

Career and Technology Studies

**Prepared for the
Northern Labour Market Information Clearinghouse**

November 2000

1. Introduction

This report is prepared for the Labour Market Information Clearinghouse of the Northern Alberta Development Council and its four partner colleges (Fairview College, Keyano College, Lakeland College and Northern Lakes College).

2. Background of Career and Technology Studies (CTS) and School Career Transitions (SCT)

Career and Technology Studies (CTS) is a provincially authorized complementary program designed for Alberta's secondary school students. In September 1997, CTS replaced all junior and senior high school practical arts courses – former courses in business and education, home economics, industrial arts and vocational education.

Career and Technology Studies (CTS) prepares students for the job market or further studies. This unique program allows them to explore a wide range of career options in technical and trade areas, learn marketable skills and gain work experience. The program reflects industry standards and requirements because it was developed with the direct involvement of business people and professionals.

Courses are offered in many career areas, and vary by school and board, according to local interest and demand. In some career areas, students may acquire credentials recognized by employers or post-secondary institutions.

Curriculum Structure

Career and Technology Studies is organized into **strands** and **courses**. Strands in CTS define competencies that help students:

- Build daily living skills
- Investigate career options
- Use technology (managing, processes, tools) effectively and efficiently
- Prepare for entry into workplace and/or related post-secondary programs

In general, strands related to selected industry sectors offer positive occupational opportunities for students.

Courses are the building blocks for each strand. They define what a student is expected to know and be able to do (exit-level competencies). Senior high school students who can demonstrate the general outcomes for a CTS course (i.e. who have the designated competencies) will qualify for one credit toward their high school diploma.

Levels of Achievement

Courses are organized into three levels of achievement: introductory, intermediate and advanced.

Introductory level courses are for students who have no previous experience in the strand and help build daily living skills while forming the basis for further learning.

Intermediate level courses build on the competencies developed at the introductory level. They provide a broader perspective, helping students recognize the wide range of related career opportunities available within the strand.

Advanced level courses refine expertise and help prepare students for entry into the workplace or a related post-secondary program.

Competencies

Two types of competencies are defined within the CTS program: **basic and career-specific**. **Basic competencies** include:

- Personal management; e.g. managing learning, being innovative, ethics, managing resources; and,
- Social; e.g. communication, teamwork, leadership and service, demonstrating responsibility (safety and accountability).

Career-specific competencies relate to a particular strand. These competencies build daily living skills at the introductory levels and support the smooth transition to the workplace and/or post-secondary programs at the intermediate and advanced levels.

The following chart shows the 22 strands that comprise the CTS program and the number of 1-credit courses available in each strand.

CTS Strand	Number of Course
Agriculture	33
Career Transitions	31
Communication Technologies	33
Community Health	31
Construction Technologies	46
Cosmetology Studies	58
Design Studies	31
Electro-technologies	37
Energy and Mines	26
Enterprise and Innovation	8
Fashion Studies	29
Fabrication Studies	41
Financial Management	14
Foods	37
Forestry	21
Information Processing	48
Legal Studies	13
Logistics	12
Management and Marketing	20
Mechanics	54
Tourism Studies	24
Wildlife	17

Source: Alberta Learning

3. Approach to the Research

The NADC website provided 1996/97 High School Enrollment and Diplomas Issued data for 19 school districts in the area. Based on discussions with representatives of the four colleges, the number of school districts was expanded to 29. Northern Lakes College indicated an interest in expanding the survey data in order to gain perspectives from school districts that serve as “feeder institutions” for their 22 sites. It should be noted that these school jurisdictions overlap the NADC area boundary and only portions of each fall within the NADC area.

Secondary Data Sources

Statistical data was collected from Alberta Learning, Educational Information Services Branch. Data collected through this source included:

- High School Population Counts 1997/98, 1998/99, 1999/2000 (Appendix A)
- Diplomas Issued 1997/98, 1998/99 (Appendix B)
- CTS Credits Awarded by Strand 1997/98, 1998/99 (Appendix C)

Primary Data Sources

Surveys were sent to the superintendents of the following 19 school divisions that are typically considered part of the NADC catchment area:

- Aspen View Regional Division No. 19
- Fort McMurray RCSSD No. 32
- Fort McMurray School District No. 2833
- Fort Vermilion School District No. 52
- Grande Prairie RCSSD No. 28
- Grande Prairie School District No. 2357
- Grande Yellowhead Regional Division No. 35
- High Prairie School Division No. 48
- Holy Family Catholic Regional School Division No. 37
- Lakeland RCSSD No. 150
- Living Waters Catholic School Division No. 42
- Northern Gateway Regional Division No. 10
- Northern Lights School Division No. 69
- Northland School Division No. 61
- North West Francophone Education Region No. 1
- Peace River School Division No. 10
- Peace Wapiti Region Division No. 33
- Pembina Hills Regional Division No. 7
- St. Paul Education Region Division No. 1.

Surveys were also sent to the following ten school jurisdictions that serve as catchment areas for Northern Lakes College:

- Bigstone Education Authority Society
- Buffalo Trail Regional Division
- Driftpile Band
- Lesser Slave Lake North Country Community Association
- Loon River First Nation
- Slave Lake Koinonia Christian School Society
- Swan River First Nation
- Sturgeon Lake First nation Band #154
- Whitefish First Nation
- Woodland Cree First Nation.

A copy of the survey is provided in Appendix D.

Telephone or personal interviews were conducted with 19 individuals actively involved in the design, delivery and/or evaluation of CTS curriculum. Perspectives were also gathered from post-secondary staff.

4. CTS Data for NADC Region

Data was collected from Alberta Learning, Educational Information Services. Full reports of the data that were analyzed are provided in Appendices A, B and C.

(i) High School Student Counts

A review of the High School Student Count data for the school years 1997/1998, 1998/1999 and 1999/2000 enrolled in Grades 10, 11 and 12 in the catchment area yielded the following observations:

- The majority of school districts from which post-secondary institutions in the NADC area draw their students are experiencing some increase in student population;
- Pembina Hills Regional Division No. 7, Slave Lake Koinonia Christian School Society, Sturgeon Lake First Nation Band # 154, Swan River First Nation and Whitefish First Nation are reporting significant growth rates in high school registrations; and,
- Northland School Division is reporting low Grade 12 registrations.

