STUDENT SCHOOL/WORK TRANSITIONS IN BRITISH COLUMBIA: A CASE STUDY OF THE CAREER TECHNICAL CENTRE IN ABBOTSFORD, 2004

By

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Abstract

Academic preparation and career programs provided through British Columbia schools support the transition from high school to post-secondary education, training and work. While a large portion of students pursue a university education, many more enrol in various other post-secondary institutions, training programs or engage in various forms of school to work programs. Career preparation programs provide students with alternative pathways to life after school and thousands take advantage of these opportunities while a much smaller number engage in specialised technical career avenues such as Secondary School Apprenticeships or attend Career Technical Centre (CTC) programs. Researchers have overlooked CTC programs and we know little about the nature of the experiences they provide.

To address this research area, observations and interviews were conducted with students, teachers, college instructors, staff and administration in the Career Technical Centre in Abbotsford, BC during the 2004/2005 school year. Formal interviews were conducted with two teachers and two college instructors. The objective of the study was to document the experiences of the participants and the nature of education the programs provide. Theoretical issues drawn from discourses on the "new vocationalism" along with educational and career choice were used for interpretation of the findings. A number of characteristics were identified.

Students complete the requirements for a high school diploma in addition to receiving University College of the Fraser Valley credentials and relevant work experience in their chosen career fields. During the 2004/2005 school year, there were 364 students enrolled in Computer Information Systems, Drafting Technician, Electrical, Electronics, Health and Human Services, Automotive Service Technician, Carpentry, Welder/Fitter,

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Applied Business Technology and the newly introduced Grade 10 programs. Specialised programs offer a unique opportunity for students to gain dual credit and genuinely explore technical careers while still in high school. An in-depth study of the form and function of the CTC has presented an important illustration of one educational choice students and parents are offered in British Columbia.

Four main themes emerged from the research data collected from the teacher and instructor interviews, informal interviews and questionnaires. First, all of the participants considered the CTC to be a very effective opportunity for career exploration. Second, many recognised the scope of the programs to be focused upon job training and preparation for work while the minimum graduation requirements were met. Third, the CTC provided facilitated access to post-secondary education institutions. Finally, the high school and college partnership structure functioned relatively well as academic education and vocational education were merged into the collaborative programs. A reasonable balance appears to have been achieved within this CTC.

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Dedication

To my loving parents Denis and Beatrice Cormier who have supported my own education and career choices. And to all those people who keep putting the Funshine in my life.

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CHAPTER I

Introduction

This research is generally focused on the transitions of British Columbia (BC) high school students to post-secondary education, training and work. This research explores the options open to students for school/work transitions in BC. Specifically, I am interested in Career Technical Centers (CTCs).

Specialized programs in conventional high schools and technology magnet schools are intended to apply considerable influence upon the choices and opportunities of students who intend to enter technical careers. The relatively recent evolution of CTC (dual credit program) initiatives in BC is a case in point and worthy of further study. Little is known about these centres, the structure of their programs and the concrete successes they are having. There is limited literature regarding this type of school and the education they provide as the first program was established only ten years ago. My research involves an ethnographic, illustrative case study of the relatively well established Career Technical Centre in Abbotsford, BC (opened September, 1994).

Problem

There were two central questions that framed my research. The first was, "What role do CTCs play in secondary and post secondary education choices and transitions of BC high school students?" These programs provide specialized schooling for secondary school students who make choices to pursue routes to various technical careers by grade 11. Students who graduate from CTCs leave with a specialized and unique education while continuing to study, train or work in their chosen career. More choices are being made available to British Columbian public school students and some students (and parents) are taking full advantage of them. My second question addressed the case of one CTC: "What are the impressions and the nature of experiences the students and teachers have in the Abbotsford CTQ" This question was targeted at learning about the functional, structural, social and educational aspects of this particular CTC. It was important to learn how the school functioned as a partnership between the Abbotsford school district and the University College of the Fraser Valley (UCFV) and how the respective teachers and college instructors worked together as a team and independently within their particular programs. Exploring the experiences of students in the CTC provided an insider's view of what it was like to attend the school and in what ways it provided the education students were looking for. A number of comparisons could be made with a conventional high school but many aspects were unique to this CTC. First-hand interaction with the members of the CTC was not only essential for finding some answers to the research question but the process was engaging and rewarding for everyone involved.

Purpose

The fundamental purpose of conducting research in this area is to clarify the role of technology careers in student school-work transitions as well as establish how student educational choice can be informed and beneficial to young peoples' lives after high school. Expanding choice within public schooling coupled with increasing uncertainty facing students leaving school place greater demands upon our education system. Well publicized skill and worker shortages are contrasted by considerable unemployment statistics (BCMoAE, 2001, Renshaw, 2002). Assisting students with the challenges of school-work transition through informed decision making is a solid preparation approach.

As a technology educator, I recognize the potential for supporting students in making post-secondary decisions. A high school education is intended to prepare students

for their lives once they leave, whether for work, study, travel, family or some combination of these. Technology courses and programs have numerous direct and indirect applications in each and every facet of young peoples' lives. Skills and knowledge gained in high school are transferable to other technical careers and areas of study while still being valuable in academic pursuits, and personal life challenges. Positive experiences with technology in high school are essential in preparing young people for life in our technological society.

The knowledge and understanding I expect to gain from this research will provide a basis for finding innovative ways to improve and develop transition programs in conventional schools in the province. Drawing on the trials and successes of a unique program enables others to explore ways of improving their own practice. Individual teachers, schools and school districts may find aspects of the research findings that could be adapted to their own programs in order to better support student transitions to postsecondary education and into various careers.

Transition Programs

There a number of school-work transition programs in Canada. Some programs are very effective in assisting students in making the transition from high school to further postsecondary study or work. Some carry higher levels of esteem by students, parents, teachers, councillors and administrators than others do so they receive varying degrees of support and participation. Each have there own merits and are worthy of interest and study. Schoolwork transition programs are easily identified in the British Columbian public school system.

The British Columbia Ministry of Education (BCMoE) has introduced a number of career programs and initiatives in order to improve the transitions of secondary school students. Flexible career programs enable students to gain valuable work experiences in various areas of interest before leaving high school. Some of these programs give students a

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head start once they leave school and continue in post secondary education or enter the workforce. It is important to understand what such programs offer to students and to what degree they are utilized.

There are four specific career programs created by the BCMoE and with support from the BC Industry Training Authority (BCITA). Co-operative Education and Career Preparation provide students with opportunities to gain valuable work experience directly related to a field of study, career preparation requirements and job skills while exploring a variety of career pathways (BCMoE, 2003a). Secondary School Apprenticeship (SSA) programs enable students as young as 15 years old to begin an accredited apprenticeship in an area of interest where they get paid while learning and earn high school credits (BCITA, 2004b). CTCs are dual-credit programs that enable students to gain valuable college credentials and access toward technical careers while completing the requirements for a high school diploma (BCMoE, 2004b). Enrolment in the four career programs are presented in Table 1. Co-op and Career Preparation programs continue to shrink as funding structures change and support wanes for career programs in general. SSAs have experienced a sharp increase for 2004/2005 after a steady decline over the few years prior. CTC enrolment continues to rise even though the total numbers remain relatively small as compared to the other programs. These career programs "are designed to address the goal of transition to the workplace or further education and training" (BCMoE, 2003a). The four Ministry programs each combine some variation of work experience activity into the general high school education.

Table 1

Year	Co-operative Education	Career Preparation	Secondary School Apprenticeships	Career Technical Centres
2000/2001	2551	48744	468	n/a
2001/2002	2303	43176	769	775
2002/2003	2614	36228	625	799
2003/2004	2336	31347	520	859
2004/2005	2128	29668	727	1009

Student Enrolment Figures in Career Programs in BC

Source: BCMoE Reports & Publications website. (BCMoE, 2003e, p. 6)

"Co-operative Education programs are educational programs designed locally to provide students with opportunities to explore one or more careers. These programs can offer a mixture of: career exploration, pre-employment training, skills enhancement, and work experience placements" (BCMoE, 2003a). Students develop generic employment skills while making connections between school curriculum and a career. The extended length of time (200 hours) committed to these work placements allows for deeper understanding of a particular occupation or the possibility to try a variety of careers. Co-operative programs are intended for all students who have interest in any type of career be it technical, social or professional in nature.

There are various school district coordinated Co-operative Education programs in many high schools. These types of programs can involve "job shadowing, mentorship, peer counselling, exposure to workplace technology, regular work-site visits, exposure to career fairs, exploratory programs, volunteer work, and other forms" (Schuetze, 2003, p. 74).

Increasing amounts of business-education interaction contributes to the variety and effectiveness of school/work programs and student experiences (Schuetze, 2003). Various federal government initiatives have provided support for co-op education programs with the most recent Youth Employment Strategy introduced in 1999 which also includes the Youth Internship program and a summer job program for students (Schuetze, 2003). Even with a range of co-op programs and initiatives in place, student participation in these programs continues to be relatively low.

On the other hand, Co-op Education is well established in a variety of university and professional programs where theoretical learning and knowledge are applied within actual work settings. Applied academic fields such as engineering have extensively adopted this type of education as part of the program of study. Students get the opportunity to transfer what they have learned in the classroom to practical applications. As opposed to other high school transition programs, post secondary co-op education programs are "eagerly anticipated by graduates" (Schuetze and Sweet, 2003, p. 16).

Secondly, Career Preparation (CP) programs in BC high schools are "locally developed educational programs that prepare students for entry into the workplace or for further education and training in a specific career pathway" (BCMoE, 2002). The goals of Career Preparation include enhancing career development, provide entry level employment skills, improve the transition between secondary school and work and enhancing the transition between secondary school and post-secondary education (BCMoE, 2002). CP programs require students to commit to 100 hours of work, which is half the time required for the more involved Co-op programs.

Thirdly, SSA programs provide an opportunity for students to begin training in a desired trade while still in high school. Typically, a student would begin their apprenticeship

in grade 11 or 12 once they had found an employer who would agree to hire them as an apprentice and support their training. These agreements usually follow some sort of work experience arranged by a school career preparation teacher or, in some cases, through some personal contact of the student. The student is employed on a part-time basis on weekends or summer breaks while earning a wage during their apprenticeship. An SSA requires students to gain 400 hours of trade related work experience to qualify and receive credit. Ideally, apprentices continue to complete the compulsory courses in high school and continue technical trade training once leaving high school (BCITA, 2004b, Schuetze, 2003). Those students who maintain a C+ average in the last two years of high school and continue in their chosen trade can qualify for a \$1000 SSA scholarship.

BCMoE initiated its SSA program in 1995. Despite the development and support of the SSA program, the levels and growth of enrolment had been relatively low while recent reports reveal that the number of students enrolled in this program is actually decreasing. Enrolment figures were estimated at approximately 500 students in 1999/2000 (Schuetze, 2003) while BC Ministry of Education reports document the last four years (see Table 1) as being 468 in 2000/2001, 769 in 2001/2002, 625 in 2002/2003, 520 in 2003/2004 and an increase to 727 in 2004/2005 (BCMoE, 2003a). Continued support of these programs by students, teachers, counsellors, administrators and school districts could be in question.

The newly formed BC Industry Training Authority manages the apprenticeship programs in BC, including SSAs. They have also introduced the Accelerated Credit Enrolment in Industry Training (ACE IT) programs that enable students to gain dual credits towards both graduation and an Industry Training Program. ACE IT programs are similar to programs offered at CTCs. They are a partnership between the school district and a local college; involve work experience that provides credit toward graduation and the on-the-job component of the apprenticeship training; and course work that gains dual credit toward graduation and the first level apprenticeship technical training (BCITA, 2004a). After a number of successful pilot projects, ACE IT programs are being offered in a growing number of BC secondary schools.

The fourth career program is the CTC, which is an emerging type of dual credit program in BC. Currently, there are only a few small programs in the province but they are gaining in popularity. "Career Technical Centres (CTCs) are partnerships between school districts and public post-secondary institutions, in consultation with their communities. CTCs are designed to maximize student achievement in trades and technology programs" (BCMoE, 2004b). Students who enrol in these programs pursue their interests in various technical careers while completing their high school requirements and receiving their diploma upon graduation. "All of the college courses taken by CTC students are dual credit courses - ie. they carry full credit toward secondary school graduation in addition to their full credit toward a post-secondary certificate" (CTC, 2004). Students who know early on in their schooling that they want to pursue a technical career have the opportunity to get a head start on their chosen career in an environment that is relevant to their lives.

Relevance is a key aspect of these programs. Not only do students study within a chosen career field but also the other core academic courses are designed to enhance the technical curriculum. Subjects that may have had little meaning before in the mainstream high school are now applied to practical applications. The question of, "How am I going to use this in the 'real' world?" can be answered much more convincingly.

The government maintains that CTCs are designed to maximize student achievement as part of their plan to promote choice in order to improve achievement. It is reasonable to expect student achievement to improve in this type of program. Students are choosing their

own educational path in a technical area of interest that can demonstrate real and achievable outcomes while in school, during summer breaks and in the immediate future following school. Structured work experience opportunities provide authentic learning situations and are also credited toward apprenticeship training time. The accompanying core academic courses hold a stronger relevance to the student's training so it can be assumed that effort and understanding would be increased from more straightforward application of the content. It should be noted that there is little research or literature at this point to indicate if these assertions are legitimate but it is clear that parents and students have been given another schooling choice.

The education provided by CTCs is somewhat removed from the general, liberal education that many advocate. Some of the broad education is replaced by job specific training, which contradicts some philosophies toward public schooling. At the same time, students who enrol in these programs are choosing to get something specific and more relevant out of their education while still satisfying the provincial curriculum requirements. This choice has become another option for young people to direct their own education in public schools.

In particular, the CTC in Abbotsford has experienced rapid growth in enrolment and programs offered. Table 2 shows the steadily increasing official enrolment figures for the past four years. The first intake of grade ten students was introduced in September 2004 as 50 students fulfil the new graduation requirements in this unique school. Correspondence with CTC administration provided a further breakdown of the student enrolment as of February, 2005. The total number of students had stabilised at 346 (260 male and 86 female) as a number had withdrawn from the program and a few new ones had enrolled after the figures had been submitted to the Ministry in September of 2004. Of these students, 17 (13

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male and 4 female) have no funding which includes 13 who are high school graduates over the age of 19 so are no longer eligible for funding. The remaining students receive Ministry funding, including 67 high school graduates under the age of 19. Enrolment figures for previous years are skewed since the programs were longer (approximately one and one-half years) the students were declared inactive when they had finished making it appear as if they had withdrawn even though they had actually completed their programs.

Table 2

Student Enrolment Figures in the CTC Abbotsford

Year	Enrolment
2001/2002	246
2002/2003	309
2003/2004	352
2004/2005	364

Source: BCMoE K-12 Standard Reports: Career Programs Reports website. (BCMoE, 2003c)

Nine programs are currently offered at CTC Abbotsford. There are four in the Technology Programs including Computer Information Systems, Drafting Technician, Electrical and Electronics. Health and Human Services is the single health related program currently being offered. Trades Programs includes Automotive Service Technician, Carpentry and Welder/Fitter. Business Related Programs consist of Applied Business Technology only as the Adventure Tourism Training is not being offered for the 2004/2005 school year. Each program is comprised of distinctive core course requirements in English, mathematics, sciences, social studies, physical education, fine arts and employment counselling. In addition to the core courses, students take a number of specialized college courses in the chosen specialty along with a substantial work experience component. Students then have the opportunity to continue their studies after graduation at the affiliated UCFV.

There are three notable CTCs in other school districts in BC that provide a variety of programs in partnership with a local college. Central Interior CTC is in Prince George which is a partnership between School District No. 57 (Prince George) and the College of New Caledonia. The Central Vancouver Island CTC is in Nanaimo and is a partnership between School District No. 68 (Nanaimo-Ladysmith) and Malaspina University College. The third is the Cariboo CTC in Kamloops and it partners School District No. 73 (Kamloops/Thompson) and School District No. 27 (Cariboo-Chilcotin) with the University College of the Cariboo.

CTCs are similar to the Technical Preparation (Tech Prep) programs that have emerged in the United States and more recently in Alberta (Lewis, Stone III, Shipley, & Madzar, 1998, Taylor, 2003). Students choose a career path that is supported by collaboration between the high school and a 2-year post-secondary institution. Senior courses are aligned with college or technical school programs and students move directly into their further studies after graduation. The creation and success of Tech Prep programs in the United States have been made possible by national legislation such as the Carl D. Perkins Vocational and Applied Technology Act of 1990 and the School-to-Work Opportunities Act of 1994 (Lewis et al., 1998). The first Tech Prep credential on the Alberta high school diploma materialize in 2002 but the programs were first introduced in 1995 (Taylor, 2003). In 2001 there were about 160 Tech Prep graduates who received certificates

along with high school diplomas from Alberta programs. Vocational and technical educators applaud these programs as a valuable part of career education.

Personal Narrative

As a technology education teacher, I am fully aware and knowledgeable of the benefits of technical education, experiential learning and career programs. Many technology subjects provide relevant skill development and knowledge that is readily transferable to work applications. Students benefit from both classroom and on-site learning and, as a result, learn to make informed decisions for what they might like to do after leaving high school. Not every student discovers exactly the career they want to pursue but many benefit a great deal from the exploration of the possibilities. There are a number of successful career programs in various schools and school districts in the province but I believe more can be done for students. Improved implementation of career programs will only serve students better in their education and further support their transition from high school to post-secondary education, training and work of all types.

My belief is that public schooling has traditionally been designed to serve those students who conform to the existing educational structure by playing the role of the receptive student, accepting the education provided and regurgitating information to prove they have internalized the conformity. Successful students are typically directed to university education as the first or best choice of options once leaving school. The fall-out or consequences to this rather narrow focus of schools is that some students end up in an environment they are not suitably matched for, others miss out on career opportunities they would flourish in and many are left to feel a sense of failure or being second-rate. Technical, trades and vocational courses and careers (non-university) carry a significantly lower status than academic courses and university based careers within schools and in society. These

types of courses and programs in schools are then stigmatized as unimportant and inherently hold less value. Students need to know and feel that any informed choice they make is of value and respected as the best for them. There is a significant responsibility for schools to ensure students make informed decisions while providing the necessary and appropriate support for doing so.

My own education and career path had an influence upon how I framed my research. In high school I took technical courses that provided me with valuable practical knowledge and skills. I also took many academic courses that enabled me to graduate with a diploma that made it possible to enter university. I recall having little idea what I might want to do after leaving high school besides wanting to be finished and find a job. I had no immediate plans for post-secondary education of any sort and it was a few years before I ended up trying and quitting college a couple times. Over the years I worked in a few trades and attended a few colleges before I became a journeyman carpenter ten years after graduating from high school. I then became serious about university in 1998, completed my BEd in 2000, returned for my MA in 2003 and intend to continue into a PhD program soon after. I undoubtedly value a range of career and education opportunities and my career path reflects this. I never would have predicted in high school where I am today but I believe that the variety of courses I took in high school have helped to some degree. I can't help but wonder though that if I had the opportunity to be involved in some type of career program in high school that I may have made some informed education and career choices earlier and spent considerably less time "floundering". If so, would I be where I am today? Or, would I have just gotten here sooner? Would I have chosen a much different career path altogether? What influence does my working/trades/academic career path have on my philosophy,

attitude and opinion toward schooling? These are questions I ponder when I consider the education, choices and futures of high school students.

Organization of the Thesis

Although my research is generally concerned with career preparation and school/work programs, I specifically focus on CTCs. I conducted and ethnographic, illustrative case study of the Abbotsford CTC during the fall of 2004 and report the methods and results of this research in this thesis. The thesis is organized in five chapters.

Chapter One includes an introduction, statement of the problem and the purpose of the study. An overview of transition programs in BC is provided in order to establish a context for discussion. I also present a personal narrative that establishes my perspective within the greater scope of the study.

Chapter Two is the literature review that begins with an historical account of technical education in BC. Vocational education in public schools is discussed followed by an explanation of the proposed New Vocationalism. The next section outlines the economic factors that involve occupation projections and youth employment opportunities. An overview of the changing demographics of students in BC follows. The matter of choice in schools is discussed and the reality of school boundaries, specialized programs and magnet schools. The chapter is concluded with an outlook of life after high school for young people.

