

Senior high students' career plans for the future: outcomes of the comprehensive career needs survey in Southern Alberta, Canada

Kim D. Witko · Kerry B. Bernes ·
Kris C. Magnusson · Angela D. Bardick

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Abstract The Comprehensive Career Needs Survey was used to assess the career plans of senior high students in Southern Alberta, Canada. This article examines senior high student perceptions regarding (a) their future plans; (b) confidence in attaining their career goals, (c) importance of remaining in their community; and (d) where they anticipate working. The majority of respondents planned to combine full time education with part time work, were confident in achieving their career plans, and anticipated finding work in their country. Results indicate a need for programs addressing career decision making and combining education and work experience.

Résumé Plans de carrière des étudiants de fin du secondaire: résultats du *Comprehensive Career Needs Survey* dans l'Alberta du Sud, Canada. Le *Comprehensive Career Needs Survey* a été utilisé pour évaluer les plans de carrière d'étudiants de fin du secondaire dans l'Alberta du Sud, Canada. Cet article examine les perceptions d'étudiants de fin du secondaire concernant (a) leurs plans d'avenir; (b) leur degré de confiance dans l'atteinte de leurs buts de carrière; (c) l'importance qu'ils accordent au fait de rester dans leur communauté et (d) où ils prévoient de travailler. La majorité de répondants prévoient de combiner des études à temps plein et un travail à mi-temps, ont confiance dans la réalisation de leurs plans de carrière et anticipent de trouver du travail dans leur pays. Les résultats indiquent un besoin de programmes aidant à la prise de décision de carrière et combinant études et expérience professionnelle.

K. D. Witko · K. B. Bernes (✉) · K. C. Magnusson · A. D. Bardick
Faculty of Education, University of Lethbridge, 4401 University Drive West,
Lethbridge, Alberta T1K 3M4, Canada
e-mail: kerry.bernes@uleth.ca

Zusammenfassung Berufspläne für die Zukunft bei Oberstufenschülern: Ergebnisse der umfassenden Studie zu Laufbahnbedürfnissen in Süd-Alberta, Kanada. Die Umfassende Studie zu Laufbahnbedürfnissen wurde zur Beurteilung der Berufspläne von Oberstufenschülern in Süd-Alberta, Kanada, verwendet. Dieser Artikel untersucht die Erwartungen von Oberstufenschülern im Hinblick auf (a) ihre Zukunftspläne, (b) ihre Zuversicht, die beruflichen Ziele zu erreichen, (c) die Bedeutung des Verbleibs in der Wohngemeinde, und (d) die Erwartungen bezüglich des zukünftigen Arbeitsortes. Die Mehrheit der Befragungsteilnehmer beabsichtigt, Vollzeit-Bildungsgänge mit Teilzeit-Arbeitsstellen zu kombinieren, war zuversichtlich bezüglich der Erreichbarkeit der eigenen beruflichen Ziele, und erwartete eine Arbeit im eigenen Land zu finden. Die Ergebnisse weisen auf einen Bedarf für Programme zur Unterstützung bei der Berufswahlentscheidung sowie zur Unterstützung bei der Kombination von Bildung und Arbeitserfahrung hin.

Resumen Planes de Futuro de Alumnos de Último Curso de Secundaria: Resultados de la Encuesta de Necesidades de la Carrera en Alberta del Sur, Canada. *La Encuesta Integrada de Necesidades Profesionales* se utilizó para evaluar los planes de carrera de alumnos de último curso de secundaria en la provincia de Alberta del Sur, Canadá. Este artículo analiza las respuestas de los estudiantes respecto a: (a) sus planes futuros después de la secundaria; (b) su nivel de confianza respecto a encontrar la ocupación que quieren, obtener la formación necesaria, y encontrar trabajo en la ocupación elegida; (c) la importancia de encontrar trabajo en su comunidad; y (d) dónde anticipan trabajar una vez elegida una ocupación. La mayoría de los estudiantes tenían pensado combinar formación a tiempo completo con trabajo a tiempo parcial, confiaban en alcanzar sus metas profesionales, y anticipaban encontrar trabajo en su propio país. Los resultados indican la necesidad de que los programas de orientación aborden la toma de decisiones profesionales y la compatibilización entre formación y trabajo.

In the United States over 3 million students leave each year high school and make the decision to either attend post-secondary education or enter the world of work each year (Stevenson, Kochanek, & Schneider, 1998). The vast number of adolescents worldwide who make career related decisions each year indicates the importance of career planning. As adolescents near the end of their formal education and need to make decisions regarding their future, career exploration takes on greater significance (Dupont & Gingras, 1991; Gati & Saka, 2001; Julien, 1999; Super, 1990). A major developmental task of adolescence is becoming aware of one's occupational interests and making educational and occupational decisions (Super, Savickas, & Super, 1996).