The full data set is provided in *Table 1 – Student Population Count for NADC Area School Authorities 1997/98, 1998/99, 1999/2000* included in Appendix A.

(ii) High School Diplomas Issued

A review of the number of Certificates of Achievement, High School Diplomas, and High School Equivalency Diplomas issued for in 1997/98 and 1998/99 for School Authorities in the NADC post-secondary catchment area indicated the following:

- Most school authorities in the area reported slight variances in the number of High School Diplomas issued in the two-year period of this review;
- Declines in the number of high school diplomas awarded during this time period were noted for Aspen View Regional Division No. 19, Ft. McMurray School District No. 2833, and Pembina Hills Regional Division No. 7;
- Jurisdictions reporting increases in the number of High School Diplomas issued included Buffalo Trail Regional Division No. 28, Fort Vermilion School Division No. 52, Grande Prairie School District No. 2357, Grande Yellowhead Regional Division No. 35, High Prairie Division No. 48, Holy Family Regional Division No. 48, Northern Lights School Division No. 69, and Peace Wapiti Regional Division No. 33;

- The number of Certificates of Achievement that were awarded in these jurisdictions has remained relatively constant; and
- The number of High School Equivalency Diplomas issued has varied only slightly but remained proportionately the same.

The full data set is provided in *Table 2 – Diplomas Issued for NADC Area School Authorities 1997/98, 1998/99* included in Appendix B.

(iii) CTS Course Completions

CTS Course Completion data was reviewed for the NADC post-secondary catchment area. The following chart presents a perspective on the most common CTS strands in area school jurisdictions.

Strand	No. of School Jurisdictions
Information Processing	26
Career Transitions	24
Enterprise and Innovation	24
Foods	24
Wildlife	22
Community Health	22
Fashion	22
Financial Management	21
Tourism Studies	21
Communication Technologies	20
Construction Technologies	20
Forestry	20
Legal Studies	20
Mechanics	20
Design Studies	19
Energy and Mines	19
Fabrication Studies	18
Agriculture	17
Cosmetology Studies	16
Management and Marketing	16
Electro-technologies	11
Logistics	2

Note: the course formerly known as CTS was also reported as being offered in 17 jurisdictions.

Variances in the number of registrations for the total catchment area by CTS strand are reported in the following table.

Strand	Registrations 1997/98	Registrations 1998/99
Agriculture	560	563
CTS (no longer offered)	5654	373
Career Transitions	5314	9375
Communication Technologies	4913	6342
Community Health	1599	1334
Construction Technologies	6618	8658
Cosmetology Studies	4344	4443
Design Studies	2299	2549
Electro-technologies	62	403
Energy and Mines	60	110
Enterprise and Innovation	1016	1414
Fabrication Studies	2786	3373
Fashion Studies	1400	1778
Financial Management	6110	5055
Foods	10,985	12,430
Forestry	2452	1789
Information Processing	25,443	26,452
Legal Studies	2184	2445
Logistics	0	<12
Management and Marketing	363	568
Mechanics	5268	5925
Tourism Studies	1130	2871
Wildlife	1177	1713

The full data set is provided in *Table 3 – CTS Credits Awarded by Strand for NADC Area School Authorities for 1997/98, 1998/99* included in Appendix C.

5. Perspectives from the Field

A total of 12 of 29 surveys were returned by area school jurisdictions. This section of the report presents the perspectives of those who responded to the survey questions.

(i) Criteria for Selection of CTS Curriculum Strands

Survey respondents identified several criteria that were used to determine which CTS curriculum strands would be offered by the schools in their jurisdiction. The top four criteria reported were:

- Available financial, human and physical resources (12)
- High level of student interest (12)
- Teacher expertise (12)
- Available equipment and facilities (9)

Other criteria that were mentioned included:

- Curriculum modules are developed
- Perceived need in community based on job availability
- Strand was offered at the Junior High level
- Available resource person in community to assist with instruction
- Time-tabling possibilities

(ii) Variances in CTS curriculum strands (1998 – 2000)

Ten of twelve survey respondents indicated that, over the past three years, no significant variances had taken place in the array of CTS curriculum strands offered in their jurisdiction.

Several respondents reported the following trends in enrollment in CTS courses:

- Enrollments in CTS courses have increased
- Students are more interested in computer-related strands
- Students are entering high school with stronger information processing skills due to changes in the Junior High curriculum

(iii) Alliances between high schools and colleges

The question regarding alliances between high schools and colleges yielded mixed results (Yes (5), No (7)). Respondents varied in terms of how they defined an 'alliance'; for some this referred to a formal written agreement while others defined the relationship more informally.

Many high schools are faced **facility and resource** limitations for CTS curriculum. Survey respondents cited several examples where high schools are accessing facilities and resources through northern colleges:

- Use Portage College facilities to offer Tech Prep
- Alberta Agriculture – Green Certificate (3) courses are supported by college
- Agreement with Grande Prairie Regional College to transfer courses toward Office Administration program
- Northern Lakes College Forestry Modules are used
- Tech Prep agreement supports use of local college facilities (2)
- Lakeland College offers CTS Mechanics course (3 credits) each semester

Varied responses were provided when asked about **opportunities for CTS students to link their studies/work experience to a post-secondary career program**. School jurisdiction representatives noted two ways that students linked their studies to work experience:

- Work experience projects in the community (5 responses); and
- Work experience gained through enrollment in the Registered Apprenticeship Program (RAP) (5 responses).

Other examples of linkages included:

- CTS students enrolled in Information Processing have exposure to NAIT programs
- Students have some linkages with Fairview College counselling and program staff
- Students have exposure to NAIT, SAIT and University of Lethbridge counselling staff

Respondents offered a diverse range of suggestions for changes/improvements that would strengthen the linkages between CTS courses and related post-secondary career programs as follows:

- Extend the number of Articulation Agreements (10 responses);
- Implement flow charts of transition strands from high school classrooms to post-secondary programs for use by teachers and students (6 responses);

- Provide more information about post-secondary programs and careers (5 responses);
- Increase the priority on Advanced Placement Credit (3 responses);
- Work with post-secondary institutions on developing career and employability portfolios that complement the portfolios that students are using in high school (3 responses);
- Communicate CTS Best Practices to post-secondary institutions (2 responses);
- Support post-secondary instructors delivering classes in schools via video conference (3 responses);
- Develop stronger liaisons with post-secondary institutions at the district and individual school level;
- Set up a provincial committee to promote these linkages;
- Increase resources to support field trips to post-secondary institutions; and
- Encourage student teachers developing/revising existing modules and make them available to current teachers

6. Best Practices Perspectives

a) CTS Best Practice Study

In March 1999, the Curriculum Standards Branch published a study entitled *Promising Practices in CTS*. This document was an initial effort to gather examples of how teachers, schools and school systems are addressing various challenges associating with implementing CTS programs. Alberta Learning has continued to share this information through the publication of a semi-annual newsletter *CTS Communication Network Update* that is posted on the CTS website.

