new knowledge with their educators and through their

learning experiences. In the EA interviews, the notion of finding a problem and possible

solutions to that problem were primary teaching and learning strategies. In the scope of

the program, students were challenged to find a technological problem or a technological

need. This problem or need could be personal or community-based. Students were then

asked to generate possible solutions in the form of products or services. The pedagogical

and philosophical framework of broad-based technological education (Ontario Ministry

of Education, 1999) was used. Autumn described how students developed projects based

on a problem-finding/problem-solving pedagogy:

> [E]verybody got to choose different activities based on their needs.
> Carly needed one [a DVD rack] at home, at the place that she was living at the
> time. Which was not her mother or her grandmother's, but her friend's house and
> they didn't have one and so she wanted to make one for home. So she worked on
> that. Some other students made a table, some other students made CD holders
> instead. But she made a beautiful DVD rack for this woman she was living with.
> We also made t-shirts and she had made this collage on the computer as part of
> her Comm. Tech credit. And then she wanted to transfer that image onto a t-shirt.
> So we all made different t-shirts and we got to choose what images they wanted
> on it. And they learned another skill, and she loved that and actually made one for
> another one of her friends. I found Carly to be a very caring individual. So she
> rarely made any of these projects for herself. They were always for somebody
> else. (Autumn/Carly.285-305)

The ability to evaluate a situation and find possible solutions are key skills used

not only in problem-solving, but also when engaged in project-based, technological

education. As part of the BBT interdisciplinary curriculum, Kayla was challenged to

define a personal need. She had just moved into a new apartment and had very few

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furnishings. One problem she identified was that she could not reach the kitchen

cupboard above the refrigerator. She brainstormed with other students and together they

came up with a solution, a project that would meet the identified need.

> This was just when she had moved into her new apartment. And she needed a
> little step-stool, so we made one at school. [S]he was able to make this very nice
> little stool and she painted it and put little beads and dazzles on it, and she had cut
> the wood herself, she had sanded it. She had taken step-by-step all of those [skills]
> and then had painted it and everything and she was quite proud of it. She brought
> it home and still has it in her apartment. (Autumn/Kayla.294-298)

Another facet of broad-based technological education is real-world experiences

embedded in technological tasks (Ontario Ministry of Education, 1999). The opportunity

to explore different BBTs through work placements in the program helped students

develop a sense of empowerment. Key informants discussed a willingness to try new

things, have some success, and go on to try something else. Experiential and workplace

curriculum allowed students in the Axis Program to experience a variety of learning

opportunities, which, in turn, encouraged a love for life-long learning. Learning through

real-world experiences in the workplace offered program participants a chance to develop

interests beyond the scope of what they had studied in the classroom.

Differentiated instruction. Differentiated instruction is a pedagogical approach

that attends to student diversity. It requires the educator to start instruction where the

students are rather than adopting a standardized approach to teaching that assumes all

learners of a given age or grade to be alike. According to Tomlinson (2003),

differentiated instruction is "responsive" teaching rather than "one-size-fits-all" teaching.

A fuller definition of differentiated instruction states that the teacher proactively

plans varied approaches to "what students need to learn, how they will learn it, and/or

how they can express what they have learned in order to increase the likelihood that each

student will learn as much as he or she can" (Tomlinson, 2003, p. 151) as efficiently as possible. The Axis Program took differentiated instruction one step further, allowing students to engage in negotiation of curriculum. Autumn discussed how she and the program teacher employed the use of negotiation through differentiated instruction to support and guide students. Here the teacher acted as a facilitator of learning, and students were co-constructors of knowledge. Students at the program were encouraged to express their knowledge, and to question, revisit, and problem solve through their interactions with a variety of materials and social interactions. Autumn discussed her first impressions of new students and how they reacted to a negotiated and differentiated approach to learning:

> [T]he idea that they came and they were in an environment where a kid said for example, "I don't agree with that assignment." "I don't like that question." They were expecting some sort of negative response from the staff. The newer kids, or the kids who had just started, just their jaw would drop! And we'd say. "Well, okay let's change the question and let's…" You know and that was something that they were never, that was not an opportunity that they would have in a regular classroom. It's kind of like a self-identified learning, self-guided. They can work at their own pace. (Autumn/Jackson.122-129)

When asked about the purpose and expectations of students making decisions about how and what to focus on in their learning, Autumn said:

> I think that the expectations are absolutely clear to the students. We make sure that they are understood and that they are clear. What maybe isn't drawn out step-by-step for them is the process in which the expectations have to be completed. That's an opportunity where the students can problem-solve. They can do what they feel would best answer the question, would best meet the expectations, and it's a learning opportunity for them on so many different grounds. (Autumn/Jackson.140-144)

A differentiated and negotiated problem-solving instructional approach was used, not only for student learning, but as a problem-solving strategy students could draw on when making difficult decisions in their lives both in and out of school. The ability to

learn, use, and practice a problem-solving model such as the Technological Process (Hill, 1998b, 2008) was thought to help students develop the ability to take risks while being supported within a framework with which they were familiar. Autumn described how one student learned to take calculated risks using Hill's (1998) Technological Process (see Appendix I) to solve problems in his life out-of-school:

> I just think that given the opportunity that Jackson had at the program, he was able to realize that, "OK, if I try something new, I'm not going to be penalized for it, I'm going to have the help that I need, and I have the confidence now that I can take the risk, and I can take a healthy risk, instead of maybe, not such a healthy risk. Like engaging in anti-social behaviour, just risks with peers that could harm him or harm his situation. (Autumn/Jackson.625-628)

In this chapter the voices of four at-risk students, key informants, were reported and analyzed. Key informants told their stories as they described themselves and their learning experiences at the Axis Program. They described a learning environment that focused on a classroom community where they felt valued and supported, and discussed how their learning was contextualized, self-directed, and differentiated to meet their learning needs. An EA was interviewed where she discussed her perceptions of the four at-risk key informants and provided additional insight into their stories. The EA discussed the learning community, a community that used interdisciplinary curriculum with broad-based technologies as the central theme, and the importance of a classroom culture where at-risk students were encouraged to take academic risks and build their confidence as learners. The EA interviews also offered further insight into the pedagogical and curricular approaches used at the Axis Program. These findings are discussed in chapter 5. Conclusions and implications are also presented.

CHAPTER 5:

DISCUSSION, CONCLUSIONS, AND IMPLICATIONS

This thesis examined the perceptions of four at-risk key informants who participated in the Axis Program. The purpose of this study was to analyze what at-risk students identified as being important and meaningful to their learning and their school experiences. This study was guided by one central research question: What have been the effects of the Axis Program for at-risk students who participated in it? Chapter 4 tells the individual stories of four at-risk students, or key informants, who had participated in the Axis Program. To support the voices of these at-risk key informants, an educational assistant identified by the key informants was also interviewed to give context to these accounts. This EA described a holistic approach to the education of at-risk learners: an interdisciplinary curriculum combined with essential skill development, hands-on, project-based learning, and educational placements in the community. In this chapter, I extract the major themes from the data and examine their significance in relation to the literature presented in chapter 2. First, I summarize key informants' stories about their learning experiences with particular attention to how these learners and an educational assistant who worked with them perceived their learning experiences at the Axis Program. Next, I draw conclusions based on the findings and examine the significance of the study with specific attention to the learning community and pedagogical and curricular approaches. Finally, I address the implications of this study for further research and professional practice.

Discussion

As a former at-risk student and now teacher of at-risk youth, I have been curious as to what at-risk students perceive as meaningful to their learning. The data collected in this study give a voice to at-risk learners, allowing them to tell their stories of their learning experiences at the Axis Program.

Student Perceptions

Key informants described their perceptions of the Axis Program. During their interviews, they described what features of the Axis Program they believed had had an effect on themselves and their learning. These themes are summarized below (Figure 2).

Themes	Frequency
The classroom community	4
Self-directed learning	2
Contextualized learning	2
Broad-based technologies	2
Differentiated instruction	1
Outcomes	4

Figure 2. Themes and Frequency

The classroom community. Some characteristics of the program's learning community that key informants identified as valuable to their learning experience included: a small class size; access to a teacher's help when needed; a comfortable but

stimulating physical environment with room to work independently or cooperatively (Newell, 2003); a flexible classroom schedule with negotiated breaks; established yet flexible routines; access to a kitchen; and a common area with couches. All stated that it was important to have a comfortable classroom environment in which to learn.

Key informants also cited the smaller teacher-to-student ratio at the Axis Program as crucial to their engagement in school tasks. All identified regular 1:1 time with their teacher and/or EA as a factor affecting their ability to successfully complete course work and meet curriculum expectations. Key informants also valued the intrinsic qualities of the program, such as a close-knit and supportive classroom community (Barr & Parrett, 1995; Begin et al.,1994; Church, 2006; Karlsson, 1996; Kohn, 1996; McDermott & Varenne, 1995; Newell, 2003; Riley & Rustique-Forrester, 2002; Sosin, 1996; Walsh, 2006) where they felt accepted and valued by staff and peers alike. Closely related to classroom community was the culture of care (Conrath, 1994) that key informants identified as critical to their success in the program.