The majority of students in senior high believe that career planning is important and are very likely to engage in career exploration (Taviera, Silva, Rodriguez, & Maia, 1998). In a study examining the career maturity of 367

Australian high school students, Creed and Patton (2003) found that older students were more likely to engage in career exploration and planning. Creed and Patton (2003) also found that career maturity is shaped by self-efficacy, age, career decidedness, and work commitment. Students who do not believe career planning to be important at this time in their lives believe it will become more important in the future (Bardick, Bernes, Magnusson, Gunn, & Witko, in press). Schneider and Stevenson (1999) found that students who engaged in educational and career planning activities while in high school had positive outcomes. During the exploration stage of career development (spanning ages 14–24) students begin to make educational and career choices based on their personal abilities, interests, and values (Super et al., 1996).

Adolescent career aspirations are shaped by a number of factors, including gender (Gati & Saka, 2001; Mullis, Mullis, & Gerwhels, 1998); ethnicity (Nurmi, Poole, & Kalakoski, 1994); socioeconomic status (Snell, Stokes, Sands, & McBride, 1994); parental education, occupation, and attitudes (Mullis et al., 1998; Rainey & Borders, 1997); early educational experiences (Snell et al., 1994); self-efficacy beliefs (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001); and expectations of influential persons (Mau, Hitchcock & Calvert, 1998; Rainey & Borders, 1997). Klaczynski and Reese (1991) found that students with an internal locus of control were more likely to attend post-secondary institutions. Alexitch and Page (2001) found that students base their educational decisions on interests and how practical they see the post-secondary program and resulting career to be. Lapan and Jingeleski (1992) found that students' perceptions of job-self compatibility were also important factors shaping adolescent career interests.

Adolescents realize that the most desirable career and financial outcomes are most often obtained after post-secondary education (Lynch, 1993; Mortimer, Zimmer-Gembeck, & Holmes, 2002; Nurmi et al., 1994). In a study examining the post-secondary plans of high school students, Mau et al. (1998) found that the majority of high school students planned to obtain some level of post-secondary education. More than 90% of grade 12 students expected to attend a post-secondary institution, and less than 28% of high school students chose to work full-time after completing high school (Stevenson et al., 1998). The post-secondary choices of students in other countries may differ from those of North American youth. For example, Gati & Saka (2001) found that Israeli youth need to deliberate about their future military job. Nurmi and Colleagues (1994) found very few cross-cultural differences when examining adolescents' future goals in Australia and Finland, with results showing that young people in Australia and Finland expect to complete their education, get a job, and then get married. Existing cross-cultural differences may include differences in anticipated timelines in obtaining one's goals (e.g., Finnish youth expected to obtain their educational goals later than Australian youth due to later school transitions) and cross-cultural gender differences (e.g., Finnish girls were more concerned about future education than were Australian girls).

Although the majority of adolescents intend to obtain some level of post-secondary education after high school, Rojewski (1999) found that more than

one-third of adolescents did not attend post-secondary education programs immediately after high school. Adolescents who anticipate entering the work force upon the completion of high school may face less than desirable terms in the job market. Some programs have been created to address the need for further education before entering the workforce, such as tech-prep, co-op programs, and apprenticeship programs (Lewis, Syone, Madzar, & Shipley, 1998). Tech-prep is a program during which students take courses in their last two years of high school that align with courses in chosen post-secondary institutions, thus allowing for a smoother transition. Co-op programs involve further education and work experience in students' career interest areas. In the German apprenticeship programs, non-college-bound students make an early connection to the labour market and move into careers. The German apprenticeship program involves vocational schooling with both vocational and academic content, which further emphasizes the perceived importance of further education and training after high school. Programs that combine further education with work are intended to address the need for skilled employees.

There may be a discrepancy between students' aspirational and actual educational and occupational choices due to informational barriers (Harris & Dewdney, 1994, as cited in Julien, 1999) and students' lack of confidence. Julien (1999) refers to situations that students may lack confidence in obtaining required information, perceive or experience a lack of encouragement from others and lack communication skills or self-confidence, and experience emotional barriers. Other barriers are also mentioned as feel discouraged by the information they receive (Alexitch & Page, 2001), experience general indecisiveness, or lack the motivation or readiness to engage in career decision making (Gati & Saka, 2001). Students also may lack confidence in actually obtaining employment in their chosen career (Taviera et al., 1998). Inadequate financial resources also may be a barrier to many adolescents (Julien, 1999). Gender and cultural differences may also contribute to a lack of confidence. For example, high school girls and grade 12 students report having less confidence in obtaining their career goals (Taviera et al., 1998). In a study of Israeli adolescents, boys were found to have greater difficulty with career decision making than girls (Gati & Saka, 2001). The sheer number of barriers that affect students' career decision making may result in career indecision and contribute to a discrepancy between students' aspirational and actual educational and occupational goals.

