

Knowledge and Risk: Choices and Decisions in the Career Selection Process Among University Students

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Abstract

The processes and resources university students employ for their career planning have become more important in the contemporary globalized economy. Demand for higher levels of education along with fluctuations in job availability and security are influencing students' vocational choices. One hundred eight students were surveyed on their choices of a career, informational and other resources supporting their choices. Four broad occupational categories were observed among student responses as potential career avenues. By making comparisons with similar recent surveys in Canada in terms of students' use of resources, we make an attempt to assess the viability of their decisions with respect to employment projections, and conclude with notes on the policy implications within universities.

Précis

Les processus et les ressources des étudiants universitaires emploient pour leur planification de carrière sont devenus plus importants dans l'économie mondialisée contemporaine. La demande pour des niveaux plus élevés de l'éducation ainsi que les fluctuations dans la disponibilité de l'emploi et de la sécurité sont d'influencer les choix professionnels des étudiants. Quatre grandes catégories professionnelles ont été observées parmi les réponses des élèves que des avenues de carrière possibles. En

faisant des comparaisons avec les enquêtes récentes similaires au Canada en termes de l'utilisation des ressources des étudiants, nous faisons une tentative pour évaluer la viabilité de leurs décisions par rapport aux projections de l'emploi, et de conclure avec des notes sur les implications politiques au sein des universités.

Making a viable decision about a course of study leading to a future occupation has become increasingly important and not without uncertainties. Globalization, the development of a knowledge economy, and economic fluctuations are but three inter-related factors that bear on educational and career choices, and suggest a more deliberate and focused process of decision-making at least for initial entry into a career. As a recent study has shown (Uppal & LaRochelle-Côté, 2014), another factor may be the awareness that significant proportions of university graduates, especially in non-professional programs, are "overqualified" for the occupation they hold. All of these factors create a context a group of counsellors may have had in mind when writing a position paper on career counselling citing the need to expand "the scope of career development to acknowledge that there are three interconnected domains: personal-career counselling, career education, and career information" (Crozier et al., 1999, p. 2).

Many students arrive at university with definite program-to-career goals, while others are

undecided. Indecision may be successfully addressed early in the university career, in which case it may be a matter of personal development, but for some students it may be a more enduring situation of "indecisiveness" or "chronic indecision" (Gordon & Meyer, 2002, p. 41). As Crozier, et al. (1999) have noted, citing several sources, a "well established career theory" is one in which "vocational development is considered to be one aspect of the overall process of human development" (p. 3). The pattern of career decision-making and a later change of course is evident the Youth in Transition Survey's combined data on the consistency or inconsistency of choices among Canadian youth and young adults over time, 2000 to 2010 (Statistics Canada, 2015). Of interest is the relative instability of career decisions, for both women and men, between the ages of 15 to 17, and the relative stability of such expectations at ages 21 and 23, the initial post-secondary years. About 14% of men surveyed were still undecided at age 25, a proportion slightly higher than for women. Evidently, experience, new knowledge about careers and opportunities during the ages relevant to the post-secondary years has an effect on career expectations; just under 40% of men and about 37% of women had made a new career decision at the age of 25 (Statistics Canada, 2015, p. 6, Chart 2).

While there are numerous studies on school-to-work transitions, less research has been undertaken on the career selection process



once students are enrolled in university and have begun to engage in reflexive decision-making based on new knowledge, varied resources, and socio-political relations previously unknown to them. The study under discussion here sought the perspectives of students on aspects of their career selection. Participants were undergraduate students enrolled in Arts, Science, and Professional Studies programs at Atlantic University. (For confidentiality purposes, the name of the university has been changed.) We first discuss choice, risk and decision-making as a means of contextualizing the study, followed by a discussion of literature on career selection. The results of our survey are then presented. Our "Discussion" section examines our participants' responses in two ways: first, by looking at the viability of their career decisions in relation to the Canadian Occupational Projections System and related research and, secondly, by comparing the responses to our survey with similar recent research.