These two publications provide concrete descriptions of successful programs and partnerships and are presented by CTS strand.

b) Practitioner Perspectives

Ten individuals who were involved with CTS initiatives that were considered Best Practices were interviewed to determine the factors that they considered essential to the success of their initiatives. A synthesis of their comments yielded the following perspectives:

- Work internships that complement CTS classroom learning will help create more employable youth and support transitions from high school to post-secondary studies.
- Many students whose CTS courses are linked to post-secondary career programs are interested in pursuing ‘fast track’ programs that assist them with completing their post-secondary studies.
- Engaging students in the planning stages helps secure community resources and supports (via their parents)
- Maintaining good working relationships with partners is essential
- It is critical that the school principal support the idea. Support from the School Division is dependent upon the support of the school principal.
- Be prepared that whatever your goal, it will take more time than you anticipated.
- Once an initiative has been designed, it is important to formalize the arrangement between the partners so that is sustained over time.
- Agreements should be standardized so that schools have the same arrangements with various post-secondary institutions.
- Once students seek direct linkages between CTS course and work experience and/or career training, the popularity of the particular CTS course will increase exponentially
- The value of CTS in career planning and preparation makes sense to parents, business, and the community at large. We need to increase awareness of the curriculum
- School resources may be limited so it is important to look in the community for content experts and resources

7. Other Career Related Programs for Youth

Several other programs offer opportunities for youth to develop career-related knowledge and skills and relevant work experience. These initiatives were reviewed since they place demands on the same post-secondary institutions and community work placements accessed by CTS. Also, students may elect to participate in one of the career-related programs instead of CTS.

a) Registered Apprenticeship Program

The Registered Apprenticeship Program (RAP) is part of off-campus education provided by Alberta Learning. Students begin apprenticing for a trade while still in high school. They spend part of their school time in the work place as registered apprentices in one of the designated trades. They receive credits towards a high school diploma while earning credit towards their apprenticeship.

The Registered Apprenticeship Program (RAP) continues to grow, albeit slowly. As this program is an agreement between school divisions and their schools, the only impact on post-secondary institutions occurs when the RAP student graduates from high school and becomes a full-time apprentice who attends technical training for his/her trade.

Apparently, there are no new articulation agreements between RAP and CTS Strands. The existing agreements are in Automotive Service Technician, Cabinet Maker, Carpenter, Cook, Electrician, Electronic Technician, Hairstylist and Welder trades. The details of this agreement are presented in Table 4 provided in Appendix E.

Some school divisions offer a logistics program through CTS. Students who successfully complete this gain advance credit toward the designated occupation certification for Warehousing through Alberta Apprenticeship and Industry Training.

One deterrent to articulation between CTS strands and matching RAP enrollment is the RAP requirement that instructors hold the appropriate trade certificate. It is unusual for CTS instructors to hold this credential, thus preventing students from obtaining RAP credit for work completed through CTS.

There is an opportunity for the colleges that have trades certified instructors. It is possible to imagine a partnership agreement between area high schools and a college that would have college trades instructors teaching high school students on the college campus. A note of caution was provided by Bob Keddie of Fairview College. He has approached school superintendents and high school principals proposing such a partnership. No school or school division has indicated interest to date. Similarly, no high school students have responded to his invitation to tour Fairview College's trades facilities and meet instructors. He intends to continue to follow-up with this proposal.

b) Careers the Next Generation

At the time of writing this paper, Careers the Next Generation is focused on the trades and encouraging employer participation in RAP.

While there is little new activity in northern communities, initiatives in the major centres are moving toward assisting with establishment of CTS strands in fine arts, financial services, energy, logistics and information technology. There is a possibility of expanding these initiatives into northern Alberta. There is more immediate interest from the forestry sector and related programming where the industry exists.

A resident of Sexsmith, Harley Jantz, has been contracted by Careers the Next Generation to work with schools and employers in northern Alberta to pursue career preparation and RAP opportunities. Funding for this initiative is provided by a partnership of ATCO Industries, Weyerhaeuser and Fairview College. One of his activities is to encourage employment through career preparation and RAP opportunities through local high schools. The objective of his efforts is to facilitate local employment and the eventual retention of young people in the community.

Harley Jantz indicated that his major focus is the area high schools. However, he has been invited to a number of Grade 9 classes to participate in high school orientation sessions. During these presentations he highlights career opportunities for students through RAP and CTS.

c) **Tech/Career Prep Initiatives in Alberta**

In 1995 four school systems in central Alberta formed a TechPrep Consortium, through a 3-year grant from Human Resources and Development Canada (HRDC). The “tech prep” model includes the following six key features:

- Applied Academics
- Articulation
- Career and Technology Studies
- Enhanced Career Planning
- Portfolio
- Work Experience (Business Partnerships)

In 1997 Alberta Education established the School Career Transitions (SCT) initiative to work with partners to implement recommendations outlined in two key Government of Alberta policy documents – *People and Prosperity* and *Framework for Business Involvement in Education*. After considerable consultation and research, a comprehensive career development system (CCDS) was outlined to help guide future action for Alberta Education, school systems and community partners. The CCDS identifies 10 key features:

- Strategic Planning
- Relevant Curriculum
- Professional Development
- Experience of Work
- Just-in-Time Career Information
- Parental/Family Involvement
- Community Partnerships
- Structured Pathways
- Quality Assurance
- Personal Planning (Portfolio and Career Plan)

As a result of discussions across the province a provincial “consortium of consortia” of those interested in Tech/Career Prep was formed and has continued to have annual conferences. Four regional Tech/Career Prep consortia are located throughout the province. Interest in Tech/Career Prep continues to grow among school systems.