Another potential reason for the discrepancy between students' aspirational and actual educational and occupational goals may be their reluctance to leave their communities. Remaining in one's own community appears to important to students from rural areas (Rojewski, 1999). Students from rural areas are often faced with the dilemma of having to leave their community and move to a larger center if they choose to pursue a higher level of education or career opportunity (Rojewski, 1999) or be faced with a lack of options in the rural environment (Nurmi et al., 1994). Therefore, adolescents from rural areas may

inadvertently lower their educational and career aspirations if they want to stay closer to home.

Although students have reported that career planning is important to them and that future plans include post-secondary education and work, a number of gaps in the literature exist. There is little information regarding the extent to which students' future plans include full time or part time education, full time or part time work, a combination of education and work, returning to high school, travelling, or volunteer work. As well, little is known about how age, grade, school size or town size affects students' post-high school plans. Although rural students have identified that remaining in their community is important to them (Rojewski, 1999), their level of confidence in obtaining employment in their community remains unknown.

The purpose of the present study is to examine students' post-high school plans as well as their level of confidence in realising those career plans. It also takes into consideration whether or not remaining in one's community is important to students, and where they anticipate working once they have chosen a career. The Lethbridge region (Southern Alberta, Canada) provides an interesting context for such a study because of the discrepancies in local unemployment rates related to the rural versus urban settings. In 2001, the unemployment rate for the city of Lethbridge was 5.5% and the unemployment rate for the County of Lethbridge was 7.2%, as compared to 5.2% in the province of Alberta, and 7.2% in Canada (Statistics Canada, 2001a).

Method

Participants

Questionnaires were sent to all eight school districts in the Lethbridge region of Southern Alberta, Canada. In total, completed forms were returned by 52 out of 54 schools. Of a possible 15,000 students in total, 7,815 junior high and senior high students responded on a voluntary basis to the survey. Within the framework of this study only 2,965 senior high students were included. Not every student, however, responded to every survey question. Gender distribution within this response group was approximately equal with 50% female students and 50% male students. Senior high participants included 1,088 (36.7%) grade 10, 960 (32.4%) grade 11 and 902 (30.4%) grade 12 students. The age of respondents ranged from 15 to 19, with a mean age of 16.25 (SD = 0.96). In this group 16 (0.5%) participants came from small schools (less than 100), 2,214 (74.7%) from medium sized schools (greater than 100 but less than 500), 33 (1.1%) from large schools (greater than 500 but less than 1,000), and 130 (4.4%) from very large schools (greater than 1,000). In Canada, areas designated as "rural" have populations of less than 1,000, while areas designated as "urban" have populations of 1,000 or more (Statistics Canada, 2001b). For the purposes of this study, respondents were distributed according to the town size as follows: 179 (6.0%) from rural areas (less than

1,000), 1,980 (66.8%) from mid-size urban areas (greater than 1,000 but less than 10,000), and 235 (7.9%) from large urban areas (greater than 10,000).

Questionnaire

Within the framework of a large survey to assess the career needs of junior high and senior high school students Magnusson and Bernes (2002) developed the Comprehensive Career Needs Survey (CCNS). This large-scale survey focused on the perceptions of junior and senior high students, parents, teachers, school counsellors, and administrators in regards to the career development needs and wants of adolescents, as well as perceived gaps in services. The CCNS was field tested with a variety of career counselling professionals and several students at each grade level to ensure that questions were clear and unambiguous. These field tests led to final adjustments to the instrument before it was used in the study. The CCNS consisted of five different forms (junior high students, senior high students, parents, school counsellors and health or career and life management teachers, and school administrators). The survey asked for sociodemographic information (age, grade, school size, and town size) and consisted of questions evaluating students' career education and support needs. The topics on the junior high and senior high forms included perceived resources and needs, educational needs, future goals and aspirations, and their perceptions of the effectiveness of career planning providers and career planning resources. The topics on the parent, teacher, and administrator forms included questions about their perceived role in adolescent career planning and potential gaps in services. Additional questions on the counsellor/teacher and administrator forms asked for their perceptions of the involvement and effectiveness of career planning providers. The questions required both quantitative and qualitative responses.

Within the framework of the present research only five questions from the CCNS senior high students form were used in addition to some of the sociodemographic information:

1. "Which of the following best describes your plans for what you will be doing after you have completed high school?" Possible answers included: "I have a specific plan for what I will be doing"; "I am trying to decide between a couple of different plans"; "I am not sure what I will be doing, but I have started working on it"; and "I don't know what I will be doing, and I am not worrying about it now".
2. "Which of the following describes what you think you will most likely be doing in the year after you leave high school?" Students were asked to check as many options as applied to them choosing from the list: "taking full-time studies at a university, college or technical institute"; "taking part-time studies at a university, college or technical institute"; "taking other types of training"; "returning to high school"; "working full-time"; "working part-time"; "working as a volunteer"; "travelling"; "other".