The Complex of Choice, Risk and Decision

A casual discussion with many university students will yield some degree of uncertainty regarding choices for academic study and a future occupation. The very concept of career planning implies an element of risk that may be partially overcome by adequate information about specific occupations and some understanding of the influence of economic fluctuations on job markets. The former is subject to control by students and their advisors, the latter is something over which individuals lack effective control.

The development of the concept of "risk society" (Beck, 1992; Giddens, 1991) has heightened attention to the potential consequences of decision-making with

respect to the competitive marketplace in "products, labor power, investments or money," the "thoroughgoing reflexivity ... of modern institutions" and linking of "individual and collective risks" with the global economy (Giddens, 1991, pp. 117-118, 20). The notion of reflexive information gathering and decision-making suggests that career information and knowledge of economic decisions are strategies of risk avoidance. Thus, *rethinking* plans and choices may well be a normative component of career selection that is evident in the link between individuals and the institutions in which they are involved. For example, "occupational climates" are prompting "changes to educational policies informing career education in high schools" (Truong, 2011, p. 1) which raises issues about the structure of universities with respect to their links to the job market (Miner, 2014). Giddens' notion of "risk profiling" (1991, p. 119) is one such issue in which the role of expert information informs what we might call the choice-risk-decision complex. Consider, in the context of career planning, that Giddens' conceptualization of a 'risk profiler' may include counsellors, university faculty and others as sources of labour market knowledge, providing their clients or students with information associated with opportunities and possible constraints of particular vocational paths. Discussions may involve (mis)perceptions developed from media exposure and other sources regarding projections of future occupational trends, corporate downsizing, job relocations and layoffs. However, an important caveat to the concept of risk in this context, and itself a potential mitigation of the problems of career selection, is the anticipation that the demand in many occupational opportunities in the future will exceed the number of

job seekers (Miner, 2010; Miner, 2014). If career readiness is a key mandate for post-secondary institutions, then the delivery of quality career education is integral to "student satisfaction with their post-secondary experience" (Crozier, et al. 1999, p. 8). We address some of these issues further below.

Aspects of the Literature on Career Decision-Making

The examination of career development programs and resources in fourteen countries by the Organization for Economic Co-operation and Development (hereafter OECD) in 2002 noted the "multi-faceted and highly decentralized" career counselling in Canada reflecting variations among provinces and among institutions within specific jurisdictions (OECD, 2002, p. 4). The review committee also noted the optional character of career guidance in both public and post-secondary education as well as the funding in some provinces based on performance criteria. As to the latter issue, the reports' authors stated that the delivery of career development and education to students may be contingent upon whether or not it aligns with senior leadership's [school board] priorities (OECD, 2002). Clearly, career development and career education requires an integral relation between secondary school and post-secondary education of all types. The OECD concluded that these are "clearly recognized in Canada as a public good which should be freely accessible to all.... The public investment in such information is considerable, and the products are very impressive". On the other hand, the report notes that the 'impressive' information available to the public is "under-utilized" (OECD 2002, p. 13).

Career planning research in Ontario secondary schools revealed



students had decided upon, or contemplated, multiple vocational pathways. Students attribute career selection to be “very”, or “quite important” as a feature defining their identities (Dietsche, 2013, p. 77). Career planning was influenced primarily by parents and guardians, along with “someone they admired who worked in a job/field” in which students may like to work; teachers and the media were also significant influences (Dietsche 2013, p. 78). Students noted that, job shadowing and speaking with others employed in a profession of interest were significant influences on career decision making (Dietsche 2013).

Truong’s (2011) research on policy and practice in secondary schools regarding career education aimed to gather student feedback on their career development options. Students were dissatisfied with the “quality of advice” obtained from guidance counselors, who, according to students, were often unavailable for consultation (p. 14). Counselors acknowledged using classroom teachers as supplemental resources in order to relieve workload pressure and ensure students had “available counsel” for the variety of career possibilities (Truong 2011, p. 19). What ‘quality of advice’ from guidance counselors or classroom teachers entails is not clear; however, this may suggest that some elements of ‘quality’ are related to assessments of the risk environment of specific labour markets.