CTS Articulation Agreements exist in higher proportion in those areas with an active Tech/Career Prep consortium. The challenges identified for the Tech/Prep Career Program in Alberta are very similar to the challenges presented for CTS. These challenges include the following:

- Insufficient funding at the school/system level. Funding is needed for:
 - Allocating personnel with time for planning and coordination
 - Professional development, particularly to support shift to applied learning
 - Instructional design (building applied learning concepts into lesson plans)
 - Purchasing materials and supplies (e.g. portfolios)
 - Marketing and promotion
- Changing perceptions of key stakeholders:
 - Public, parent and educator’s perception re: technology-related careers
 - Educators’ perception that applied learning strategies will negatively impact result of diploma and achievement exams

8. Discussion and Implications of Research Findings

An analysis of the data collected for this research report presents several themes.

1. Need to clarify intent of CTS Curriculum

Alberta Learning staff view the CTS curriculum as an opportunity for students to develop knowledge and skills specific to careers. As well, they see these courses as provided a foundation on which students can build in pursuing post-secondary studies. Post-secondary educators would like to strengthen the linkages between CTS students and themselves for those CTS curriculum strands that are related to post-secondary career programs.

Several school administrators and Alberta Learning staff commented that many teachers and counsellors view CTS courses as an opportunity to expose students to an area of interest and do not see these courses linking to future career studies. In many jurisdictions, there are not sufficient qualified staff to teach CTS courses beyond the introductory level. Furthermore, teachers and counsellors are not sufficiently familiar with post-secondary career programs to appreciate the linkages with CTS curriculum.

2. Increasing resources to support CTS curriculum

School jurisdictions face challenges in securing appropriate facilities and equipment to support the delivery of the CTS curriculum. In some cases, local colleges may be able to provide access to these resources.

Proposals for resources to expand facilities or acquire new equipment may be supported by government, the private sector and community if these proposals are viewed as beneficial to both secondary and post-secondary students.

3. Coordination of career related curriculum

Several Ministries within the Alberta government are concerned with helping youth become fully employed. Career-related curriculum is provided by the schools, public post-secondary institutions and private training schools all of which report to Alberta Learning.

Alberta Learning's initial focus for the development of a comprehensive career development system initially was junior and senior high schools. Now this work needs to be applied to the post-secondary system in order that students can achieve a 'seamless transition' in pursuit of career education.

4. Strengthening relationships between high schools and colleges

Historically secondary schools and post-secondary institutions have operated in relative isolation. For the most part, secondary school teachers and post-secondary faculty members have been prepared for their work in separate faculties of universities. They are not required to have the same professional teaching credentials. Nor have continuing professional development opportunities brought these two groups together.

Post-secondary faculty are often unfamiliar with the secondary high school curriculum as are secondary school teachers equally unfamiliar with post-secondary career programs. If students are to make successful transitions from one system of education to the next, it is important that they can access accurate, timely information about career programs.

The Alberta Learning Information Service (ALIS) website provides useful information for students about careers and relevant career training. This resource has also helped secondary school teachers make meaning of the diverse array of post-secondary programs.

School personnel indicated an interest in a flowchart which shows how CTS curriculum integrates with post-secondary career programs. The ALIS website could provide a useful medium to present this framework for teachers and post-secondary instructors across Alberta.

5. Increasing pool of instructional resources

Schools often lack teachers with sufficient content knowledge to teach certain CTS courses. One option is to have a local resource person work with the teacher to deliver the curriculum. This requires additional planning and coordination time.

Both survey respondents and interviewees thought that post-secondary institutions could assist these schools by providing resource materials and instructional assistance. Although college faculty may be able to visit local schools or have secondary students visit the campus, this is not feasible for more geographically distant locations.

Most regions of Alberta now have a solid network of videoconferencing facilities. Perhaps resources could be requested to develop some distance delivery modules for those CTS courses that are related to local college career programs.

Alberta universities that provide education programs are partnering with the technical institutes to develop pre-service and in-service workshops for teachers responsible for CTS curriculum. If Alberta Learning wants schools to expand their CTS curriculum offerings, there is a need to encourage education students and teachers to upgrade their knowledge and skills in applied learning and career-related instructional strategies.

6. Raising community and parental awareness of career-related curriculum

Alberta Learning is now placing increased emphasis on Teacher Advisor Programs where a cohort of students is assigned to teacher for one year to help assist with portfolio development. The -implementation of career and learning portfolios starting at the junior high level will require parental 'signoff' of the document on an annual basis. This will increase parental awareness of the relationship between learning and earning.

There is an ongoing need to make the public aware of the changing face of employment and career preparation.

7. Expand number of Articulation Agreements and develop more consistent format

Although partnerships between secondary schools and post-secondary institutions were initiated mostly on an informal basis, those interviewed and surveyed stressed the value of formalizing these agreements.

The recommended approach to formalizing the working partnership is the development of an Articulation Agreement between the school and the post-secondary institution. Several respondents stressed the importance of clarifying the meaning of these Articulation Agreements including:

- The meaning of the term “preferred admission status”;
- When CTS courses are required as program pre-requisites; and
- Whether advanced standing will be awarded for CTS courses.

9. Sources

Documents

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Alberta Learning, CTS website <http://www.learning.gov.ab.ca/>

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Alberta Education. (May 1999). *Tech/Career Prep Initiatives in Alberta – Identifying Connections and Strategies to Support Provincial Implementation*.

Alberta Education. (1997). *Off-campus Education Guide*.

Alberta Education. (1996). *Framework for Enhancing Business Involvement in Education*.

Government of Alberta. (1997). *People and Prosperity*.