In Chapter Three, the research design and methodology are explained starting with an in depth look at the research questions. The site selection is identified and justified. The next sections provide an explanation of ethnography and case study methods utilized in the study. Population selection is described in the next section followed by a description of the

data collection and data analysis techniques used. A section on research ethics follows and the chapter ends with a timeline of the research study.

Chapter Four is a summary of the research findings. The results include data from field notes, teacher and instructor interviews and questionnaires completed by teachers, instructors and students.

Chapter Five is a summary of the research study with a discussion of conclusions drawn from the findings and recommendations for further inquiry.

CHAPTER II

Literature Review

Numerous scholars from Britain, Europe, Australia, The United States and Canada provide insight and multiple perspectives of vocational education, schooling for work, liberal versus technical education and career programs. The literature provides valuable evidence of what has developed historically in technical education and school/work transitions. Authors have addressed questions pertaining to role, responsibility, choice and opportunity in public schooling with reference to post-secondary education and training, careers and economic factors.

In this chapter, I provide a brief history of technical education in BC. I outline the key arguments related to vocational education and the proposed *New Vocationalism*. I indicate some of the economic factors that affect youth employment and careers. The changing demographics in BC are also addressed. I discuss the notion of choice in BC schools. I then look at life after high school for students.

History

In order to better understand technology education and transition issues today, it is important to examine the development of technical education in its early years. In the early 1900s, technical education involved curriculum and courses for broadening a traditional liberal elementary education as well as providing opportunity for students to develop practical skills useful for home, farm or work. Courses in woodworking and drafting were offered to boys who had interest in these areas and for those who aimed to pursue agricultural, trades or technical occupations, while girls attended courses in domestic science or home economics (Petrina & Dalley, 2003). One of the goals of technical education

courses was to keep boys in school longer for a general education as well as equip them with skills appropriate for attaining work after leaving school (Dunn, 1978, 1979; Robertson, 1913; Tomkins, 1986). "The ultimate aim of mass public education was to prepare youth for socially efficient citizenship" (Dunn, 1979, p. 238). Social efficiency was important to establish and maintain and manual training was an effective way of ensuring this (Dunn, 1979, 1978; Kyle, 1915-1928). Preparing young men for the changing needs of industry and the segmentation of skills was another motivation. "Manual training did not make boys carpenters, ship-builders or metal workers" (Dunn, 1979, p. 241) but rather provided a basis for them to be suitably trained by employers in industrial work situations. The Putman-Weir Commission of 1925 prompted the name change to industrial arts as it spread into junior and high schools. A greater selection of courses in electricity, home mechanics, metalworking and printing began to establish a foundation for preparing and training students as skilled workers for industry. Technical education had adopted a strong vocational quality in its first few decades as a school subject.

Increased student enrolment in industrial arts courses during the 1930s to 1960s prompted numerous workshops to be constructed and instructors to be hired to teach. In 1960, the Royal Commission on Education's (Chant Commission) report recommended changes that included a name change to Industrial Education (IE) and for schools to reflect the economic developments of the times. Closely following the Chant report was the Federal Technical and Vocational Training Assistance Act, which provided \$243 million to the provinces in order to establish industrial and vocational education programs. Substantial funding increases outpaced the enrolment increases during the next two decades. School funding in BC rose by 78% between 1960 and 1970 with enrolment climbing by 40% and funding continued to rise another 38% between 1970 and 1975 while enrolment growth

slowed to only 5%. A large proportion of these new funds were directed toward IE and vocational education programs as new facilities were constructed and equipped at significant expense. The number of new IE teachers being trained each year at UBC had increased from 15 in the early 1960s to 75 by the 1970s. A considerable investment had been infused into IE programs, facilities and teachers over a rather short period of time (Petrina & Dalley, 2003).

Vocational and liberal educational qualities continued to transpire as technical education matured through the decades and through various titles including Industrial Arts, Industrial Education and Technology Education of today. Curriculum has evolved over the years along with various technologies and the associated courses. Choice and availability of programs have continued to increase, allowing students to experience new and different areas of study. Work experience, apprenticeship programs, technology specializations for students in schools, female participation in these traditionally male dominated courses and a significant connection between schools and post-secondary institutions have all been complimentary to the education and experience of students in Technology Education.

Vocationalism

The umbrella term 'Vocational Education' holds many meanings and is used in a variety of ways to describe an assortment of technical, work-related and skills based training. Broadly, this can refer to any kind of training for work. Many educators and scholars are moving away from using this term in order to escape the typically negative stigma it carries while using terminology that better describes the specific education and training being discussed. The American Vocational Association (AMA) has distanced itself from the term and is now called the Association of Career and Technical Educators (ACTE). This new name and terminology more clearly describes what and whom the association represents.

Vocational education also tends to appear in the literature as job-specific skills and task training.

Vocational education continues to be held in low esteem in Canada in comparison to academic studies (Schuetze & Sweet, 2003). Historically, vocational programs were aimed at low achievers, at-risk groups and non-academically inclined students. Job-specific skills and work training are considered to be limiting and restrictive in some ways and debate surrounds this type of education as gender, class and race based while only reinforcing inequality (Lewis et al., 1998).

Employers do the majority of job-specific training directly with their employees on the job. Specialized skills are learned within the context of the specific work and are delivered in structured and unstructured ways that best suit the needs of the employer (Schuetze, 2003). General employability skills can be instilled in young people through school based activities but these only go so far as to make someone more trainable in a more specialized setting. Problem solving, decision making, critical thinking and logical process skills can be adapted to providing solutions within the workplace. This type of training is given on an as needed basis.

Schuetze articulates a rather critical but revealing appraisal of what he terms alternation education (education for work and career preparation) in Canada:

In summary, alternation education and training in Canada exist in various forms, but while the concept's potential is clear, it is not flourishing. This low status is, in part, due to deep-seated social values and attitudes that favour academic education over vocational-technical education and industrial training. There are also structural reasons: the lack of investment in coordinated school-work pathways and the lack of employer interest in and commitment to employee training. Recent attempts by some provincial governments to link schools more closely to the workplace by prescribing work experience as part of the school curriculum and by promoting cooperative education and school apprenticeships have so far yielded only modest results. (2003, p. 87)

Although he depicts a system of good intentions and relatively poor results, he also suggests there is optimism "for an active public-private partnership and a new definition of the respective roles of the state, the economy, and the workers and their representatives" (Schuetze, 2003, p. 88). Theoretical support is strong for school transition programs so effective application and acceptance within our social value systems need to be actively addressed and remedied.

In BC, there is a minimum 30-hour work experience component of the graduation requirements where students develop employment skills with a local employer (BCMoE, 2003a, 2004c). The BCMoE defines work experience as "that part of an educational program which provides a student with an opportunity to participate in, observe or learn about the performance of tasks and responsibilities related to an occupation or career and includes work experience as part of a Career and Personal Planning course" (BCMoE, 2004k). High school students have the opportunity to gain work experience through placements arranged by students and/or teachers with local employers. These rather informal activities are "mainly aimed at familiarizing students with the routines and rituals of the workplace" (Schuetze & Sweet, 2003, p. 6). The workplace setting allows students to apply some of their classroom or life knowledge to practical applications. Awareness of working life, constraints and authority within organizations and opportunity for personal growth are other benefits imbedded in these cursory encounters. The rather short and superficial nature tends to reduce the efforts schools, students and employers put behind these programs and inhibits informed choice by students related to work and careers (Schuetze, 2003). Student benefit is then limited as a result of insufficient time and resources applied to high school work experience.

The New Vocationalism

The new global, knowledge-based economy has placed new demands on workers and the training they need to remain competitive or survive in the changing workforce. Some argue that students need to be adequately prepared in order to successfully make the transition from high school to the world of work. Others note that existing vocational education strategies need to adjust to the changing world students face as they leave school. "Because the character of work and jobs has changed, it is felt that traditional job-specific vocational education must be superseded by a *new workford students*" (Lewis, 1998b, p., 286). Lewis argues that work-based skills are best learned within a school environment:

There cannot be any argument that the principles and practices of occupations can be taught more rigorously under school-like conditions than by imitation in the workplace. Thus it would seem that vocational education can be defended purely on the count that it throws further light on occupations than would be the case if the acquisition of skills were left to the contingencies of the heat of production (1991, p. 106).

Rather than leaving students to learn by fire in a real work setting, carefully selected work experience placements and work-oriented programs would produce better results and practical benefit for the students than leaving this type of education to employers.

Lewis suggests "one feels that what vocationalism really needs is a liberal view of its possibilities" (1991, p. 105). "What is needed is a vocationalism which admits to the value of liberal education and which forever seeks to purvey its own traditions in a liberal way" (Lewis, 1991, p. 106). The traditional form and function of vocational education cannot and will not provide what students need to be successful in today's economy.

Lewis et al. (1998) suggest the need for a new vocationalism to emerge in schools in the United States. Workplaces that provide satisfactory transitions for students could be studied to better understand what makes the experiences effective. These work placements could then be used as exemplar models in developing other student work experience

locations. This innovative approach to school-work transition "is a new role in which a deliberate effort is made to teach *all* students the basic principles of working in contexts that authentically represent the real world of work" (Lewis et al., 1998, p. 287). The transition would be for all in a just and equitable society that would not assume that some will continue on to college and others will not.

Lewis' work has continued to push the idea of a new vocationalism forward with an argument for vocational education as general education (Lewis, 1998b). Job training continues to be held in low esteem in schools and does not even provide the skills and knowledge that is actually required of workers.

It has been further argued that instead of being trained for particular jobs, workers now need to be educated for job flexibility. Because the character of work and jobs has changed, it is felt that traditional job-specific vocational education must be superseded by a new vocationalism (Lewis, 1998b, p. 286).

A major hurdle that lies ahead of this new approach is that vocational knowledge is treated as low-status knowledge unlike academic knowledge and is kept to the fringe of general education.

Michael Young (1993a) contends that 'academic/vocational divisions are inescapably embedded in other social divisions.... Because it is largely academic routes which provide progression into higher education and thus to jobs with higher status and prestige, academic/vocational divisions represent a social or status hierarchy' (p. 213, quoted in Lewis, 1998b, p. 285).

Until we break free from this polarized treatment of academic and vocational knowledge, we are destined to continue this struggle.

Lewis suggests an alternative to the "liberal/vocational divide" as a "conception of vocational education that can be dispensed within the framework of a unitary curriculum" (1998b, p. 305). He suggests three directions the new vocational curriculum should take. *The meaning-of-work argument* that would teach students about work, what is good and bad work and to be critical of work in relation to gender, race and class. Beyond pay, the kinds

of jobs people hold - how much autonomy they have, how much responsibility they have tend to influence their job satisfaction, their work values, their work commitment, and, ultimately, their sense of worth" (Lewis, 1998b, p. 302). Practical-knowledge as-knowledge is a valid school curriculum as academic and vocational content depends upon the intent of the teacher and the learner. Many academic subjects are rather vocational in nature, especially when applied to real situations. Job skills would extend to technical skills that can be applied to skills for work, work related skills - such as job application writing or understanding workplace legislation - and other forms of knowledge the curriculum might assume. Situated cognition would facilitate contextualized learning within a variety of curriculum areas. "Vocational subjects facilitate learning by making otherwise difficult concepts reachable to students" (Lewis, 1998b, p. 302). Involved and integrated vocational classes could teach about the world of work while addressing the breadth of supplementary knowledge using an enterprise approach. "For example a building construction class that actually builds a house from start to finish can learn about the hiring process, the need for safety practices and laws, the minimum wage, zoning laws, borrowing money, the role of unions, project management, and working as a team" (Lewis, 1998b, p. 303). Vocational education provides for contextual learning in a more natural way than other parts of the curriculum (Lewis, 1998b).

Lewis outlines five components of the vocational curriculum that could facilitate learning through facets of work. Work experience in real jobs where they could spend time working, job shadowing, talking with other workers, management and union representatives and journaling and/or reflecting upon the various experiences. Learning in school and out of school is different hence school knowledge can be applied to real world situations. Contrived experiences could be simulated work experiences within the school vocational labs, school programs (cafeteria, newspaper, store, etc.) or other areas of school life.

Students would have a greater opportunity to learn about the whole organization of a workplace, benefit from simulated experiences without the pressures of an actual work site and be taught real skills within an organized and productive team; this approach closely reflects the vocational education favoured by John Dewey. Employment trends, including labour-force data and regional occupational trends, could be studied by students to help them understand job outlooks and make decisions for their own education based on this knowledge. Community projects "that shift the focus from economic work to social work" (Lewis, 1998b, p. 304-305) including volunteerism, environmental projects and the like. Entrepreneurship could take the form of providing students with the information required to develop simulated businesses and ascertain the feasibility and possibility of considering such a route themselves (Lewis, 1998b).

The curricular components set forth here are a suggested sample only, intended to convey the possibilities. They show that vocational education does not have to be narrowly constricted, that is, premised on specific preparation for a single job. It can be conceived in ways that allow for the fullest development of students, in keeping with democratic principles. It can be education for citizenship (Lewis, 1998b).

Michael Apple comes forward in agreement with many of Lewis's arguments as they have "the potential to push many communities in both vocational education and general education in new directions" (Apple, 1998, p. 339).

In fact, an honest assessment of the current situation demonstrates why we should reword Herbert Spencer's original curriculum question of "*What* knowledge is of most worth?" into the more pointed one of "*What* knowledge is of most worth?" Theodore Lewis's analysis is grounded in a recognition of this truth (Apple, 1998, p. 339).

Tracking and differentiated curricula are dangerous, education *about* work not *for* work should be the focus, practical knowledge from the world of work should be recognized as real knowledge and education about work must be critical of how work is currently organized (Apple, 1998). Although he expresses agreement with many of the points Lewis

makes, his position is that this new vocationalism actually needs to be rejected and a new focus be established.

There are some points that he expresses reservation toward Lewis's position and where some arguments could go further than they have been taken. Apple cautions us of the motives of the neo-liberal economy that justifies many school-work programs. Market driven education policies threaten to impose "postmodern consumption" (Apple, 1998, p. 343) and the "markets are the best possible mechanism to ensure a better future for all citizens (consumers)" (p. 345). "Closer linkages between education and the economy or placing schools themselves in the market" - such as school-work, education for employment and choice programs - "... subject schools, like workers, to the discipline of market competition" (Apple, 1998, p. 343). Schooling for work may include the skills, knowledge and values needed to perform in our competitive economy but this only reinforces economic influence and retreats the line between public and private. "Tech-prep" and similar nonuniversity programs make an attempt at addressing integration between academic and technical knowledge but, alas, school counsellors' ever mounting workloads limit their capacity to adequately advise students of their options and appropriate choices. The mere use of the word "work", in Lewis's and volumes of other literature, implies "paid work" and undermines the vast and more exploitive unpaid domestic work mostly done by women; "the separation of public and private that lies at the heart of gender hierarchies in our societies" (1998, Apple, p. 353). A negotiated common curriculum which integrates the academic and the vocational has merit but who and what defines "common" and under what auspice is this then "negotiated" is of notable concern. Apple quotes Nancy Fraser:

In general, there is no way to know on advance whether the outcome of a deliberative process will be the discovery of a common good in which conflicts of interest evaporate as merely apparent or, rather, the discovery that conflicts of

interest are real and the common good is chimerical.... [The] existence of a common good cannot be presumed in advance (1998, p. 354).

Rather than attempting to make vocational education more academic, much can be learned from the integrated methods developed in vocational education familiar in schools today. It would be useful to combine real-world situations with social and academic knowledge to inform "curricular, pedagogic, and evaluative policies and practices in critically oriented vocational education" (Apple, 1998, p. 357).

Part of the task in this regard is a simple one: to make the stories of these successes public, to provide a sense of possibility that real schools with real students and teachers, in real communities with real problems, can actually succeed in providing an education that comes close to the progressive parts of what [Lewis] is proposing, one that is expressly counterhegemonic (Apple, 1998, p. 358).

At the risk of over simplifying both Lewis's and Apple's theses, a few of the most pertinent points have been raised here. Extensive thought provoking literature has been produced on the premise of a *new wcationalism* with degrees of agreement and divergence of opinion and a significant portion of it have been penned by these two authors. Apple aptly maintains "both that the struggle over educational institutions is a collective one and that it is important to build on each other's arguments in respectful ways" (Apple, 1998, p. 339).

Economic Factors

Various economic factors affect the experiences of youth as they pursue career options. Post-secondary education, career aspirations, full and part-time employment and the demands of the globalized, knowledge-based economy combine to make the transition from high school a very challenging time for young people. Most of these factors are beyond their control but they are expected to wade through it all just the same.

A recent study, *The Third Option: A First Choice – Rewarding Careers via Non-University Pathrways* (BCBC, 2003) written by the BC Business Council, has made a thorough examination of non-university post-secondary education and training options for young people leaving high school. The report focuses on the variety of real opportunities, the multitude of education and training alternatives, employment projections, new career developments, new (2004) graduation requirements and the choices available to students and parents at the secondary school phase. This report provides an overview of an extensive range of career opportunities available to students that they may not otherwise be aware of. Awareness and information made available to schools, teachers, parents and students can be particularly helpful when providing career choices to school leavers who are not interested in attending university.

Non-university bound students have been described as "the forgotten half" as in the William T. Grant Commission 1988 (Heinz, 1999, Kantor, H., 1994, Schuetze & Sweet, 2003), the "bottom half" (Lewis et al., 1998) or as "the neglected majority" in Parnell's book *The Neglected Majority* (Lewis et al., 1998). Some attention has been given to this other half of students in recognition of the relative numbers, needs and pathways in school and once they leave. Many are confronted with a "floundering period" (Heinz, 1999) after leaving high school while they search and wander through various temporary full and part-time jobs, unemployment and haphazard training experiences. This "floundering" (Heinz, 1999, Schuetze & Sweet, 2003) or "milling around" (Schuetze & Sweet, 2003) tends to take place for a number of years until the young people find more secure employment (Krahn & Lowe, 1999), enter structured training or education programs or a few even give up all together.

Difficulties lie ahead for many youth that attempt to find adequate employment after high school. Some find work in the secondary labour market while still in school and the
jobs do not tend to get better once they have left school and join the labour force full-time. They are forced to piece together various low-level full and part-time jobs that do not hold much promise for advancement. Employers prefer to wait until workers reach the age of 20 or 22 years old before considering them for career jobs (Lewis et al., 1998). The transition from school to being valid members of the work force is not a distinct moment in ones life but rather a tumultuous endeavour that can take years. "Even members of the business community that actively advocate school-work partnerships postpone the hiring of graduates until it is felt that they had matured and settled down" (Lewis et al., 1998, p. 266).

Youth unemployment and part-time employment is invariably greater than other older workers in Canada (Krahn & Lowe, 1999). Part-time employment is on the rise in all age categories but is more common for young men and women aged 15-24 (Krahn & Lowe, 1999). A university degree is little protection against these two trends as graduates are confronted with high competition for employment and the emergence of contract labour and temporary full-time positions (Krahn & Lowe, 1999). Recent information from Statistics Canada even suggests that a university degree does not help someone to get a job as much as it once did (Little, 2004). Supply of university graduates may have started to outweigh the demand for such credentials. Additional and higher levels of post-secondary education continue to benefit young people in the labour market but changing economic conditions stand to challenge this fundamental viewpoint.

Employment projections in British Columbia are influential factors when young people are faced with making important educational and occupational choices. *The Third Option* (BCBC, 2003) report indicates a number of occupations that are expected to undergo substantial growth over the next decade and the majority are accessible through nonuniversity education and training. Figure 1 shows a few examples of high opportunity

occupations and the number of jobs that are expected to materialize. It should be noted that most of the projected opportunities would be for low-level and low-wage occupations in the hospitality and retail service industries.



High Oppportunity Occupation Groups from 2001-2011



Retirement and attrition are expected to be the greatest contributors to increased employment opportunities over the next decade (BCBC, 2003). Figure 2 exhibits the projection of more than half of opportunities will arise due to worker replacement. As our population continues to age it requires a younger workforce to fill the increasing number of positions being vacated.