Research on career thoughts of undergraduates sought to discover whether “negative career thoughts” had any relations to “career decidedness and satisfaction with choice” (Chason et al., 2013, p. 39). Chason et al. conceptualize “career thoughts” as “an individual’s feelings, thoughts, attitudes, beliefs, and expectations related to career decision-making and problem-solving

effectiveness”, while “negative career thoughts” impart “a negative impact on one’s career decision-making and problem-solving abilities” (2013, p. 40). Career decidedness characterizes those individuals who settled on a career choice or had a possible career in mind along with some alternatives. Negative career thoughts can cause a host of issues for the individual, including altering or avoiding career related behaviors and decision-making, the outcome of which may impact the “effectiveness of career problem solving and decision making” (2013, p. 40). Chason et al. concluded that the more “negative career thoughts” students held, the more variation there was in career decisions and satisfaction. In particular they noted that resolving anxieties around career choice implies satisfaction in the decision itself and a belief that one possesses adequate “decision-making skills” (2013, p. 45).

Method

Data collection was completed mid-way through the Winter academic term, 2014, using a 25-item questionnaire asking about demographic information, family background, occupational and educational goals, employment outlook, utilization of career related resources, and the influences on career decision-making from an variety of sources. Statistical analyses were performed utilizing IBM SPSS version 22.

The participants in the survey were 108 full-time undergraduate students enrolled in Arts, Science, or Professional Studies degree programs. Participants ranged in age from 18-27+ and were categorized based on predefined age groups. Slightly more than half were aged 18-20, one-third were 21-23, and the remainder (15.6%) aged

24 or older. Of students completing the survey nearly 40% were first-year students, 12.8% in second year, 17.4% in third year, and 22.0% in fourth year. A small proportion were students in their fifth year or more of study, some having transferred from other post-secondary institutions or changed degree programs and did not know their relative position with respect to their new program of study. The programs of study were quite varied amongst the respondents but this was somewhat expected based on the classes selected for this sample: a first year Anthropology class, a second year Biology class, a third year Criminology class, and a fourth year class in Child and Youth Study. The selection of courses for the survey was based on discipline, availability and agreement of course instructors. There was something of a gender imbalance in that 88.0% of participants were women. The majority, (93.0%) indicated their country of origin was Canada; a similar proportion indicated their secondary education was completed in Canada.

Results

Parents’ Education

The level of educational attainment for each parent as indicated by students offered some interesting figures, most notably a larger proportion of mothers having obtained a university degree (26.6%) compared to fathers (20.2%). Similarly, more mothers had completed a community college diploma, degree or certificate (25.7%), compared to fathers (22.0%) and more mothers had obtained a professional certification (e.g. nursing, medicine, law) (11.0%), compared to fathers (4.6%).



Occupational Goals and Educational Requirements

The overwhelming majority of students (90.0%) had decided upon a major and a significant majority (79.6%) indicated they had determined an occupational goal. Respondents who indicated the latter were asked to list the occupation they were anticipating; those who had not determined a goal were asked to list the occupations they were considering. The majority of decided respondents, and those considering their vocational options, cited four broad occupational areas: child care and early childhood education (35.0%), teaching at various levels of public schooling (24.1%), social work and related occupations (16.7%), and school, youth and/or health related counselling (14.8%), such as Sports Nutrition, Community Nutrition, or Registered Dietician. The first two of these categories (child care and teaching) are fairly specific occupations but ones in which job titles can vary depending on the institutional focus and clientele. The last two categories include considerably more sub-categories of jobs. In our analysis, below, of the viability of career selection in relation to occupational projections, these occupational groups (social work and related occupations, and school, youth and/or health related counselling) are collapsed into one group leaving us with three broad occupational categories.