Interviews

Michael Alpern, Alberta Learning	(403) 422-3272
Jan Anderson, Centre High	
Gary Bertrand, Alberta Learning	(403) 297-5022
Garry Briggs, NAIT	(780) 471-7764
Ray Cimolini, W.P Wagner High School	(780) 469-1315
Karen Fetterly, Alberta Learning	(780) 422-5079
Patti Henley, Tech Prep (Central Region)	(403) 422-3275
Harley Jantz, Careers the Next Generation	(780) 814-4530
Bob Keddie, Fairview College	(780) 835-6636
Eugene Kulmatycki, School to Work Coordinator	(403) 342-3740
Jan Mills, Alberta Learning	(780) 422-3275
Tom Nesbitt, Careers the Next Generation	(780) 424-3414
Rosemarie Ollis, Archbishop MacDonald H.S.	(780) 451-1470
Barbara Pederson, Alberta Learning	(780) 427-9019
Sharon Prather, Alberta Learning (now retired)	
Richard Siler, Red Deer Public School Division	
Erik Schmidt, Alberta Learning	(780) 427-8765
Sam Shaw, NAIT	(780) 471-7701
Douglas Taylor, Alberta Agriculture, Food and Rural Development	(780) 427-4183
Debbie Vance, School to Work Transitions Project	(403) 294-6307

Appendix A

Table 1 – High School Student Population Count for NADC Area School Authorities for 1997/98, 1998/99, 1999/2000

Source: Alberta Learning, Education Information Services

Authority Name	School Year	Grade 10	Grade 11	Grade 12 Under 20 years	Grade 12 Greater than 19 years
Aspen View Regional Division No. 19	1997/1998	272	272	248	1
	1998/1999	309	255	270	1
	1999/2000	317	283	244	2
Bigstone Education Authority Society	1997/1998	2	0	0	0
	1998/1999	0	0	0	0
	1999/2000	0	0	0	0
Buffalo Trail Regional Division No. 28	1997/1998	426	378	372	1
	1998/1999	410	401	385	3
	1999/2000	420	391	405	0
Driftpile Band	1997/1998	12	13	4	2
	1998/1999	15	7	3	0
	1999/2000	0	0	0	0
Fort McMurray Roman Catholic Separate School Division No. 32	1997/1998	249	238	269	0
	1998/1999	256	259	282	0
	1999/2000	288	265	316	0
Fort McMurray School District No. 2833	1997/1998	440	401	433	3
	1998/1999	439	433	441	8
	1999/2000	461	422	476	10
Fort Vermilion School District No. 52	1997/1998	228	177	123	0
	1998/1999	256	160	171	1
	1999/2000	250	178	143	0
Grande Prairie Roman Catholic Separate School Division No. 28	1997/1998	184	173	269	1
	1998/1999	200	166	180	0
	1999/2000	212	194	185	0
Grande Prairie School District No. 2357	1997/1998	606	437	437	1
	1998/1999	630	452	454	2
	1999/2000	660	476	506	0
Grande Yellowhead Regional Division No. 35	1997/1998	638	608	603	15
	1998/1999	657	576	661	25
	1999/2000	580	580	580	5

Authority Name	School Year	Grade 10	Grade 11	Grade 12 Under 20 years	Grade 12 Greater than 19 years
High Prairie School Division No. 48	1997/1998	282	264	250	1
	1998/1999	293	275	278	3
	1999/2000	323	285	291	2
Holy Family Catholic Regional Division No. 37	1997/1998	144	134	62	0
	1998/1999	175	147	124	0
	1999/2000	209	161	120	1
Lakeland Roman Catholic Separate School District No. 150	1997/1998	160	107	127	3
	1998/1999	147	142	120	1
	1999/2000	147	128	132	1
Lesser Slave Lake North Country Community Association	1997/1998	1	1	4	0
	1998/1999	4	2	2	0
	1999/2000	2	1	1	0
Living Waters Catholic Regional Division No. 42	1997/1998	64	73	57	0
	1998/1999	142	82	63	0
	1999/2000	130	116	78	1
Loon River First Nation	1997/1998	2	0	0	0
	1998/1999	3	0	0	0
	1999/2000	0	0	1	0
Northern Gateway Regional Division No. 10	1997/1998	441	404	410	2
	1998/1999	484	410	403	3
	1999/2000	463	446	444	2
Northern Lights School Division No. 69	1997/1998	548	471	456	14
	1998/1999	497	489	461	5
	1999/2000	527	468	483	3
Northland School Division No. 61	1997/1998	114	60	56	1
	1998/1999	143	64	71	1
	1999/2000	119	90	38	0
Northwest Francophone Education Region No. 1	1997/1998	20	21	19	0
	1998/1999	13	18	24	0
	1999/2000	18	13	18	0

Authority Name	School Year	Grade 10	Grade 11	Grade 12 Under 20 years	Grade 12 Greater than 19 years
Peace River School Division No. 10	1997/1998	385	279	294	0
	1998/1999	341	333	271	0
	1999/2000	286	305	338	0
Peace Wapiti Regional Division No. 33	1997/1998	458	403	364	0
	1998/1999	496	374	400	0
	1999/2000	501	393	397	0
Pembina Hills Regional Division No. 7	1997/1998	542	481	550	90
	1998/1999	1058	942	999	534
	1999/2000	957	1172	728	434
Slave Lake Koinonia Christian School Society	1997/1998	0	0	0	0
	1998/1999	8	0	0	0
	1999/2000	0	5	0	0
St. Paul Education Regional Division No. 1	1997/1998	326	306	271	2
	1998/1999	321	315	270	2
	1999/2000	327	304	291	6
Sturgeon Lake First Nation Band #154	1997/1998	1	0	0	0
	1998/1999	20	14	13	2
	1999/2000	26	17	10	<6
Swan River First Nation	1997/1998	7	11	8	1
	1998/1999	6	9	8	3
	1999/2000	12	7	9	1
Whitefish Lake First Nation	1997/1998	8	7	0	1
	1998/1999	8	2	0	0
	1999/2000	11	2	2	0
Woodland Cree First Nation	1997/1998	29	7	8	5
	1998/1999	7	9	0	1
	1999/2000	10	5	3	1

Appendix B

Table 2 - Diplomas Issued for NADC Area School Authorities for 1997/1998, 1998/1999

Source: Alberta Learning, Education Information Services

Authority Name	Diploma Type	1997/98	1998/99
Aspen View Regional Division No. 19	Certificate of Achievement	11	<6
	Diploma	156	133
	High School Equivalency Diploma	<6	<6
Buffalo Trail Regional Division No. 28	Certificate of Achievement	<6	0
	Diploma	268	298
	High School Equivalency Diploma	<6	<6
Driftpile Band	Diploma	<6	0
Fort McMurray Roman Catholic Separate School District No. 32	Certificate of Achievement	<6	<6
	Diploma	173	170
	High School Equivalency Diploma	6	6
Fort McMurray School District No. 2833	Certificate of Achievement	0	<6
	Diploma	244	233
	High School Equivalency Diploma	9	24
Fort Vermilion School Division No. 52	Certificate of Achievement	<6	0
	Diploma	88	126
	High School Equivalency Diploma	<6	<6
Grande Prairie Roman Catholic Separate School Division No. 28	Certificate of Achievement	<6	<6
	Diploma	101	114
	High School Equivalency Diploma	<6	<6
Grande Prairie School District No. 2357	Certificate of Achievement	6	10
	Diploma	253	270
	High School Equivalency Diploma	<6	<6
Grande Yellowhead Regional Division No. 35	Certificate of Achievement	<6	0
	Diploma	306	344
	High School Equivalency Diploma	13	23
High Prairie School Division No. 48	Certificate of Achievement	<6	0
	Diploma	141	157
	High School Equivalency Diploma	0	<6
Holy Family Catholic Regional Division No. 48	Certificate of Achievement	0	<6
	Diploma	46	77
	High School Equivalency Diploma	<6	0