Increased Employment Opportunities Due to Retirement



Figure 2. Increased Employment Opportunities Due to Retirement Source: COPS BC Unique Scenario, February 2003; BC Ministry of Advanced Education & HRDC (BCBC, 2003)

Some occupations are expected to experience greater replacement worker demands due to attrition than others. Population growth will require increased number of new positions in many areas but replacing retiring workers will inadvertently provide the majority of opportunities for young people. A projected number of new and retirement openings are given for a selection of industries in Figure 3. Hospitality, retail and service occupations will see the greatest demands with education, public administration and primary goods industries showing little growth at all. Health services, transportation, manufacturing and construction occupations are expected to maintain their steady growth.



Projected Number of New and Retirement Openings by Industry, 2001-2011

Figure 3. Projected Number of New and Retirement Openings by Industry, 2001-2011 Source: COPS BC Unique Scenario, February 2003; BC Ministry of Advanced Education & HRDC (BCBC, 2003)

Changing Demographics

The population increase recorded in Canada and BC between 1996 and 2001 has been primarily within the visible minority groups. Canada's overall population increased by 1,110,910 people with 786,365 (71%) being visible minorities. British Columbia's population increased by 179,110 and 175,895 (98%) were visible minorities (Statistics Canada, 2004b, 2004j). Figure 4 displays a comparison of the visible minority groups and their relative population numbers in Canada for 1996 & 2001. Chinese, South Asian and Black populations show the greatest numbers as well as increases over the five years between censuses. Figure 5 provides a similar comparison for BC for the same years. Chinese and South Asian populations represent an even greater proportion of the visible minority population with considerable increases over the five years. Significant shifts in population growth indicate a transformation of the demographics within the country and the province. Changing demographics are reflected by the students who attend BC schools.



Visible Minority Populations in Canada, 1996 & 2001

Figure 4. Visible Minority Populations in Canada: 1996, 2001 Census (Statistics Canada, 2004a, 2004b)



Visible Minority Poulations in British Columbia, 1996 & 2001

Figure 5. Visible Minority Populations in BC: 1996, 2001 Census (Statistics Canada, 2004a, 2004b)

A wide range of students from different cultures, numerous ethnic backgrounds and who speak a variety of languages attend BC schools. Demographic information gathered by the BCMoE from school enrolments provides a representation of the student population in the province. Languages spoken in the home of students can be used as an indicator of student demographics. Figure 6 displays the languages spoken, numbers of students and the percentage of the student enrolment. The languages listed in the Figure 6 are not conclusive but only include those that composed 0.10% of the total number of students. It should also be noted that Cantonese, Mandarin and Chinese categories were provided so if the numbers were combined they would comprise 42,031 students or 7.07% of the total student enrolment. Some school districts in BC have much greater proportions of students of non-English speaking backgrounds. For example, for the 2004/2005 school year the Vancouver school district consisted of 30.31% students who speak Chinese, Cantonese or Mandarin in their home while 44.50% reported English as the home language (BCMoE, 2004h, p. 3). In Vancouver schools, 55% of the students speak a language other than English in their homes. Similarly, in the Richmond school district 35.97% of students speak Chinese, Cantonese or Mandarin in their home while 45.41% reported English (BCMoE, 2004f, p. 3). The Surrey school district's largest non-English speaking group (Punjabi) comprised 16.85% of the total student population and 62.24% are English speakers at home (BCMoE, 2004g, p. 3). Most of the students in the Abbotsford school district - where the CTC is located - speak English (75.84%) in the home while Punjabi is spoken by 16.35% of students (BCMoE, 2004e, p. 1). It should be noted that enrolment of non-English speaking students continues to steadily rise in most districts across the province. Figure 6 offers a clear comparison of the languages spoken in the home other than English in all BC school districts combined.



Languages Other Than English Demographics of Students in British Columbia

Figure 6. Languages Other Than English Demographics of Students in BC (BCMoE, 2003d)

Changing demographics alter what is required of schools and the education system in general. Students have varying educational needs and require schools to constantly adapt. The multicultural makeup – recognizing both the diversity and sheer numbers – of the communities within the various school districts in the province has a profound influence upon schools, schooling and public education in general. Supporting all students continues to be a challenge for BC schools.

Choice

In the springtime, secondary school students are asked to choose what courses they want to take in their year of schooling starting the next September. Most schools offer quite a considerable range of elective courses in order to promote student interest in subject areas and to enable students to customize their education. Courses in technology education, music, drama, fine arts, sports, outdoor pursuits and international baccalaureate programs – to name a few – enable students to study and participate within their own personal interests. Even the core academic subjects provide choice as to the level students intend to pursue in each. For example, a student can select from three levels of mathematics – essential, foundations and principles – that best suites their abilities and requirements for further schooling. Even with the numerous required courses and graduation credits each student must consider, choice of courses in public schools has, and continues to be, quite broad and accommodating (Ungerleider, 2003).

The BCMoE has been moving toward ensuring more choice in the public school system. The Ministry has created school catchment areas while removing school and district boundaries. "Opening boundaries for more school choice gives BC students more opportunities to excel" (BCMoE, 2004d). First of all this retains student access to their local school but then allows any student in the province to fill the remaining spaces if they so choose. Also, schools are more able to develop courses and programs that will attract students while continuing to provide the necessary curriculum and graduation requirements. "Students have more choice in the elective area. Graduation Program policies that recognize other learning opportunities are available for Grade 10 students as well as Grade 11-12 students, and school districts have increased flexibility to develop courses and program that respond to local needs" (BCMoE, 2004c).

Some schools even offer special programs for students who want their schooling to be more tailored to their specific educational needs. Mini schools enable some students to get specific attention such as adapted curriculum and courses for at risk students or high achieving academic students. Some internal programs might be designed and delivered around the concept of computer immersion where students receive, manage and complete coursework using laptop computers as the central medium along with classroom instruction from their teachers. Independent directed studies could be undertaken in conjunction with regular classroom courses. Parents and their children may be looking for something a little different from their schools in order to create the best educational experience possible. Internal school programs can be adapted in order to provide this kind of choice without parents and students needing to look to other schools.

Magnet schools are being promoted by the government to school boards in order to "meet the diverse needs of their students by offering specialty programs or developing 'magnet schools' whenever possible" (BCMoE, 2004d). These schools offer programs around a central theme while still conforming to the provincial curriculum requirements. "Some districts are already offering specialized programs, such as fine arts, international baccalaureate, Montessori, online learning, First Nations studies and Mandarin immersion" (BCMoE, 2004d). With the removal of school and district boundaries, students can select a school and program that interests them. Already successful programs in schools may be bolstered or promoted in order to establish the school as a magnet while other schools may seek out other specializing opportunities that could be pursued as a theme that would best fit the facilities available and the interests of their current students and teachers. It makes practical and economic sense to fully utilize the facilities a school already has in place in order to best offer these specialized programs. Quality programs have been established and

are functioning well while still more are in the planning and development stages. This is a significant challenge as it demands commitment from the staff and school board while maintaining good standing with current parents and students while maintaining high quality achievement within the provincial curriculum.

A counter-effect of attracting students to specialized programs and magnet schools is the destruction of community schools. Students no longer attend their neighbourhood school and must be bussed or driven outside of the catchment area. A sense of community does not develop in the same manner when children leave their local school and others from different areas fill their place. More of a transient or consumer-like element emerges.

Occasionally, some high schools go so far as marketing themselves in order to attract and retain students. Many schools have websites that provide information about programs, facilities and student achievement that are of interest to parents and students. The media can contribute to the school's reputation as it runs editorials and articles that focus on individual schools and programs of interest. Special interest groups can influence school image by promoting their agendas within the public sphere. Schools and boards are conscious of their public reputation and continuously go to great extents in maintaining a positive image and support within the local community. Marketing of schools can even lead to funds being allocated to advertising campaigns for schools in an attempt to improve or spread its image within the community and beyond. Ungerleider (2003) suggests that this is not a healthy situation as competitive marketing consumes valuable school and district resources that could be much better utilized within schools in order to improve the education of the students already in attendance. In some cases competition can foster improvement but also can initiate unhealthy contending forces that begin to work against the good of schools and priorities of education.

Distance education is another emerging educational choice students have available to them. Various correspondence courses have been developed to enable students to complete core academic or elective courses for credit. Increased internet access has prompted school districts to provide more on-line courses similar to correspondence courses but can offer more in the way of resources, information, versatility and support. These, of course, can be taken by any student anywhere in the province or those who may be temporarily out of province. Directed independent study courses are another option for school credit and they can be developed using the various paper, library and internet resources available. This type of course choice offers significant flexibility and freedom for many students who do not have similar choices in their schools or who prefer an alternative learning environment.

The level of choice increases as education options move away from the conventional schooling model. School courses and programs provide a small degree of choice as government control is very centralized. Even as open school and district boundaries, mini schools and magnet schools are established the choice increases but the government controls remain quite prominent. Distance education and contracted programs afford some choice as well while being decreasingly government regulated. Alternative choices are provided by home schooling, independent and charter schools, vouchers, private and for-profit schools as well as becoming more decentralized as government regulation diminishes (Werner, 2004). Although many of these schooling options are not part of the provincial public system, they indicate the freedom of choice that can be offered by other institutions. Even though these institutions may appear to provide particular aspects of education that the public system does not, it is arguable that most of these alternatives do not actually offer greater choice than the courses and programs currently established in our public schools (Ungerleider, 2003).

As the levels and varieties of choice increase and spread to more areas of the public school system, it is inevitable that other curricular values will be affected. Some will be mutually beneficial while others may begin to work in opposition. It would be prudent to recognize some of the ripple effects of choice.

Improved achievement is ostensibly the primary focus of the government and is reflected in the rhetoric. We want our schools to teach our children well in order for them to be able to perform to the best of their ability. It is suggested that providing parents, students, schools and school boards the opportunity of choice will promote higher levels of achievement since students will learn in environments they choose, in subjects they express a personal interest and in a style or context that have meaning at the time and for their future. The increased motivation of choice is expected to support student performance. However, some students who choose to move schools to improve achievement only make gains of 3 to 4 percent at the most while the students who remain experience significantly lower performance because they do not have the experience of working with the students that benefit from more family support outside of school, personal educational resources and academic confidence (Ungerleider, 2003). As social institutions, the education ministry, schools and educators need to recognize this lack of significant improvement in achievement as well as the deficiency experienced by others.

Access for students into various courses and programs raises some concerns. Some students with special needs (of any type) may discover enhanced access to parts of the curriculum they previously could not reach and, as a result, can achieve success in these subjects. On the other hand, some students who may have previously found success in a school or program may experience a setback after the new theme or focus has been adopted. The direction of the school may not fit with the abilities or interests of some students and

end up leaving them behind or reducing their access to education. Fundamentally, choice is intended to improve accessibility by providing a greater selection of courses and programs to students which will satisfy their interests and educational needs. Choice can improve and broaden accessibility if it is implemented in a constructive manner.

Accountability remains a common thread in all courses, programs and schools in the provincial public school system. Regardless of the theme, style or course of instruction, the provincial curriculum must be followed. Learning outcomes need to be met and appropriate assessment criteria and documentation need to be made available for accounting purposes. Anytime a new course, customized program or magnet school is developed the common curriculum must be at the core. Fortunately, there are numerous methods, media and possibilities for delivering the same curriculum. Teachers and schools have – and continue to have – the opportunity to develop local, effective and innovative approaches for teaching students for further positive outcomes.

Parent and community involvement can be strengthened with choices in schools. Parents can take more ownership in the education of their children when they have opportunities for more say in what is taught and how it is done. Communities can become more involved when the schools can offer something in return such as sharing of facilities, services or exhibitions of arts, sports and entertainment. Some special interest groups may attempt to gain more access to schools for specific benefit in the same manner. Corporate influence may also creep into schools in search of self-interested gains by offering products or services in return for access or exposure to students and teachers. This is a difficult balance that schools and administrators need to manage with the best interest of the students, parents and the community in mind.

Relevance can be significantly increased by offering choices to students where there are opportunities to explore or experience coursework that reflects their personal interests. Courses may be directly related to hobbies, activities or even career directions they intend to pursue. Specialized courses or entire programs could provide a context that would encourage participation and learning by the students. It is expected that if students can direct their studies and personalize choices that are relevant to their lives, they will commit to learning and increased achievement would inevitably follow. Relevant curriculum and programs extend valuable meaning to students' experiences in school and can promote effective education.

Choice in the public school system in BC is undoubtedly vast and continuously evolving. Ministry initiatives promote choice in schooling in order to improve achievement while removing boundaries that may inhibit educational progress. Parents are given greater opportunities to select the type of schooling that they believe is best for their children. Students can choose from an array of courses, programs and schools that can offer them a more relevant education that fits into their own unique interests and goals. Schools have been given more flexibility to develop specialized programs that offer quality educational options and facilitate in maintaining enrolment. Teachers have greater opportunity to develop innovative approaches to delivering the provincial curriculum which benefits students and can improve the teaching experience. There are numerous benefits availed by the diversity of choice in our public schools but these are coupled with some tradeoffs. It is left to educators, in conjunction with parents and students, to find a balance among these values that best provides for the education of BC children.

Life After High School

A number of transition programs are offered through BC school districts. The majority of these programs are intended to assist the non-university bound students to make the transition from high school to other post-secondary education, training or work situations. Arguably, secondary schools are structured more toward the success of academic students who intend to make the transition directly to university. Since only approximately 40% of high school leavers go directly to universities or university-colleges and about half of these graduate with a credential (Andres, 2003), the remaining majority of students need serious consideration.

The BCMoE conducted a survey of 1,000 high school graduates from various regions in 2003 to determine what transitions those young people made within one year of graduation. The *Graduate Transition Survey Report: Multiple Choice and Open Ended Questions* (BCMoE, 2003b) provides useful data regarding activities the graduates were involved in within their first year of completing school as well as how they valued their high school education in retrospect. The report indicates that 720 of the 1000 respondents (72%) attended some sort of post-secondary education and 394 (39.4%) of those attended a university or university-college (BCMoE, 2003b). Many of the respondents held a positive view of their high school education and how well it prepared them for life after graduation but numerous responses indicated disappointment and/or suggestions for improving transitions into post-secondary education, training or work. Similar surveys were conducted in 2001 and 2002 with generally similar results.

Much can be learned from choices made and directions taken by students once they have left high school. Lesley Andres has been conducting a significant, province-wide longitudinal study – *Paths on Life's Way* (Andres, 2002) – which has documented the

pathways of the British Columbia graduating class of 1988. Students have made the transition from high school to various forms of work, education, training and combinations of each. This research is a valuable resource in understanding what choices young people make when making the transition from high school and the subsequent years that follow. The role of the school, teachers, parents and peers emerge as graduates reflect upon their school transition experiences. It becomes evident how many different choices are made and how young peoples' lives develop as a result of these choices.

A number of respondent comments from the Paths on Life's Way study provide some insight into young people's discontent with their high school education. One respondent claimed, "The education system does not, and I stress does not prepare you for the outside world" (Andres, 2003, p. 126). Another suggested that, "High school does not prepare a person for working in the modern world or for post-secondary education. Students should be able to select courses in high school that are of more use to them in the fields of work or study after leaving high school" (Andres, 2003, p. 126). Some recognized the value of postsecondary education but not necessarily from a university. "I think you do need some sort of post secondary education now days but it doesn't have to be university level; a lot of good paying jobs [that] are in trades and technical institutes such as BCIT are excellent" (Andres, 2003, p. 127). Respondents also considered better career and life skills preparation would have been useful. "High school unfortunately does not prepare people for post-secondary schooling nor real life. School should have real career programs rather than structured, semester systems with grades." (Andres, 2003, p. 128). "High school students need more exposure to real world to be given opportunity to find out what the career is really like that they are thinking about pursuing" (Andres, 2003, p. 129). Non-university pathways were also mentioned. "It starts in high school. You either are going to college or not and the

courses in my high school were presented that way. There were no courses for the inbetween education like a trade or vocational type courses" (Andres, 2003, p. 130). This sample of the comments found in the research study reflects some of the attitudes young people have toward preparation for post secondary education or training and the world of work.

Collaboration between Human Resources Development Canada and Statistics Canada produced a study called the 2000 Youth in Transition Surrey for 18-20-Year-Olds. The longitudinal study was intended to determine the education and career pathways of youth over the first year after leaving high school. The first report from this study was, *At a Crossroads: First Results for the 18 to 20-Year-old Cohort of the Youth in Transition Surrey* (Bowlby & McMullen, 2003). The report provides a descriptive overview of the experiences of youth in transition along with insights of the challenges they face in choices they make and opportunities available to them. A number of factors affecting education and career choices and experiences were analyzed in this first report.

Dropouts were less engaged in school socially and academically, on average had lower grades than graduates but not all had poor grades as about half had a B average. Graduates were more likely than dropouts to live in two-parent homes while in school with parents that had completed a post-secondary diploma or degree. Three times as many dropouts as graduates had parents who did not complete high school. Dropout rates actually reduced from 18% in 1991 to 12% in 1999.

Graduates were more often employed than dropouts during high school. Those who worked a moderate number of hours (10 to 19 per week) were the least likely to leave school before graduating. Male students worked more long hours (over 20 per week) than female

students and those male dropouts that worked during high school tended to work the longer hours.

"As of December 1999, just over half of 18-20-year-olds who were no longer in high school were attending a post-secondary educational institution; 4.3% had already graduated from a post-secondary institution; and 5.7% had left a post-secondary program before completing it" (Bowlby & McMullen, 2003, p. 16). Over 60% of 18-20-year-olds who were no longer in high school had experience with post secondary education. About 70% of high school graduates between the ages of 18 and 20 had gone on to post-secondary education (Bowlby & McMullen, 2003, p. 15). The post-secondary participation rate was much higher for females than males. Approximately one third (33.8%) of post-secondary continuers attended a university and just under one half attended a community college (48.1%). The remainder attended a university college (6.2%), technical, trade or vocational school (6.8%), a private business or training school (4.6%) or another school above high school (0.8%) (Bowlby & McMullen, 2003, p. 56). Slightly over one quarter of youth graduated but had not received any post-secondary education along with about 12% of youth were dropouts with no post-secondary education. A very large segment of the youth population was a less educated segment of the general workforce. "Youth who go no further in their education than high school are hampered in two ways when they enter the labour market: first, they have fewer education credentials than those who do pursue a postsecondary education; and second, they enter the labour market with weaker skills on a number of dimensions" (Bowlby & McMullen, 2003, p. 50). Post-secondary graduates had the highest rates of full-time employment (63.1%) with dropouts (59.3%) and postsecondary leavers (58.2) close behind while, at the same time, dropouts experienced significant rates of unemployment (22.5%) and post-secondary continuers were most likely

to be unemployed (34.8%) or be employed part-time (53.8%) (Bowlby & McMullen, 2003, p. 54). Canadian youth clearly experienced diverse levels of involvement in various educational and employment activities.

Aspects of the report provided specific information regarding the experiences of BC's youth. BC respondents reported to have taken career planning courses (89.5%) and job/skills experience courses (50.1%) far more than students in all other provinces (66.6% and 29.4% respectively). Although they were second lowest in volunteering at 42.5% after Quebec at 35.6% and Alberta was similar at 42.7% while the national average was 49.0%, those that had volunteered in some way believed that it had helped develop skills to get a job. The BC dropout rate for 18-20-year-olds (11.2%) is slightly less than the national average (11.8%) but the number of graduates with no post-secondary education (30.6%) is noticeably higher than most other provinces (Canada 26.0%) along with fewer post-secondary continuers (Canada 50.5%) (Bowlby & McMullen, 2003, p. 46).

This first report from the 2000 Youth in Transition Survey for 18-20-Year-Olds presents some of the challenges and opportunities for youth in transition. Education and career choices of young people affect their participation in today's knowledge-based society and the global economy. Post-secondary education is becoming more and more important in the labour market as requirements continue to increase and, as a result, competition is heightened for post-secondary programs and employment opportunities. Many youth struggle to find a balance between post-secondary education, full and part-time employment, career aspirations and personal experiences during the transition period following high school.

This chapter examined a number of factors that affect student school-work transitions. Numerous challenges face students as they prepare to make the transition

from high school and enter the world of work, post-secondary education or career training. Competition for employment and post-secondary education continues to increase the stakes of high school, compelling young people to seek out whatever advantage possible. Correspondingly, greater demands are being placed on schools and educators to support the needs of students.