We asked students to list “what educational level or training” was required for their chosen occupation. Assessing these responses, we found that the majority (73.0%) were accurate in their understanding of occupational requirements. When asked if education and training requirements influenced their decision to pursue employment in a given field, the most frequent response

(45.0%) was that it only “Somewhat” influenced their decision. This suggests that length of education and training serve as only one facet of the career selection process. Students were asked, “to your knowledge what is the availability of jobs in” your chosen occupation? Nearly 30% of students considered prospects to be “Good” and 27.5% believed the occupation was “Growing”, while one-quarter considered employment prospects to be “Slim”; the remainder did not know or were not sure. Using a sliding scale from “Not at all motivated” to “Completely motivated”, students’ perception of available job opportunities appears to motivate a large proportion (46.3%), while nearly 30.0% were indifferent, and slightly less than ten percent were not at all motivated by job availability. We return to the accuracy of choice and job availability below.

A qualitative analysis was not performed on the primary reasons students chose to pursue a particular occupation, but the most common responses, in general terms, were the intrinsic need to help people, and having had an interest in the field of choice prior to beginning their post-secondary education. The following are some typical rationales of students for selecting their occupational path:

Student Response 1: “My wife has Crohn’s Disease, and I want to further the current treatment options and knowledge base to increase understanding of and treatment of gastroenterological disease.”

Student Response 2: “I love working with children. I think that if we take care of our children then there will be a better future. The way a society treats their children, determines the morality and condition of a soci-

ety. I want to contribute positively to this.”

Student Response 3 [paraphrased]: I have seen the amazing work Speech Language Pathologists have done with my siblings. I was inspired to follow a similar career path.

Student Response 4: “Being in a military family, I felt that it was important and relevant to provide support to those in need of it.”

Student Response 5: “After researching into this field [Forensic Psychology], the many descriptions all sound appealing as a career choice.”

Student Response 6: “Improving the health of my community members is important to me.” I have an interest in diabetes education [paraphrased].

Occupational Risks and Anxiety

We infer students’ awareness of the risks and anxieties associated with selecting the ‘right’ field of study and occupation from their rating of the following statement on a scale, where 1 represented “Strongly Agree” and 5 represented “Strongly Disagree”: “I worry a great deal about choosing the right field of study or occupation.” Figure 1 shows that 74.0% of respondents worry to varying degrees about choosing the right occupation (24% ‘Strongly Agree’, 50% ‘Agree’), compared to 22% who either disagreed or strongly disagreed. Students were asked a follow up question (Figure 1): “Whenever I’ve become interest in something, important people in my life disapprove”. The majority of respondents disagreed or strongly disagreed (75% combined) thus suggesting



support from others for their career interests.

Utilization of Resources

Career counselling services appear to be utilized by a larger number of students at the high school level, in contrast to its utilization at the university level; 37.0% and 28.0%, respectively (Figure 2). However, the majority of respondents did not use Career Counselling services at either level of education. Career Fairs were attended by more students during high school (57.0%) than during university (7.0%). Seeking advice regarding education or training from university faculty (48.0%) was nearly equal to the proportion not seeking advice (50.0%) did not (Figure 2).

Participants were asked: “Whether you are certain or not certain about a career / occupation, please rank the level of helpfulness of the following resources” (Table 1). Students indicated that job shadowing and speaking with individuals already employed in a given occupation to be very helpful, 78.0% and 77.0%, respectively. Workplace or

industry tours were seen as ‘very helpful’ by 44.0% of students. Web and text-based information used to explore, match, and describe potential career interests and abilities were viewed as somewhat helpful, 53.2% and 61.5% respectively. Co-operative education and career development courses at the high school level were also rated as ‘very helpful’, 47.7% and 30.3%, respectively; however, significant proportions of respondents indicated they had not used either resource, 27.5% and 18.3%, respectively. Organized career fairs or career days appear to be somewhat helpful (45.9%); however, a significant portion of students (17.4%) did not utilize these resources. Individually exploring vocational options with guidance counselors was rated as ‘helpful’ or ‘very helpful’ (71.6% in total).