Authority Name	Diploma Type	1997/98	1998/99
Lakeland Roman Catholic Separate School District No. 150	Diploma	78	74
	High School Equivalency Diploma	<6	<6
Lesser Slave Lake North Country Community Association	Diploma	0	<6
Living Waters Catholic Regional Division No. 42	Diploma	31	38
	High School Equivalency	<6	<6
Northern Gateway Regional Division No. 10	Diploma	246	241
	High School Equivalency	8	6
Northern Lights School Division No. 69	Certificate of Achievement	0	<6
	Diploma	248	283
	High School Equivalency Diploma	<6	7
Northland School Division No. 61	Diploma	13	12
Northwest Francophone Education Region No. 1	Diploma	<6	19
Peace River School Division No. 10	Diploma	210	181
	High School Equivalency Diploma	<6	<6
Peace Wapiti Regional Division No. 33	Certificate of Achievement	8	<6
	Diploma	236	247
	High School Equivalency Diploma	<6	<6
Pembina Hills Regional Division No. 7	Certificate of Achievement	9	7
	Diploma	709	652
	High School Equivalency Diploma	41	44
St. Paul Education Regional Division No. 1	Diploma	176	173
	High School Equivalency Diploma	<6	<6
Sturgeon Lake First Nation Band #154	Diploma	<6	<6
Swan River First Nation	Diploma	<6	<6

Appendix C

Table 3_ - CTS Credits Awarded by Strand for NADC Area School Authorities for 1997/1998 and 1998/99

Source: Alberta Learning Education Information Services

Authority Name	Strand Description	1997/1998	1998/1999
AspenView Regional Division No. 19	Agriculture	78	92
	Career and Technology Studies	127	0
	Career Transitions	375	363
	Communication Technology	177	454
	Community Health	<6	7
	Construction Technologies	210	304
	Cosmetology	<6	20
	Design Studies	145	130
	Energy and Mines	<6	<6
	Enterprise and Innovation	<6	<6
	Fabrication Studies	53	57
	Fashion Studies	0	17
	Financial Management	219	77
	Foods	458	446
	Forestry	56	58
	Information Processing	1195	1163
	Legal Studies	172	76
Management and Marketing	0	<6	
Mechanics	224	309	
Tourism Studies	65	54	
Wildlife	97	308	
Bigstone Education Authority Society	No data available		
Buffalo Trail Regional Division No. 28	Agriculture	47	36
	Career and Technology Studies	781	10
	Career Transitions	735	1097
	Communication Technology	219	444
	Community Health	<6	53
	Construction Technologies	289	650
	Cosmetology	0	50
	Design Studies	91	252
	Electro-Technologies	0	<6
Enterprise and Innovation	137	33	

	Fabrication Studies	137	33
	Fashion Studies	<6	93
	Financial Management	897	640
	Foods	744	1173
	Information Processing	2145	2470
	Legal Studies	130	261
	Management and Marketing	6	42
	Mechanics	153	256
	Tourism Studies	32	109
	Wildlife	41	47
Driftpile Band	Agriculture	<6	0
	Career Transitions	<6	<6
	Community Health	<6	0
	Construction Technologies	<6	15
	Enterprise and Innovation	0	12
	Financial Management	<6	<6
	Foods	14	<6
	Information Processing	32	<6
	Legal Studies	6	0
	Tourism Studies	6	0
Fort McMurray Roman Catholic Separate School Division No. .32	Career and Technology Studies	383	0
	Career Transitions	288	346
	Communication Technology	0	116
	Community Health	428	91
	Construction Technologies	0	143
	Cosmetology	310	281
	Design Studies	213	131
	Electro-Technologies	0	27
	Enterprise and Innovation	21	14
	Fabrication Studies	258	169
	Financial Management	209	135
	Foods	202	270
	Forestry	161	55
	Information Processing	1162	1358
	Legal Studies	11	65
	Management and Marketing	12	<6
	Mechanics	130	308
	Tourism Studies	90	70

	Wildlife	0	56
Fort McMurray School District No. 2833	Agriculture	<6	28
	Career and Technology Studies	<6	0
	Career Transitions	234	437
	Communication Technology	223	36
	Community Health	332	154
	Construction Technologies	387	359
	Cosmetology	404	333
	Design Studies	126	33
	Electro-technologies	0	10
	Enterprise and Innovation	50	96
	Fabrication Studies	401	259
	Fashion Studies	<6	115
	Financial Management	137	98
	Foods	681	696
	Forestry	93	14
	Information Processing	1786	1651
	Legal Studies	20	116
	Management and Marketing	49	<6
	Mechanics	192	194
	Tourism Studies	20	115
	Wildlife	9	48
Fort Vermilion School Division No. 52	Agriculture	16	<6
	Career and Technology Studies	138	0
	Career Transitions	101	158
	Communication Technology	145	224
	Community Health	12	26
	Construction Technologies	200	220
	Cosmetology	<6	0
	Design Studies	78	86
	Energy and Mines	0	<6
	Enterprise and Innovation	118	27
	Fabrication Studies	21	119
	Fashion Studies	186	152
	Financial Management	311	202
	Foods	429	380
	Forestry	89	10
	Information Processing	800	1018