3. “How important is it to you to be able to find work that allows you to stay in your community?” Students were asked to rate their answer on a 5-point scale ranging from 0 (*not at all important*) to 4 (*very important*).
4. “When you think about the next few years of your life, how confident are you about the following?” Students were asked to rate three statements (“I will be able to find an occupation that I love to do”, “I will be able to get the training or education that I need”, “I will be able to find work in the occupation I have chosen”) on a 5-point scale from 0 (*not at all likely*) to 4 (*very likely*).
5. “If you find work in your chosen occupation it will be ...”. Students were asked to rate 4 options (“in my community”, “in my province”, “in my country”, “internationally”) on a 5-point scale ranging from 0 (*not at all likely*) to 4 (*very likely*).

Procedure

The questionnaire used in this project was distributed to 54 junior high and senior schools in the Southern Alberta region. The questionnaires were handed out to the students by their classroom teacher, who was given the relevant instructions and explanation regarding the questionnaire’s purpose. No time limit was given, and students completed the form in approximately 30 min during school hours.

Data analysis

Frequency counts and percentages were used to describe senior high responses. Chi-square analyses were conducted in order to determine differences between various demographic subsets of the student sample (i.e., grade, age, town size, and school size). Only statistically significant differences are reported ($p < .01$).

Results

In the reporting of the results, it is important to note that not every student responded to every question, and for some questions, students were able to provide more than one response.

Plans after high school

Overall, the majority of the respondents reported that they were either considering more than one option, or that they had a specific plan for what they would be doing after high school (see Table 1). A significant relationship was found for the demographic variables age ($\chi^2_{(12, 2367)} = 67.99, p < .001$), grade

Table 1 Senior high students plans for after high school

	Specific plan <i>n</i> (%)	Deciding between more than one option <i>n</i> (%)	Not sure, but have started working on it <i>n</i> (%)	Not sure and am not worrying about it <i>n</i> (%)	Total <i>N</i>
<i>Grade</i>					
10	221 (25.4)	362 (41.6)	175 (20.1)	112 (12.9)	870
11	197 (25.1)	364 (46.3)	155 (19.7)	70 (8.9)	786
12	287 (40.0)	305 (42.5)	84 (11.7)	42 (5.8)	718
<i>Age</i>					
15	142 (24.3)	250 (42.8)	129 (22.1)	63 (10.8)	584
16	201 (25.0)	359 (44.7)	151 (18.8)	92 (11.5)	803
17	276 (36.7)	327 (42.4)	107 (14.2)	51 (6.8)	753
18	80 (39.0)	87 (42.4)	25 (12.2)	13 (6.3)	205
19	3 (13.6)	13 (59.1)	1 (4.5)	5 (22.7)	22
<i>School size</i>					
<100	5 (33.3)	3 (20.0)	2 (13.3)	5 (33.3)	15
100–500	630 (28.8)	970 (44.3)	384 (17.5)	205 (9.4)	2,189
500–1,000	14 (43.8)	10 (31.3)	4 (12.5)	4 (12.5)	32
>1,000	53 (38.6)	45 (34.6)	21 (16.2)	11 (8.5)	130
<i>Town size</i>					
<1,000	48 (27.1)	77 (43.5)	35 (19.8)	17 (9.6)	177
1,000 to 10,000	560 (28.6)	870 (44.5)	343 (17.5)	184 (9.4)	1,957
>10,000	95 (40.8)	82 (35.2)	32 (13.7)	24 (10.3)	233

($\chi^2_{(6, 2367)} = 77.59, p < .001$), school size ($\chi^2_{(9, 2359)} = 24.19, p < .004$), and town size ($\chi^2_{(9, 2367)} = 22.82, p < .007$). As age and grade increased, respondents were more likely to indicate that they had a specific plan for after high school with the exception of 19 year olds (grade 12 students), who were more likely than any other group to indicate that they did not know what they were doing. Respondents were also more likely to indicate having a more specific plan for after high school as school size increased and as town size increased.

Student's specific plans for after high school are now presented. For this question, students were able to provide more than one response. Students' top two preferences for all grades were full time studies and part-time work (see Table 2).

Full-time studies. Nearly half of the respondents indicated that they planned to attend full-time studies after high school. A significant relationship was found for the demographic variable grade ($\chi^2_{(2, 3492)} = 23.569, p < 0.001$). Grade 12 students were more likely to report that they planned to attend full-time studies than were grade 10 or 11 students.

Part-time studies. Very few of the senior high students reported planning to attend school part-time after completing high school. Significant relationships were found for the demographic variables age ($\chi^2_{(4, 3481)} = 28.054, p < .001$), and grade ($\chi^2_{(2, 3488)} = 25.017, p < .001$). Although fewer grade 12 students reported planning to attend part-time studies, a higher number of 19 years old reported planning to attend