A broad survey of the pertinent literature provides a solid grounding for the study. From this knowledge it is possible to develop an informed and effective research study that extends from current understanding and explores new ideas. The next chapter outlines the research study design, methodology and relevant theory.

CHAPTER III

Research Design and Methodology

What has been revealed through the review of literature informs the issue of student transitions from high school to work, post-secondary education and training. Theories supporting student transition along with recognizing successful programs of different types provide a foundation for developing new approaches. Documentation of the participation in the variety of transition programs made available to students and the career paths they pursue after graduation are essential in supporting them in their education. Illustrating the role and effectiveness of the CTC program in Abbotsford is one manner of learning what is being done in the way of supporting student transitions in BC. This chapter outlines the research design and methodology employed in this study.

This chapter outlines the design of the research study I conducted at the CTC in Abbotsford. I review the research questions and expand upon some of the underlying queries. I provide an explanation as to why I chose the particular CTC to carry out the study. I justify the effectiveness of the research methods chosen for the study and how they provided the flexibility and validity required. The participant selection, data collection and data analysis techniques are described in detail. I conclude the chapter with a discussion of ethics and ethical safeguards I utilized to protect the participants and a timeline for conducting the research study.

Research Questions

My field research involved learning about the experiences of the students, teachers and college instructors at The Career Technical Centre in Abbotsford, BC. This was where I planned to answer my two research questions; "What role do Career Technical Centres (CTCs) play in secondary and post secondary education choices and transitions of British Columbia high school students?" and "What are the impressions and the nature of experiences the students and teachers have in the Abbotsford CTC?". CTCs are one of the four career programs designated by the Ministry of Education. This unique school provides an opportunity for students in grade eleven and twelve to complete high school and graduate with a Dogwood certificate while completing the first year of their chosen college program (dual credit). I intended to explore what it is like as a student to attend this program and consider how it served their educational and career needs as well as better understand the perspectives of the classroom teachers and University College of the Fraser Valley (UCFV) instructors who work with these students toward achieving their goals.

As my research progressed, I began to ponder several sub-questions relating to my primary research questions. Once I had learned more about this particular program I started to wonder how the CTC fit in with conventional high schools; How does an education at this CTC compare and differ to that at a conventional high school?; What unique challenges are presented in running such a program that go beyond what I had initially speculated (school structure, college partnership, dual credit)?; Do students receive a lesser quality education at this school?; Does this type of program present a threat to Technology Education teachers? The UCFV partnership raised other queries that I wanted to resolve; How do the instructors adapt to teaching younger students within a high school context?; What other advantages do students receive besides dual credit, college entrance and targeted work experience? Another question that reoccurred while studying the program was; What constitutes a quality, general, conscientious, principled education? Definitive answers to these questions were not essential to the success of the study but a degree of resolve emerged in the results.

Site Selection

My research study was intended to learn more about one of the Ministry of Education transition programs and this CTC in particular. As it is a unique program in BC and relatively early in its development, few educators know about it and even fewer know much about its role, function or utility. It was important to learn what I could from the people who are directly involved in the program.

This CTC is situated in a separate facility, housing all of the high school teachers and classrooms necessary for the core courses as well as the UCFV instructors, labs and equipment required to deliver most of the technical components of the programs. Only the welding and automotive trade programs were delivered on the UCFV campus. The size and diverse scope of the CTC presented numerous challenges for operating such a program but also offered substantial potential as a research site.

The administration of the CTC initially expressed genuine interest in the research study and was very supportive throughout the process. Their sincerity provided open access to the school, teachers and students and readily accommodated my questions and requests. Cooperation from all the members of the CTC facilitated the success of the research study. The geographic location of the CTC is rather close to Vancouver so this made making site visits manageable.

Ethnography

"In recent years, ethnographic research has also been acknowledged, and to some extent even welcomed, as an alternative research strategy for inquiring into education" (Wolcott, 1988, p. 187). "In its most characteristic form it involves the ethnographer participating, overtly or covertly, in people's daily lives for an extended period of time, watching what happens, listening to what is said, asking questions – in fact, collecting

whatever data are available to throw light on the issues that are the focus of the research" (Atkinson & Hammersley, 1995, p. 1). "Ethnography refers both to the research *process* and to the customary *product* of that effort – the written ethnographic account" (italics by author, Wolcott, 1988, p. 188). "Ethnography means, literally, a picture of 'the way of life' of some identifiable group of people" (Wolcott, 1988, p. 187).

Ethnography involves the intensive, first-hand study of a culture or group within their own natural context (Gall, Gall & Borg, 2003). Typically, a wide range of qualitative and, when appropriate, quantitative data-collection techniques are used (Wolcott, 1988). Ethnographic researchers tend to use their ingenuity in using various techniques in order to "gain the emic perspective that is essential in qualitative research" (Gall, Gall & Borg, 2003, p. 492).

Atkinson and Hammersley offer another description of ethnography: "The term ethnography generally refers to research which has one or more of the following features: a strong emphasis on exploring phenomena within their natural setting; a tendency to work with data which is not pre-coded in terms of its analytic categories; investigation of a small number of cases; and a form of analysis which emphasizes description and explanation rather than quantification and statistical analysis" (quoted in Anderson & Arsenault, 1998, p. 121). Observing, interacting and interviewing participants within their natural setting: the flexibility of this method permits the researcher to allow themes and trends to genuinely emerge from the research making it possible to depict the phenomenon in a much more realistic fashion. Limitations applied by predetermined coding or predicted salient themes places restrictions on the validity and accuracy of research data. The intention of this study was to provide a description of the CTC program in general, the school as an educational institution and the experiences of the teachers, instructors and students within it.

Two of the foremost ethnography fieldwork techniques used are participantobservation and interviewing with written field notes to support each mode. "'Observation' is an empirical technique that involves looking for a purpose - one has an analytic interest and is prepared to gather 'relevant' data, however those terms are defined" (Palys, 2003, p. 222). As a participant-observer, the researcher engages or observes the human social behaviour under study (Wolcott, 1988). Wolcott argues that participant-observation in schools is rather different as many outsiders enter the school as interested observers. "Schools offer few role options, but one role that is well structured is observer-visitor. Most studies conducted in schools as 'participant-observer' research are really 'observer' studies augmented by an occasional chance to talk briefly with students or teachers" (Wolcott, 1988, p. 193). He makes a distinction among participant-observer styles as active participant, privileged observer and limited observer. School researchers would fall into the category of privileged observer. Informal questioning that a researcher often conducts is part of the participant observation (Atkinson & Hammersley, 1995). Field notes are essential to documenting any observation. "Field notes are normally very personal documents, and they have a crucial role, particularly in less structured observational research, because they're the raw data on which your analysis will be based" (Palys, 2003, p. 223).

Interviewing can take many forms in ethnographic research but a few are relevant to this study. Interview activity can include "anything that the fieldworker does that intrudes upon the natural setting and is done with the conscious intent of obtaining particular information directly from one's subjects" (Wolcott, 1988, p. 194). Structured or formal interviews take the form of direct questioning with a prepared format and list of predetermined questions the researcher intends to attain answers to. The informal interviews tend to be casual conversations between the researcher and a participant. Often,

the results from the informal interview prove to be more important than that of a formal interview. A semi-structured or semi-formal interview might involve using an interview guide to start of the conversation but would allow for open ended responses and flexibility in the course the interview would take. Wolcott includes questionnaires as an interview technique as they provide an opportunity to access data that are "appropriate to understanding the case at hand" (1988, p. 196). In some cases it is more appropriate or feasible to utilize questionnaires in ethnographic research to collect important data that might not otherwise be accessible.

Case Study

Case study research is primarily concerned with how and why things happen. Case studies are useful for systematically examining a specific phenomenon within in its natural context by utilizing a wide variety of qualitative data collection techniques (Anderson & Arsenault, 1998). The techniques utilized do not necessarily determine whether not a form of research is a case study but "as a form of research, case study is defined by interest in individual cases, not by the methods of inquiry used" (Stake, 1996, p. 236 quoted in Anderson & Arsenault, 1998, p. 153). Yin offers a rather elaborate definition of case study research:

- 1. A case study is an empirical inquiry that
 - Investigates a contemporary phenomenon within its real-life context, especially when

• The boundaries between phenomenon and context are not clearly evident.

- 2. The case study inquiry
 - Copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result
 - Relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result
 - Benefits from the prior development of theoretical propositions to guide data collection and analysis (quoted in Anderson & Arsenault, 1998, p. 153).

In the case of this research study, focusing on a particular phenomenon allowed for an indepth understanding of an educational program.

Educational environments tend to require a variety of methods to adequately understand teaching practices, initiative implementation or student progress. "Education is a process and, at times, requires a research method which is process-oriented, flexible and adaptable to changing circumstances and a dynamic context. Given these boundaries, case study method is often appropriate" (Anderson & Arsenault, 1998, p. 152).

"Researchers generally do case studies for one of three purposes: to produce detailed descriptions of a phenomenon, to develop possible explanations of it, or to evaluate the phenomenon" (Gall, Gall & Borg, 2003, p. 439). This framework provided a sound structure for the research study. The CTC was approached as an interesting and unique program worthy of study and had the potential to provide valuable information which could facilitate understanding of solutions for technical education and school/college partnerships.

Instead of beginning with theory and assuming that there's one theory that will eventually account for everything, the qualitative approach typically involves beginning with individual case studies in context, trying to understand each situation on its own terms, and leaving open, for the moment, the question of whether generalizable theoretical concepts can ever eventually be drawn together in anything resembling a grand theory. For qualitative researchers, theory isn't something you start with; it's something you build (Palys, 2003, p. 12).

The findings of this case study have provided a description of the CTC and have established some explanation and evaluation of the phenomenon.

This particular case study is best described as "*illustrative* in character and intended to add realism and in-depth examples to other information about a program or policy" (The United States General Accounting Office, 1990, quoted in Anderson & Arsenault, 1998, p. 155). This research benefited from the diversity of data collection techniques of a case study

and from the rich description and analysis that has resulted. Combining the benefits of observations, various interviewing methods and questionnaires to this case achieved enhanced results over applying these methods independently.

Population Selection

There were over 350 students, 19 teaching staff and several support staff in the CTC. A substantial amount of data could have been collected if each and every were interviewed or completed a questionnaire. I had initially intended to distribute questionnaires to the entire student body (or as many as possible) and to each of the teachers and instructors who taught in the CTC or in the affiliated programs on the UCFV campus. This turned out to be quite ambitious once I had visited the site, spoke with the administrators and got a sense of the institution. It was not feasible for me or the school to approach each and every class and place this rather large request with them. I soon realized that it would be prudent to find teachers and instructors that were interested and supportive of the study and that could also afford the time to complete questionnaires themselves and distribute them to their students. The ensuing 24 completed student questionnaires and 4 teacher and instructor questionnaires only represented approximately 10% of the student body and 20% of the teaching staff but the population sample was sufficiently representative of the CTC as a whole.

I used a voluntary approach to obtaining the participants for the teacher and instructor interviews. The same teachers that offered to complete the questionnaires and distribute them among their students, volunteered to conduct the interviews with me. Finding willing members to come forward to be participants in the research study made for easier researcher access, potentially enhanced data and a positive experience for those who took part.

Informal conversations that I had with students, teachers, administration and other staff during the site visits provided me with a great deal of important data. I gained a multidimensional perspective of the CTC, the programs it offers and the quality of education it provides. The general atmosphere in the school and attitude I sensed of the people reinforced my impressions.

My initial research plan included conducting a group interview with a cross-section of students to learn first hand of their experiences and impressions being in the CTC. I attempted to solicit volunteers through information posters distributed to the teaching staff but with no concrete results. I was hoping that students would come forward to participate in the experience. I was not on-site everyday and this may have been a significant factor for the group interview not coming to fruition. My increased visibility with the teaching staff and students would have helped the cause but the required amount of time was not possible. Further study of the CTC would warrant student interviews and an observation schedule that would span over a much longer period of time.

Data Collection

I distributed separate questionnaires among the teaching staff and students in the school in order to establish some demographics as well as attitudes, opinions and perspectives held by both teachers and students involved in the program. It was useful to know what kinds of teachers worked in such a program and how they viewed the education they provided to their students. Also, knowing how and why students chose to attend such a focused program and in what ways they believed their educational needs and career goals were being met was informative for other school contexts. An overall profile of the teachers and students in the school provided an enhanced understanding of what the educational role

of the program really is. These questionnaires were completed and returned by the participants during October and November

I also asked, in writing, for teachers and instructors to volunteer to take part in individual interviews to gain further insight into how the program works for them and their perception of the educational value to their students. A 30 to 40 minute interview with two teachers enabled me to explore more thoroughly their experiences working in this unique program. Teaching in this CTC would have its own challenges and benefits compared to teaching in a conventional school. At the same time, similar interviews with two of the UCFV instructors was valuable for learning about the experiences they have had working with younger students at the CTC than they typically have in the other conventional college programs. All four interviews provided a valuable understanding of the working relationship between the teachers, instructors and the school administration. Individual interviews provided an opportunity for the teachers and instructors to share some of their teaching and working experiences with me.

I used a semi-structured interview approach for the individual interviews which I also audio taped. I created a written interview guide that contained my introductory questions to more easily begin the interview, general questions and probes I used to explore some aspects or themes more deeply by encouraging interviewees to share some of their personal experiences and finally, some questions and comments that helped bring the interview to a comfortable and appropriate conclusion. A well planned guide contributed to covering the essential points in the interview and allowed for simple note taking that reinforced what had been said or recorded key points to refer to later in the interview. An interview guide and note taking are effective techniques to use during an interview to be sure important questions are asked, interesting points or "meta-statements" (Anderson & Jack,

1991, p. 21) mentioned by the interviewee are explored and the flow of the questioning and responses continues to be fluid, comfortable and meaningful.

At the end of each interview I confirmed that I could contact the interviewee at a later date in case member checking or a follow-up interview was needed. Some details were in need of confirming before the final analysis could be completed. Member checking provided for more valid data while improving clarity of the information initially provided.

Observation of classroom and out-of-class activities of the students and teachers in the school afforded yet another perspective of the program. I observed the day-to-day activities within the school and documented what I experienced in my written field notes. Behaviour and responsiveness of the students during lessons, instruction and activities set out by the teacher, relevance of content to the needs of the students and interaction of the group with the teacher or instructor were a few of the key areas I paid close attention to. The atmosphere outside the classroom in hallways, the cafeteria, the gymnasium during lunchtime extra-curricular sports activities and outdoors was another important aspect of school life to consider as essential to the character of the school and a significant factor of the program. Acknowledging the attitudes of the students toward their schooling was a fundamental component of this study.

Utilizing a variety of data collection methods enables triangulation (Fontana & Frey, 2000) of the results into a more coherent and sound analysis. Triangulation is a term used to describe the use of a combination of data collection methods in order to "capitalize on the respective strengths of these methods, or to counteract the perceived limitations of each" (Atkinson & Coffey, 2003, p. 114). Atkinson and Coffey suggest that "Denzin's original formulation of methodological triangulation also conveys the impression that researchers could combine methods such as participant observation and interviewing to draw on the

methods' complementary strengths and offset their respective weaknesses" (2003, p. 114). Some researchers have developed this idea further by applying the metaphor of a crystal and coining the term "crystallization" (Reid, 2004, p. 80). "According to Richardson, the crystal, 'combines symmetry and substance with an infinitive variety of shapes, substances, transmutations, multidimensionalities, and angles of approach. Crystals grow, change and alter, but are not amorphous.... Crystallization provides us with a deepened, complex, thoroughly partial, understanding of the topic. Paradoxically, we know more and doubt what we know'" (quoted in Reid, 2004, p. 80). "The strength of fieldwork lies in its 'triangulation,' obtaining information in many ways rather than relying solely on one" (Wolcott, 1988, p. 192). My research plan intentionally combined questionnaires, individual interviews, field notes and participant observations as data collection methods to draw on the strengths of each and afford more valid analysis and subsequent conclusions.

I used a variety of methods to collect the research data in order to illustrate the many facets of the CTC program. A written questionnaire provided some valuable general information and enabled me to acquire responses from more participants than I could possibly interview. I audio recorded and transcribed the individual teacher and instructor interviews while taking notes for richer data and insightful analysis. Specific details and quotations were drawn from the transcripts in order to explore emerging themes in the responses. My field notes were valuable for recording and reflecting on the context of the interviews, impressions after the interviews had been completed and observations of classroom and out-of-class activities. All three data collection procedures acquired different types of information but it was possible to bring these together in the final analysis. Emerging themes raised by the participants were identified and discussed while individual comments and responses provided rich insight toward their experiences.

Data Analysis

Results from the student questionnaires presented me with a basis of data for initial analysis. Trends quickly became evident once the responses were collated and preliminary coding was used to organize some of the data. Salient themes also emerged that facilitated the representation of the student body in more general terms. A number of the responses to questions were readily converted into bar charts to best illustrate the results. Comparison and quantification was more easily accomplished with this technique. Several anecdotal comments were taken from a few of the open-ended questions in order to add richness to the remaining results. These comments added some depth to the data that the multiple response questions could not achieve on their own. Although there were only 24 student questionnaires completed, the participants characterize a representative cross-section of the student body and the data produced a meaningful description of the students.

Each of the four interview participants completed the teacher and instructor questionnaires. The data provided some demographic information which was helpful in discerning the backgrounds of the respondents. Some of the open-ended questions allowed for more detailed responses which were more relevant to the issues concerning the individuals. The initial questions allowed the respondents to begin to contemplate their teaching experiences.

My interview questions reflected some of the key points discovered from the teacher and instructor questionnaire data. The respondents had the opportunity to elaborate on some of the ideas that emerged in the questionnaires. Divergent issues and topics were then explored to greater detail and specific examples were shared. My questions were answered sufficiently while new and distinct issues were discussed. The respondents were given a rare

opportunity to reflect on their teaching experiences at the CTC - all four commented on how they had not done so for some time if at all.

Analysis of the interview data began with coding of responses and thematic grouping. Themes that emerged from the questionnaire data facilitated organizing the interview data into more developed concepts. Many of the themes reflected several of the headings in the literature review so this was used as a structure for organizing and categorizing the data. Certain data were given several codes as they offered credence to multiple themes. Coded and grouped responses substantiated and deepened the emergent themes. Thematic coding, grouping, and concepts were then drawn together to form some distinct and informative evidence.

Ethics

There are a number of ethical considerations when working with students and adults and these vary for the type of research method being used. The questionnaires I used included a covering letter that contained all the necessary information required by the UBC Behavioural Ethical Review Board (BREB) and did not require any identifiable information of the subject beyond gender, grade and program of study. Information from the questionnaires was used in reporting results of the study but all subjects remain anonymous. Questionnaires were kept confidential and stored in a locked file cabinet until reporting of the study was complete and were subsequently destroyed. Non-coercive letters and cover letters were used to recruit interview participants. Written, informed consent was given before any interviewing took place. Data from all interviews were vital to the study and some of the information or responses were used directly and/or indirectly in reporting the results. Interviews were not intended to be anonymous and the interviewees were not informed of this in any way. Notwithstanding, audio cassette tapes used for all interviews

were also kept confidential and stored in a locked file cabinet until after the study reporting was completed and then properly destroyed. BREB review and approval was acquired for the study before any research began in September, 2004.

Timeline of the Research

I began my initial literature search in January, 2004 and started to formulate the research questions soon after. The research proposal was submitted to my thesis committee in August. The BREB application for ethical review was submitted in August and approval was granted on September 14. I collected the data during the end of September until the end of October. Data analysis and reporting the findings ensued.

This research design and methodology provided a variety of data collection techniques and analysis methods that offered a constructive research plan. A substantial amount of quality data was collected during the course of the study. The following chapter provides a detailed report of the research findings.

CHAPTER IV

Findings

The results of my field notes, teacher and instructor interviews, teacher and instructor questionnaires and the student questionnaires are explained in this chapter. Each of the data collection techniques was effective in providing resolve to the research questions. The methods enabled the various members to have a voice in describing the role and function of the school. The themes used to organise the interview data reflected several aspects of the literature review while some additional ones emerged. The compilation of the results presents a descriptive illustration of the CTC by the people involved.