	Legal Studies	45	56
	Mechanics	114	164
	Tourism Studies	17	62
	Wildlife	75	200
Grande Prairie Roman Catholic Separate School Division No. 28	Agriculture	<6	<6
	Career Transitions	36	133
	Communication Technology	0	84
	Construction Technologies	358	131
	Design Studies	0	139
	Enterprise and Innovation	76	79
	Fabrication Studies	0	6
	Fashion Studies	49	77
	Financial Management	413	388
	Foods	236	298
	Forestry	137	84
	Information Processing	1106	1114
	Legal Studies	72	23
	Tourism Studies	142	60
	Wildlife	22	<6
Grande Prairie School District No. 2357	Agriculture	<6	15
	Career Transitions	711	1166
	Communication Technology	761	986
	Community Health	0	31
	Construction Technologies	578	719
	Cosmetology	716	505
	Design Studies	608	604
	Electro-technologies	0	189
	Energy and Mines	19	<6
	Enterprise and Innovation	70	213
	Fabrication Studies	292	175
	Fashion Studies	0	6
	Financial Management	445	337
	Foods	1279	1224
	Forestry	<6	8
	Information Processing	1640	1843
	Legal Studies	199	196
	Management and Marketing	0	48
	Mechanics	845	626

	Tourism Studies	47	97
	Wildlife	0	<6
Grande Yellowhead Regional Division No. 35	Agriculture	6	8
	Career and Technology Studies	400	0
	Career Transitions	223	632
	Communication Technology	645	746
	Community Health	86	97
	Construction Technologies	1048	1252
	Cosmetology	345	426
	Design Studies	286	193
	Electro-technologies	41	86
	Energy and Mines	0	<6
	Enterprise and Innovation	305	555
	Fabrication Studies	487	774
	Fashion Studies	378	391
	Financial Management	321	215
	Foods	1712	2368
	Forestry	67	30
	Information Processing	2504	2509
	Legal Studies	218	207
	Logistics	0	<6
	Management and Marketing	36	101
	Mechanics	607	746
	Tourism Studies	207	126
	Wildlife	100	79
High Prairie School Division No. 48	Agriculture	100	15
	Career and Technology Studies	291	0
	Career Transitions	120	467
	Communication Technology	44	467
	Community Health	<6	<6
	Construction Technologies	412	384
	Design Studies	21	76
	Electro-technologies	21	9
	Enterprise and Innovation	0	17
	Fabrication Studies	210	284
	Fashion Studies	38	17
	Financial Management	69	139
	Foods	634	678

	Forestry	111	18
	Information Processing	834	973
	Legal Studies	36	91
	Management and Marketing	31	44
	Mechanics	0	53
	Tourism Studies	29	47
Holy Family Catholic Regional Division No. 37	Agriculture	0	<6
	Career Transitions	144	174
	Communication Technology	10	128
	Community Health	38	29
	Design Studies	8	64
	Electro-technologies	0	66
	Enterprise and Innovation	<6	6
	Financial Management	15	37
	Foods	0	150
	Forestry	43	77
	Information Processing	582	594
	Legal Studies	31	46
	Management and Marketing	0	80
	Mechanics	0	151
	Tourism Studies	6	42
	Wildlife	131	120
Lakeland Roman Catholic Separate School Division No. 150	Agriculture	9	<6
	Career and Technology Studies	505	0
	Career Transitions	183	77
	Communication Technology	0	26
	Community Health	<6	77
	Construction Technologies	78	218
	Cosmetology	<6	<6
	Design Studies	22	48
	Electro-technologies	<6	0
	Enterprise and Innovation	6	0
	Fabrication Studies	6	0
	Fashion Studies	<6	0
	Financial Management	75	40
	Foods	236	162
	Forestry	63	21
	Information Processing	605	672

	Legal Studies	50	70
	Management and Marketing	0	43
	Mechanics	37	18
	Tourism Studies	49	66
	Wildlife	93	61
Lesser Slave Lake North Country Community Association	Career Transitions	0	<6
	Construction Technologies	0	<6
	Foods	10	11
	Forestry	<6	0
	Information Processing	0	<6
Living Waters Catholic Regional Division No. 42	Career Transitions	21	62
	Communication Technology	76	173
	Community Health	<6	32
	Cosmetology	<6	64
	Design Studies	51	96
	Enterprise and Innovation	12	8
	Fashion Studies	<6	19
	Financial Management	106	129
	Foods	91	303
	Forestry	0	<6
	Information Processing	204	467
	Legal Studies	41	82
	Management and Marketing	<6	10
	Mechanics	10	0
	Tourism Studies ²³	26	0
	Wildlife	60	57
Loon River First Nation	Community Health	0	9
	Energy and Mines	0	<6
	Enterprise and Innovation	0	10
	Fashion Studies	0	<6
	Information Processing	0	8
	Wildlife	0	<6
Northern Gateway Regional Division No. 10	Agriculture	20	25
	Career and Technology Studies	520	0
	Career Transitions	118	598
	Communication Technology	287	469
	Community Health	<6	<6
	Construction Technologies	618	728

	Cosmetology	628	819
	Design Studies	189	140
	Electro-technologies	0	<6
	Enterprise and Innovation	45	0
	Fabrication Studies	205	294
	Fashion Studies	59	68
	Financial Management	166	157
	Foods	775	810
	Forestry	120	94
	Information Processing	2387	2336
	Legal Studies	103	17
	Management and Marketing	95	79
	Mechanics	772	951
	Tourism Studies	34	43
	Wildlife	153	247
Northern Lights School Division No. 69	Agriculture	28	47
	Career and Technology Studies	653	0
	Career Transitions	683	892
	Communication Technology	482	432
	Community Health	140	187
	Construction Technologies	385	471
	Cosmetology	455	300
	Design Studies	8	38
	Energy and Mines	0	12
	Enterprise and Innovation	42	6
	Fabrication Studies	141	264
	Fashion Studies	14	103
	Financial Management	298	301
	Foods	577	605
	Forestry	116	48
	Information Processing	1822	2003
	Legal Studies	221	121
	Logistics	0	<6
	Management and Marketing	0	<6
	Mechanics	301	216
	Tourism Studies	114	161
	Wildlife	41	154
Northland School Division No. 61	Career and Technology Studies	<6	0