Working from a systems approach (Burris, 2004), a culture of care was constructed and cultivated at the Axis Program to ensure students felt supported. Students' articulated feelings indicating they were felt comfortable and cared for in their school environment. This feeling of being cared for allowed students to become more than just passive observers in their learning. Students described a child-centred, care-centred explicit curriculum based on the principle of unconditional positive regard (Rogers, 1969) fostering positive relations between the educators and the students. These pedagogical relations (Van Manen, 1994) were the centrifuge of effective and meaningful

practice and provided Axis Program students with opportunities to develop and practice the skills needed to function in a learning system.

In the case of the key informants interviewed in this study, the confidence and positive self-esteem they say they gained in response to this systems-based, humanistic approach to learning left them feeling empowered. Key informants described the learning experiences at the Axis Program as their own, which they could recreate in their future educational experiences. Knowing the educators truly cared about their well-being, their life circumstances (Burris, 2004; Freeman & Hutchinson, 1994), and their success as learners enabled these students to develop the core skills necessary to continue their educational journey as active participants in the learning process. The core skills key informants described included: interpersonal and social skills needed to succeed in a classroom environment; self knowledge such as an appreciation of their learning style, their abilities and limitations; and the academic skills of problem-finding/solving using the technological process.

Once key informants had mastered the core skills; they were urged to assist younger peers in the Axis Program. This cooperative approach to learning gave senior at-risk students an opportunity to mentor other junior at-risk students, demonstrating that success and skill development was not beyond these latter students' grasp. The "if I can do it, so can you" attitude expressed by one key informant was a great motivator not only to her, but to the junior students she mentored. The concept of peer mentoring used at the Axis Program was defined by DuBois and Karcher (2005) as cross-age peer mentoring:

> Peer mentoring involves an interpersonal relationship between two youth of different ages that reflects a greater degree of hierarchical power imbalance than is typical of a friendship and in which the goal is for the older youth to promote one or more aspects of the younger youth's development. Peer mentoring refers to

a sustained [long-term], usually formalized [i.e. program-based], developmental relationship. The relationship is 'developmental' in that the older peer's goal is to help guide the younger mentoree's development in domains such as interpersonal skills, self-esteem and conventional connectedness and attitudes [e.g. future motivation, hopefulness]. (p.267)

The peer mentoring approach used at the Axis Program, where senior students in a higher grade level and one to two years older assist younger junior students, is often referred to as peer teaching, peer education, partner learning, peer coaching, and cooperative learning (DuBois & Karcher, 2005).

Self-directed learning. Key informants indicated that when they worked on remedial and ILC course work, such as essential skill development though self-directed independent study (Manning & Baruth, 1995; Ontario Ministry of Education & O'Conner, 2003), they developed discipline as learners, and became agents of their own educational achievements (Johnson & Johnson, 1989). They accessed assistance when they determined it was needed and developed independence as learners (Newell, 2003) Moreover, when facilitated with specific attention to a positive classroom community and caring classroom culture (Barr & Parrett, 1995; Begin et al., 1994; Church, 2006; Karlsson, 1996; Kohn, 1996; McDermott & Varenne, 1995; Newell, 2003; Riley & Rustique-Forrester, 2002; Sosin, 1996; Walsh, 2006), key informants said they felt more confident in their abilities to try new things and take risks academically.

Contextualized Learning. Key informants said that being able to learn in the context of the workplace helped them toward the completion of OSSD credits. Placements in hospitality and tourism workplaces allowed key informants to use the interpersonal and academic skills developed at the Axis Program in the real-world context (Hill, 2004; Hill & Smith 1998, 2007; Lynch, 1997) of the workplace. Key

informants built transferable skills in an authentic way (Fogerty, 1997; McNeil, 2005; Riley & Rustique-Forrester, 2002; Sowel, 2005) and in a real-world context, making their learning relevant and meaningful to their life situations.

At the Axis Program students learned in context using authentic learning theory (Hill & Smith, 2005). Key informants spoke of how their learning was engaging and kept them interested because they had a choice as to what they would study and what was meaningful for them. As defined by Hill and Smith, the four key characteristics of an authentic learning environment include:

1. Mediation: the need for learners to engage in authentic cultural tasks using relevant cultural tools.

2. Embodiment: learning involves the body as centrally as the mind and embraces cognitive, emotional, physical, and social dimensions.

3. Distribution: learning is not confined to the individual mind, but extends outward to include the ongoing actions provided by cultural tools and other persons.

4. Situatedness: also known as learning in context; learning is contextually-grounded.

Key informants participated in real-life, authentic learning opportunities that made their learning relevant to them. They used the tools of the trades; for example, in the case of construction technologies, hand and power tools were used. In the case of communications technologies, computer and audio/visual tools were used to research, develop, and create genuine projects, products, and services to meet genuine needs.

In this study, key informants described how their motivation to learn was affected through contextualized learning. Student motivation, a biological and cultural entity, is grounded in the students' will to become competent in matters that concern them; hence ensuring student motivation stems from the concepts of self-esteem and autonomy of learning (Smith, 2001). Thus, for motivation to occur, learning must be meaningful to the student. The student must become an active stakeholder in her or his learning so that the learning process becomes its own intrinsic motivator. To make learning meaningful and to motivate students, key informants were asked to seek out real-world problems meaningful to their lives and/or the lives of others' in need of solution. They used their strengths and multiple intelligences (Gardner, 1983, 1999) or signways (Smith, 2001) to self-identify ways they could best solve the problems at hand and develop real-life projects, products, and services.

Key informants said learning in context (Hill & Smith 1998, 2007; Lave & Wenger, 1990; McPhail & Freeman, 2005) increased their confidence (Johnson & Johnson, 1989) as learners and their desire to further their education. Corroborating the findings of Hill and Smith (1998), key informants in this study indicated that, when learning experiences had meaning in the context of their lives they felt supported educationally and were eager to learn.

Broad-based technologies. BBT was the medium for the hands-on, project-based learning experiences in the Axis Program. Real-world skill development through project-based, contextual learning was the central element of the Axis Program curriculum. Key informants who participated in the Axis Program described a learning experience facilitated through broad-based technologies (BBTs). They said the contextual and

holistic approach of BBTs directly influenced their desire to continue their education.

Through structured technological tasks using Hill's model of the *Technological Process*

(1998, 2008, see Appendix K) for technological problem solving, students developed the

ability to take risks while being supported educationally. This educational support was

facilitated through an interdisciplinary curriculum rich in the combination of essential

skill development, hands-on project-based learning, and educational placements in the

community. Collectively, these strategies provided a holistic approach to the education of

the students. Figure 3 shows a schematic of how the Axis Program curriculum was

developed and organized to ensure a holistic learning experience.

Broad-based Technology

Mathematics   **English**   **Science**

Social Sciences & Humanities

Self-Guided Courses

Workplace and Experiential Curriculum
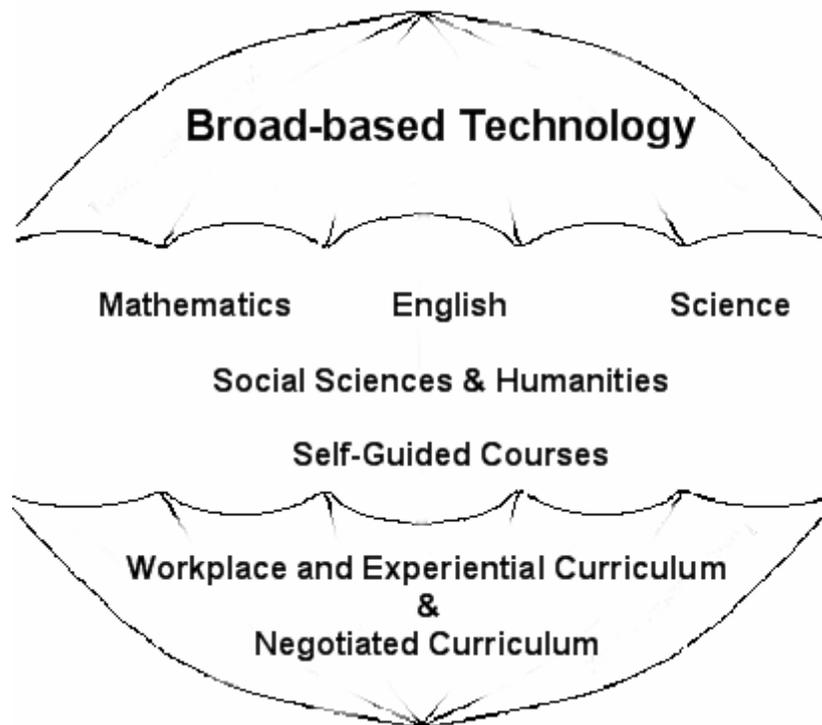**&**
Negotiated Curriculum

Figure 3. The Axis Program Curriculum Model

Just as key informants would use the technological process to work through the

BBTs' integrated subject matter, the *Technological Process* model (Hill, 1998b, 2008)

was also used to dialogue about, work through, and address issues of concern in the key

informants' daily lives. By practicing and using this problem-solving approach, key

informants said they gained confidence with their own abilities to define problems, used a

variety of methodologies to address the problems, found possible solutions outside of the

scope of BBTs, and gained first-hand knowledge and understandings based on their

findings. As with Hill and Smith's study (1998), key informants in this study stated that

when they participated in the BBTs, their self-confidence, creativity, self-esteem, and

overall motivation to learn increased because the curriculum offered them multiple

opportunities to demonstrate their learning (Hill & Smith, 1998, 2007; Lave & Wenger,

1990; Lynch, 1997; Pratt, 1994). They gained confidence as learners, and problem-

solving skills that they transferred from classroom to life situations.