Not surprisingly, students’ vocational plans are influenced by an array of groups and individuals, with parents or guardians being most influential (36.7%), followed by teachers, (34.9%) (Table 2) and someone the respondent admired already working in the desired job (34.9%); friends appear somewhat (41.3%) or not at all influential

(37.6%) (Table 2). Other influential persons including family members, guidance counselors, career advisors, or university faculty, appear roughly split between ‘somewhat’ or not at all influential on career planning. The media’s effect on planning was somewhat influential (36.7%), but almost one-half (47.7%) were largely unaffected by this source.

Discussion

As we have indicated, students derive some portion of their career decisions from informed planning through a variety of sources and are aware of the requirements of the occupations chosen. These are important issues not only in terms of individual student plans, but also for career counselling at the university level regarding a student’s program choice that is indicative of a career path.

How Accurate are our Participants Regarding Future Occupational Availability?

As noted above, after collapsing two (social work and related occupations, and school, youth



Figure 2. Student Use of Career Related Resources at the High School and University Level

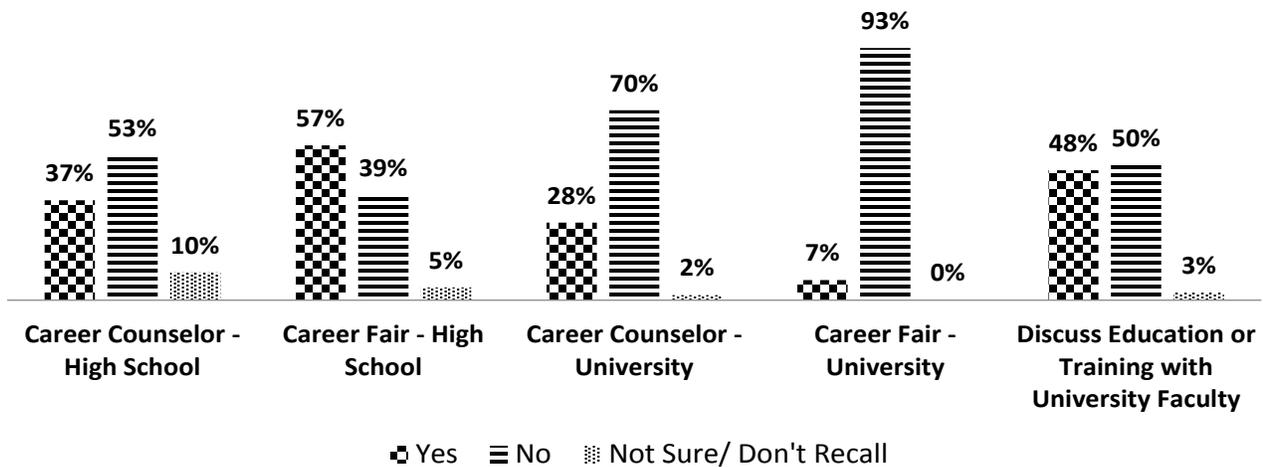


Table 1

Career/occupation

Whether you are certain or not certain about a career / occupation, please rank the level of helpfulness of the following resources.					
	Very helpful	Somewhat helpful	Not helpful	I did not use this resource	Did Not Respond
Job shadowing to explore what the occupation involves.	78%	11%	0%	7.3%	3.7%
Talking to people already working in the occupation.	77.1%	15.6%	0.9%	2.8%	3.7%
Using a web-based tool that provides information you need to select a future career matched to your interests & abilities.	22.9%	53.2%	15.6%	4.6%	3.7%
Text-based information on web sites or print material describing potential careers.	22.9%	61.5%	10.1%	0.9%	4.6%
Career development course in high school.	30.3%	34.9%	12.8%	18.3%	3.7%
High school co-op course.	47.7%	16.5%	4.6%	27.5%	3.7%
Working one-on-one with a guidance counsellor to explore future careers.	34.9%	36.7%	8.3%	14.7%	5.5%
Career Fairs or Career Days.	22.9%	45.9%	9.2%	17.4%	4.6%
Speaking with university guidance staff.	38.5%	37.6%	4.6%	15.6%	3.7%
Workplace or Industry Tours.	44%	26.6%	5.5%	20.2%	3.7%

*Adapted from Dietsche, 2013.



