

Career and Other Factors Influencing Postsecondary Decisions: Survey of High School Students in Alberta, Canada

The range, magnitude, and intensity of the problems currently facing parents, educators, and others involved in preparing young people to become effective, self-fulfilled, contributing members of society are well documented. One major area of concern is policy makers and society in general is the transition from school to employment.

During this difficult period, seemingly irrevocable decisions have to be made. Aspirations and reality have to be reconciled. Specifically, a pattern of adult life has to be initiated that includes communicating with adults and peers in new formal and informal learning situations. It is always difficult to make choices that will have long-term implications; yet, in adolescence, choices have to be made about academic subjects, coursework, training and qualifications, a career, and whether to work for others or for oneself. Decisions must be made about the advice offered by parents, teachers, counselors, and peers.

Although work has many different meanings for human beings, it is the "backbone of an individual's life" (Paulter, 1995, p. 19). The presence or absence of work is perhaps the most important pivotal point in a human's life. Generally, individuals spend their early years preparing for work, the major section of life doing the chosen work, and the last part of life retired from work.

The aim of this study is to identify the extent to which certain factors influence career choices and the transitional pathways that lead to further education and finally to employment for high school students in Alberta. The important question of this study is the investigation of career and other factors, and the role they play in influencing Alberta high school students in pursuing higher education and making career choices.

There are several studies of various facets of the relationship between the person and work. Holland (1985), Osipow (1983), Roe and Siegelman (1964), Sunter (1992), and Super (1990) have written about the need for work, the satisfaction obtained from work, the process of choosing a career, the problems associated with indecision and poor choice, and the difficulties experienced from inadequate career planning.

How do young people make the transition to employment? Do students have career plans? Is choice of a career a point-in-time phenomenon or a sequence of decisions that evolve

over time? Does parental influence affect choice of career pathway? How do young people become knowledgeable about work? What are the effects of leisure activities? These are some of the questions that confront students during the transition process.

Even though some people have well-developed plans and decide to proceed directly into the labor force, others may enter postsecondary education as an intermediate step. There are others whose plans are so poorly formed that they could be said to be nonexistent.

Much of such planning or lack of it is a function of a student pre-knowledge of career choices that could lead to routes such as universities, community colleges, technical institutes, or other institutions of learning. In this study, these career routes are defined as career pathways, that is, the various routes chosen such as universities, community colleges, or technical institutes, including apprenticeships, which students take to lead to the achievement of their academic goals.

When a student has made a clear career choice reinforced with knowledge of the career pathway that could lead to the acquisition of such a choice, that student is at an advantage. Knowledge of the career pathways available is positively related to career choices since they are similarly influenced.

Level of knowledge of available career pathways is also a function of various parental, peer, and institutional influences. For instance, a student growing up in a home where a parent is a doctor is most likely to be knowledgeable about a university pathway. Peers, counselors, and a variety of other influences also directly or indirectly affect knowledge of the particular pathway.

Thus, many factors, such as the educational experiences environment, and personal social factors will influence the career path chosen by a student. An important factor in determining career goals is whether job opportunities in the labor market match individual perceptions of those opportunities. It is imperative that appropriate career education and career planning be guided by knowledge of career development and career decision-making processes. Fundamental issues surrounding choices and decisions must be clearly addressed if the transition from school to work is to be a constructive process.

With regard to research studies, several conceptual frameworks have been put for-

ward in an attempt to describe and to explain the development of career pathways. Although limited empirical support is currently available to validate their explanatory power, these developmental (Gottfredson, 1981), psychological (Holland, 1985), and sociological/status attainment (Cuneo & Curtis, 1975) frameworks identify numerous variables that should be considered in efforts to elaborate on the choice of career pathways.

Among these variables are parental influences and support. Included also are the personal orientations of youth: their vocational interests, perceptions, and knowledge of work, and their educational decisions, which include their high school programs, course selections, intended postsecondary major.

Practical and theoretical questions were addressed in an attempt to understand how particular social structures and/or processes facilitate or frustrate the realization of further education or job attainment. The central questions are: What are the career choices and the period over which the choices have been contemplated? What are the general factors influencing the choice of a career and its consequent career pathway? How significant are some of those factors in the transition from either school to employment or to additional education?

The Study Structure

Grade 11 students registered in the Province of Alberta public school system for the 1994-1995 school year were the primary source for this study. The total number of students registered for the 1994-1995 school year were 35,259.