Differentiated instruction. One key informant felt that having the ability to

determine what would be learned, how she would learn it, how she would achieve course

expectations, and how she would demonstrate her learning was of great importance to her

learning experience. The Axis Program offered learning experiences that were

contextualized and cooperative, that used problem-finding/solving and project-based

approaches, and that included teaching and learning with multiple intelligences and

remediation. In addition, a level of authenticity was preserved in the Axis Program

curriculum, ensuring that not only was student learning contextual, but that it is was

specifically and deliberately differentiated to meet the needs of the learner, not just

educationally, but emotionally and socially as well.

Not unlike contextualized learning, the notion of differentiated instruction (Tomlinson, 2003) has its roots in similar disciplines of educational psychology. Boomer (1990) presented a theory of negotiated learning where the teacher developed curriculum that accounted for the key interests, intentions, and needs of the learners. Boomer considered the need to negotiate curriculum with students before planned instruction began. In the Axis Program, students negotiated a differentiated curriculum with the teacher (Boomer, 1990; Tomlinson, 2003), including content and learning strategies. The teacher would present an outline of what curriculum goals and expectations were required, and students would develop ideas around how they could best meet these goals and expectations based on their interests, needs, and competencies.

Outcomes. All key informants described outcomes from their attending the Axis Program. Combined data from key informant interviews reveal six important student outcomes:

- Earning OSSD graduation credits as required by the Ontario Ministry of Education.

- A desire and concrete plans to complete secondary school, graduate, and pursue a college education.

- Changed perceptions about educational choices; interest in skilled trades, apprenticeships, and alternative secondary school programs.

- An appreciation of academic abilities, strengths, and learning styles.

- Increased academic confidence, self-esteem, and self-image as a learner.

- Behavioural changes such as: a reduction and/or elimination of anti-social behaviours including substance use, truancy, and criminal activities; an

It is important to note that the desire to stay in school and go on to further education was not a goal for these key informants when they were initially placed at the Axis Program. In fact, all but one expressed that, before attending the program, they had no short-term or long-term plans for their education or for their lives.

All key informants interviewed in this study experienced academic success while at the program. All key informants stated that they had every intention to complete their secondary school diploma and to pursue higher education at community college or through a skilled trade program. Key informants described themselves as competent and able learners when the learning experience was tailored to their learning needs, learning style, and interests, and was relevant and meaningful to their lives. All key informants stated that their perceptions about themselves and their futures had changed as a result of attending and participating in the Axis Program. They described themselves as less influenced by the negative anti-social behaviours they engaged in prior to attending the program, and as more caring, studious, and hopeful for a bright future, and expressed a keen desire to continue their educational journeys.

Conclusions

The learning environment of the Axis Program, with its underlying focus on a culture of care in the classroom, combined with innovative pedagogical and curricular approaches, resulted in a learning experience that at-risk learners valued. As discussed in the literature, any child may become at-risk (Barr & Parrett, 1995); however, as identified by the key informants in this study, the manner in which they are supported in their learning community has a profound effect on their confidence and relationship with life-long learning. Key informants expressed that they felt cared about, which in turn helped them to build confidence and hope in their ability to be successful in secondary school and pursue post-secondary goals. At-risk learners are often regarded as students who can't learn, don't want to learn or have chosen not to learn (Riley & Rustique-Forrester, 2002). However, if at-risk students feel supported and cared about in their learning environment, their chances of success are greater (Barr & Parrett, 1995; Conrath, 1994; Kohn, 1996; McDermott & Varenne, 1995). The findings of this study support the current research in its understanding of the need for at-risk learners to feel valued, supported, and cared for in their educational environment.

In addition to the structure of the learning environment, another key feature of the Axis Program suggests that, for the at-risk learner to be actively engaged in their learning, they must become stakeholders in their educational experiences. This sentiment is supported in current literature (Hill & Smith, 1998, 2005; Karlsson, 1996; Newell, 2003; Sosin, 1996), and students at the Axis Program expressed that the pedagogical approach of authentic learning was central to their motivation, engagement, and desire to continue their schooling.

In conjunction with authentic learning pedagogy, the negotiated and differentiated curricular approaches, as described by Boomer (1990) and Tomlinson (2003), ensured that not only were pedagogical approaches used to facilitate greater meaning to the students' learning, but the curriculum itself could be negotiated with the teacher to ensure students were learning curriculum content from a perspective that was relevant to their own lives.

Significance of the Study

This study demonstrates the need to construct an explicit social curriculum in conjunction with the conventional understandings of curriculum for at-risk learners. This social curriculum may not be measured and evaluated; however, its effect on learners and the learning environment are demonstrated in the responses of the key informants in this study. Feeling that they belonged and that they were part of a social system, these students and their teacher created a community that was a mutually beneficial environment for both. Key informants responded to the supportive relational paradigm of the learning community, developed confidence, and became active participants in their learning.

When asked about their learning experience at the Axis Program, all key informants cited the learning community as a central feature affecting their learning. From the educator's perspective, the learning community was also considered a key element to the program experience. The learning community that key informants and the EA described revolved around a culture of care. In the context of the Axis Program, the culture of care required the care giver (the educator) to remain open to the needs and concerns of the cared for (the student) and to reflect upon them. The process of remaining

open involved the need for a connection between the teacher and the student. Noddings (1999) cites the "care perspective" as having four key elements: modeling occurs as educators show students what it is to care; dialogue allows learners to question, negotiate, and mitigate what is occurring in the classroom which, in turn, provides the learner and the teacher with a knowledge of others to form more solid relations; practice allows educators to find instances and experiences for students to care as much as possible within the context of their lives; and confirmation is the act of affirming and encouraging the best in others (Noddings, 1999).

Juxtaposed with Nodding's (1999) care perspective, Hill's (2008) *Technological Process* model provided Axis Program educators and learners with a concrete mechanism whereby at-risk students could enter into a problem-finding, problem-solving paradigm to identify, examine, discuss, and practice the skills needed to mitigate not only their learning experiences at the program, but life's experiences and demands as well. Juxtaposing Nodding's (1999) care perspective and Hill's (1998b, 2008) *Technological Process* may at first glance appear an unusual approach to curriculum development and implementation; however, as shown in the responses of the key informants and the educator, having such a mechanism to facilitate real-word, contextual, and relevant learning experiences provided educators with a logical and valid approach when providing meaningful educational experiences for at-risk youth.

This study shows that a supportive learning environment does have positive effects for at-risk learners. Pedagogy based on the Theory of Authentic Learning (Hill & Smith, 2005), negotiated (Boomer, 1990) and differentiated (Tomlinson, 2003) curriculum modified the relational paradigm to a higher level of sophistication; one of

self-articulated, self-directed learning through cooperative, hands on, project-based interdisciplinary curriculum. This modification created further complexity to the learning environment, uncovering the exact nature of just what factors had the greatest positive influence on the at-risk students who participated in this study.

Classrooms, like society, do not exist in isolation and neither do the themes uncovered in this study. Just as a supportive classroom culture may change a student's learning experiences (Burris 2004; Van Manen 1994), participating in authentic learning tasks also creates an effect (Hill & Smith, 1998, 2005), as does negotiated (Boomer, 1990) and differentiated curriculum (Tomlinson, 2003). What this study indicates is that the intersection of these theories and practices may have a greater cumulative effect on making learning more accessible, meaningful, and relevant to the at-risk student. The culture of care in the learning environment helped to develop trust and respect. Trust and respect gave the at-risk students opportunities to develop social skills and practice them with peers and adults in a reflective and cognizant manner. Once the sense of belonging and rapport was co-constructed by the students, teacher, and staff, students felt more confident when approaching their learning. They felt supported, respected, and ready to learn.