Table 2

Career/occupation Influence

Whether you are certain or not certain about a career / occupation, please rank the level of influence on your plans of the following individuals or groups.				
	Influenced me a lot	Influenced me somewhat	Did not influence me	Did Not Respond
Parent(s) or Guardian(s)	36.7%	48.6%	10.1%	4.6%
Someone I admire who is working in the job I'd like	34.9%	23.9%	36.7%	4.6%
The media (e.g. movies, TV programs, etc.)	10.1%	36.7%	47.7%	5.5%
Friend(s)	16.5%	41.3%	37.6%	4.6%
Other family members or relatives	18.3%	47.7%	29.4%	4.6%
Teachers	34.9%	37.6%	22.9%	4.6%
Guidance counselors / Career Advisor	15.6%	38.5%	41.3%	4.6%
University Faculty (e.g. professor, instructor)	13.8%	43.1%	38.5%	4.6%

*Adapted from Dietsche, 2013.

and/or health related counselling) of the four initial categories into one of expected occupations we can make some assessment of the accuracy of employment possibilities and, therefore, the viability of students' plans using equally broad projections from government and some more focused forecasts from other sources.

The three occupational categories most frequently cited were compared with the Canadian Occupational Projection System (COPS) used by Employment and Social Development Canada. COPS forecasts expansion demands of occupations in terms of additional numbers of employees, as well as projected retirements and other factors relevant to assessing a field of occupations for its long-term viability. (For a discussion of such forecasting, see Canadian Council on Learning, 2007). COPS forecasts currently cover the years 2013 – 2022. Only the three-digit National Occupational Classification (NOC) is used

to develop projections for 140 “occupations” (actually groups of closely related occupations); forecasting for each of the occupations within these groups (identified by their respective four-digit NOC code) is not provided. Thus, because of this grouping we can determine a general, but not a precise assessment for students' selections.

Social work and related occupations, along with various manifestations of counselling is a broad occupational area selected by 31.5% of our respondents. The COPS projections for this varied field (COPS, NOC 415) anticipate that of the job openings (60, 895) over the 2013-2022 period (equal to 40% of employees in this classification in 2012), 29% will be due to “expansion demand”, while 60% of openings are expected to come from retirements. The projected demand will exceed job seekers by about 10% over this period. The majority of the expansion and replacement

demand will be in the specific occupation of social work. Further, the positive choice of this occupational group is also indicated by the low level of unemployment in 2012, 2.2%.

With an academic department devoted specifically to children and youth at Atlantic University it is not surprising that many of our respondents selected child care or working with youth as a career. COPS data shows that this occupational group (COPS, NOC 421), which also includes another area of our participants' interest, employment counselling, to be one in which demand will exceed job seekers by almost 10% in the 2013-2022 period. The combined expansion demand and replacement requirements are projected to be 15% of the number of employees in these groups (441,922) in 2012, while retirement over this period is expected to be almost 19% of that number. The unemployment rate in 2012 was



slightly below national average.

The choice of teaching has a much different outlook. Secondary and Elementary School Teachers and Counsellors (COPS, NOC 414) are occupations with diminishing demands for job seekers. COPS projects an excess of job seekers by 16% for the expected 147, 666 job openings over the 2013-2022 period. Expansion, other replacement demands, retirement and those moving out of this occupation will amount to slightly more than 30% of the occupational force of 487, 426 in 2012. If accurate, this projection will see at best a stable if not worsening unemployment rate which was 4.3% in 2012. Interestingly, a small number of participants who planned on a teaching career, acknowledged the 'slim' growth rate of that occupation.