The chronological age of students ranged from 15 to 20 years. The sample study group was comprised of 520 females (49.7%), 500 males (47.8%) and 27 nongender respondents (2.5%). These 1,047 students represented every region in Alberta.

Bi-modal methodology was used to develop the instrument and collect data. The self-administered Likert-type instrument of forced choices and open-ended questions produced career preferences and information regarding age and sex. Chi-square analysis was used to test the significance of observed differences.

There are actually two areas of analysis: (a) variables of work knowledge, leisure time activities, work habits, program completed, grades, school, future lifestyle, and selected pathway, and (b) relationships and influences.

Choice of Pathways

There are several transitional pathways to

pursue in the choice of a career. In Table 1, four categories of pathways are identified in order of prevalence: (a) University ($n = 366$, 35.0%), (b) Community College ($n = 194$, 18.5%), (c) Technical Institute/Apprenticeship ($n = 229$, 21.9%), and (d) Other/Don't know/No response ($n = 258$, 24.6%).

Table 1

<i>Pathways</i>		
Categories	Number Percent ($n = 1,047$) (100)	
Univertisy (U)	366	35.0
Community College (CC)	194	18.5
Technical Institute/Apprenticeship (TI/A)	229	21.9
Other (Don't Know/No Response) (O)	258	24.6

Career Plans

As they learn and develop, decisions about occupational choice are of great concern to youth. Occupational choice represents the first major choice youth must make in life, and this choice is likely to have profound effects on later experiences. Identification of a career by young people, whether it is specific or vague, or the lack of Identification of a career by young poeple, whether it is specific or vague, or the lack of identification of a career enables policy planners to ascertain where the young people are in their various stages of career development. It also allows policy planners to intervene and to provide guidance and direction to facilitate the transition process from school to work. Even those who have identified a career need guidance because they may be unsure of their choices. Further, for those who have identified a career, the length of time spent contemplating the chosen career is important.

When they identified careers they would like to pursue, the most popular choices among males were professional athlete, engineering, computing science, and law enforcement. For females, the most popular choices were teaching, nursing, and office work. More unusual choices for males were politician, astronaut, diplomat, and fighter pilot. More unusual choices for females were mortician, astronomer, oceanographer, and welder.

Several respondents identified more than one career choice. Most respondents (61.3%) gave one career choice, 10.6% gave two choices, 2.4% gave three choices, and 1% gave four or more choices. When responses were organized according to the major categories of the *National Occupational Classification Index of Titles (NOC)* (Employment and Immigration Canada, 1993), approximately 28.1% of the students' choices were distrib-

uted among the categories of natural and applied sciences and health, 13.3% were in social sciences, and 10.1% were in sales/service (see Table 2).

Development of Occupational Choices

Identifying a career is important; however, of significance is the length of time over which a particular chosen career has been contemplated. Developmental theorists consider occupational choice as a long process of development. More than one in seven (15.9%) had selected a desired career within the recent six months, whereas 17.5% had chosen their career more than a year ago. About two out of three (66.9%) had decided on the career for two years or more prior to this study.

Developmental theorists such as Brooks (1990), Gottfredson (1981), and Osipow (1983) have argued that career choices made three, four, or five years prior to a student's leaving school suggests that occupational choice does involve long-term processes and that occupational choice is not a mere matching process that occurs when the time for making a decision occurs.

Probing of career choice responses with regard to pathway revealed a relationship that is highly significant ($\chi^2 = 43.03$, $df = 15$, $p < .001$) at the .05 level. A large number of students ($n = 235$) including university, community college, technical institute/apprenticeship, and other students, have been contemplating their choice for more than three years.

Noting the above, it can be concluded that the longer the period, the larger the number between the length of time contemplating a

career choice and the chosen pathway. For instance, those who were contemplating university for "more than three years" contributed the largest number (92) to this criteria.

Because many students had several choices and a large number did not know what they wanted, it is apparent that many students could benefit from career information. This need has been corroborated by two other researchers. In an Edmonton high school study, Shaske (1989) found students with various skills benefited equally from more career information. Researchers Snook and Cusworth (1985), in their study of 716 junior and senior high school students in the Red Deer (Alberta) Catholic School District and Three Hills School Division (Alberta), found that students were not satisfied with the amount of information they received regarding job or career planning.

Knowledge of Work

There are different views of the skill requirements of the labor market. Debates have focused on the quality of the new jobs and the importance of understanding trends in the skill content of jobs. Consensus has been that growth in the service sector usually creates low-skill jobs. High-skill jobs usually are created in sectors such as financial services.