I had the opportunity to spend approximately two or three days per week for four weeks in the end of September to the end of October observing and interviewing people in the CTC. Each day I would make five to fifteen classroom visits in a variety of programs throughout the school. Some classes were observed several times in the same day as different activities took place. Many of these visits provided opportunities to talk with students, learn about their experiences and inquire about what they were learning in their courses. There were some intramural sports activities during the lunch break that I watched. Between classroom visits I found numerous opportunities to talk with several teaching and support staff in their various capacities. Regular contact with the students and staff made it possible to organise interviews with volunteers and find teachers to complete and distribute questionnaires.

My numerous observations, conversations and journal notes begin the description of the CTC. My role as a participant observer enabled me to illustrate the atmosphere, structure and function of the program first hand. Each member of the school had their own
impressions and experiences. My time spent within the CTC enabled me to draw on some of the human aspects that are valuable characteristics of any educational institution.

Only two teachers and two instructors completed the questionnaires and participated in the interviews but the voluntary contribution of the participants reflected an appropriate sample of the teaching staff. The teacher and instructor questionnaires and interviews provided rich insight into the function and educational role of the CTC. The survey responses offer a comparative understanding of the experiences of both the high school teachers and college instructors while the subsequent interviews developed a rich understanding of the function, evolution and character of the institution. These two groups of educators come from distinctly different backgrounds to work together within a single program. This partnership is revealed by the research findings.

The student questionnaires offer a profile of the variety of needs, experiences and goals of the young people who have chosen such a specialized program. These are rather typical students with targeted career goals. Their responses shed light from a different angle on the role of the CTC in their own education.

My Observations and Impressions of the Students, Staff and Facilities.

Having taught in numerous schools as a substitute teacher or Teacher on Call (TOC), I get a sense of the school atmosphere soon after entering the front doors. The CTC was no exception. Once I arrived I noticed the building was old and later discovered that it had been used as a middle school before being closed in 1993 with the students moving on to other newly built schools in the area. Entering the school, I found the office to be like any typical school I had visited or taught in before but I soon discovered that beyond the exterior and first impression, this was no typical school.

One of the first aspects I noticed on my visits in the fall of 2004 was that there were very few, if any, of the 346 students in the hallways during class time. The occasional student I did see was on their way somewhere, involved in a pertinent discussion and openly friendly to me as they quickly realized I was a guest of their school. As I wandered the halls to gain my bearings I observed students in the various classrooms engaged in their work and only quiet discussion taking place. I soon had the feeling I was on a college campus rather than what I had previously experienced in conventional high schools.

The director and assistant director whom I had met in a preliminary visit introduced me to a number of teachers, instructors and staff. There were ten teachers who taught the five core academic subjects and eleven college instructors who taught the technical courses. Two counsellors worked with the students to assist their educational and career needs. A learning assistance teacher was available to provide extra support for the students who needed it. A group of eight support staff worked in the main office, library, cafeteria and custodial areas.

The teaching staff was very welcoming and seemed genuinely interested in my research study. Some were curious to know more and offered their support in whatever ways they could. The introductions allowed me to access classrooms quite easily to observe the students, what was being taught and get some of the impressions of the students in the various programs.

The classes I observed tended to be quite relaxed and mature in nature as the teachers, instructors and students were focused on the task at hand without concern for behaviour or motivation issues. Talking with some of the students, I discovered most of them had made the career decision to attend the CTC and wanted to get what they could out of their education and training. Finding related employment after graduation was a common

theme in the conversations with students and seemed to be the primary motivator for success in the programs. Getting a job and making money after graduation was very important to the students. Many expressed intentions of pursuing a career within their chosen programs while a few planned to make some money before going on to further studies in related or different areas.

The students were eager to talk about their programs and the CTC in general. They were curious to know more about my research and why I was so interested in their school. This discussion prompted them to more fully recognize the opportunity they had been presented. One particular grade 11 student commented that they felt lucky to be in such a unique program. We had been discussing the fact that this was the only such dedicated CTC currently in the Province. I learned a great deal from the numerous, informal conversations with the students during the fall of 2004 and they appeared to find the discussion a positive experience as well.

Talking with the various teaching staff provided abundant insight into the programs, the school and the experiences of teaching at the CTC. The teachers and instructors seemed to get along well as colleagues without any indication of a separation or divide between the two groups. Friendly discussion about students, teaching and personal matters filled the staffroom during breaks and lunch time. I found the atmosphere in the staff lounge to be very positive, more so than I often found in other high schools I have worked in. A number of teachers shared their experiences with me about working in the school with the students and other teaching staff. I had many conversations that touched on the challenges and benefits of teaching at the school, the numerous benefits afforded to the students by the program and how this type of program could benefit more students if it was made available in more schools and districts. One staff member in particular had many positive comments

toward the program and disclosed that their own child was currently attending the school. The teaching staff was very supportive of the programs and was devoted to the education and career preparation of the students.

The various interviews with the teachers and instructors proved to be rewarding for both the interviewees and myself. All of the participants commented on how the experience of being interviewed was a positive experience for them and gave them an opportunity to reflect on their teaching, their particular roles in the CTC and some of the individual students they had worked with over the years. Recollecting particular students and situations added richness to the interviews and the resulting responses. They were keen to be a part of the research study and clearly wanted to contribute in whichever way they could. The impressions and experiences of teachers and instructors in the CTC are central to the research study and the interviews provided me with substantial data in this respect. They all affirmed that they found participating to be a beneficial experience.

Results of the Teacher and Instructor Interviews

Several themes emerged from the four interviews conducted with the teachers and instructors. Many of the themes in the review of literature are revisited. A few others became apparent as further points of interest or aspects specific to the case under study. A selection of excerpts has been drawn from the transcripts in order to illustrate the impressions and experiences of the teachers and instructors who work in the program.

I have used pseudonyms for each of the teachers and instructors. Mr. B. is a Technology Education teacher and had been teaching in the district for 23 years before moving to the CTC to develop the grade 10 program. Mr. T. is a very experienced English and Drama teacher and has been teaching in the CTC since its beginning. Ms. J. is the instructor for Applied Business Technology for UCFV and has worked for the college for

over 20 years. Mr. D. is one of the Electrical instructors who has been at the CTC from its creation and after many years experience working and teaching in the electrical trade.

Working with Students

The general make-up of the student body is quite mixed. Students in grades 10, 11 and 12 are enrolled in the school in order to complete their graduation requirements along with receiving related college instruction. Other students are youth who have recently graduated from another school but are still less than 19 years of age and qualify for provincial public school funding that is tied to the CTC program for college courses. Another set of students is fee-payers and mature students who are pursuing college education and have been offered an available place in the CTC classes. Students in this last group have entrance waitlists at the UCFV or other college campuses. This broad mixture leads to diverse class composition in the CTC. Most of the students are high school aged but the ages of the students in a class can range from 15 to 50. Mr. D. described the varied composition of the classes:

Like in our class now there are a couple of students who are 15 and that's pretty young to be in a college program. I don't know really what the issue is but maybe it's an issue of attitude or lack of life experience. I find that I have to deal with that sort of exercise a little bit more discipline with those students. But at the same time we've had students who have been 45 and 50, the opposite is true. In that situation, even the younger students, the maturity level is brought up with the presence of an older student, or a more mature student. I think they are minor issues in terms of the age of the student or makeup and that sort of thing.

The diverse classes present their own types of challenges but can also provide positive experiences for both the students and teachers. Mr. T. reflected on the experience of working with such an unconventional mix of students in one class:

We've got somewhat of a mix with some older students. But not as apparent because it used to be that I could have a couple of 30-year-olds, a couple 20-year-olds and the rest 16-year-olds in the same class but that's even a neat experience for any high school teacher.

The teachers and instructors had positive impressions of most of the high school students they worked with. They found them to be typical students who had chosen the CTC program for individual reasons. Focussed, motivated and hard working were common themes that emerged from the responses. Mr. D. made this observation:

I think the students enjoy it. They are like any other grade 11 student. You get the ones that really don't apply themselves and that sort of thing. For the most part they are pretty focused. They come to CTC and they come for a reason so I would have to say, generally, they work pretty hard and take their work seriously.

Ms. J. recognised the motivation in the students:

They're very motivated to succeed. I think for choosing to come here they have made a pretty big decision because they are willing to leave whatever school they were at or if they've been home schooled this is their first time at school. They choose the program and everybody comes to an orientation before they start here. Motivation is usually good.

Students choose to attend the program and they do so with purpose toward reaching their goals. "Most of them, as I say, have been focused, they know what they want, they want to

accomplish."

Sometimes a student gets more out of their experience than they originally expected.

Career goals and employment prospects may be central to first attending the school but

other social and personal benefits may come of their experiences in their chosen program.

Mr. T. offered this recollection of one such student:

One student, I think of in particular, came in and I had him in English, drama, and he said this school basically saved his life. He said he was going to go down the wrong path, his brother was in trouble with the law and he was going to be stuck being the big brother looking after him and he wanted to make sure his life was going to go in the right direction and it did. He gained self-confidence; academically he was successful in the program that he chose to be in. And the thing that choked me up the most he got a program award his first year. His parents that had been divorced for years, since he was 3 years old, came and sat with him together. So like that's well beyond just offering a career. He got his life back. And not every kid is like that; kids like that stand out.

As Mr. T. stated, not every student would experience such a turnaround in their personal lives but the program can provide opportunities for some students that might not have been otherwise available to them in a conventional school.

Providing a General Education

Students need to fulfil the Provincial graduation requirements in order to receive their diploma and the teachers in the school are expected to deliver the same curriculum and administer the compulsory tests as they would in a conventional school. Grade tens complete all of the conventional courses along with one block of Foundations where they explore the various programs offered at the CTC. The students continue to receive many aspects of a general education with the core academic courses (English, mathematics, social studies, science and physical education) constituting half of the instruction over the next two years. Three of the four terms in grade eleven and one term in grade twelve are devoted to completing the fundamental courses. The education provided in the school must meet both the Ministry requirements along with the needs of the students.

Both the teachers and instructors have found it necessary to be adaptable in their teaching in respect to the various needs of their students. Fortunately, the unique situation in the school has facilitated in making this possible. Mr. T. revealed how their approach has been adapted:

It goes back to the flexibility. I think I learned a huge lesson being in this school because I used to go... I taught drama for a long time and drama is very flexible, but when I taught straight academic courses I used to go straight by the book; kind of this is how you do a lesson, I can't waiver. And I learned that's not me, because I felt more comfortable teaching drama... I had the ability to run through the experience with the kids at this school and just kind of spread through. If I don't get through my little agenda on the board I am not upset about it.

Teaching style can be modified in order to best reach the students. Mr. D. explained how the flexibility in the program enabled him to deliver the required material in a manner that best suited the students:

Well, I think here as an instructor, we are really free to guide our courses as we see fit so long we are within the Provincial curriculum in terms of the electrical program. Because the students who graduate the program get credit for it so we have to cover material throughout the program that permits them to get credit for it. So we are free to do that in any format that we sort of deem as being what we think as being the best way.

The longer academic year – ten months in high school as opposed to eight months in a conventional college program – permits the instructors and students to be more creative and open in the ways the courses can be conducted. Greater success is expected and recognized in this adaptable program.

Achievement continues to be the central focus of the school. Students enter the program with a variety of career goals but do not always recognize the value of the academic segment of their education. "[The students] don't see the academic side of their education here as important as their technical education. They don't see that it has to go hand-in-hand. That's part of the struggle." Teachers have to deal with this perspective from the students. "There's still an attitude adjustment. I had to adjust my class today and tell them that 'Just because you are an automotive student doesn't mean you can't be an achiever'." Instilling the desire for success in academic courses is a significant challenge within a technical and career centred program. Many of the students come to the school with career goals in mind, not necessarily general educational goals. Mr. T. noted:

The high school aged students, I think initially they were not as motivated to do well on exams or pass. I think they don't like the academics. And they still came around to enjoying the drama program because I was trying to make it as active and enjoyable as possible. Unbeknownst to them, they were still developing communication skills, flexibility skills, working skills and all those kinds of things that they have to have as employees on any kind of work site.

Skills developed in the academic courses are readily transferred into career situations. Students may have rather specific career goals when entering their chosen programs but leave with general employability skills that directly benefit their careers and personal lives.

Conventional schools provide numerous opportunities for students to explore various subjects and areas of interest. Few students actually explore specific careers or employment to any significant degree such as in a Career Preparation Program. They tend to dabble in a number of areas without much focus or direction. "General high school kids would take film, a shop course and they'll bounce around all over and … when they want employment they've done a lot of things but there's no real, real focus." (Mr. B.) Left with the opportunity to choose, many students end up making ill-defined educational choices that directly and indirectly affect their lives after high school.

Providing Educational Choice

The high school aged students who choose to go to the CTC elect, first of all, to leave the school they originally attended and, secondly, to pursue their career goals. They have varied educational backgrounds that follow them into the programs. Academics are not lost on some of these students as they do not necessarily enrol in the program to avoid academic challenges but, rather, as the best educational choice to achieve their goals. Mr. T. commented on the type of students that are choosing the school. "The ones I have here today are more adaptable than the ones I initially had 10 years ago because of the shift in the demographic that we are attracting. They have a broader background in terms of taking academics over the years and they just happen to be opting for the choices that are at this school."

The success of the program is attracting the attention of students, parents and educators alike. Mr. T's opinion provided a perspective of how making the choice to attend the program had been justified:

There's been a real push on the last few years because it seems to be pretty successful. [CTCs] had been mimicked throughout the Province in a variety of formats. I think primarily parents are turned on to it more than kids are initially. Parents are concerned that their children aren't going to university. Then we hear in the news there is lacking in the trades. Of course, we need well trained, skilled people and there's no shame in that. I think that's changing. People used to say, "Well, I'm just going to be a mechanic", and I think that attitude has to change. Because there's no shame in doing anything like that.

Informed decisions are essential to the productive and successful futures of young people. Choosing a program such as this is a practical step along the life path of a student.

Supporting Student School/Work Transitions

The teachers and instructors identified the transition of students from high school to work, training and post-secondary education as a central function of the CTC program. The nature of the student experience revolves around work experience, technical training career development. Not only do they receive on-the-job training but instruction is directed toward employability skills, work site preparation and transferable life skills. Focus is directed toward student career goals and the educational and training experiences required achieving these goals.

Preparation begins with the grade ten students through the technical Foundations course they complete along with the Planning Ten courses all students are required to take. Instruction is made relevant to career development and employability skills wherever possible. Collaboration between the teacher and various college instructors enables appropriate development of skills and experiences that will better prepare the students for the programs they intend to pursue in grade eleven and twelve. Mr. B. discovered that:

What the instructor is saying when that student comes to them as a grade eleven what do they want them to be better and have experienced. I can design my activities around maybe too many repetitious things but what activities can they do to be ready to go into the electrical, the carpentry, the drafting, the, what do you call the pure technology end, those kind of things. What can we do for them now to get them ready?

Students also try to gain access to the CTC programs and post-secondary education by attending the school for grade ten. "They're looking at one of the programs here and hoping to, I guess, have a preferred entry by doing grade ten here." Enrolling grade ten students is new for the school for the 2004/2005 school year and there are a number of challenges ahead but transitional focus is evident in the program.

Teachers recognize the transition aspect of their students' education and incorporate it in their teaching. Mr. T. explained how this comes out in their classroom:

Well, I haven't done personal follow-ups but in theory I would think that they get a pretty good glimpse of the world of work because the work experience aspect of it is a pretty serious focus. They are interviewed, getting resumes out, expected to be on time and besides that there is a consistency throughout. And it takes a lot to have that fit in because some of these kids say, "Well, its just school", but eventually it gets to them. Especially when they get to their programs because it's, their expectations are probably more stringent than at the high school level. So I think that does help want them really develop employability skills to an extent. I try to incorporate some of those aspects when I teach and what I teach and I do need to make mention of it.

Finding relevance in academic courses for their own situations enables students to gain more from their education and carry it forward into their careers. Students can better cope with the high demands placed upon them in their programs with sufficient preparation. Benefits are bound to continue as they progress beyond the CTC and further into their training and education.

High school and college students have different needs to support their school/work transitions. Instructors have recognized that there are differences with their students and

have made efforts to accommodate them. This is quite apparent in how the instructors have prepared for working with the younger group of students. Ms. J. noted:

The whole idea of this school really was addressing that transition and I've got a sheet of paper up on the bulletin board that makes me aware of the transition issues. The difference between typical learning in a high school and typical learning in a college, and I try very hard to be aware of that because it does help when we go to the college because the students have more flexibility or independence and all of those things.

Instruction takes place on both the CTC and UCFV campuses so the students have the opportunity to take the first college courses in a more familiar school setting with the instructors before moving on to the college for the remainder with a number of different instructors. Maintaining the college atmosphere at the CTC is a significant challenge for instructors but is essential for supporting a successful transition from school to college for the students. Ms. J. continued:

Probably one of the biggest hurdles is they see me here everyday and its very easy to fall into patterns of sort of being a typical grade 10 teacher where I would be watching everything they do rather than making them assume the responsibility. I guess that's the biggest challenge, is getting them to assume the responsibility for their learning, for asking questions, so that they're prepared, especially when they go on campus, to function with less supervision and then to make that transition again to work. That's a big challenge.

Students must be able to function well on their own once they reach the college campus because the support network is not as comprehensive and they are expected to perform like any other college student.

The CTC program is essentially a "stepping stone" to further training or postsecondary education. Students gain access to college courses and credentials earlier in their schooling and then continue within their chosen career, move onto further education in a related area or change specialisation altogether. Ms. J. recognized how the program they teach provided a foundation for progressing in any number of careers:

For me that's really important with Applied Business Technology because I'm, the label secretary tends to get stuck on this program but the content of the program is basic computer skills, word processing, spread sheets, data base management, bookkeeping, office procedures including human relations, communications, writing letters. All of those things can be used no matter what you do. And I've had students go on to take nursing, general studies, police and corrections and every time I've seen those people they've said "I use the things that I learned there all the time even though I'm not working in an office." So, the program is a stepping stone, it's a really important concept to me, that it opens doors.

Completing any of the programs would provide valuable experience that can then be easily transferred to a variety of post-secondary institutions. "For someone coming out of a regular high school, already their work habits are better tuned to a college system."

Early access to college education presents an advantage for students over their peers who attend conventional schools. Getting a head start on a career while still in high school puts them in a favourable position after graduation. Mr. B. recognized the benefit of time gained by the students:

Well, I think they see that they have an advantage over any other student that would be interested to follow a career path that these programs offer. If they don't get their leg up now they're going to be half a year, a year behind to get in an apprentice program. So that gives them the edge in the world of work.

Employment competition is a strong motivator for attaining marketable skills and

experience. Mr. B. continued:

The serious students coming out of this kind of facility would be first choice on the job market or if there was selection for a program they would be some of your hot candidates, for sure. As long as they succeeded here, versus someone coming out of some general studies or just trying to get in, they would be a better candidate, they would have to be. If that was still their passion.

Teachers, instructors and students alike recognize the benefits of completing three

years of schooling in only two. Mr. D. explained the benefit realized by students over the

conventional high school route:

I think the biggest thing is they complete their high school requirement at the same time that they complete the college program. Whereas if they chose to go to college and take a program at college, they would have do their high school and then they would have to apply to the college, there would probably be a time disadvantage to them of at least a year. They can graduate here at CTC and graduate, as I say, with their high school diploma and their college certificate in their area of study. So they've got, basically, one year up on any other high school student who didn't attend an institution like this.