Confluent to the culture of care, authentic learning theory ensured that the curriculum was embodied and enriched. This embodiment and enrichment developed transformative learning: cultural, emotional, social, physical, and cognitive knowledge and skills. In tandem with the *Technological Process* (Hill, 1998b, 2008), students experienced learning from a problem/finding, problem/solving perspective, and learned that they possessed the skills needed to be successful and that they could access those

skills and abilities using a process. By articulating and implementing this process, the cultural myth of the expert teacher was demystified, opening a deeper means of communication between the students and the teacher, thus allowing for co-constructed knowledge and understandings. The learning became the students' reality, created in their own image, within their cultural, social, and emotional constructs. The process made the learning "real." This transformative effect allowed students to make inferences to other contexts in their lives, and gave them the tools to construct the kind of reality they chose for themselves. After the Axis Program, Carly's glass appeared, as she said, "half full." The effect of the program on Carly gave her the tools she needs to refill her glass as needed, and showed her how to access knowledge and understanding using a process to seek out support and resources to solve problems, make choices, and "own" her learning experiences.

The final element of significance in this study stems from the notion of negotiated curriculum (Boomer, 1990) and differentiated instruction (Tomlinson 2003). At-risk students felt supported through the culture of care. They experienced learning authentically (Hill & Smith, 1998, 2005) and developed the tools to self-direct their decision making and problem solving. Once students experienced the new learning paradigm and developed and practiced these new competencies, they began to self-select in cooperation with their teacher what they needed and wanted, and they became motivated to learn. As indicated in the data, "new" students were often confounded by having choices around their curricular choices, but after experiencing the Axis Program culture and pedagogy, they embraced having choices around learning that was relevant and meaningful to their lives.

The complexity of themes and the confluence of their implementation when working with at-risk learners offer implications for further research and professional practice. These implications are now discussed.

Implications for Research and Practice

Implications for Research

One primary challenge in this study was the engagement of supportive adults to offer additional perspectives into the lives of the at-risk learners who were interviewed. The additional perspective of supportive adults would have contributed to a more in-depth understanding of the transformative effects of the Axis Program experience on the four at-risk learners. Knowing now how hard it is to obtain names of supportive adults from at-risk learners, and then to obtain engagement of identified supportive adults due to lives equally complex as that of the at-risk learners themselves, I recommend an expanded approach be undertaken in further research. I would recommend that the researcher, with key informant permission, act as a participant observer in agreed upon out-of-school activities in the at-risk learners' lives, and make contact with adults that the researcher identifies as supportive.

Another implication for research is the issue of interviewee and interviewer rapport. As evidenced in interview data of at-risk learners in this study, when rapport is not well established, data may be "thin" and lack the richness needed to draw significant conclusions. I would recommend, from experience acquired in this study, early integration of the interviewer into the educational environment of at-risk learners to be interviewed. This would allow time for interviewee/interviewer rapport to be established.

It is anticipated that at-risk learners would then be more comfortable in the interview and data would be richer.

It remains a challenge to establish links between specific factors and learners being placed at risk. Additional research is needed to make sense of the impact of confluent factors on at-risk identification. Factors such as anti-social behaviours, family instability, personal issues, and mismatch to learning systems can not be easily isolated. In Canadian society, a fragmented family structure, such as families headed by a single parent, also experience socioeconomic hardships. Socioeconomic hardships and fragmented family structures may place the learners at-risk. As well, it is difficult to determine the impact of personal factors, such as low-self esteem and behavioural issues, on students becoming at-risk, as these factors often coexist with other cumulative factors such as poverty and fragmented family structure.

Another challenge in determining relationships between specific factors and learners being placed at risk stems from the work of Brown, D'Emidio-Caston, and Benard (2001). These authors have found that there "are children who possess the same at-risk characteristics as others, but go on to successfully complete secondary school. These children possess an ability to thrive in the face of adversity" (p. 13). The concept of resilience in children, ones who face adversities and thrive while others deteriorate, presents a quandary for the development of an epidemiological foundation of what places learners at-risk and how to best serve their needs. Further study is needed to untangle characteristics of students who are identified as at-risk and the concept of resilience.

In addition to the complications surrounding why some at-risk students go on to learn successfully and become life-long learners while others continue to struggle with

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their learning research is needed to examine the transfer of learning acquired in alternative settings to other school and life situations. Is the learning sufficiently transformative to provide enough momentum and support for conventional learning placements following the alternative placement? Moreover, just why is conventional schooling constructed in such a way? Further examination of how the systemic and institutional practices used in schools create a classification among learners, and of others marginalization and/or complete removal or withdrawal. Why is it that students who perform well within the provincial norms of school expectations and academic achievement are considered successful while others who struggle with conventional approaches are labeled at-risk?

Implications for Practice

Due to the complexities of the in-school and out-of-school factors which affect at-risk students and the complexities of the school environment, educators must consider the social effects of educative norms that may not meet the needs of the at-risk learner. The classroom environment, numbers of students, access to 1:1 support, and the social constructs of schools and curriculum have a profound effect on at-risk learners. Richardson, Casanova, Placier, and Guilfoyle (1989) suggest that it is not only familial, personal, and socioeconomic factors that place students at-risk. These authors cite the learning community as an issue when considering what places a learner at-risk, suggesting that educational settings and the culture of schools factor into the risk equation. Just as some classrooms have specific expectations and cultures, schools possess a unique hierarchy and complex social system. Richardson et al. (1989) suggest

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that these constructed environments are often difficult for the at-risk child to successfully navigate, exacerbating an already tenuous life situation for these learners.

At present, much focus has centered on literacy and numeracy as the primary curricular approaches for at-risk learners. This focus often creates culled curriculum options emphasizing literacy and numeracy (Ontario Ministry of Education, 2003) versus a variety of curricular choices and options developed with student interest and with motivation in mind. This study suggests that more emphasis must be given to supporting the at-risk learner's social and emotional growth, while providing a supportive learning environment where students have a voice, make choices, develop skills and competencies, and embrace a love of life-long learning. If we listen to the voices of four at-risk learners and pay attention to the themes that have emerged in this study, we can discuss, develop, and implement curricular and teaching practices, practices that at-risk learners, learners who make up nearly one–third of our secondary school student population, say makes their learning experiences better and, in the case of these four at-risk learners, supports their desire to continue their education and become life-long learners.

The challenge is before us. Can we as educators create a learning environment where one can learn to solve problems, take risks, and learn to trust and know oneself? At-risk learners have a story to share and must have a voice to share it. This study listened to such voices in the hope of gaining a deeper and more meaningful appreciation of what education can do to support and serve these students.

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APPENDIX A

AN AXIS PROGRAM OVERVIEW

The Axis Program studied in this research project is located in a secondary school in southeastern Ontario. The name, Axis Program, is a pseudonym to protect the identity of the school board, school, program, teachers, and students. It is an alternative education placement for secondary students needing a short-term alternative placement. The program provides educational services to students who have experienced acute behavioural difficulties at their previous schools including expulsions for aggression, threatening behaviour, violence directed at staff and students, as well as Youth Criminal Justice violations. The Axis Program also is intended for students who suffer from mental health exceptionalities which impede their success in a regular school setting.

Students with identified behavioural difficulties often have a wide range of needs. Many come from a variety of emotional, social, economic, and ethnic backgrounds, and frequently the conventional educational model does not address their needs. The Axis Program was created to meet the needs of these students who often experience daily conflict and occasional confrontation between students and/or staff and students. The demands of the Axis Program are extreme, intense, and challenging for staff. Attachments between staff and students are encouraged because individual attention has been identified as critical to student success and to the development of student confidence as a learner. To teach students in this special program, staff require well-developed problem solving skills, flexibility, and commitment to the service of at-risk, aggressive, and often anti-social youth.

STAFFING:
- One Secondary School Teacher;
- One Intermediate and/or Secondary School Itinerant Teacher;
- One program Educational Assistant (EA); and
- Casual support as required for students with exceptionally high needs (particularly mental health situations).

The Axis Program staff are expected to model natural youth counsellor qualities; genuineness, warmth, compassion, and integrity[1]. Program staff are expected to assist with the development and implementation of the Axis Program curriculum. They must ensure that there is a focus on cognitive/behavioural programming in the areas of emotional literacy, goal setting, conflict resolution, problem solving, anger management, life skills, career development, and job searching. The curriculum also must be designed to allow all students to work on individual academic programming at the secondary school level as recommended by their referring school, all the while adhering to the expectations and learning outcomes as defined by the Ministry of Education guidelines. Opportunities to participate as a group in community service projects should also be available. This highly structured program targets inappropriate school behaviours that interfere with a student's educational progress through the use of an interdisciplinary curricular approach to learning. The Crisis Intervention and Prevention (CPI) model of de-escalation is practiced daily.