Table 2 Senior high students' plans for the future

	Full-time studies <i>n</i> (%)	Working part-time <i>n</i> (%)	Part-time studies <i>n</i> (%)	Working full-time <i>n</i> (%)	Travel <i>n</i> (%)	Other training <i>n</i> (%)	Other <i>n</i> (%)	Volunteer <i>n</i> (%)	Return to high school <i>n</i> (%)
<i>Grade</i>									
10	575 (42.4)	429 (31.7)	330 (24.4)	231 (17.1)	237 (17.5)	185 (13.7)	176 (13.0)	71 (5.2)	39 (2.9)
11	464 (42.5)	350 (32.1)	230 (21.1)	232 (21.3)	207 (19.0)	138 (12.6)	131 (12.1)	55 (5.0)	28 (2.6)
12	537 (51.4)	306 (29.3)	167 (16.0)	269 (25.8)	184 (17.6)	95 (9.1)	122 (11.7)	67 (6.4)	38 (3.6)
<i>Age</i>									
15	431 (44.8)	309 (32.1)	239 (24.8)	146 (15.2)	168 (17.5)	123 (12.8)	93 (9.7)	54 (5.6)	24 (2.5)
16	489 (42.8)	364 (31.9)	249 (21.8)	228 (20.0)	222 (19.4)	138 (12.1)	170 (14.9)	46 (4.0)	28 (2.5)
17	530 (49.3)	327 (30.5)	177 (16.5)	273 (25.5)	191 (17.8)	116 (10.8)	118 (11.0)	82 (7.6)	45 (4.2)
18	117 (42.2)	78 (28.2)	48 (17.3)	73 (26.4)	41 (14.8)	36 (13.0)	40 (14.4)	10 (3.6)	4 (1.4)
19	9 (32.1)	6 (21.4)	10 (35.7)	10 (35.7)	5 (17.9)	1 (3.6)	6 (21.4)	1 (3.6)	3 (10.7)
<i>School size</i>									
<100	11 (68.8)	6 (4.9)	2 (12.5)	3 (18.8)	2 (12.5)	1 (6.3)	0 (0.0)	1 (6.3)	1 (6.3)
100-500	951 (43.1)	676 (30.6)	481 (21.8)	466 (21.1)	273 (12.4)	399 (18.1)	283 (12.8)	124 (5.6)	64 (2.9)
500-1,000	11 (33.3)	15 (45.5)	6 (18.2)	11 (33.3)	6 (18.2)	8 (24.2)	3 (9.1)	6 (18.2)	1 (3.0)
>1,000	57 (43.8)	34 (26.2)	16 (12.3)	44 (33.8)	18 (13.8)	19 (14.6)	9 (6.9)	7 (5.4)	3 (3.8)
<i>Town size</i>									
<1,000	72 (40.4)	63 (35.4)	35 (19.7)	47 (26.4)	30 (16.9)	26 (14.6)	24 (13.5)	9 (5.1)	5 (2.8)
1,000-10,000	859 (43.5)	612 (31.0)	435 (22.0)	409 (20.7)	366 (18.5)	242 (12.3)	253 (12.8)	119 (6.0)	59 (3.0)
>10,000	99 (42.5)	59 (25.3)	35 (15.0)	66 (28.3)	32 (13.7)	32 (13.7)	19 (8.2)	10 (4.3)	5 (2.1)

Note: Students were able to choose more than one response

part-time studies, indicating that the older a student is when they complete high school, the more likely they are to continue their education in a part-time manner. The type of part-time education was not specified (e.g., post-secondary or high school upgrade).

Other training. A small number of senior high students reported that they intended to take other types of training, although the type of training was not specified. No significant relationships were found for any of the demographic variables.

Returning to high school. Very few students reported that they intended to return to high school. A significant relationship was found for the demographic variable age ($\chi^2_{(4, 3481)} = 15.398, p < .004$). Nineteen years old students were more likely to indicate that they intended to return to high school than were other students. This result may be related to the finding that 19 years old students plan to attend part-time studies, possibly to upgrade their high school courses.

Working full-time. Less than one-third of the senior high students indicated that they planned to work full-time after completing high school. Results found significant relationships for the demographic variables age ($\chi^2_{(4, 3481)} = 41.772, p < .001$), grade ($\chi^2_{(2, 3488)} = 27.156, p < .001$), school size ($\chi^2_{(3, 2385)} = 14.198, p < .003$), and town size ($\chi^2_{(2, 2385)} = 9.350, p < .009$). As age increased, students were more likely to report that they would be working full-time in the year after completing high school. Likewise, a greater percentage of grade 12 students reported that they would be working full-time in the year after completing high school. Students that lived in rural areas and large urban areas were more likely to indicate that they intended to work full-time in the year after high school than were students from mid-sized urban areas. Students that attended large schools or largest schools were more likely to report intending to work full-time after high school than were students from small schools or mid-sized schools.

Working part-time. Approximately one-third of the senior high students indicated that they planned to work part-time after completing high school. No significant relationships were found for any of the demographic variables.

Volunteer. A small number of the high school students reported that they intended to work as a volunteer in the year after completing high school. Chi-square analysis produced significant results for the demographic variable age ($\chi^2_{(4, 3481)} = 16.279, p < .003$). More 17 years old students reported that they intended to work as a volunteer in the year after completing high school.

Travel. Of the senior high students, less than 20% of the total respondents indicated that they planned to travel upon the completion of high school. No significant relationships were found for any of the demographic variables.