Respondents were presented with a number of occupations, some requiring low skills and some requiring high skills. The students' perceptions of career difficulty were based on the degree of reasoning, math, and language skills necessary to perform these jobs, as catalogued by the *NOC* (Employment and Immigration, Canada, 1993). Based on their rating,

Table 2

Future Career Choice

Occupational	All Students (<i>n</i> = 1,047)		Female (<i>n</i> = 386)		Male (<i>n</i> = 398)	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Management (senior, middle, owner)	26	3.3	12	46.1	14	53.8
Business (accounting, finance, office)	76	7.3	56	73.3	20	26.3
Natural & Applied Sciences (physicists, mathematicians, engineers, climatologists, computing, etc.)	123	11.7	35	28.5	88	71.5
Health (doctor, nurse, dentist, etc.)	172	16.4	117	68.0	55	32.0
Social Science (law education,	130	13.3	99	76.1	31	23.8
Art, Culture, Recreation, & Sport (actor comedian, sculptor, hockey player, etc.)	105	10.0	46	43.8	59	56.2
Sales/Service (law enforcement, armed forces, parks, pursers, chefs, etc.)	106	10.1	35	33.0	71	67.0
Trades (auto mechanic, welder, etc.)	40	3.8	2	5.0	38	95.0
Primary Industry (mining, farming, oil & gas, etc.)	11	1.1	-	-	11	100
Don't know	50	4.8	24	48.0	26	52.0
* No response	208	19.9	92	44.2	89	42.8

* includes missing gender information

the students' perceptions of the two most difficult occupations were surgeon (75.0%) and dentist (56.7%). The occupations of teacher and farmer had a similar level of difficulty to these students (25.4% and 25.2%, respectively). Occupations they perceived to be very easy were clerk in a store (42.0%) and janitor/custodian (38.5%).

These responses suggest that the occupations students are knowledgeable about, according to the ranking of level of difficulty, are consistent with the *NOC*. However, closer examination of these occupations indicates that they are all, with the exception of computer systems analyst, in the middle- to low-skill area and that students tended to know less about occupations requiring high-level mathematics, reasoning, and language skills.

Hours of Part-Time Work

Knowledge of work is also gained by participating in the labor market, though the job held is not necessarily the chosen career. If students are involved in the labor force, even on a part-time basis, this work leads to the acquisition of many attributes that enable individuals to function effectively in a variety of social and work situations, and it may aid in the making of career choices.

This study found that over half (56.4%) of respondents were involved in part-time work; they worked an average of 12.5 hours per week. Almost 10% (9.3%) of students were working more than 20 hours per week, and males outnumbered females almost 2 to 1 in that category. Students who worked 5 to 9 hours per week represented 13.8% of the group. The survey found that as the total hours of part-time work increased per week, the number of females who worked part-time decreased.

Work Habits

Work habits of students seem to be a useful predictor of later success in employment. The consequences of not having the ability to organize a task and to perform it with alacrity could be the difference between a student's acquiring, meeting, and receiving more responsibilities. Such additional responsibilities could lead to worker autonomy, and according to Toffler (1990), worker autonomy encourages and fosters sound work habits.

Respondents were given a number of statements concerning work habits and were asked to rate them from "always" to "never," according to their perception of how well they met those criteria. Students were positive yet modest in their self-report. Almost three out of five (59.9%) said they were always tidy. One in two said they were punctual (48.5%), and two

out of five said they could be depended on, were organized, were punctual, were proud of their work, and took criticism well (42.2%, 42.8%, 41.4%, 42.5%, 41.4%, and 42.4%, respectively).

The findings on work habits are consistent with what is generally expected in any work environment, be it school or labor. As Toffler (1990), in *Powershift*, and Cohen and Stanley (1993), in *No Small Change*, emphasized, being organized, being able to work quickly, and liking what you do are key elements that allow people to function in the new information economy. Therefore, these elements are critical for students' future success, and it is obvious by their responses that students are aware of them.

Leisure Activities

Leisure activities are an important developmental link for young people. These activities enable them not only to appreciate and participate in the lighter side of life, but also to participate in serious and demanding adult activities—activities that have important consequences for students' later attitudes, behavior, and decisions. Information from the respondents about leisure activities showed that the majority spent their time "hanging out" or dating (38.9%); this translates into 45.9% for females and 33.2% for males. Almost 19% (18.6%) spent their leisure time working in a family business. The next most popular leisure time activity was participating in sports (14.9%), with a ratio of 3 to 1 in favor of males. It is astonishing to note that doing homework, watching television, and being involved in hobbies were just about equal. The difference in separation of these three categories was less than one half of a percent with, of course, watching television receiving the highest rating.