Successful student transition from high school to post-secondary education, training and work is the fundamental role of the CTC program. The design and function of the program has been developed around this objective. Mr. D. explained how this objective was

achieved:

At CTC, because of the combination high school and college, it happens naturally. They don't know its happening but its happening. I don't know how to describe it any other way but to say it's seamless. There's really no definition for the student. They are a grade 11 student but they say, they way they sort of label themselves is "I'm a grade11 student in the electrical program", or "I'm a grade 11 student in the carpentry program", or "I'm an automotive grade11 student". So, that transition is sort of there instantly the day they apply and the day that they are accepted. They know that it is not a pure high school and it's really not a pure college atmosphere but a bit of both is present here. If they were to continue on at say BCIT or a college or institution that offers a specialty program, it would be a lot easier for them. If they were to come out of high school and sort of go to a college program it's a little bit different because as college instructors, and for lack of a better term, we don't sort of baby-sit them. This is the work we have to accomplish, these are the due dates and assignments. You have to do them, if you don't they're not going to be chased down as if they were in high school. Just to sort of clarify that, it's not as if we dump the work on them and walk away. We do sort of chase them down a bit but the end result is well, "You're an adult, you're in college, if you choose not to do it that's your choice, you're responsible for those choices". In terms of being in high school, maybe in certain situations parents would be brought in and there would be a discussion take place with the high school administration, the parents and the student and this is what you have to do type thing. I guess in that sense there could be, potentially be a little bumpier transition for students. In schools like this, I would have to say it is pretty seamless. Come in to grade 11 and sort of go into the college program, go back to grade 12, come back and finish the college program, they go out to work and they adjust to the working life extremely well. I have never had anybody come back and say, "Ooh, I hate this". Especially for the younger guys, they leave CTC at 18 or at 19 and they step into a job shortly after they graduate or within days of graduating making 12, 13 dollars an hour. That's pretty exciting for a guy that age. I think the transition is pretty seamless when it comes to CTC.

Students, parents and educators need to know that there are alternative routes to positive and productive careers that do not require the traditional university credential. This

"neglected majority" or "forgotten half" is served by the CTC. Mr. D. also made this point:

I just think it would be great if there were other institutions like this. There is around the province but they're rather spotty. But I think the concept works well and I think it's important that those students that aren't intent on heading to university there has to be a place for them. They're sort of in the middle. Even if a student has dropped out of school and comes back, this is a good place for that student. They can sort of fit back in and there's a chance to sort of [second chance]. ... [The program] is set-up to accommodate high school students, to try and catch those who really have no intention of going to university. Coming to CTC they get prepared for a trades and technology career.

Providing Work Experience Opportunities

All students at the CTC participate in a work experience as part of their program.

They have the opportunity to get valuable experience in their chosen trade or specialty while

discovering first-hand if that career choice is best for them. Mr. T. noted:

It gives them a taste of something they think they want to do but they discover that they are not suitable for that particular career or whatever and they are still young enough to change their course or career and not be defeated by that. Because they are getting dual credits so they can still graduate from high school. If a kid is 16 wants to be a mechanic and all of a sudden discovers, "OOH, is this what it's about? I don't want to do this". It's no big disaster as opposed to finishing high school, going out and doing that.

If they find it is not what they had anticipated, they still graduate from high school and go onto something more suitable.

Students are able to establish connections with employers in the community through the various placements they have. Time spent working in actual work situations provides the students with a realistic perspective of the world of work. Ms. J. explained the direct benefits of work experience for the students:

Our program requires that the students do 3 weeks of work experience in an office, so in order to get their certificate they have to have that... Because they're working through [the CAPP teacher], and because she has connections in the community, the

first thing is it gives them a local work experience, a job reference and many of them do end up staying on and working. So yeah, big connections.

Related experience and employer references are vital for attaining employment in a competitive job market. Relevant work placements tie in the classroom teaching to workplace applications, which translate into marketable skills, and noticeable benefits to prospective employers.

Developing Employability Skills

Many of the courses have a career preparation or employment focus within the curriculum or the instruction. Grade ten courses are delivered in this career environment along with the academic core courses in grades eleven and twelve. Teachers make relevant connections between the learning for particular curriculum and applications that can be used in the technical areas. Mr. B. suggested how this was done in the Planning 10 course:

I think my delivery, everything I try and relate back to job readiness. Like getting ready to enter a field of work and be successful there... Well are they going to carry you successfully, are they going to help you get a job and keep the job? So I talk frankly with kids all the time about, you know, "What you're doing is going to keep you employed or get you employed". I try and always relate it to that because I think that's where the reality of life is.

Teachers would make these connections for students in order to demonstrate the value of learning the high school curriculum and how it applied to the lives and careers of the students while in the program and after graduation.

The education provided in the various programs was quite focused on directly preparing students for a technical career even with the substantial academic component that was necessary for high school graduation. This meant that only the minimum academic and liberal arts credentials were offered to allow room for the multitude of technical courses required for the college certificates. Mr. B. commented:

You decide on an area of study and the focus is much more intensely. You're not trying to add in a drama class or you're doing the constants and the rest of your schedule is focused on a career choice, on getting skills and knowledge that makes you very employable.

The particular combination of general and technical education the students obtain in the program readies them for employment and further training. Mr. B. continued:

With what they finish up with at CTC here they are groomed for that as well and part of it they're all classed as Career Prep students, so they will get out with an employer in a field of their studies and get a little hands on and meet people in the business.

Students enrol in the CTC program in order to gain the education, skills and

experience necessary to prepare them for entry into a technical career. Informed decisions are made that affect and support their career goals. Students investigate the options available to them and make choices based on information they discover through their own inquiry with educators, employers, trades people and the like. Mr. D. explained how students in their program researched their career decisions:

I think lately, in the last couple of years there has been a demand for electricians and when I quiz the students what I find is that they usually, not so much the grade 11s, but a certain percent of the grade 11s but more so the gradded students and the fee payers, they have done some research and they have usually looked at carpentry, or plumbing and electrical and they have talked to different, maybe a carpenter, an electrician and a plumber and they have seen the electrical trade has appealed to them more than carpentry or plumbing. So that's kind of what I get in terms of feedback of why they come in the program. And they look at, I think, the job opportunities. The electrical field is pretty broad, so they have a very high degree of latitude in terms of where they want to go and what they want to do. I'd say most of our students go and end up in apprenticeships. We've had a couple who have gone on to study engineering and a couple of guys who have actually gone into their apprenticeship with BC Hydro's line.

Informed choices carry a great deal of credence once a student embarks on a career path. Students are more committed to their goals if they pursue them based on knowledge and understanding of what is in store for them. The commitment and experience obtained by students in the program are recognized by prospective employers. Not only do they have the benefits of a completed general education and worthy employability skills but, in addition, valuable technical skills that are of immediately applicable on a work site and beneficial to an employer. Mr. D. offered their perspective that reinforces this reality:

The other thing is the fact they are work ready. When these guys graduate from CTC out of the electrical program, they are immediately productive to their employer, their employer recognizes that. That offers some, obviously, some advantage in terms of getting hired, it offers, usually a hire starting rate of pay. The fact that they are immediately productive and they understand more than the basics of the trade. They understand what's required of them on the construction site or in that work environment. So, I think that is a big advantage to students that they wouldn't necessarily get from the college.

Students who go through the CTC appreciate the particular career preparation benefits they gain from the program. Employment in a desirable technical career is what is hoped for by completing the various programs. Mr. D. remarked:

The end result is everybody is happy. They get training, they get jobs and they get their careers established. When they come back to do their technical training they always come back and say hi and we chat. The feedback I get from them is that CTC was a big help and they are glad they completed the program and they are happy.

Working within the Unique School Structure

Although CTC students acquire a predominantly technical education, the essential aspects of a general education are a significant component of the programs. Teachers stress the relevance and effectiveness of academic studies toward their students' career goals. Technical training is only one element of the education the students seek along their chosen career path as many students use the programs as spring boards to various other education and career opportunities. For those who do not intend to pursue a university education – "the forgotten half" – there must be other options. One instructor asserted, "I think the

concept works well and I think it's important that those students that aren't intent on heading to university there has to be a place for them. They're sort of in the middle". General knowledge and transferable employability skills are developed along with specific technical skills and experience to establish a marketable education in a competitive knowledge-based economy.

The new Grade 10 program includes a foundations course which is intended to provide students with work-related experiences in a range of areas without being too specific or "vocational" in nature. Students will have the opportunity to learn about the various programs through the course and by interactions with the various college instructors. Mr. B. explained the challenge presented by creating the new course:

The Foundations 10 will be a mixture and we will have to find activities that cross over between the different specialties and that some are specific. I will separate kids out for those but that's my big challenge for February to virtually design that course, decide what I'm going to do to benefit the students and I have spoken with a lot of the colleagues.

Students learn about the array of careers and experience some of what is involved in each.

The school timetable and structure present numerous advantages and challenges to offering the assorted programs. Certain aspects of the high school and college structures differ causing some disparities. Using a four-term timetable with two classes per day enables administrators to schedule classes with fewer conflicts between teachers, instructors and room allocations. Larger blocks of instruction time allow for more involved activities and projects to be carried out. Other limitations arise as courses have to be completed within a ten-week term. Both teachers and instructors pointed out the pros and cons of the school timetable and structure.

Two, two-and-one-half hour classes each day presented a number of challenges for the Grade 10 students and teachers. Most, if not all, of the students had never experienced

such a long period of time in one class before and clearly found it difficult to focus for that length of time. A teacher described their situation as they were required to teach two classes of the new Planning 10 course every day. "Right now they have Social Studies for half the day and this Planning 10 for half the day and it's just too long a day sitting with the same kind of delivery and style and material to massage." It was clearly difficult for both the students and the teacher to perform in the time schedule. Since it was the first year for grade ten students in the system, a number of new challenges arose while some possible solutions for the following terms and year emerged. Mr. B. stated:

I know with my one group, I wished I thought of it a month ago, I have the same students for PE next term and I really should have done some Planning 10 with them for the first half of the class and started my PE a month ago and then just kept going with it next term and finished with the Planning 10 next term. Because they just can't, they can't sit and focus that long not after doing Social Studies all morning. So I mean, again, that's something that next year I would sit down with the administration, look at the timetable and different students... Adults or young adults I think can handle the longer class time more easily than these kids can, that's for sure.

The timetable constraints raised numerous concerns for teachers and students alike.

Working with the older students in the long classes presented similar challenges. Mr. T. noted some of the difficulties they encountered in their classes. "I mean we have to put up with it for two and one half hours at a time. It's tough for a kid who is 15 or 16 years old. It's tough for an older person too, but you just have to plan for a variety." The length of classes was a concern for many teachers but they found ways to cope with the situation.

The time between courses was another significant factor that affected teaching and learning in the high school classes. A grade eleven course could be taught in the first term while the grade twelve component could be taught in the third or fourth term the next year. The great span of time between courses would make it more difficult for students to remember and relate what they had learned in the course prior. When the two courses are

delivered only one or two terms apart it becomes less of a problem for both the teacher and the students. Mr. T. commented on how the timetable affected the students:

I don't think it is as beneficial for some of them when they concentrate on English then they have almost a year between. If you take it at the beginning in the first quarter and then the next year taking it in the last quarter and that would keep up those skills. And this is why we have this literacy project going which is not just school focus, its district and it's becoming an issue across the country.

Extra support for students is required to ensure their success in these courses. Teachers and

students need to work harder at times to be successful.

Completing both high school and college courses in two years places greater

demands on the time and effort of students. Mr. D. noted:

They have to work a little harder because they are doing grade 12 and the college program, so the work load is a little bit heavier than just being in high school or just being in college. They have two things they have to complete. It's sort of woven together that it's almost seamless. They don't realize that they are doing it but they are doing it, so that's a big advantage.

Three years worth of courses and credits required by the various programs must be squeezed

into just two years so there is little room for anything else. Mr. D. continued:

When we first started where we delivered over two and one half years, the trade off was an extra half year in high school to finish the college program and that's evolved from that so that they finish the college program and the high school program at the same time.

There is little room for making up failed or incomplete courses in the tight school schedule.

Expectations and achievement levels are high for students in the CTC programs.

Students at the CTC are expected to reach the same standards as their peers at the

college and instructors are required to maintain these same standards. A credential from

either institution must retain an equal value in order for it to be valid among other

institutions and employers. Ms. J. explained how the standards are upheld:

The requirements for me through UCFV for the standards and I have to keep reminding myself that its my job to reach the same standards as if they were at campus... I do have to be really conscious of that but I can't do any modified programs because that wouldn't do the program any service. Employers need to know that student coming from CTC is every bit reliable and have met the same standards as the students coming from campus... When the students go, the students are very successful completing the high school electives and their requirements because in order to pass their program they have to have 70%. If they didn't pass one of their courses but got 65%, they would still get credit for their high school elective which is really important. I think they come out way better even if they don't pass one of our courses.

Students benefit from the instruction and achievement standards maintained in the

programs. Earning the equivalent credentials is vital to their educational experience.

Students experience noticeable transformations as they progress through their programs. Teachers and instructors recognize some of the changes during and between courses. Mr. T. explained:

The thing is right now like I've got the 12s I have I had in 11 last spring so there is not a huge difference because it is so close because first quarter and the last quarter are so close together. They are changing, that is just the normal pace of maturation in high school education... I think the program instructors would probably see a difference because of the intensity of what they have to do and they really have to rely upon something very, very specific to connect to what they are doing in their full three quarters...

Changes occur when young people take on situations that challenge them. The students evolve as they encounter the variety of educational and work experiences designed into their respective programs.

Sometimes, younger students in college programs come across certain freedoms and responsibilities that they are not normally accustomed to. Although they find greater flexibility in rules and guidelines of college courses and the instructors who teach them, the higher workload and other demands of the programs place a greater burden of responsibility on the students. Ms. J. made this point:

One of the challenges for families who are sending their kids here is that as a college instructor my relationship is solely with the student. So I can talk to the student about their progress but I can't phone the parents and say, "Suzy isn't doing her homework". If there are issues that are coming up I can talk to the high school counsellors and then they can call the parents. And then if Suzy chooses to bring

her mom in and I ask Suzy's permission to have the mom there while I talk to her and she's ok with it great but I can't, so, it is different. And most the time it works out just fine. I think the students like that part of it. We don't let things slide but we still, can't call parents.

Once the students move onto the UCFV campus they are required to be self-reliant just as any other student at the college. Students are expected to take responsibility for their own education and do what is necessary to be successful. Most seem to rise to the challenge and flourish.

Teacher and College Instructor Working Partnership

The CTC is a direct partnership between the Abbotsford School District and the University College of the Fraser Valley (UCFV) which, together, provide students with courses and experiences for credit toward a BC Dogwood diploma and college certificates in numerous trades and technical specialties. BCTF teachers and UCFV instructors work closely within the program to provide the essentials of a general education along with effective technical career training. Two educational institutions are required to deliver the same instruction any of their other students would expect to receive and to the same standards. This is done primarily on the same campus with shared resources. Certain challenges are expected to arise from this partnership.

Two different groups of educators work together toward a common goal of providing a quality education for their students. Initial trepidation toward merging the two factions did not appear to materialize into anything of concern. Mr. D. recognized this issue:

I think originally there was maybe a fear that the college teachers and the school district teachers, there would be a definite separation or division between them but that hasn't happened here. We work as close with the high school faculty as with our own college faculty. We don't see each other as high school teacher/college teacher. We are all teachers and we all have a common goal and that is to prepare students for a good and rewarding career.

It is the responsibility of the school administration to make the partnership function effectively. They have to keep the roles of both institutions clear in order to provide the quality of education promised to the students and their parents. Mr. D. recognized the task of the administration:

We do have good cooperation with the administration here and working with us and having them offer their expertise and that sort of thing, dealing with various issues. We also have our own direct administration from the college that we will call upon but it seems it is just as easy in-house and it works out well. That's kind of how we like to handle it.

The on-site, day-to-day management is crucial to the success of the entire program. How

situations are managed sets the tone for the school.

Many challenges are expected to surface as a unique program such as this is created. Mr. T. reflected upon a recent change of administration that had a significant effect upon the

staff and the program in general:

Well, we've gone through some difficult times. I've been here since they basically started. Mutate and change and grow. A difficult changeover in administration because of political concerns outside of what we actually do. It caused a lot of stress. Last year was a transitional year for us as a staff. I am only just beginning to see that we are coming out of that transition.

Because all of the instructors have been here pretty well since day one. You kind of know them, the personality, joke with them. You know essentially what they do, what their focus is and what their expectations are. Now that we have the newer high school staff coming in and new administration, that's part of the transitioning I mentioned earlier. I think it's taking the administration a bit of time to figure out how integral they are to the function of this place because they are used to running a high school schedule, high school perspectives. They are just going right through, doing their thing. They are very efficient as administrators but it's like, "Whoa, wait a minute; this is not a regular high school." You get these people with sort of different expectations, work under a different umbrella of regulations so you have got that into account. So last year they were almost excluded from any kind of meetings and so forth and we had to make a few waves. Voices are important here.

No, it wasn't polarized. We as a matter of fact came together very closely but it's just the tension. Not knowing what the future was supposed to be, all of a sudden they pull the rug out from under what this place is all about... The success of this and (inaudible) achieving for the district and then the threat was they were going to destroy the place by changing the configuration of the (inaudible) but luckily it didn't

work because the parents banded together. So, it had a stronger support system than the district recognized.

I think it is [stronger now]. Again it's waiting for these new people, whether they click in or not because they don't have the same perspective and they have their experience teaching but they don't have the perspective we have in terms of teaching in this place or what the time lines are, etc. That's what remains to be seen...

Difficulties that have arisen in the past appear to have been acknowledged, discussed and appropriate solutions have eventually been implemented. The consequences of the situation are reflected by the resilience of the staff and how they continue to work toward the goals of the school and their students.

The teachers and instructors find opportunities for collaboration in their teaching. Relevance was a common theme that emerged from the teacher and instructor responses. Mr. B. revealed how input from the instructors had helped him develop the curriculum for the grade ten courses:

When I go to the college people and say, "Do you want to come in and visit with them, and talk about the program for fifteen minutes", or, you know, I need to sit down and buy you a coffee and say "What should I work these kids through with activities and things so that they're better prepared for your program?"

I guess it is again based a lot on my experience and then hopefully I have the college people that will, well already a couple of departments have given me resources that I can start to work with now and prepare my materials so that I will have something for the students in the new year ready to go. But it's exciting for me because I'm going to learn a lot too. What are the beginnings of the college level courses?

Co-operating with each other can only benefit the students and support their transition into their chosen programs the following year.

Need for Adequate and Modern Facilities

The quality of the facilities within the school was referred to on numerous occasions by the instructors. The amenities, equipment and resources available were not to the same standard as would be found on the UCFV campus. This was considered to be one of the drawbacks to working at the CTC. Mr. D. explained:

If there is any down side or challenges, it might be, the school is an older school and possibly the facility needs to be upgraded and sort of brought up to standard with the new schools that are being built. And that's happening slowly but surely. There is the challenge with funding for capital equipment. That's always a struggle. In order to keep the program current, and do a good job and attract students I think it is important to have the look of a successful institution and that comes through facilities, equipment, teaching aids and that sort of thing. We try and we do our best, persevere and each year it gets better and better. I guess it's like anything else; there are challenges on a daily basis, nothing that we can't overcome or deal with.

The condition of the school and quality of the equipment was a concern for the image of the program but progress had been made for improving upon what had been previously put in place.

Results from the Teacher and Instructor Questionnaires

Many of the questions prompted responses that coincided with the results of the teacher and instructor interviews. Agreement between the two groups was evident on many points while some notable distinctions emerged. The remaining questions provided other interesting responses worthy of discussion.

Instructors found teaching at the CTC more difficult than at their previous college teaching positions. Student motivation and inadequate facilities were noted as specific difficulties. The teachers found teaching at the CTC similar to what they had found working at other conventional high schools citing that the students have similar needs and present expected challenges. The type and age of students would primarily be high school students with less life and educational experience than typical college students.

The respondents all recognized that the lack of extracurricular activities might detract from the education of the students. The teachers went on to indicate that academics, sports, arts, university preparation and a general variety of experiences all placed limits on the

education. These are all aspects that constitute a general education available to most students at conventional high schools. Facilities were once again specified by the instructors as a detracting factor to the education of their students.

Combined agreement and deviation arose when asked about the quality of education provided by the CTC. Empowering and advantaged were unanimously stated descriptors by the group but the instructors both included a diverse and well-rounded education while the teachers regarded it as technical and adequate. The discrepancy between the latter responses suggested an interesting point; from a college standpoint the students get a wide range of experiences but a rather narrow one from a high school perspective.

Curriculum and lessons were made more relevant to the students. Evidently, there was attention placed on the practical and work experience facets. The teachers tended to be more adaptive with their lessons. There were indications that the types of students and the educational goals they hand in mind prompted the teachers to adapt to their needs. The instructors found they could be more focused in their instruction as they had greater student contact time than they typically did in regular college courses.