Confidence

Students were asked to rate their level of confidence in finding an occupation they love to do, in obtaining training or education that they will need, and finding work in one's chosen occupation (see Table 3).

Finding an occupation that they love to do. Almost two-thirds of the senior high students reported that they were either “very likely” or “quite likely” to find an occupation that they loved to do. No significant relationships were found for any of the demographic variables.

Obtaining appropriate training or education. Over 75% of the senior high students reported that they believe it is either “very likely” or “quite likely” that they will be able to obtain the training or education that they need. Chi-square analyses produced a significant relationship for school size ($\chi^2_{(12, 2316)} = 27.251, p < .007$). Students from the medium and largest schools were more likely than students from the small or large schools to believe that they were either “very likely” or “quite likely” to obtain the training or education that they will need.

Finding work in one's chosen occupation. Approximately one-third of the respondents reported that they believe it is either “very likely” or “quite likely” that they will find work in their chosen occupation. Chi-square

Table 3 Senior high students' confidence in obtaining career goals

	Rating					Total N
	Very likely n (%)	Quite likely n (%)	Somewhat likely n (%)	Not very likely n (%)	Not at all likely n (%)	
Finding occupation						
<i>Grade</i>						
10	280 (28.2)	358 (36.0)	248 (24.9)	57 (5.7)	51 (5.1)	948
11	212 (24.2)	351 (40.1)	227 (25.9)	44 (5.0)	42 (4.8)	876
12	226 (27.9)	329 (40.6)	202 (24.9)	34 (4.2)	20 (2.5)	811
Obtaining education						
<i>Grade</i>						
10	368 (35.0)	409 (38.9)	210 (20.0)	41 (3.9)	24 (2.3)	1,052
11	341 (36.7)	377 (40.6)	162 (17.5)	30 (3.2)	18 (1.9)	928
12	336 (38.8)	353 (40.8)	147 (17.0)	20 (2.3)	9 (1.0)	865
<i>School size</i>						
100 or less	6 (40.0)	4 (26.7)	4 (26.7)	1 (6.7)	0 (0)	15
100–500	513 (25.9)	782 (26.7)	500 (25.2)	98 (4.9)	91 (4.6)	1,984
500–1,000	11 (39.3)	8 (28.6)	4 (14.3)	4 (14.3)	1 (3.6)	28
1,000 or more	42 (33.3)	40 (31.7)	29 (23.0)	7 (5.6)	8 (6.3)	126
Finding work in chosen occupation						
<i>Grade</i>						
10	302 (28.8)	399 (38.1)	256 (24.4)	69 (6.6)	22 (2.1)	1,048
11	252 (27.3)	366 (39.6)	243 (26.3)	47 (5.1)	16 (1.7)	924
12	266 (30.8)	375 (43.4)	186 (21.5)	30 (3.5)	7 (0.8)	864

analyses produced a significant relationship for the demographic variable grade ($\chi^2_{(8, 2836)} = 23.695, p < .003$). Results indicated that grade 12 students were more likely than grade 11 or grade 10 students to believe that they were either “very likely” or “quite likely” to find work in their chosen occupation. The majority of the respondents reported being confident that they would find an occupation they loved to do, obtain the education or training they required, and find work in their chosen occupation.

Importance of working in one’s community

The majority of respondents indicated that it was not important to them to find work in their community with the exception of the 19 years old students, of which the majority reported that it was important for them to find work in their own community (see Table 4). Chi-square analyses produced significant relationships for the demographic variables age ($\chi^2_{(12, 2902)} = 45.639, p < .001$) and town size ($\chi^2_{(6, 2366)} = 34.996, p < .001$). A greater number of students from large urban areas indicated that it was either “very important” or “quite important” to remain in their community as opposed to students from rural areas or mid-sized urban areas.

Location of work

Senior high students anticipated being able to obtain work nationally or in their province versus in their community or internationally (see Table 5).

Community. Almost half of the senior high students reported that it was either “not at all likely” or “not very likely” that they would find work in their community. No significant relationships were found for any of the demographic variables.

Province. Over half of the respondents reported that they were confident that it was either “very likely” or “quite likely” that they would be able to find work in their province. The chi-square analyses produced a significant relationship for the demographic variable grade ($\chi^2_{(8, 2688)} = 23.411, p < .003$). Results indicated that grade 12 students were more likely to believe that it was either “very likely” or “quite likely” that they would find work in their province than were grade 11 and grade 10 students.

National. Of the senior high respondents, 73.0% reported that it was either “very likely” or “quite likely” that they would find work in their country. Chi-square analyses produced a significant relationship for the demographic variable grade ($\chi^2_{(8, 2700)} = 40.370, p < .001$). Results indicated that grade 12 students were more likely to indicate that they were either “very likely” or “quite likely” to find work in their country.