The Axis Program Objectives:

The primary objectives of this program are to:

- Reduce anti-social behaviour (e.g., involvement in criminal activity, substance use/abuse);
- Improve attendance;
- Improve self-esteem;
- Improve social/emotional skills;
- Improve student's self-image as a learner;
- Offer a wide range of experiences;
- Improve educational attainment through "contextualized" learning ;
- Provide curricula with a labour market focus;
- Establish links to the school and community at-large;
- Equip students with practical life and vocational skills;

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[1] Canadian Counselling Association, (2007), *Accreditation of counsellor education programs.* Ottawa: ON. Queens Printer

- Prepare the student for re-entry into secondary school or alternative programming; and

- Provide real-world experiences for students to improve post-secondary transitions.

CURRICULUM

The Axis Program Curriculum Model

Interdisciplinary Curriculum Model

Science · Mathematics · Technological Education · English · Social Sciences & Humatinities · Self-Guided Curriculum

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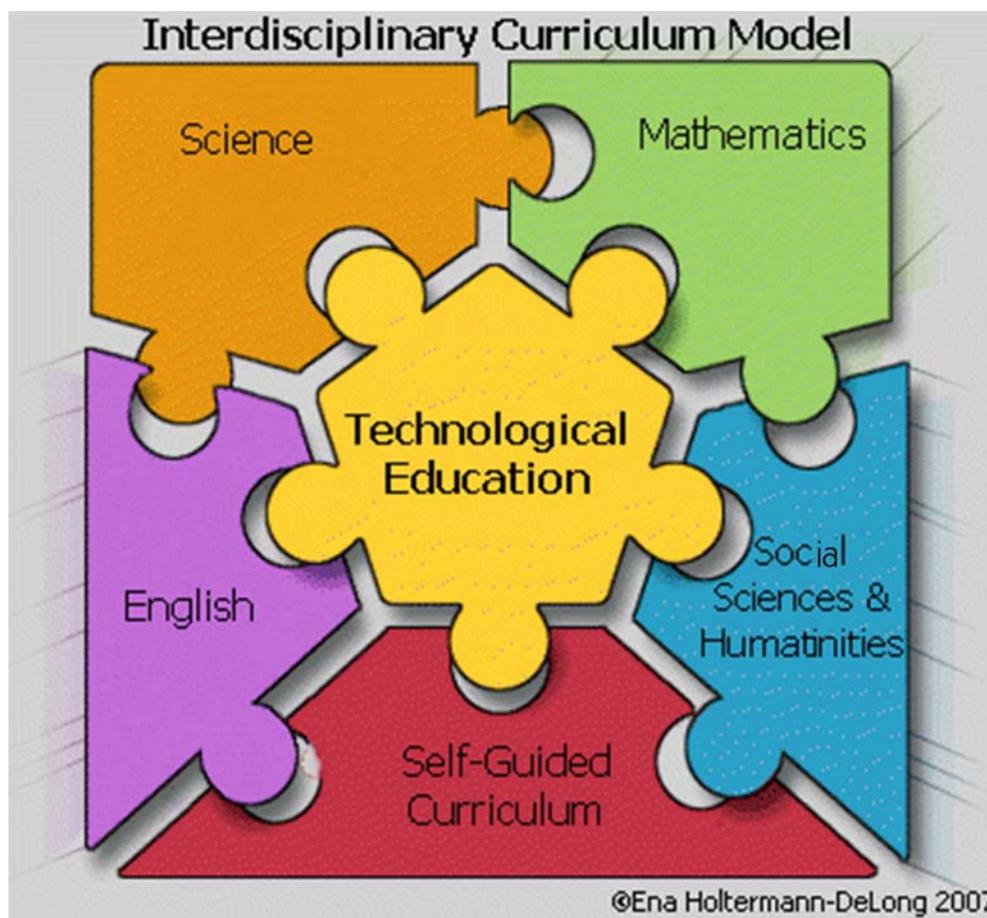
COURSES	Phase I- Bridges	Phase II- Leadership	Phase III- Transition
INTERDISCIPLINARY CURRICULUM			
Broad-based Technology (BBT) is the medium for the hands-on, project-based learning experience in the Axis Program. Students design and construct real-world projects using hand-tools and computers while applying, demonstrating, and meeting Ministry of Education curriculum expectations in all five* BBT subject disciplines through an interdisciplinary curriculum design. This approach offers students a relevant and coherent secondary school curriculum tailored to their learning needs and grade level.			
*ENGLISH			
English – Academic	ENG 1DT[i]		
English – Applied	ENG 1PT	ENG 2PT	
English – Locally Developed Compulsory	ENG 1LT	ENG 2LT	
English – Workplace Preparation			ENG 3ET
*MATHEMATICS			
Principles of Mathematics-Academic	MPM 1DT		
Foundations of Mathematics-Applied	MFM 1PT	MFM 2PT	
Mathematics – Locally Developed Compulsory	MAT 1LT	MAT 2LT	
Mathematics for Work and Everyday Life			MEL 3E
*SCIENCE			
Science – Academic	SNC 1DT		
Science – Applied	SNC 1PT	SNC 2P	
Science – Locally Developed Compulsory	SNC 1LT	SNC 2P	
Science – Workplace			SNC 3E
*TECHNOLOGICAL EDUCATION	On-site	On-site	Supported through referring school & Co-op placement[ii]
Broad-based Technologies– Open	TTI 1OT		
Communications Technology – Open		TGJ 2OT	TGJ 3E/C
Construction Technology – Open		TCJ 2OT	TCJ 3E/C
Hospitality Services – Open			TFJ 3E/C
Manufacturing Technology – Open			TMJ 3E/C
Personal Services – Open		TPJ 2OT	TPE 3E/C
Technological Design – Open		TDJ 2OT	TDJ 3E/C
Transportation Technology – Open			TTJ 3E/C
*SOCIAL SCIENCE & THE HUMANITIES			
Food and Nutrition– Open	HFN 2OT		
Managing Personal Resources– Open		HIP 3ET	
Managing Personal & Family Resources– Open			HIR 3CT
SELF-GUIDED COURSES			
The following are courses not integrated into the daily curriculum. Students self-select courses of interest and are supported with the guidance of the program teacher. It is recommended that student work at their grade level.			
THE ARTS			
Visual Arts– Open	AVI 1OT		
BUSINESS STUDIES			
Introduction to Information Technology in Business– Open	BTT 1OT		
Introduction to Business– Open		BTT 2OT	
Entrepreneurship: The Enterprising Person			BDP 3OT
SELF-GUIDED COURSES	Phase I-	Phase II-	Phase III-

(con't)	Bridges	Leadership	Transition
CANADIAN & WORLD STUDIES			
Geography of Canada– Applied	CGC 1PT		
Contemporary Canadian History – Academic		CHC 2DT	
Contemporary Canadian History – Applied		CHC 2PT	
Civics-Open		CHV 2OT	
Travel and Tourism: Regional Geography			CGG 3OT
GUIDANCE & CAREER EDUCATION			
Learning Strategies– Open	GLS 1OT		
Career Studies– Open		GLC 2OT	
Designing Your Future– Open			GWL 3OT
Discovering the Workplace– Open		GLD 2OT	
Navigating the Workplace– Open			GLN 4OT
Leadership and Peer Support– Open		GPP3OT	
HEALTH & PHYSICAL EDUCATION			
Healthy Active Living Education– Open			PPL 3OT
SOCIAL SCIENCE & THE HUMANITIES			
Parenting– Open			HPC 3OT

i T= Course code for the Axis Program.

ii Supported through referring school & Co-op placement. Student is supervised by Co-op Education teacher from referring school and co-operative placement supervisor. Additional academic support may be available from the Axis Program teacher if required.

ADVANCEMENT STRUCTURE

Phase I-Bridges

Many of the students attending the Axis Program will have had a variety of factors influencing the decision for referral to specialized programming. Depending on grade level upon referral, a student could complete Phase I in one semester. If a student arrives with less than two secondary school credits Phase I may take two terms/semesters attending five half-days on-site per week. Students 'graduate' at their own pace as they achieve Phase I expectations. Graduation to Phase II is determined through formal and informal assessments of the successful completion of Phase I goals in concurrence with administration and the Axis Program staff.

Phase II-Leadership

Upon completion of Phase I, students 'graduate' to Phase II. During this phase self-directedness and independence are developed through co-operative education and/or peer leadership placements for two half days of each week. Here students investigate a variety of forms of employment including employment in skilled trades. Another key expectation of students in Phase II is that they demonstrate leadership and support to their

peers. For one half day per week Phase II students work directly with Phase I students to foster positive peer relationships in a supervised environment. If a student arrives with less than two secondary school credits, Phase II may take two full terms/semesters attending five half-days on-site per week to complete. Students 'graduate' at their own pace as they achieve Phase II expectations. Graduation to Phase III is determined through formal and informal assessments of the successful completion of Phase II goals in concurrence with administration and the Axis Program staff.