Structural aspects of the program regularly surfaced as being significant to the function of the program. Transitioning from high school was noted as the greatest benefit to the education of the students along with focus and choice. Specific learning toward chosen career goals was central to this type of program and appeared to be beneficial to these students.

There was a recurring suggestion for adapting the successes of the CTC program to conventional schools. Three of the respondents suggested some type of specific technical training provided to students through existing technical courses along with some type of college collaboration. This would appear to be similar to other CTC programs already

established in schools or very much like the ACEIT initiative recently presented by the Industry Training Authority.

Results from the Student Questionnaires

Twenty four students completed the questionnaire for this study. The students embodied a broad range of ages and programs of study with the number of males and females being reflective of the student body. The student questionnaire respondents are displayed in Figure 7. Although the number of participants was less than 10% of the entire school enrolment and does not provide conclusive or generalizable evidence regarding the entire student body, the resulting sample was quite representative. A number of interesting and insightful themes emerged from the responses.



Questionnaire Respondents According to Gender, Grade and Program



The students held a variety of educational goals they wanted to achieve while at the CTC and after leaving their respective programs. Some intended to complete a trade certification while others planned to continue toward college diplomas, degrees and university degrees. Whichever plans that were set did not end at this first step but rather were a "stepping stone" toward further education and career goals. Many of the students intended to continue their studies in other post-secondary institutions.

Career goals appeared to be the central influence upon the choice to enrol in the CTC. The students had decided upon a career path and this program could provide what they wanted to achieve. A number of the students gained access to their specific college program through this school and benefited by avoiding wait lists elsewhere, cost savings due to the public school funding and expedience of entering the program while still in school and not waiting until after graduation. Parents were the only significant external influence upon the decision to attend the program as friend, counsellor and teacher influences were not indicated by many respondents. Figure 8 portrays the influences students identified as affecting their choice of the school.





Figure 8. What influenced you to choose to enrol in this CTC? (CTC Student Questionnaires, 2004)

The large majority of respondents noted that the program had changed their attitude toward high school in a combination of ways. Several claimed they were more focused while many found it more relevant and they worked harder. About half found the program more challenging than their previous schooling with many respondents stating time management as the primary aspect and harder classes, challenging activities and more homework as also contributing to the difficulties. Despite the difficulties, most of their grades improved or improved a great deal since attending the program. A few experienced no noticeable change in grades while just two students found their grades had become worse. The targeted learning of the college courses would demand greater focus and improve engagement of the students. Positive improvements would produce better students and challenge them to realize greater goals.

Several respondents indicated some aspects they missed out on that they could get at a conventional high school. A significant portion missed Supplementary and elective courses that are typically part of a general education. Fine arts courses were not available at the CTC and were noted by some but these were not identified as terribly important or "no big deal". Some of the other electives may not have been part of the programs these students were enrolled in. University preparation was another concern of students which can be understood as the primary focus of the programs is technical and college centered. A number of the male students noted there was a lack of "girls" in the school. This is an important aspect of adolescent social development that was clearly lacking in this school with a majority of male students. Very few extra curricular activities are offered at the school so students are expected to pursue these on their own time. Figure 9 displays the range of responses the students selected as what they found they were missing by attending the CTC.



Is there anything you miss at this CTC that you would get in another high school?

Figure 9. Is there anything you miss at this CTC that you would get in another high school? (CTC Student Questionnaires, 2004)

The majority of respondents stated that the program had changed their outlook toward life after high school and many of them cited more than one aspect. Employment, career opportunities and job satisfaction were the most significant factors along with improved income and post-secondary education. The array of responses is shown in figure 10. Career goals and employment are central to the changed points of view. The CTC program would appear to be an important transitional means or stepping-stone to the goals held by the students. Has this program changed your outlook toward life after high school?



Figure 10. Has this program changed your outlook toward life after high school? (CTC Student Questionnaires, 2004)

The levels of education of parents reported by the respondents did not reveal any clear trends. Variations between parents of female and male students were not noticeably unbalanced. The results indicate that the respondents of the questionnaires came from parents who have experienced a wide range of educational endeavours. The results are displayed in Figure 11.



Level of Education for Parents

Figure 11. Level of Education of Parents. (CTC Student Questionnaires, 2004)

Two of the questions allowed students to comment on how they perceived the program would benefit them in the near future and long term. A number of different responses were offered, including many indicating employment and monetary reasons; "Because you can use it to get a job"; "It will put me straight into the work world"; "I think it will benefit because as soon as I graduate I will be likely to have a job"; "Might set me up for summer/ continuing employment"; "I think it will give me a lot of employability skills for the future"; "Saving me time and money. Getting me a better job"; and "Help me make more money." Not only did they foresee employment benefits but satisfaction in their careers as well; "I think I will get established with a well supportive income in the electrical trade, along with being satisfied with the job"; "Will have provided me with a start to a successful career long term"; and "Will help me to get a job that I like so I can have fun working." Several comments referred to preparation for other post-secondary education and career goals; "Preparing me to the outside world; jobs and university"; "Get right into university with my first year. Encouraged me. I know I can do well in university"; "Job out of high school to save money for college/university"; "Stepping stone for career in real estate"; and "I think the program will in some way help me reach my goal." The students clearly recognized a number of advantages of the program to support their various career goals. Many just wanted to get a steady job after graduation that paid well and that they would enjoy doing as a long term career. Others intended to utilize the education and training as a springboard to future career goals by attaining paid employment to finance further education, gain access to post-secondary institutions or gaining valuable experience which would enhance their ultimate career goals.

The students were also asked to comment on their parents' opinions of the program; What do your parents say about the CTC program? Again, a variety of rather supportive

responses were provided; "They say that it is a very good opportunity. They really like the program that I have chosen"; "It is a good school, good education and good preparation for college and outside world (future)"; "They think CTC is a good and useful school"; "They think that it is better than a regular high school"; "Fast paced and condensed format makes for a quicker way for gaining a trade. It's good!"; and "They encourage me in it and wish they had the opportunity like this when they were in school." Parents were clearly supportive of the program and recognized the educational and career benefits realized by their children.

I concluded the questionnaire with an invitation to the students to add anything further to their responses; Are there any other comments you can add in regards to being a student in this CTC? One student offered some disapproving points; "The high school part is bad. Not enough students. School needs renovations. PE needs to be gone." Another offered a suggestion that the "classes could be compact[ed] to 3 days a week instead of 5 with the amount of material learned each day." For the most part, the comments were quite encouraging; "I really enjoy it and the teachers are really great, they are all really nice. I am very glad to come here"; "Excellent idea/ programs"; "Needs to get bigger"; "The teachers treat you better"; "Excellent school with exceptional staff"; "It is hard but rewarding"; and "This school is a great opportunity for everyone." The impressions and experiences of the students were noticeably optimistic and favourable at the CTC.

The extensive observations, comments and responses recorded from the participants presented important insight into the experiences and function of the CTC. A great deal of appreciation can be gained from the research data. Further study opportunities can be continued from what has been established here. The subsequent final chapter offers a summary, conclusions and recommendations that have resulted from this research study.

CHAPTER V

Summary, Conclusions and Recommendations

Academic preparation and career programs provided through BC schools support the transition from high school to post-secondary education, training and work. While a large portion of students pursue a university education, many more enrol in various other post-secondary institutions, training programs or engage in numerous types of work. Several career preparation programs have been developed by the BCMoE and delivered by schools in order to assist students in continuing life after high school. Thousands of students take advantage of work experience and career preparation opportunities while a much smaller number engage in specialized technical career avenues such as SSAs or attend CTC programs. My interest in non-university career paths and technical career education has prompted me to inquire about CTCs. Not a lot was known about CTC programs and the character of the education they actually provided. The purpose of my research was to investigate this CTC to learn about the educational significance and human aspect of the program that could not be appreciated from without.

Summary

My research problem originated from questions I had around the idea of postsecondary education and career paths for young people who did not intend to pursue a university education but wanted to find a fulfilling career doing something they enjoyed. Much of the focus in secondary schools is whether a student will attend university or college and the academic preparation required to take that route. Those that do not choose the university route have other options but they seemed to be more limited and less clear as to how one would pursue them. A large portion of students do not know what they want to do after leaving high school and are left to sort out interim employment until they make up their

mind or stumble across something that interests them. These concerns are what prompted me to dig deeper into the options and choices available to students while in school and the established support provided for the alternatives to a conventional university education. Essentially, I wanted to discover the less conventional post-secondary education opportunities designed to support a large proportion of BC students.

Through my research, I established an understanding of the role and function of the CTC in Abbotsford. The first research question was: "What role do CTCs play in secondary and post secondary education choices and transitions of BC high school students?" The questionnaires, interviews and various conversations with the different members of the school combined to create the illustrative description. Students received the core academic education that is necessary to build further learning upon while developing valuable technical skills required to be successful in their chosen careers and acquiring the appropriate experiences of applied knowledge and practical understanding. Real work experiences not only develop the technical skills and knowledge learned in the classroom but also provide the students with marketable on-the-job training and experience that prospective employers look for in new workers. The education provided by the CTC is relevant and valid career preparation for students pursuing real careers.

The data I collected was very useful for providing insight to my second research question: "What are the impressions and the nature of experiences the students and teachers have in the Abbotsford CTC?" Talking with a number of students, teachers, administrators and support staff was invaluable for learning about the lived experiences in the CTC and specifically within the various programs. This type of feedback cannot be learned from any brochure, presentation or website. It was important to put a human face on the CTC in order to ascertain its genuine value. Each participant from the CTC brought their past
educational and professional experiences with them and these intermingled with others around them in this unique setting. Thankfully, the participants were eager and willing to share their personal impressions and experiences with me.

The students recognized the advantage and opportunity for beginning a career through the CTC. They gain employability skills, technical skills and real work experience with a clear focus on a rewarding career. What they might miss out on in a conventional high school is far outweighed by the benefits they receive. Personal, social and skilled qualities develop through their involvement within the school and out in the work environments. They can actually see how what they learn in school can be applied in real situations and they can rationally and independently answer the question: "Why do I need to know this?" School, teachers and learning starts to make some sense.

Conclusions

The technical careers the students choose to engage in are a worthy pursuit. Although these careers do not involve a prestigious university degree or are necessarily held in high esteem within society, they do hold important value within our societal structure and are essential to maintaining our standard of living. It is arguable that any career holds equitable value to another as each is necessary to our social, economic and cultural being. Unfortunately, the public image that any particular job, career or profession might have tends to be reinforced with students by educators and parents alike.

Any stigma attached to these inherently less desirable jobs is reinforced by wellmeaning educators and parents who insist students are "toast" and are destined for unfulfilling "dead-end" jobs if they fail to go to college or university, as well as by academics who deride the work carried out by the very people they profess to honour. Stigmatization will be diminished only when educators and parents acknowledge that all approved work is socially necessary and that fulfilment and dignity stem more from the worker than from the job (Holmes, 1998, p. 278).

Technical and trades careers are worthy careers and students should be shown and to know this to be true. Programs like CTCs demonstrate the commitment to students that society recognizes the value of the careers they choose and that publicly funded education is intended to support all students no matter what career path they take.

Students and parents maintain that they receive good value for their education dollars from the CTC. They made a conscious choice to leave their local high school and give up what is provided by a conventional general education in order to take advantage of what is offered at this particular school. The arts, liberal arts, academics and sports are important to many students and parents and are readily ascribed to in conventional schools but, realistically, many do not truly engage in much of what schools have to offer – as much disengagement can be found in a typical high school. Students who have chosen to study at the CTC put their energy and motivation into an education and a career they believe to be beneficial.

The future of vocational education lies in the promise of school and college partnerships that, together, provide balanced programs which incorporate a sound academic core of knowledge and learning that various technical skills and relevant work experience can be effectively built upon.

There is a stronger chance for the revival of vocational training (for example in vocational centers, either in free-standing institutions or attached to colleges or schools) and the development of school-to-work programs, partly because both approaches are compatible with the individualization and diversity that characterize pluralist societies (Holmes, 1998, p. 279).

Such environments make it possible to bring academic and vocational knowledge together in a meaningful and practical way. Both occupational and basic skills are important; basic skills enable the learning of job specific skills and occupational skills. The core knowledge bestows the capacity to acquire ever-changing job-specific skills. "Workers have always had to adjust to new occupational skills" (Bishop, quoted in Lewis, 1991, p. 104). Within this framework, it is possible to foster learning in several spheres converging on a central goal or focus.

Notwithstanding the value of a new vocationalism that has been proposed and discussed, one should not base too much emphasis on predicted employment scenarios.

Even Grubb (1996) cautioned that certain aspects of the new vocationalism based on futurist predictions of labor force participation rates are uncertain at this time. Advocates of school reform may be influenced by heightened business imperatives, he feared, rather than time-tested and sound educational practices (Lakes, 1997, p. 25).

False promises for employability may result as real work opportunities are declining, especially for minority and disadvantaged students (Lakes, 1997). The danger of market driven educational policy and programs are abundant and unmistakable. Undeniably, economic factors influence educational systems as the various levels of public schooling are not only intended to foster citizenship, humanism, feminism, liberalism, multiculturalism, secularism, socialism and unionism but also provide new workers to join the workforce in a global, market economy. It is a constant challenge for educators to keep these characteristically opposing forces in check.

Lakes (1997) offers critical arguments toward the new vocationalism from Marxist, Freirean and Deweyan perspectives. The Marxists contend capitalist production has been mirrored in schools by reproducing machinery and tool operation within a workplace environment, legitimizing the imperatives of industry and perpetuating the oppression of labour. Many students are prepared for working class jobs and enter the workforce to fill low-waged jobs under poor conditions. The Freireans, on the other hand, welcome the integration of academic and vocational studies as a way of empowering the workers in the struggle to end labour injustice. Vocational classrooms can be a place where students can

engage in dialogue and critically examine the world of work, the distribution of power and class-based identities. Deweyans look to the ideal of elevating the role of work in the eyes of students and recognize the value of learning by doing. They aspire to democratic, progressive and experiential learning opportunities with a holistic approach to both academic and vocational knowledge. "The Deweyans and Freireans want a critical vocational education, one that gives students a hopeful message for pragmatic, progressive reconstructions through personal and sociocultural transformations" (Lakes, 1997, p. 23).

The future of vocational education can be described as uncertain at best as many forces oppose its progress. Conservative interests that aim to retain parental control over children and limit the prominence of social ideologies within society. "The new vocationalism might offer endless possibilities for learning and living democratically, but only if we are serious about social justice, educational improvement, and the production of good work and smart workers" (Lakes, 1997, p. 30). These greater philosophical arguments surround vocational education continue to influence the programs that are offered in schools and the students who enrol in them.

Possibly the most realistic approach to reforming vocational education on a larger scale may be by enriching vocational program offerings through curriculum integration. "These exponents are dedicated to moving students away from narrower conceptions of job training toward broader choices and flexible options related to sound career planning for successful occupational futures" (Lakes, 1997, p. 27). Bringing the two camps together with a common goal might provide for a stronger foundation for attaining a truly progressive and democratic education. This is relatively easily argued in principle but much more problematic in practice as has been illustrated by the literature and aspects of this research

study. The challenges of establishing a legitimate and relevant new vocationalism promise to be an ongoing issue as do the challenges of public education in general.

Another aspect to consider is that the struggle to gain legitimacy has coincided with the increase of vocational credentials. More and more programs are attaching a credential to them in an attempt to add a marketable value. It is questionable that the expansion of credentialing will result in higher quality high school programs and is little more than printing pieces of paper for the sake of posturing (Taylor, 2003). "Certainly the liberal programme of promoting equality through expansion of educational opportunity, has merely led to an inflationary market for educational credentials, which rearranges the positions of some individuals but leaves the underlying structure of inequality the same" (Collins, 1992, p. 87).

This research study confirmed much of the supporting theory behind the new vocationalism but, at the same time, has revealed many of the challenges and limitations that encumber its success. Curriculum integration continues to prove to be a significant complexity as competing agendas make

it difficult to effectively merge academic knowledge and vocational knowledge. Institutional structures present their own challenges as the flexibility required for educational reform is habitually cumbersome. Despite great efforts from administrators, teachers, instructors and students alike, tradeoffs and shortcomings are inevitable when something innovative is to be gained.

Recommendations

The data collection techniques utilized in the research study were effective in gathering useful information, allowed for emergent themes to coalesce and established a three-dimensional understanding of the case from the various perspectives. The flexibility of

using a variety of methods was instrumental in gaining the access and results that were achieved. The findings that were a consequence of applying these techniques created an informative illustration of the CTC, its function and its educational significance.

Undeniably, individual or group interviews with a selection of students would have added richness to the data as well as revealed another layer to the impressions and experiences of the students. The students possess a great deal of insight that is invaluable to understanding the importance of the CTC and the educational and career opportunities it offers. Tapping into this resource would be a wise next step.

There are a few tributaries for further study that would be worthy of exploration. One possibility is a long-term ethnographic study that involves a group of teachers, instructors and students from grades 10, 11 and 12 over a full school year. A longer and more in-depth study would provide greater detail and offer a broader scope of the CTC. Their high school and college courses, work experience, employment, social experiences and extra-curricular activities could be closely followed. Progress and development during the course could be monitored and tracked as the students move through the various stages of their programs. The impressions and experiences of the students would continuously evolve over time and the changes could be documented. What is learned from the participants could be very useful in developing and/or modifying programs, curriculum and school structure.

Another course of study might involve a longitudinal study that would follow the student body after graduation as they enter various educational and career paths (similar to Leslie Andre's *Paths on Life's Way* study). The intentions and goals of the CTC could be assessed as to their relative success and consequence. Employment placement, post-secondary education continuity, career paths and related experiences would be valid evidence

as to effectiveness of the CTC and its programs. A long-term analysis of a program can provide valuable data for educators and policy makers.

A third direction could take the form of a comparative study involving all of the CTC programs in the province along with the new ACEIT initiative that has just recently been introduced. Each of the programs would have been created in different regions of the province and would, understandably, have varied goals and foci. The function of each might have comparable aspects yet notable differences may provide further insight into the role of CTCs. Learning from each other and sharing knowledge between programs could be facilitated with a study of this type.

Some Final Words

Not only do students deserve a choice in how they will engage in their education and pursue career goals but educators have a responsibility to provide educational choices that endorse quality, democratic education. "We need to examine that choice: do we want our schools to create a passive, risk-free citizenry, or a politicized citizenry capable of fighting for various forms of public life and informed by a concern for equality and social justice?" (McLaren, 1989, p. 158). Duplicating the traditional does not necessarily guarantee the successes of the past to be replicated in the future. Progress merely builds upon the knowledge of the past and the present while continually evolving into the future. This conjures up the question asked by Dewey: Education as a function of society or society as a function of education?

For the small number of students who actually enrol in a CTC program, the education they receive is not only sound from a general education standpoint but it offers students the knowledge, training and experience that they want out of their high school years. The CTC programs are not for every student but for the ones its serves, it serves

them well. Some students just want to finish high school, get a job – hopefully a good paying and fulfilling job – and become independent and contributing members of society. This job may lead into a life-long career or merely be a means to some other post-secondary education or career goal but, essentially, it is a valuable component to a young person's career. It would be best to define career as a lifetime of experiences that would include, and not be limited to, educational, employment, familial and personal experiences. The small group of students who enrol in a CTC have chosen to make this just another step along their career path.

I reflect back upon the last question I asked each of the teachers and instructors I interviewed: Would you send your child to the CTC? Each one said they would and justified or qualified it in their own way. They recognized the benefits and drawbacks of the CTC but also understood what it can offer a student with particular career goals. Would I send my own child to a CTC? If she or he was interested in a technical career, desired the education and training that was offered and made the choice to pursue their goals, absolutely I would.

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APPENDIX

Questions for Career Technical Centre (CTC) Students

Circle the best answer for each question. You may circle more than one for some questions. Add details where it may make your answers more clear.

Grade	11	12	Male	Female	Program of study_
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Your Schooling

1. Which school did you attend before coming to this CTC?

2. How would you describe your schooling during grades 8, 9 & 10?

- a. Excellent learned a lot, enjoyed it
- b. Good learned some useful things, enjoyed it somewhat
- c. OK learned a little bit, made it through
- d. Poor learned very little useful things, hardly made it through
- e. Boring not engaged in learning, did not like it at all
- f. Bad hated it
- 3. What elective courses did you take in grades 8, 9 & 10?