International. Approximately 45% of the respondents believed that it was either “very likely” or “quite likely” that they would be able to find work

Table 4 Importance of working in one's community

	Level of importance				Total <i>N</i>
	Very important <i>n</i> (%)	Quite important <i>n</i> (%)	Slightly important <i>n</i> (%)	Not at all important <i>n</i> (%)	
<i>Grade</i>					
10	109 (10.1)	221 (20.6)	322 (30.0)	422 (39.3)	1,074
11	69 (7.2)	201 (21.1)	285 (29.9)	397 (41.7)	952
12	77 (8.7)	173 (19.4)	254 (28.5)	386 (43.4)	890
<i>Age</i>					
15	70 (9.3)	160 (21.3)	234 (31.1)	288 (38.3)	752
16	64 (6.7)	200 (20.8)	290 (30.1)	408 (42.4)	962
17	78 (8.4)	178 (19.2)	267 (28.8)	403 (43.5)	926
18	34 (14.4)	44 (18.6)	59 (25.0)	99 (41.9)	236
19	9 (34.6)	7 (26.9)	6 (23.1)	4 (15.4)	26
<i>Town size</i>					
Less than 1,000	10 (5.6)	34 (19.1)	48 (27.0)	86 (48.3)	178
1,000–10,000	131 (6.7)	352 (18.0)	600 (30.6)	875 (44.7)	1,958
10,000 or more	23 (10.0)	74 (32.2)	55 (23.9)	78 (33.9)	230

Table 5 Where senior high students anticipate finding work

Grade	Very likely <i>n</i> (%)	Quite likely <i>n</i> (%)	Somewhat likely <i>n</i> (%)	Not very likely <i>n</i> (%)	Not at all likely <i>n</i> (%)	Total <i>N</i>
<i>Community</i>						
10	135 (13.6)	155 (15.6)	264 (26.5)	198 (19.9)	243 (24.4)	995
11	98 (11.1)	112 (12.7)	235 (26.6)	213 (24.1)	226 (25.6)	884
12	106 (12.9)	110 (13.4)	239 (29.0)	171 (20.8)	197 (23.9)	823
<i>Province</i>						
10	280 (28.3)	250 (25.3)	247 (25.0)	103 (10.4)	108 (10.9)	988
11	212 (24.1)	253 (28.8)	251 (28.5)	83 (9.4)	81 (9.2)	880
12	256 (31.2)	240 (29.3)	198 (24.1)	63 (7.7)	63 (7.7)	820
<i>Nationally</i>						
10	456 (45.9)	228 (23.0)	185 (18.6)	55 (5.5)	69 (6.9)	993
11	442 (49.8)	200 (22.5)	159 (17.9)	42 (4.7)	44 (5.0)	887
12	449 (54.8)	195 (23.8)	139 (17.0)	15 (1.8)	22 (2.7)	820
<i>Internationally</i>						
10	379 (37.6)	154 (15.3)	146 (14.5)	152 (15.1)	176 (17.5)	1,007
11	282 (31.7)	164 (18.4)	138 (15.5)	152 (17.1)	154 (17.3)	890
12	258 (31.7)	123 (15.1)	142 (17.4)	154 (18.9)	137 (16.8)	814

internationally. The chi-square analysis produced no significant relationships for any of the demographic variables.

Discussion

The present study examined senior high students' post-high school plans and their confidence in attaining their career plans in the Lethbridge region of

Southern Alberta, Canada. Results may not be generalized to senior high students beyond Southern Alberta, Canada, therefore, the discussion is limited to the results of this study and comparisons to relevant research. In countries with different characteristics (e.g., a different high school education system) or with different career decision making tasks, student post-high school plans and confidence in achieving their goals may differ. Thus, cross-cultural studies examining senior high students' career plans and confidence in obtaining their plans may be useful to inform career planning programs.

Findings from the current study are consistent with Super's (1990; Super et al., 1996) theoretical stage of Exploration, during which adolescents between the ages of 14 and 24 begin to crystallize, specify, and implement their occupational choices. The majority of respondents reported that they were either considering more than one option or had a specific plan for what they would be doing after high school, with the exception of a sub-group of 19 years old students who indicated that they did not have a plan. This finding is consistent with previous research that older students may experience career indecision (Creed & Patton, 2003; Gati & Saka, 2001) or less confidence in obtaining their career goals (Taviera et al., 1998). It may also be a desire to postpone making a decision. There are a number of factors that may influence this population of students, such as educational difficulties and general decision making ability. Whereas younger students may perceive that they can delay making a career decision until a later date (Bardick et al., in press), the proximity of this deadline is close at hand for 19 years old.

Respondents from large urban areas and large schools were more likely to have a specific career plan. This may be a reflection of students having more access to career resources and more opportunities to engage in career exploration in larger urban areas and larger schools, where resources and opportunities may be limited in smaller towns and schools.