We noted above that many students majoring in the child and youth care field also chose teaching as a possible occupation. However, it is not possible to ascertain whether the choice of child care is merely a basis for entering teacher education or that the latter occupation is simply an additional possibility. Given the COPS projections, at least, the completion of a degree in child and youth care brings students to a gateway of a more certain occupation, albeit one with lower remuneration and fewer benefits than teachers receive.

The generally positive occupational picture is, however, not entirely rosy. Several studies in Canada have examined the issue of "overqualification", defined as having educational credentials that exceed those required for an occupation (Uppal & LaRochelle-Côté, 2014, p. 10 n. 2). Using census data from 1991, 2006 and 2011 Uppal & LaRochelle-Côté (2014) note the proportions of men and women with university degrees working in occupations requiring

only high school education, 17.7% and 18.3%, respectively, in 2011. The proportions are greater for university graduates working in occupations requiring a community college degree only, 40.5% for men and 39.2% for women. The proportions of "overqualified" immigrants with degrees from universities outside Canada and the U.S. are higher. Overqualification is most evident for graduates in the humanities and the social and behavioural sciences, but is also evident for those with degrees in physical and life sciences, and management and business administration (Uppal & LaRochelle-Côté, p.5, Table 2). The authors note that overqualification decreases with age and occupational experience, factors that are not encouraging to university students or recent graduates.

How Similar is the Career Selection Path of our Participants Compared to Other Students?

Slightly more than 76% of our participants spoke with university guidance staff and found that resource 'Very' or 'Somewhat helpful' (Table 1). This proportion exceeds other studies of post-secondary students in which career counselling appears to have had less than adequate up-take. A pan-Canadian study of first-year community college students, for example, revealed that 20-30% had not sought advice from their high school career counsellor, "completed a questionnaire or visited an internet site to explore job interests or potential post-secondary programming or taken classes in career planning" (HRSDC 2007, p. 29). One-half of the sample of slightly less than 29,000 spent less than 8 hours exploring the occupation they anticipated after graduation. Rather, as in our survey (Table 2), parents were the primary source of information.

The difference between accessing counselling and assessing its quality is evident in responses of first year university students surveyed by the Canadian University Survey Consortium (CUSC). Eighty-six percent of participants who offered an opinion were satisfied or very satisfied with career counselling services at their university, but that figure is misleading as only 10% of the more than 15,000 participants responded to that survey item (CUSC 2013). Similarly, while 61% of graduating university students had decided on a career field or specific occupation, less than one-quarter had met with a career counsellor, although slightly more than half had discussed career issues with faculty. The same proportion, 60%, were satisfied or very satisfied with the "availability of information of career options in their area of study". (CUSC 2012, pp. 66, 67). As with college students, above, the satisfaction rate among graduating university students was high (78%) but only 31% of more than 15,000 students in the study had used career counselling services (CUSC 2012). While we did not ask directly about 'satisfaction', 54% of our respondents felt that counselling advice (which could have been during high school and/or university) had influenced them "a lot" or "somewhat".

CUSC recently released its survey of Middle-Years Students (in second or third years of study) concerning a wide range of university-related issues, including career planning. More than 22,000 students from 28 universities responded; Atlantic University was not among them. CUSC divided the responding universities into three groups depending on size and composition of programs. Group 2 is comprised of "universities that offer both undergraduate and graduate studies and that tend to be of medium size in terms of student



population” (CUSC 2014, p. 5). Atlantic University fits the Group 2 description; hence, the relevance of the CUSC data compared to our own will be confined to that group. Overall more than 7000 students from eight Group 2 universities responded with numbers ranging from 227 to 3223 second and third year students. The number of students in these years in our survey was comparatively low, 33 or slightly less than one-third of our total respondents. Nevertheless, to the extent it can be applicable, some comparison may be a useful addition for assessing the success or shortcomings of career counselling at Atlantic University.