Phase III: Transition

Phase III is the final part of the Axis Program. During this phase students begin the transition back to their referring secondary school. Phase III is a one semester transition with five half-days at the student's referral school in a workplace, alternative education, co-operative education, or skilled trades locally developed programs. The primary objective of Phase III is to support students in a smooth transition back to full days in a conventional educational setting. Consultations between the referring school, guidance staff, and the Axis Program administration and staff assist students with course selection for this transition period.

PHILOSOPHICAL FOUNDATION

The development of the Axis Program's interdisciplinary curriculum focuses on the factors that most directly promote resiliency such as general personal and social competence, feeling control over one's life, feeling optimistic about the future, being able to detach from conflict in the home, school or neighbourhood, and being willing to seek support[2]. Educational support with an interdisciplinary curriculum rich in the combination of essential skill development, hands-on, project-based learning and educational placements in the community, provide for a holistic approach to the education of the whole child. The program aims are based on reliable, and ideally, local, information on the nature and extent of issues which may place youth at-risk; issues such

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[2] Hawkins, D., Catalano, R., Miller, Y., Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: implications for substance abuse prevention. Psychological bulletin Vol 112 #1 (1992).

as substance use, youth criminal justice interventions, and low socio-economic status[3]. Curriculum goals, objectives, and activities address local circumstances, are linked logically through Ontario Ministry of Education curriculum, and are assessed using authentic assessment practices which are measurable and rigorous.

From the outset, those committed to the concept of the Axis Program's interdisciplinary curricular approach must work toward long-term integration of the program into the referring school's philosophy of education. Consideration to core concepts of adolescent psychosocial development and at-risk behaviours within the context of the stages of adolescent development must be considered in order to respond most effectively to the learners' needs.

In order for the Axis Program to be credible with students, instructors must take into account the way young people view the benefits and the risks associated with anti-social risk taking behaviour. As such, the integrated curriculum of the Axis Program is negotiated with students. Students in the program have a role to play in the design and implementation of core, elective, and alternative curriculum.

Young people who attend the Axis Program need to see themselves, and to be seen by others, as their own best resource for minimizing any harm associated with risk factors. This is achieved through the implementation of effective processes such as credible messages from peers, staff, and community volunteers who have themselves experienced similar negative life situations and risk factors, and redefined their lives in a positive and encouraging way. Both the explicit and implied messages delivered in the classroom need to be viewed as realistic and credible by participants (staff and students alike).

Real-world skill development is the central element for the Axis Program curriculum and it is accompanied by accurate, objective information about life choices. The use of interactive group processes which engage and involve participants in skill development activities and discussions allow students to demonstrate leadership qualities and build self-esteem.

Staff must demonstrate competence, empathy, and an ability to promote the involvement and interaction of young people to build a strong classroom community.

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[3] Karlsson, M.R. (1996). *Motivating at-risk students*. Westminster, CA: Teacher Created Materials Inc.

This community must address risk factors and resiliency, as well as develop students' recognition of the contributing factors surrounding at-risk behaviours. A focus on factors that most directly promote health and essential skills to prepare students as life-long learners and for future careers are the primary objectives for the Axis Program and the classroom community of this program.

APPENDIX B

SAMPLE RECRUITMENT SCRIPT FOR PHONE CONTACT

Contact information including telephone numbers, email addresses, and home addresses are offered on the part of the student to ensure staff can reach them for a variety of reasons. Such reasons include opportunities for employment, programming feedback, and volunteer opportunities. Most, if not all, students have at one time or anther expressed a keen desire to "tell" their stories; to talk about how the school experience was for them. Interviews will be conducted with a total of four students, that is, the at-risk learners who have transitioned out of the program.

Hello - My name is XXX XXXX. I am calling to talk to you about participating in Ms. Ena Holtermann-DeLong's graduate research study. This is a study about improving secondary school programming for at-risk students. You're eligible to be in this study because you were a student at the Axis Program where she was your teacher. Ena gave me your contact information because when you left her program you said you would be interested in participating in a study by her.

If you decide to participate in this study, you will be agreeing to participate in a 60 minute audio-taped interview. In this interview, you will be asked questions about your learning experiences in the Axis Program. Ena has asked me help out with the interviews, so I would be conducting your interview.

Remember, this is completely voluntary. You can choose to be in the study or not. If you'd like to participate, we can go ahead and schedule a time for you to meet with the interviewer for more information. If you need more time to decide if you would like to participate, you may also call or email me with your decision.

Do you have any questions for me at this time?

If you have any more questions about this process or if you need to contact me about participation, I may be reached by telephone at XXX XXX XXXX or by email at XXXXXX@queensu.ca. You may also contact Ena at 613 539 6714 or by email at delonge@queensu.ca

Thank you so much.

APPENDIX C

LETTER OF INFORMATION: PAST STUDENT

Date

LETTER OF INFORMATION FOR PAST STUDENT

LISTENING TO THE VOICES OF FOUR AT-RISK LEARNERS IN ONE ALTERNATIVE

ENVIRONMENT

I am writing to request your participation in research aimed at education for at-risk learners in secondary school programs. The ultimate goal of this research is to improve programming for at-risk students by examining the learning experiences of former students who attended an Axis Program. I am a Master of Education student in the Faculty of Education, Queen's University. This research has been cleared by the Queen's University General Research Ethics Board, and by the School Board and is under the supervision of Dr. Ann Marie Hill, Faculty of Education, Queen's University.

In this part of the research, I wish to document your views as former student in an Axis Program. Should you accept this invitation to participate in the study, you will be agreeing to participate in a 30 to 60 minute audio-taped interview. In this interview, you will be asked questions by a third-person interviewer about your learning experiences. With your permission I would also like to interview an adult who you consider to be supportive in your life and a former teacher or Educational Assistant who you worked with while at the Axis Program. These individuals will be identified in your interview.

The interview will be tape recorded and conducted at a time and in a place that is convenient to you. The tape recorded interview will be transcribed, and then the tape will be destroyed. Confidentiality will be protected by appropriate storage and access of data and by the removal of your name from the data. Data will be stored in a locked office and be accessible only by the researcher.

We do not foresee risks in your participation in this research. Your participation is entirely voluntary. You are not obliged to answer any questions you find objectionable, and you are assured that no information collected will be reported to anyone who is in authority over you. You are free to withdraw from the study without reasons at any point, and you may request removal of all or part of your data.

This research may result in publications of various types, including conference presentations, journal articles, professional publications, newsletters, books, and instructional materials for schools. Your name will not be attached to any form of the data that you provide, neither will your name or the identity of your school, school board, place of work or home address be known to anyone tabulating or analyzing the data, nor will these appear in any publication created as a result of this research. A pseudonym will replace your name, the program's name, and the school board's name on all data that you provide to protect your identity. If the data are made available to other researchers for secondary analysis, your identity will never be disclosed.

If you have any questions about this project, please contact me Ena Holtermann-DeLong at telephone 613-539-6714 or my supervisor Dr. Ann Marie Hill at 613-533-000 Ext. 77432. For questions, concerns or complaints about the research ethics of this study, contact the Education Research Ethics Board at ereb@queensu.ca or the chair of the General Research Ethics Board, Dr. Steve Leighton 613-533-6000 Ext. 77034 (greb.chair@queensu.ca).

Sincerely,

Ena Holtermann-DeLong

APPENDIX D

LETTER OF CONSENT STUDENT/PARTICIPANT

For: Ena Holtermann-DeLong of the Faculty of Education, Queen's University
Supervisor: Dr. Ann Marie Hill, Faculty of Education, Queen's University
Study: Listening to the Voices of Four At-Risk Learners in One Alternative Environment

I have read and retained a copy of the letter of information concerning the study entitled "Listening to the Voices of Four At-Risk Learners in One Alternative Environment" and all questions have been sufficiently answered. I am aware of the purpose and procedures of this study, and I have been informed that the interview will be recorded by audiotape.

I have been notified that participation is voluntary and that I may withdraw at any point during the study and I may request the removal of all or part of my data without any consequences to myself. I have also been told the steps that will be taken to ensure confidentiality of all information.

I am aware that if I have any questions about this project, I can the researcher Ena Holtermann-DeLong at 613-539-6714 or study supervisor Dr. Ann Marie Hill at 613-533-6000 Ext. 77432. I am also aware that for questions, concerns or complaints about the research ethics of this study, I can contact the Education Research Ethics Board at ereb@queensu.ca or the chair of the General Research Ethics Board, Dr.Steve Leighton 613-533-6000 Ext. 77034 (greb.chair@queensu.ca).