Findings from our study are consistent with international findings that the majority of respondents planned to further their education after high school (Mau et al., 1998; Nurmi et al., 1994; Stevenson et al., 1998). Students may be thinking about their future rationally and recognize the need for further training. Grade 12 students were more likely to plan to attend full-time studies, indicating that they realize that further education is likely to result in a more favorable outcome. A new finding was that the majority of senior high students planned to combine full time education with part time work. Senior high students' intentions to combine post-secondary education with part-time work may be a reflection of the financial barriers and/or the rising cost of post-secondary education (Julien, 1999). Conversely, it may also reflect a desire to obtain work experience in their chosen field of study. A contrary finding was that a higher percentage of 19 years old students planned on working full time and attending part-time studies, as opposed to the other respondents who planned on attending full-time studies and working part-time. This may be due to a need for mature students to upgrade high school courses or obtain more work experience before making a formal decision. Financial concerns may also impact students' decision to work full-time. One factor that was not

taken into consideration in this study was the length of time students intended to work full time upon the completion of high school, which may be an area for future research. Another area for future research may be longitudinal research to determine whether students follow through on their reported aspirations.

The majority of respondents reported that they were confident that they would find an occupation that they love to do, obtain the training or education they would need, and find work in their chosen occupation. This overall trend contradicts Taviera et al. (1998) findings that adolescents do not feel very confident that they will be able to secure employment in their desired career area. This study's finding that students' level of confidence in securing employment in their desired career area increases as grade increases, is also contradictory to Taviera et al. (1998) findings which reported that grade 12 students have less confidence in obtaining their career goals than younger students. However, this study did not address factors affecting student's confidence. Examining the factors that contribute to students' confidence is recommended, as confidence is important in motivating students to engage in career exploration.

Contrary to Rojewski's (1999) findings that students from rural areas were more likely to want to remain in their community, the majority of students in this study did not believe that remaining in their community was important. However, this is consistent with Rojewski's (1999) assertion that students from rural areas are more likely than students from non-rural areas to have to leave their community to pursue a higher level of education or career opportunity. A sub-group of 19 years old respondents indicated that it was important for them to find work in their community. These students also indicated planning to work full-time after high school. Mature students may recognize the need to obtain work in their community because without education or further training the likelihood of obtaining work in other locations may be limited. Students from larger centers (non-rural) were also more likely to indicate that it was important for them to remain in their community, and were more confident that they would find work in their community. This may be a reflection of greater opportunities that may be available to students in larger centers.

Implications for career planning

The present study provides data that may be useful in helping senior high students with career planning. First, knowing the respondents' intended career trajectory is helpful to inform program planning. Second, knowing that the respondents are confident in attaining their post-high school educational and career goals means that carefully researched and developed career programs and resources are more likely to succeed. If students have the confidence that they will attain their career aspirations, the motivation to pursue their goals and aspirations by engaging in career exploration is likely to increase (Lent,

Brown, & Hackett, 1994; Mitchell & Krumboltz, 1990; Stumpf, Colarelli, & Hartman, 1983).

Two implications arise from the finding that the majority of the respondents planned to combine full-time post-secondary education with part time work. First, programs combining further education and work, such as apprenticeship, tech-prep, and co-op programs, may be beneficial to students who desire to obtain further training and experience in their chosen area (Lewis et al., 1998). Second, greater access to information on how students may access existing financial aid or improved funding for post-secondary education may be indicated.

The findings that a sub-group of 19 years old students did not have a specific educational or career plan upon the completion of high school indicates that mature students may not be receiving the career planning help they need. These students may intend to take time off school and work full-time in order to make a decision, or they may be delaying decision making because they have not developed the skills to make an effective career decision. Mature students may require more help in making a decision. These results may indicate that teaching decision making skills before a decision needs to be made may be more effective than targeting students at the time they are expected to make a decision. Beginning career program planning as early as possible in a students' educational path (e.g., junior high or earlier) may be effective in helping students throughout their career decision making process, rather than focusing on making career decisions at the end of high school. Further investigation into the factors that influence mature students' career indecision, desire to remain in their community, and intention to obtain full-time work upon the completion of high school is indicated.

Conclusion

The majority of senior high students in the Lethbridge region of Southern Alberta, Canada reported that they were considering more than one option, or that they had a specific plan for what they would be doing after high school. The majority of the respondents indicated that they planned to combine full time education with part time work upon the completion of high school. The majority of respondents reported being confident that they would obtain their future career goals. Finding work in one's own community was not found to be an important factor for the majority of the respondents. Respondents were confident that they would find work in their country, as compared to their community, their province or internationally. A sub-group of 19 years old students reported contrary results, with not having a specific plan, intending to work full-time and attend part-time school upon the completion of high school, and hoping to find work in their community. Results indicated that mature students may be delaying career decision making and thus require help in career decision making. Results also indicated that beginning career program planning as early as possible in a students' educational path (e.g., junior high or earlier) may be effective in helping students throughout their career

decision making process, rather than focusing on making career decisions at the end of high school. Results from this study may be useful to create career planning programs that enhance students' decision making abilities and provide students with opportunities to further their education while obtaining valuable work experience, thus enabling them to attain their career goals.

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