Data for leisure activities when measured for significance using chi-square analysis ($X^2 = 42.55$, $df = 21$, $p < .003$) showed that leisure activities are highly associated with identified choice of career. It seems that leisure activities provide variability, disrupt the pattern of students' thinking, and revitalize students' capacity to concentrate. Socialization and dating allow students to exchange ideas and to talk about a host of topics, including their career dreams. It is not surprising that the findings on leisure activities are so highly significant.

Future Lifestyle

The goals people set for themselves often serve as guides for action. Goals to which students aspire serve to focus their sights in a universal direction along which different paths

lead. Often, these goals affect students' attitudes or self-concept and are based on many factors that affect their perceptions of their future lifestyle. Many of these factors are value based. Farmer (1986) found that the motivating factors for future achievement were aspiration and either the mastery of or a commitment to a certain lifestyle.

According to studies on self-concept, *academic* self-concept is influenced by student perceptions of their academic achievement. Sharpe and Spain (1991) found that a large percentage of the students' lifestyle included a job or career. Clearly, students' self-concept and perception are determinants in their future lifestyle.

A majority of respondents, 60% in this Alberta study, indicated that it was very important to "find enjoyment in their work," and an almost equal number, 57.3% wanted "to excel in their chosen career." One in two wanted a "long-term job that was personally rewarding" and two out of five wanted jobs that will give "security, flexibility, and independence." Although those attributes were rated as important, there were other attributes, such as "doing community work" and "keeping a good household" (homemaker), that were considered important.

A surprising revelation was that more males than females felt indicated that being a good homemaker was important. We can only assume that the difference in perception can be attributed to societal changes regarding equity in household affairs. The relationship between future lifestyle ($X^2 = 29.48$, $df = 9$, $p < .001$) and the identified pathway is significant at the .05 level.

Influences

The type of diploma program students are enrolled in and the grades students have attained usually influence their plans after high school. Dowsett (1990) found that there was a noticeably higher level of achievement by students who planned to attend a university than by those who planned to attend a college or a technical institute. However, Little (1986) noted that differences in high school performance had very little effect on the level of occupations attained. Although some literature can be considered contradictory, program and average grades attained are generally thought to have an influence on students' career choice.

Program. In the 1994–1995 school year, students in the Province of Alberta could enroll in either an advanced or a general diploma program. The advanced diploma program consisted of higher level math and pure sciences. In our study, we found that 62.3% of the

1,047 students were enrolled in advanced diploma programs. Of this number, 46.3% were males and 53.7% were females.

Analysis of the relationship between the pathway chosen ($X^2 = 44.38$, $df = 3$, $p < .001$) indicated a strong relationship, which consistent with research findings.

Grades. Another factor influencing the transition from either school to employment or school to further education is grades. Some authors (Dowsett, 1990; Berryman & Schneider, 1993; West & Newton, 1983) suggested that school achievements are critical in determining the transition route selected by students.

Respondents were given several grade ranges and asked to identify a range that best described their average grade. The 65-79 grade range was the largest (41.8%); 40.1% of female respondents and 42.5% of male respondents were in this grade range. The next largest number of respondents was in the grade range of 80 to 100, which consisted of 38.5% of the students. In terms of number, there were 28 more females than males in the 80 to 100 grade range. The grade range of 50 to 64 included 14.9% of respondents. The lowest grade range 0 to 49, included 4.8% of respondents. There were three more females than males in this grade range. Overall, the highest grade range, 80 to 100, and the lowest grade range, 0 to 49, included more females than males.

An analysis relating grades to pathway ($X^2 = 26.02$, $df = 9$, $p < .010$) showed there was a significant relationship. The findings in this province-wide study show that often grades have a significant influence on the transitional pathway chosen, and these results are consistent with Keyote's (1979) study of a rural Alberta high school and Tanner's (1991) study of an Edmonton high school. Both authors found that differences in high school achievement were related to students' decisions about whether to attend a university, a technical institute, or a college or to drop out. According to Collett's (1981) study, *Monitoring a School System*, students who had plans to attend a university also received higher marks. The results showed that grades were not significantly related to gender.