☐   I AM 18 YEARS OF AGE OR OLDER *(if under the age of 18, parental consent is required-*see below)*
☐   I HAVE READ AND UNDERSTOOD THIS CONSENT FORM AND I AGREE TO PARTICAPATE IN THE STUDY

Participant's Name: _____

Signature: ──────────────────────────────────────

Date: _____   Contact number: _____

*I HAVE READ AND UNDERSTOOD THIS CONSENT FORM AND I AGREE TO ALLOW MY CHILD TO PARTICPATE IN THIS STUDY.

Parents/Guardian's Name: _____
Signature of parent/guardian: _____
Date: _____   Contact number: _____

TWO COPIES OF THIS FORM ARE INCLUDED HERE. PLEASE SIGN ONE COPY AND RETAIN THE SECOND FOR YOU RECORDS

Please write your e-mail or postal address at the bottom of this sheet if you wish to

receive a copy of the results of this study.

APPENDIX E

LETTER OF INFORMATION: EDUCATOR

Date

Listening to the Voices of Four At-Risk Learners in One Alternative Environment

I am writing to request your participation in research aimed at education for at-risk learners in secondary school programs. The ultimate goal of this research is to improve programming for at-risk students by examining the learning experiences of former students who attended an Axis Program. I am a Master of Education student in the Faculty of Education, Queen's University. This research has been cleared by the Queen's University General Research Ethics Board, and by the School Board and is under the supervision of Dr. Ann Marie Hill, Faculty of Education, Queen's University.

A former student >*student name*< who has transitioned out of an alterative learning program has identified you as an educator supportive and has given permission to interview you in this regard. In this part of the research, I wish to document your understandings of their learning experiences while at the Axis Program. Should you accept this invitation to participate in the study, you will be agreeing to participate in a 30 to 60 minute audio-taped interview. In this interview, you will be asked questions by an interviewer about >*student's name*< learning experiences in the Axis Program.

The interview will be tape recorded and conducted at a time and in a place that is convenient to you. The tape recorded interview will be transcribed, and then the tape will be destroyed. Confidentiality will be protected by appropriate storage and access of data and by the removal of your name from the data. Data will be stored in a locked office and be accessible only by the researcher.

We do not foresee risks in your participation in this research. Your participation is entirely voluntary. You are not obliged to answer any questions you find objectionable, and you are assured that no information collected will be reported to anyone who is in authority over you. You are free to withdraw from the study without reasons at any point, and you may request removal of all or part of your data.

This research may result in publications of various types, including conference presentations, journal articles, professional publications, newsletters, books, and instructional materials for schools. Your name will not be attached to any form of the data that you provide, neither will your name or the identity of your school, place of work or home address be known to anyone tabulating or analyzing the data, nor will these appear in any publication created as a result of this research. A pseudonym will replace your name, the program's name, and the school board's name on all data that you provide to protect your identity. If the data are made available to other researchers for secondary analysis, your identity will never be disclosed.

If you have any questions about this project, please contact me Ena Holtermann-DeLong at telephone 613-539-6714 or my supervisor Dr. Ann Marie Hill at 613-533-6000 Ext. 77432. For questions, concerns or complaints about the research ethics of this study, contact the Education Research Ethics Board at ereb@queensu.ca or the chair of the General Research Ethics Board, Dr. Steve Leighton 613-533-6000 Ext. 77034 (greb.chair@queensu.ca).

Sincerely,

Ena Holtermann-DeLong

LETTER OF CONSENT EDUCATOR

For: Ena Holtermann-DeLong of the Faculty of Education, Queen's University
Supervisor: Dr. Ann Marie Hill, Faculty of Education, Queen's University
Study: Listening to the Voices of Four At-Risk Learners in One Alternative
                 Environment

I have read and retained a copy of the letter of information concerning the study entitled "Listening to the Voices of Four At-Risk Learners in One Alternative Environment" and all questions have been sufficiently answered. I am aware of the purpose and procedures of this study, and I have been informed that the interview will be recorded by audiotape.

I have been notified that participation is voluntary and that I may withdraw at any point during the study and I may request the removal of all or part of my data without any consequences to myself. I have also been told the steps that will be taken to ensure confidentiality of all information.

I am aware that if I have any questions about this project, I can contact the researcher Ena Holtermann-DeLong at 613-539-6714, email delonge@educ.queensu.ca or my study supervisor Dr. Ann Marie Hill at 613-533-6000 Ext. 77432, email AnnMarie.Hill@queensu.ca . I am also aware that for questions, concerns or complaints about the research ethics of this study, I can contact the Education Research Ethics Board at ereb@queensu.ca or the chair of the General Research Ethics Board, Dr. Steve Leighton 613-533-6000 Ext. 77034 (greb.chair@queensu.ca).

□   I AM 18 YEARS OF AGE OR OLDER

□   I HAVE READ AND UNDERSTOOD THIS CONSENT FORM AND I AGREE TO
           PARTICAPATE IN THE STUDY

Participant's Name: _____

Signature: _____

Date: _____   Contact number: _____

email :_____

INDIVIDUAL STUDENT/PARTICIPANT INTERVIEW GUIDE

For: Ena Holtermann-DeLong of the Faculty of Education, Queen's University
Supervisor: Dr. Ann Marie Hill, Faculty of Education, Queen's University
Study: Listening to the Voices of Four At-Risk Learners in One Alternative Environment

Introduction:

Hi, my name is _____.

The interview will probably last about 60 minutes. I'm going to be tape-recording this interview so that I can remember what we talk about today. What you say in the interview is confidential and an alternative name that you choose (a pseudonym) will be used in any future data analysis or reports.

Let me give you a little background on what we are doing here today.

First, I want to ask that during the interview, whatever we talk about, please feel free to say whatever comes to mind. Just think out loud. Don't worry if it makes sense to me or if it's a complete thought. There's nothing specific I'm expecting or hoping you will say, I just want your honest views.

I will ask about experiences you've had at the Axis Program where you were a student, your school experiences in general, and your life right now. Specifically, I am interested in finding out how you feel about your learning experiences and how these learning experiences have affected your life.

The topics we discuss here will remain confidential and will not be shared with anyone outside of the research team, that is, myself and my supervisor.

Do you have any questions?

Focus for interviewer probes:

During the interview focus on:

- Learning activities participants carried out during their studies at the Axis Program and how they used various kinds of broad-based technologies to support this or reach their goals or even to arrange/coordinate/regulate their own or shared learning.
- Find out what specific subject disciplines within the integrated curriculum participants found useful in their learning while at the program and at present.

- Probe to find out if the learning experiences at the program have changed the way the participant learns or thinks about learning.

Semi-Structured Interview Questions:

1. Would you state your name and spell it for me?

2. If you don't mind, would you tell me your age?

3. Are you in school or working right now?

4. What are you studying/what is your current occupation?

5. When were you a student at the Axis program?

6. How would you describe yourself as a student/learner before starting at the program?
   - What has happened in your life as a student that leads you to describe yourself this way?)

7. How would you describe yourself as a student/leaner while in the program?
   - What experiences contributed to seeing yourself this way?

8. How would you describe your experiences at the program?
   - Did the program change your thinking about learning? How?
   - Did the program change how you view yourself or others? How?

9. What can you tell me about the program? (Probe)
   - What kinds of things did you do there?
   - What were some of your favorite learning activities?
   - What were some of your least favorite learning activities?
   - Was there anything special about the way you learned or were taught at the program?

10. In what ways, if any, was your experience at the program different from your past experiences in school? (Probe)
    - willingness to try new things,
    - changing anti-social behaviors like substance use,
    - truancy,
    - confidence as a learner,
    - influencing you to consider a skilled trade after high school.
    -
11. What would you say was your biggest accomplishment while you were a student at the program?

12.   What would you say was your biggest accomplishment since you left the program?

13.   In what ways, if any, do you think the program influenced you while you were a student there?

14.   In what ways, if at all, do you think the program influenced your choices (school/work, etc) after leaving?

15.   Do you think you would be in the same place now, if you have not attended the program?
        If yes, why?
        If no, where?

16.   What advice do you have for students thinking about coming to the program?

17.   Are there any other comments that you would like to make regarding your perspective on the program?

APPENDIX H

EDUCATOR INTERVIEW GUIDE

For: Ena Holtermann-DeLong of the Faculty of Education, Queen's University
Supervisor: Dr. Ann Marie Hill, Faculty of Education, Queen's University
Study: Listening to the Voices of Four At-Risk Learners in One Alternative Environment

Introduction:

Hi, my name is_____.

The interview will probably last about 60 minutes. I'm going to be tape-recording this interview so that I can remember what we talk about today. What you say in the interview is confidential and an alternative name that you choose (a pseudonym) will be used in any future data analysis or reports.

Let me give you a little background on what we are doing here today.