Grade 8

Grade 9

Grade 10

4. What courses will you take at the CTC?

Grade 11

Grade 12

5. What post-secondary education do you intend to continue with after this CTC?

- a. Trade Certification
- b. College Certificate
- c. College Diploma

a. Trade Certification

b. College Certificate

c. College Diploma

e. University Degree f. Other

d. College Degree

- I. Other____
- 6. Do you think you will continue your education beyond that point? Yes No If yes, in what way?
 - d. Tech. Institute Diploma
 - e. University Degree
 - f. Other

The CTC Program

 7. What influenced you to choose to en a. Teacher b. Parent c. Friend d. Counsellor 	rol in this CTC? e. Change of school f. Career choice g. College education h. Other
8. Has this program changed your attitu	de toward high school? Yes No How?
a. Work harder	c. Better grades
b. More focused	d. More relevant
9. Have you found this program more on No In what ways?	hallenging than your previous schooling? Yes
a. Harder classes	d. More homework
b. Difficult concepts	e. Time management
c. Challenging activities	f. Other
 a. Improved a great deal b. Improved 11. Is there anything you miss at this CT a. Courses = b. Programs = c. extra-curricular = 	c. Stayed the same d. Gotten worse C that you would get in another high school? d. university preparation e. Nothing f. Other
12. Are the teachers and instructors diffe	erent than your last school? Yes No
a. More challenging	d. More practical
b. More relaxed	e. Higher expectations
c. More knowledgeable	f. Other
13. Has this program changed your outle In what ways?	ook toward life after high school? Yes No
a. Post-secondary education	d. Employability
b. Career opportunities	e. Job satisfaction
c. Improved income	f. Öther
14. How do you think this program will	benefit you in the near future (summer or Explain

15. How do you think this program will benefit you in the long term (2, 5, 10, 20 years)? Explain.

Employment

- 16. Were you employed before coming to this CTC? Yes No If yes, what type of job?
- 17. Have you found employment since being a student here? Yes what type of job?

18. Is your employment in your chosen career area? Yes No

19. What is your intended career path or goal?

20. When did you know you wanted to do this career?

Your Parents

21. What level of education have your parents completed?

Father

- a. Some High School
- b. High School Diploma
- c. Some College
- d. College Diploma
- e. Trade Certification
- f. Tech. Institute Diploma
- g. University Degree
- h. Other____

22. What are your parents' professions?

a. Father

b. Mother

23. What do your parents say about the CTC program?

Are there any other comments you can add in regards to being a student in this CTC?

Mother

- a. Some High School
- b. High School Diploma
- c. Some College
- d. College Diploma
- e. Trade Certification
- f. Tech. Institute Diploma
- g. University Degree

h. Other____

No If yes,

Questions for Career Technical Centre (CTC) Teachers and Instructors

Circle the best answer for each question. You may circle more than one for some questions. Add details where it may make your answers more clear.

Pro	gram

Course(s)

Your Teaching Experience

- 1. Which schools or institutions have you taught at before coming to the CTC?
- 2. How many years have you been teaching?
- 3. What certification, diplomas and degrees do you hold?
 - a. Trade Certificate
 - b. Diploma
 - c. Degree
 - d. Teaching Certificate

Teaching at the CTC

- 4. How do you find teaching at the CTC compared to your previous teaching experiences?
 a. Difficult
 b. Similar
 c. Easier
 In what ways?
- 5. What aspects of teaching do you experience at the CTC that you can not get in a conventional school or college program?
- 6. What aspects of teaching do you feel you miss out on at the CTC that you might get at a conventional school or college program?
- 7. What are the specific challenges you find teaching at the CTC?
- 8. How would you describe the students you teach at the CTC?

Student School/Work Transitions

9. In what ways do you see the CTC program successful for students?

- a. Motivation
- b. Engagement
- c. Self esteem
- d. Work experience
- Explain:

- e. Career goals
- f. Employment
- g. Access to post-secondary
- h. Other

10. What aspects of the CTC might limit or detract from the education of students?

a. Extra-curricular activities

c. Variety of experiences d. Other

b. University preparation

Explain:

11. How could the successes of this program be adapted to conventional schools?

Quality of Education

12. What quality of education do you feel students get from the CTC?

- a. Adequate
- b. Technical
- c. Limited
- d. Well-rounded

a. Independence b. Empowering

Explain:

- e. Diverse f. Advantaged
- g. Empowering
- h. Other

- 13. Do you find the curriculum and lessons are made more relevant to the students? In what ways? Yes No

14. How does the structure of the program benefit the education of the students?

- d. Transitioning from school
- e. Focus
 - f. Other

c. Choice Explain:

Are there any other comments you can add in regards to being a teacher/instructor at this CTC

Interview Guide: Teacher/Instructor Interview

- 1. Which program do you teach in?
 - a. What courses?
 - b. What other responsibilities?
- 2. Where and what have you taught before? Other work experience?
- 3. How have the new students been adapting to the new school?
 - a. Motivation, effort, interest, attitude?
 - b. Grade 12s?
- 4. How do you find working with the students in this CTC?
 - a. Student perspectives toward school? Programs?
 - b. Challenges you are met with? Demands?
- 5. How do you approach your teaching here?
 - a. Lesson preparation, managing students, projects, homework?
 - b. Relevance, depth of instruction, skills?
- 6. What can you offer students here that you could not at a conventional school or college?
- 7. Specific benefits for students and teachers?
- 8. How does the CTC support student transitions to post-secondary education, training and work?
- 9. What has it been like working with the other teachers/instructors?
- 10. Would you have your own children attend this CTC?
- 11. What else can you add to describe your experiences teaching in this CTC?

CTC Interview with Mr. D - 13/10/04

D My name is Mr. D and I teach the electrical program here at CTC. Basically, my responsibilities are anything to do with teaching the program, trying to arrange work experience, possible for the students. I also try and get job placements for them at the end of the term which has in the past been extremely successful. Our placement ratings are pretty well 100%. There might be one or two guys that don't get placed immediately, but I would say within a couple of months everybody is usually working. More often than not, the guys are hired prior to taking the course. I look after managing the function of the program. Keeping updated materials, texts, equipment in the shop, deal with in class student issues. If there's some difficulties I try to help them out or find some learning assistance for them if that is what the underlying problem is. I do, aside from teaching in the course, a little bit of everything.

G Do you teach any other courses at the college?

D I have in the past, courses more specifically designed for industry, course I have developed. More of a community... They are run out of the community education; continuing education I guess is what they call it now. So, it would be courses directed at upgrading electrical journey people. Stuff like motor controls, industrial electronics, programmable logic controls, that sort of thing.

G So, kind of a continued training program?

D Yeah.

G For practicing electricians.

D Yeah.

G What other work experience did you have before you became an instructor?

D Well, I guess my dad was an electrician, my brother is an electrician and I sort of went through high school with the intent of being an electrician. So, I chose the electrical shops over anything else in high school. When I graduated I went right into my apprenticeship, and served my time, worked in all sorts of jobs. You know from residential frame construction right up to robotics and automated control and that sort of thing. I think shortly after I come out of my time, I started to do contract work where I would just sort of contract myself out to contractors who needed manpower when, needed for a full-time kind of thing. And then from there I went into my own business, ran my own business in the electrical industry for a number of years. I did all sorts of jobs. Mostly I focused industrial and heavy industry, instrumentation and again control and automation kind of stuff. From that I actually branched off into general contracting and real estate development. Buy up pieces of land and sort of join them all together and get a plan together for land usage, build the building, become the landlord. From there I went into more residential type of construction, more of build houses. I did that for a number of years, up until about 1990. I

always had a desire to teach. Early, when I came out of my time I was a union electrician. We used to have to attend these supplementary apprenticeship training classes which were held Saturday mornings, every other Saturday at centennial college in Scarborough, Ontario. The idea was that we would get extra skills and training that non-union apprentices wouldn't get. So I came out of my time, I thought I wouldn't mind teaching these Saturday morning classes. I taught the classes for one season which was from September to April. And, I just didn't think I had enough experience. It felt I could do a better job if I went and spent a bit more time in the trade. I went back and continued to work in the trade. I guess when I sort of tapered off on building the houses I went back to college and studied Electrical Engineering Technology. After that I started I started to pursue, more actively pursue a career in education and teaching. That was the reason for going back to college, is that I felt that I could sort of prepare myself with refreshing my theory knowledge and that sort of thing. As it turned out I actually began teaching for the college I returned to which was Sir Sanford Fleming College in Peterborough, Ontario. So I started doing small contracts, teaching for them. More so related to re-skilling individuals that were trying to get back into the workforce. So it was mixed classes with men and women. We would give them each a taste of trades and that sort of thing. From there I answered an add for UCC in Kamloops. I got hired on there as a part-time instructor and I did a number of things. I taught in the apprenticeship program, electrical apprenticeship. I taught in the technician programs. I did some contract work for them. I taught some code to a number of engineering clients who would do electrical drafting but really didn't have a good grasp of the code. It did that sort of stuff. It was always part-time in terms short contracts. When this opportunity came up here in the Fraser Valley I applied for that and at the time they didn't have an electrical program. I applied for that, was successful and I basically developed the CTC electrical program. So, started that and the first class was March 1996. I think we started out with four students and the rest is history. We do apprenticeship training now and we are running, this year, two full classes of entry level electrical students. So it's worked out good.

G So, now looking at the students you have this year, how have they adapted to your system here?

D I think that it's a combination of ... CTC electrical is setup to accommodate high school students, to try and catch those who really have no intention of going to university. Coming to CTC they get prepared for a trades and technology career. I think the students enjoy it. They are like any other grade 11 student. You get the ones that really don't apply themselves and that sort of thing. For the most they are pretty focused. They come to CTC and they come for a reason so I would have to say, generally, they work pretty hard and take their work seriously. Over the years we've taken in students that have graduated from other schools but still meet the age requirement. They come in and sort of, the program has evolved to accommodate students that want to take just the electrical program, so we follow the school year, we start with an intake in September and then we graduate our students in June. Prior to that it used to take 2 ^{1/2} years and if we wanted to bring what we call "gradded students" or "rate payers" we would run a summer school. They would take the first level of the course and that would prepare them to come back to school in November and they would go from that program to the end of the following year. There seemed to be more and more gradded students that there was grade 11s coming in. So the program evolved before it was, with a definitive start and a definitive finish date to accommodate gradded students

and fee payers. Reduce the program from the 2 $\frac{1}{2}$ years to the ten months of the normal school year.

G The student you have now, what percentage or break down would there be from grade 11 students, gradded students and mature students?

D Its probably 50/50, but that really, that can change drastically. This year it is 50/50, last year it was probably 80/20, 80% were grade 11s, 20% were already gradded students or fee payers, mature students. This year it is about 50/50, 50% grade 11s and then another 50% would probably be made up of half and half of gradded students and mature students but that mix continually changes. I really don't know what sort of causes that. I think lately, in the last couple of years there has been a demand for electricians and when I quiz the students what I find is that they usually, not so much the grade 11s, but a certain percent of the grade 11s but more so the gradded students and the fee payers, they have done some research and they have usually looked at carpentry, or plumbing and electrical and they have talked to different, maybe a carpenter, an electrician and a plumber and they have seen the electrical trade has appealed to them more than carpentry or plumbing. So that's kind of what I get in terms of feedback of why they come in the program. And they at, I think, the job opportunities. The electrical field is pretty broad, so they have a lot of very high degree of latitude in terms of where they want to go and what they want to do. I'd say most of our students go and end up in apprenticeships. We've had a couple you have gone on to study engineering and a couple of guys who have actually gone into their apprenticeship with BC Hydro's line. So its pretty varied in terms of how the students...

G In terms of their successes when they are complete?

D Oh, yeah, they're definitely happy.

G When you are actually working with the students, what do you find different with working with students at the college? Do you find it different or just in general how is it working with the students that come here?

D I haven't found it problematic. I think in every, whether its in a college school setting or in a high school setting, you run into the odd student that may have some unresolved, underlying issues that are causing them to not applying themselves, or may not have a focused sense of what they want to do. So, I think without that focus it does have an effect on the student, the student comes in. If they don't really know why they are in the program, I think it becomes problematic. They will begin to miss time and then they will begin to do poorly on written work and course work. Eventually, the inevitable happens, they either dropout or move on to something else. In terms of my experience with them, I don't think I have had a really bad experience. Most of them, as I say, have been focused, they know what they want, they want to accomplish. They work well with me and I seem to work well with them. The end result is everybody is happy. They get training, they get jobs and they get their careers established. When they come back to do their technical training they always come back and say hi and we chat. The feedback I get from them is that CIC was a big help and they are glad they completed the program and they are happy.

G So they feel successful once they have completed their programs. The majority would be, obviously, quite focused if they choose a school like this. As in a college student they are choosing to go to college, they are paying to go there. They are making that choice, so they are more focused. Can you think of any specific challenges that make it more difficult teaching in the school here compared to where you have before? Maybe involvement in the school, or the students, or other teachers?

D No, I think originally there was maybe a fear that the college teachers and the school district teacher, there would be a definite separation or division between them but that hasn't here. We work as close with the high school faculty as with our own college faculty. We don't see each other as high school teacher – college teacher. We are all teachers and we all have a common goal and that is to prepare students for a good and rewarding career. If there is any down side or challenges, it might be, the school is an older school and possibly the facility needs to be upgraded and sort of brought up to standard with the new school that are being built. And that's happening slowly but surely. There is the challenge with funding for capital equipment. That's always a struggle. In order to keep the program current, and do a good job and attract students I think it is important to have the look of a successful institution and that comes from, through facilities, equipment, teaching aids and that sort of thing. We try and we do our best, persevere and each year it gets better and better. I guess its like anything else, there's challenges on a daily basis, nothing that we can't overcome or deal with.

G Do you approach your teaching differently here? You mentioned something about the structure changing over a different time scale, but in any other ways?

D No. I think you have to be, the students are definitely and there is at times maturity issues. Like in our class now there are a couple of students who are 15 and that's pretty young to be in a college program. I don't know really what the issue is but maybe its an issue of attitude or lack of life experience. I find that I have to deal with that sort of exercise a little bit more discipline with those students. But at the same time we've had students who have been 45 and 50, the opposite is true. In that situation, even the younger students, the maturity level is brought up with the presence of an older student, or a more mature student. I think they are minor issues in terms of the age of the student or makeup and that sort of thing.

G It's just has a slight change of the atmosphere of the class but not necessarily affecting your teaching or the program?

D I am pretty consistent I think, at least in my mind I am, with the atmosphere I try and achieve. I like to keep it light, friendly, open but focused. We can have an enjoyable while we learn and as long we are learning and we are enjoying what we are doing, I'm happy, the students seem happy, I respect them, they respect me. It works out well.

G Great. From what you see from the program that's offered here, what can this program offer a student different than a conventional college.

D I think the biggest thin g is they complete their high school requirement at the same time that they complete the college program. Whereas if they chose to go to college and take a

program at college, they would have do their high school and then they would have to apply to the college, there would probably be a time disadvantage to them of at least a year. They can graduate here at CTC and graduate, as I say, with their high school diploma and their college certificate in their area of study. So they've got, basically, one year up on any other high school student who didn't attend an institution like this. The other thing is the fact they are work ready. When these guys graduate from CTC out of the electrical program, they are immediately productive to their employer, their employer recognizes that. That offers some, obviously, some advantage in terms of getting hired, it offers, usually a hire starting rate of pay. The fact that they are immediately productive and they understand more than the basics of the trade. They understand what's required of them on the construction site or in that work environment. So, I think that is a big advantage to students that they wouldn't necessarily get from the college.

G Because they have more time available here with the structure of the program.

D They have to work a little harder because they are doing grade 12 and the college program, so the work load is a little bit heavier than just being in high school or just being in college. They have two things they have to complete. It's sort of woven together that it's almost seamless. They don't realize that they are doing it but they are doing it, so that's a big advantage.

G And they recognize that's a trade-off they have to make to achieve these goals.

D That's gotten less and less. When we first started where we delivered over 2 ½ years, the trade off was an extra half year in high school to finish the college program and that's evolved from that so that they finish the college program and the high school program at the same time. I am not sure that's as much of an issue as it would have been in the past.

G What do you think would be a specific benefit to be an instructor or teacher in this school? Because it is different, you make a choice to be here.

D Well, I think here as an instructor, we are really free to guide our courses as we see fit so long we are within the Provincial curriculum in terms of the electrical program. Because the students who graduate the program get credit for it so we have to cover material throughout the program that permits them to get credit for it. So we are free to do that in any format that we sort of deem as being what we think as being the best way. We get to participate in both college professional development and high school professional development opportunities which, if you were just a college instructor, you wouldn't have that opportunity. We get to see they're doing and do it with them which I think is a real benefit of working in an institution like this. Unfortunately, the high school teachers aren't able to participate in the college PD so we enjoy our own college perks as well as the high school perks. I don't think there is any real sort of down side to working here.

G You do recognize the benefits?

D Yeah, oh yeah.

G Style of your teaching or flexibility in delivering the program.

D We really, I guess, rely on the center's administrator to assist us in dealing with any real potential problems. I think I always try and settle them in class, keep everything "in-house" so to speak, but if there's something that sort of spills over to or has potential to affect others outside the class or what ever. We do have good cooperation with the administration here and working with us and having them offer their expertise and that sort of thing, dealing with various issues. We also have our own direct administration from the college that we will call upon but it seems it is just as easy in-house and it works out well. That's kind of how we like to handle it.

G It seems like a fairly functioning system.

D Yeah, it works well.

G And if you have less problems to begin with... We kind of touched on the students' access to post-secondary education. What I'm looking at is how do you think their transition from high school to post-secondary education, or training, or work is facilitated?

D At CTC, because of the combination high school and college, it happens naturally. They don't know its happening but its happening. I don't know how to describe it any other way but to say it's seamless. There's really no definition for the student. They are a grade 11 student but they say, they way they sort of label themselves is "I'm a grade11 student in the electrical program", or "I'm a grade 11 student in the carpentry program", or "I'm an automotive grade11 student". So, that transition is sort of there instantly the day they apply and the day that they are accepted. They know that it is not a pure high school and its really not a pure college atmosphere but a bit of both is present here. If they were to continue on at say BCIT or a college or institution that offers a specialty program, it would be a lot easier for them. If they were to come out of high school and sort of go to a college program it's a little bit different because as college instructors, and for lack of a better term, we don't sort of baby-sit them. This is the work we have to accomplish, these are the due dates and assignments. You have to do them, if you don't they're not going to be chased down as if they were in high school. Just to sort of clarify that, its not as if we dump the work on them and walk away. We do sort of chase them down a bit but the end result is well, "You're an adult, you're in college, if you choose not to do it that's your choice, you're responsible for those choices". In terms of being in high school, maybe in certain situations parents would be brought in an there would be a discussion take place with the high school administration, the parents and the student and this is what you have to do type thing. I guess in that sense there could be, potentially be a little bumpier transition for students. In schools like this, I would have to say it is pretty seamless. Come in to grade 11 and sort of go into the college program, go back to grade 12, come back and finish the college program, they go out to work and they adjust to the working life extremely well. I have never had anybody come back and say, "Ooh, I hate this". Especially for the younger guys, they leave CTC at 18 or at 19 and they step into a job shortly after they graduate or within days of graduating making 12, 13 dollars an hour. That's pretty exciting for a guy that age. I think the transition is pretty seamless when it comes to CTC.

G Into college or into work. Would you send your own kids here?

D Yeah. Unfortunately, my kids are older than... There in university, but I would have no problem sending my kids here.

G Great. Was there anything else you could add to our discussion that might be important?

D I just think it would be great if there were other institutions like this. There is around the province but they're rather spotty. But I think the concept works well and I think it's important that those students that aren't intent on heading to university there has to be a place for them. They're sort of in the middle. Even if a student has dropped out of school and comes back, this is a good place for that student. They can sort of fit back in and there's a chance to sort of...

G Second chance?

D Yeah. I just think it's a great place.

G Well great, I really appreciate your time. Thank you very much. I learned a lot.