	Career Transitions	80	52
	Communication Technology	99	51
	Community Health	25	99
	Construction Technologies	25	89
	Cosmetology	35	13
	Design Studies	21	42
	Energy and Mines	0	<6
	Enterprise and Innovation	0	71
	Fabrication Studies	0	41
	Fashion Studies	36	21
	Financial Management	51	27
	Foods	80	138
	Forestry	<6	10
	Information Processing	210	171
	Legal Studies	46	9
	Management and Marketing	0	7
	Mechanics	20	<6
	Tourism Studies	9	56
	Wildlife	16	17
Northwest Francophone Education Region No. 1	Career Transitions	21	0
	Enterprise and Innovation	0	34
	Wildlife	48	0
Peace River School Division No. 10	Agriculture	0	19
	Career and Technology Studies	291	0
	Career Transitions	527	688
	Communication Technology	365	344
	Community Health	22	97
	Construction Technologies	586	519
	Design Studies	84	121
	Electro-technologies	<6	7
	Enterprise and Innovation	43	41
	Fabrication Studies	111	152
	Fashion Studies	43	67
	Financial Management	374	399
	Foods	630	647
	Forestry	219	68
	Information Processing	1102	1166
	Legal Studies	276	186

	Management and Marketing	66	51
	Mechanics	102	137
	Tourism Studies	91	184
	Wildlife	68	125
Peace Wapiti Regional Division No. 33	Agriculture	100	180
	Career and Technology Studies	595	0
	Career Transitions	333	589
	Communication Technology	461	415
	Community Health	6	19
	Construction Technologies	636	970
	Cosmetology	338	531
	Design Studies	73	101
	Enterprise and Innovation	<6	0
	Fabrication Studies	69	254
	Fashion Studies	257	249
	Financial Management	638	435
	Foods	1086	1025
	Forestry	18	<6
	Information Processing	2596	2336
	Legal Studies	264	249
	Management and Marketing	12	0
	Mechanics	40	96
	Tourism Studies	47	8
	Wildlife	48	27
Pembina Hills Regional Division No. 7	Agriculture	154	116
	Career and Technology Studies	591	0
	Career Transitions	244	875
	Communication Technology	616	470
	Community Health	385	271
	Construction Technologies	713	1078
	Cosmetology	1048	1030
	Design Studies	128	187
	Enterprise and Innovation	104	156
	Fabrication Studies	186	344
	Fashion Studies	0	70
	Financial Management	1468	1320
	Foods	808	786
	Forestry	157	173

	Information Processing	1794	2106
	Legal Studies	133	255
	Management and Marketing	9	7
	Mechanics	1042	1251
	Tourism Studies	158	282
	Wildlife	170	132
Slave Lake Koinonia Christian School Society	Fashion Studies	0	8
	Foods	0	16
	Information Processing	0	24
St. Paul Education Regional Division No. 1	Agriculture	25	7
	Career and Technology Studies	131	0
	Career Transitions	142	682
	Communication Technology	227	361
	Community Health	0	55
	Construction Technologies	398	518
	Cosmetology	65	58
	Design Studies	147	207
	Electro-technologies	0	9
	Enterprise and Innovation	51	76
	Fabrication Studies	200	154
	Fashion Studies	371	368
	Financial Management	311	367
	Foods	499	480
	Forestry	0	<6
	Information Processing	1897	1528
	Legal Studies	182	342
	Management and Marketing	47	54
	Mechanics	672	449
	Tourism Studies	78	72
	Wildlife	18	26
Sturgeon Lake First Nations Band #154	Career Transitions	7	8
	Communication Technology	0	<6
	Construction Technologies	30	21
	Enterprise and Innovation	12	30
	Fashion Studies	18	0
	Foods	<6	12
	Information Processing	8	38
	Wildlife	9	0

Swan River First Nation	Career and Technology Studies	<6	0
	Community Health	113	0
	Fashion Studies	0	14
	Financial Management	<6	0
	Foods	40	50
	Forestry	0	<6
	Information Processing	<6	<6
	Legal Studies	<6	0
	Wildlife	0	9
Whitefish Lake First Nation	Agriculture	<6	0
	Career Transitions	9	<6
	Energy and Mines	0	6
	Financial Management	<6	0
	Forestry	0	<6
	Information Processing	0	11
	Mechanics	<6	0
	Wildlife	0	<6
Woodland Cree First Nation	Career Transitions	24	6
	Communication Technology	76	0
	Community Health	12	<6
	Construction Technologies	19	<6
	Cosmetology	0	13
	Design Studies	<6	0
	Enterprise and Innovation	0	9
	Fabrication Studies	9	<6
	Fashion Studies	<6	<6
	Foods	0	<6
	Information Processing	128	7
	Mechanics	7	<6
	Tourism Studies	8	0

Survey of School Jurisdictions – CTS Profile

These questions are being posed to school jurisdictions as part of a study commissioned by the Northern Alberta Development Council (NADC), Fairview College, Keyano College, Lakeland College and Northern Lakes College. The Council and the colleges are interested in better facilitating the transition of CTS students to related post-secondary career programs.

Please fax (780-468-2831) or email (emerge@istar) your responses to Emerging Directions Consulting Ltd. by April 17.

If you wish further information about this study, please contact Dr. Wendy Doughty, Emerging Directions Consulting Ltd. at (780) 469-3258.

1. Which strands of the CTS curriculum are most frequently offered in your jurisdiction?

2. What criteria are used to determine which CTS curriculum strands are offered?

3. Has there been much variance in the CTS curriculum strands offered in your jurisdiction during the past 3 years?

4. Do you access post-secondary facilities or resources to offer CTS curriculum? If so, which facilities and resources?

5. What opportunities exist for CTS students to link their studies/work experience to a post-secondary program of study?

6. What suggestions would you offer to strengthen the linkages between the CTS curriculum and post-secondary studies?

Thank you for your participation in this survey.

Name of School Board:

Name and Title of Respondent (optional):

Table 4 - CTS and Post-secondary Articulation

Apprenticeship Trade	Length of Program	# of CTS Required One Credit Course	Credit for Formal Training	On-the-Job Time Credit
Automotive Service Technician	4 years	25 courses	1 st Period	Nil
		35 courses	1 st and 2 nd Period	525 hours
Cabinetmaker	4 years	30 courses	Nil	408 hours
Carpenter	4 years	25	1 st Period	Nil
Cook	3 years	17	1 st Period	Nil
		30	1st and 2 nd Period	450 hours
			1 st and 2 nd Period	
Electrician	4 years	25	1 st Period	Nil
Electronic Technician	4 years	25	1 st Period	Nil
Hairstylist	2 years	35	1 st and 2 nd Period	525 hours
		55	1 st Period	700 hours
Welder	3 years	25		Nil