Extracurricular activities. According to the research literature, student activities can either constrain or facilitate educational aspirations and attainments. Communities also provide a larger arena in which young people can learn civic participation, leadership, and responsibility. As important as it is for young people to know they can receive help, it is really when they are asked to lend their idealism and energy to help others that they are

most likely to acquire respect for themselves and a stake in their community.

The data produced in this survey show that many young people were aware of the role the community plays in their lives. Many students identified extracurricular activities. They indicated that strong influences on their career decision were the volunteer work organization, student council, school newspaper, magazine/yearbook, religious organization, and musical band.

Almost 50% (44.8%) of the respondents indicated that clubs, such as debating, poetry, and chess clubs, had a strong influence in their career decision. More than one in four (30.3%) of the respondents indicated that sports (interschool and intraschool) had a strong influence on their career decisions. More females (53.3%) than males (46.7%) were strongly influenced by clubs. However, the reverse was observed in sports; 53.8% of males compared with 43.3% were strongly influenced by sports activities.

The revelation of the findings is what was expected and fits with the general thinking that men are more interested in sports than women and that women are more interested in language arts (e.g., school newspaper/yearbook) than men. However, it was surprising that a large percentage of females reported that their membership in clubs strongly influenced their career decision, because clubs included, among other things, mathematics, science, and computer discussions. Even when the other clubs were isolated, there were more females (3.2%) in the mathematics, science, and computer clubs than males.

Significant other. According to Hendry, Shucksmith, Lone, and Glendinning (1993), the family is the most influential social institution in the development of the individual. Elkin and Handel (1978), in their study of senior high school students, found that parents, teachers, and friends directly affected students' educational plans. Parents and teachers act as role models, among other things, setting standards for cognitive and self-concept development and achievement. Another researcher (Roberts, 1980) noted that peers and friends provide encouragement and support and convey information necessary for making decisions. Thus, peer affiliation can be viewed as an influence that is complementary to the influence of parents.

Other researchers (Dowsett, 1990; Furlong, 1992) have found that parents and peers have an impact on the manner in which students make the transition from high school. To evaluate the effect of the influence of significant others on students, a list of significant others

(both within the school system and outside the school system) was given to students to rate.

Across the nine categories of significant others, respondents indicated their parents were the primary significant other influence in their career selection, followed by friends, fellow worker(s), and other relatives. In contrast, school was less important; 5% relied on teachers or counselors, and less than 1% (0.9%) were influenced by either the principal or assistant principal.

The low value for principal and assistant principal is understandable because they are seen by students as administrators only. However, the low value for teachers and counselors is somewhat disturbing because it contradicts a generally held belief that teachers and counselors are important significant others in students' lives. Three causes could account for this finding. First, the students in this study simply may not have believed the opinions of teachers and counselors were important. Second, perhaps the students viewed educational personnel as not being truly understanding or caring. Third, the students may have viewed teachers and counselors as too "out of touch" with the students' lives. A possible defense for the educators is too much work for too few personnel. Despite the explanation, the fact was that counselors and teachers had a very low relative value in terms of influence on students' postgraduation aspirations. This should be viewed as strikingly disturbing and worthy of intense scrutiny.

A chi-square test revealed a significant ($X^2 = 36.60, df = 24, p < .047$) difference in the relationship between other influences and pathway.

Essential Relationships and Voids

Of importance in this study was the relationship between the time spent contemplating a career and the chosen pathway. Many respondents contemplated their career choice more than two years in advance, and according to development theorists, the process involved is significant.

Although students' work knowledge was limited to lower level occupations, their positive, yet modest, work habits included being organized, punctual, and proud of their work. The students' present leisure activities list included dating, hanging out, or watching television. They identified doing community work, security, independent, and a good home maker as part of their future lifestyle. Sports were important to boys, but speech and computer clubs were important to girls. While they acknowledge that programs and grades are important influences in their decision, so too

are parents and peers, but not necessarily school officials.

Further, respondents' knowledge of the workforce, though limited, their job aspirations, and their self-concept have been identified as part of the process of transition from school to either work or further education.

Final Thoughts

New theories and new data sources offer continuous challenges to previously held views about processes and pathways that students

follow when making the transition from school to employment. Helping students make the transition from school to employment is both a challenge and an opportunity.

The findings presented here are intended to illustrate some factors involved in the process of the school-to-employment transition for young people. Our major aim is to help educators and researchers take a closer look at this important and vital process for teens and young adults.

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