Eighty-eight percent of our second and third year respondents had chosen a specific career, nearly two and one-half times more than CUSC participants (CUSC 2014). This difference may have something to do with a greater proportion of Atlantic middle-year students (24.2%) having consulted a career counselor (Figure 2, above) compared with 15% of CUSC respondents (CUSC 2014, p. 25 Table 30), although a much smaller proportion of our middle-year students (6%) had attended a career fair compared to 33% of those in the CUSC survey (CUSC 2014). Comparing the 37% affirmative responses to the CUSC Survey statement, “Talked with professors about employment/career” (CUSC 2014, p.39, Table 55) with responses in our Table 2 statement, above, regarding consultation with university faculty, 57% of our participants found that interaction influenced them “a lot” or “somewhat”.

Conclusion

Other than the contribution to the complexity of ‘risk’ issues, the issues of education-job mismatch and the current concerns about labour shortages are beyond the

scope of this study, but at least two points are relevant. Miner (2014, pp. 18-22) discusses the job mismatch problem, the extent of which varies across numerous studies. McQuillan (2013) adds to this issue by noting the imbalance between the available skills of a highly educated population in Canada and the demands of the labour market, particularly in relation to the Temporary Foreign Worker Program and current immigration policy. Job mismatch and speculation about labour shortages may complicate the career decisions of university students as these are compounded with the general labour market encouragement of obtaining at least one post-secondary degree. One implication of this discourse is that those with technological or professional degrees will not experience the degree of overqualification or job mismatch that other job seekers will. With respect to the survey under discussion here, it is clear that our respondents are choosing semi-professional (e.g. child care), arts-based and to some extent, science-based education and career paths. Only a handful of our survey respondents chose a specific STEM occupation (science, technology, engineering, mathematics and computer science), the types of occupations that are the focus of much of the current public discussion of the education-labour market connection. But it is worth noting that unemployment rates for young men (aged 25 – 34) with STEM degrees was less than one percent better than for those with non-STEM degrees in 2011; women (aged 25 – 34) had an unemployment rate more than one percent higher than women with non-STEM degrees (Hango 2013, pp. 2-3). The issue of job mismatch remained a problem, more so for women than for men (Hango, 2013, p. 2 Table 1).

Thus, despite the unknowns

at any particular juncture, economic fluctuations will affect students’ career plans, however well planned these may be. It would seem prudent that universities become more pro-active in offering critical information to students regarding future employment probabilities. First, such critical information should include career counselling with all the possible caveats of occupational requirements, constraints and opportunities that may need to be considered by students as they plan their program of study. In other words, career counselling needs to be integrally related to educational choices with a view to adjusting those choices when necessary. Certainly, such a suggestion could apply to the multiple sources of advice young adults cited as influential in the present study as well as other studies to which we have referred. Secondly, parents and peers, however important, may be more limited in their knowledge of the future capacity or sustainability of particular occupations. Thus, it may be incumbent on counselling personnel to draw a sharper focus on multiple resources relevant to career planning. Thirdly, the institutional resources — faculty, counsellors, administrative personnel — a university has at its immediate disposal should become components of career counselling, including risky choices, especially faculty who need to be organized into an intentional and integral component of the career counselling process at least within their own disciplines. In our research and that of others, faculty are clearly important to the career selection process with their assumed knowledge of an occupational field and the inter-personal relations they can develop with students. Fourthly, career planning is carried out in an economic environment that is relatively stable but subject to instability with potentially enduring effects on



anticipated careers. For many students, the hope of stability and reward in a career of their choice may override the actual or projected economic outlook. Hence, however uncertain the economy may be at any moment, knowledge of economic fluctuations and potential must be part of the groundwork of career development. Much of this could possibly be achieved through university career development courses for credit which, as Hung (2002) has shown, provides students with theoretical and practical knowledge that can result in greater certainty with respect to career selection.

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