First, I want to ask that during the interview, whatever we talk about, please feel free to say whatever comes to mind. Just think out loud. Don't worry if it makes sense to me or if it's a complete thought. There's nothing specific I'm expecting or hoping you will say, I just want your honest views.

I will ask about >student/participant's name< experiences at the Axis Program while he/she was a student there, about >student/participant's name< school experiences in general, and >student/participant's name< life right now. Specifically, I am interested in finding out what you have observed about how >student/participant's name< feels about his/her learning experiences and how these learning experiences have affected >student/participant's name< life.

The topics we discuss here will remain confidential and will not be shared with anyone outside of the research team, that is, myself and my supervisor.

Focus for probes:

During the interview focus on:

- Learning activities they participants were aware of that students carried out during their studies at the Axis Program and how participants think the students felt about the used various kinds of broad-based technologies studied. Find out what specific subject disciplines within the integrated curriculum student mentioned to participant while at the program and at present.
- Probe to find out if the learning experiences at the program have changed the way the student now learns or thinks about learning.

Semi-Structured Interview Questions:

1.   Would you state your name and spell it for me?

2.   What was your educational role in relation to > student/participant's name<?

3.   When was > student/participant's name< a student at the Axis Program?

6.   How would you describe > student/participant's name< as a student/learner
        while at the program?
        • What experiences do you think contributed to your seeing >
          student/participant's name< this way?

7.   What challenges, if any, did > student/participant's name< face as a
        student/leaner at the program?
        • Why do you think that was so?

8.   How would you describe > student/participant's name< experiences at the
        program?
        • Do you think the program changed > student/participant's name< thinking
          about learning? How?
        • Do you think the program changed how > student/participant's name <
          viewed themselves? How?
        • Did the program change the way you viewed >student/participant's
          name<?
        • Did the program change the way your view learning for at-risk students?

9.   What can you tell me about the program? (Probe)
        • What kinds of things did you do with > student/participant's name< at the
          program?
        • What were some of > student/participant's name< favorite learning
          activities?
        • What were some of > student/participant's name< least favorite learning
          activities?
        • Was there anything special about the way > student/participant's name<
          learned or was taught at the program?

10.   In what ways, if any, do you believe > student/participant's name< experiences
        at the program differed from his/her past experiences in school?
        (Probe)
        • willingness to try new things,
        • changing anti-social behaviors like substance use,
        • truancy,
        • confidence as a learner,

- influencing > student/participant's name< to consider a skilled trade after high school.

11. What would you say was > student/participant's name< biggest accomplishment while he/she was a student at the program?

12. In what ways, if any, do you think the program influenced > student/participant's name< while he/she was a student there?

14. In what ways, if at all, do you think the program influenced > student/participant's name< choices (school/work, etc) after leaving?

15. Do you think > student/participant's name< would be in the same place now, if you have not attended the program?
    If yes, why?
    If no, where?

16. What advice do you have for >educator's role< thinking about working with at- risk students and students at the this program?

17. Are there any other comments that you would like to make regarding your perspective on the program?

PARTIAL TRANSCRIPT FOR KEY INFORMANT: MELANIE

40. A *Was there any special thing about the way you learned or special way that you*
41. learned or special way that you were taught at the program?

42. The teacher would take like real life experiences in like with Math, I can count
43. money, so she'd like do it as money, so it was a lot easier. I don't know, she was
44. more one on one, and she like actually sat there and like paid attention to you and
45. helped you out.

46. Oh, that's good. Now, in what way if any was your experience in the program
47. difference from past school experiences? Like, when you were at a regular high
48. school, doing the same classes as everyone else.

49. Umm, with classrooms, there are a lot more people and it's a lot harder to pay
50. attention, where as in her [the teacher's] class, there's less people and it's like she has
51. more patience with you, where other teachers like twenty kids and they can't pay
52. attention to just you.

53. Do you find that you were more willing to try new things, or you were like eager
54. to come to school?

55. Ummm, my confidence was way better and it was like, yeah I really wanted to go
56. to school I didn't want to sit at home like I normally would.

57. So school was more fun, or exciting?

58. Yeah.

59. So what would you say your biggest accomplishment while you were at the
60. program was?

61. Umm, getting like a lot of credits in such a short amount of time.

62. How many did you get? Like were you able to catch up?

63. Uh, yes. I did like my grade nine year in a semester.

PARTIAL TRANSCRIPT FOR EDUCATOR, EA: AUTUMN

51. *Okay. How would you describe Melanie as a student while she was at*
52. *Transitions? Like during the time that you got to know her, sort of from the*
53. *beginning until you know, she transitioned out. How would you describe her as a*
54. *learner?*

55. When she first came to us she was frustrated in her learning she had only had one
56. opportunity to be in a secondary school and she really was motivated and not as
57. confident as she could be but when she came to us she was knowledgeable and
58. she was willing. And throughout her entire time at Axis there were a few
59. bumps but at all times she was always willing and motivated and she was her
60. confidence really built as a learner when she was with us.

61. *Give me an example of a bump. Because when I think of a bump in a regular*
62. *secondary school it might be that you fail a test or that you don't attend like are*
63. *they the same sort of bumps that you're talking about?*

64. No. It's mostly bumps that would happen in her personal life. Moving between
65. families, moving between parents, moving between provinces.

66. *Wow.*

67. Um, that she had to deal with. And then coming back to our school and trying to
68. figure out where she left off. And just kind of hit the ground running.

69. *So when we're talking about Melissa and her experiences what I hear you saying*
70. *and if you could help me out with this, is that her personal life seemed to create*
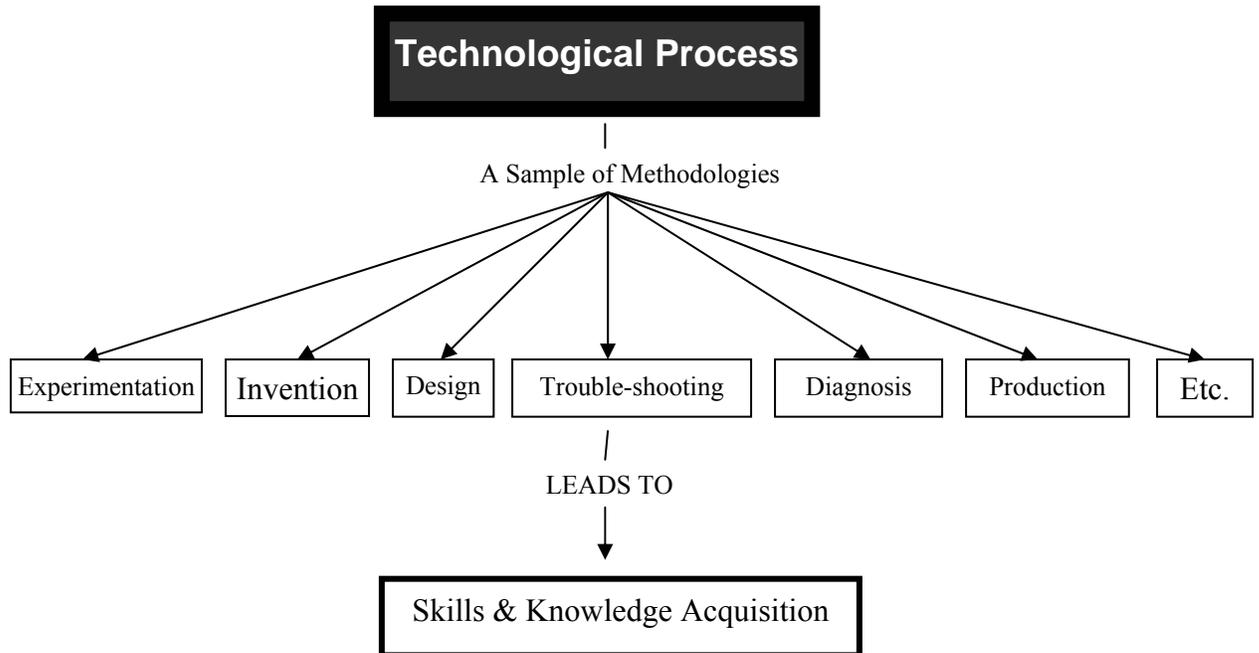71. *some of the school issues that were happening?*

72. Um, I think so. There was a lot of stress, a lot of stress that she had to overcome
73. to stay focused in school and she really had to work hard to achieve that.

74. *Was Melissa identified as having a learning disability?*

75. No.

THE TECHNOLOGICAL PROCESS

Technological Process

A Sample of Methodologies

| Experimentation | Invention | Design | Trouble-shooting | Diagnosis | Production | Etc. |

LEADS TO

Skills & Knowledge Acquisition

The Technological Process. Figure developed by Dr. Ann Marie Hill,©1998

Note: Excerpt from Hill, A.M. (2008). *Curriculum development in technological education. Teacher resource document.* Queen's University, Kingston, ON: Author