
How Career Information Helps Adolescents' Decision-making

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INTRODUCTION

Research into various aspects of information seeking in non-work settings has focussed on three basic contexts: formal information service systems (cf. Zweizig and Dervin 1977; Kuhlthau 1991; Dewdney and Ross 1994), everyday life situations (Chatman 1992; Savolainen 1995), and life crisis situations in which people are faced with a gap in their understanding that is outside their typical day to day experience (cf. Dervin 1982; Baker 1996). The last context includes information seeking by people facing health crises. However, among the most critical decisions we face during our lives are career-related decisions. Although children often claim to have made career decisions, it is during our adolescence, and particularly late adolescence, that career decision making begins taking on significance. It is during that life stage that we become fully conscious of the social expectation that we make some plans for our lives following school, and that is the stage when people typically explore their abilities and values in their preparation for career exploration (France 1990; Dupont and Gingras 1991). In North American secondary schools, career education focuses on self-assessment and exploration of possible occupations. Self-knowledge and specific information about work are critical components of this process (France 1990; Cairns et al. 1992). Students need to be provided the opportunity to explore several issues: their values, strengths and goals; their educational and career opportunities; their perception of the role models and influences of significant others in their life; and the work world (France 1990). Career planning requires students actively to seek out information about alternative choices; learn about their own skills, attitudes, values and interests; and discover educational and career opportunities (Herr and Johnson 1989).

The decision making processes adolescents employ in their career planning range from the complex to the highly simplistic. However, regardless of the decision-making process used, information from some source, even if only

from adolescents' own heads, must be obtained and organized. Information used by adolescents in making decisions about their future work lives includes attitudes and beliefs instilled during socialization and in school, and specific information provided by any number of sources: parents, siblings, other family members, family friends, peers, guidance counsellors, teachers, school and public library resources, the mass media, and government career centres. Information can be imparted purposefully by particular sources, as is occasionally done by guidance counsellors and parents, or it can be identified by the information seeker who attends, on both an unconscious and conscious level, to the stimuli and behavioral models in her or his environment. Most important, perhaps, is that the value of such information lies not in its volume (Jepsen 1989), but in its usefulness to career decision-makers.

This research explored the difficulties faced by young people who are in the process of making decisions related to their future careers, and who are searching for information relating to these decisions. The fundamental theoretical approach to information seeking informing this research was Dervin's sense-making theory of communication (1983; 1992). Central to this theory are the assumptions that information is a product of human observation and is subjective (therefore, what constitutes 'information' is that which is useful to the observer); information seeking and use are activities that people undertake to construct meaning and create sense; and sense-making behaviour is situationally dependent and predictable on the basis of those situations. The sense-making model centres on a relationship between *situations* or contexts in which people need to make sense of some problem, *gaps* in their understanding of how to solve problems (information needs), and *uses* of created sense (information helps) to bridge those gaps. The overall context for the information seeking behaviour in this research is the situation of adolescents making career decisions.

The objectives of the study were to determine what information sources adolescents turn to for particular types of information when making career-related decisions (i.e. how they seek to make sense of the problem of career decision-making), how these sources help in decision-making (i.e. the specific uses to which the information is put), and what barriers to information access are being perceived by adolescents as they make career-related decisions.

Data gathered to answer these questions derived from a questionnaire surveying 399 males and females in late adolescence who were attending two secondary schools in a mid-sized Canadian city, and one secondary school in a small town a few kilometres outside that city. The questionnaire focussed on the degree of helpfulness of various information sources and the ways in which these sources have helped, and on some of the barriers to information seeking faced by adolescents. As well, data from 30 semi-structured interviews with adolescents enriched the quantitative data obtained from questionnaires by

soliciting information about the respondents' decision-making and information-search processes, their concerns about these processes, and the barriers they face in accessing helpful information for career decision making.

THE RESEARCH PARTICIPANTS

The questionnaire respondents ranged in age from 15 to 19 years old, but 58 % were 17 years of age. Fifty-three percent of respondents were female, and 48 % were male. Fifty-one percent of respondents report that they think about life after high school a lot of the time, and a further 43 % sometimes think about life after high school. Six percent think about this very little, and less than 1 % never think about it. Eighty-eight percent of respondents had part-time work experience, 29 % had volunteer experience, and 16 % had worked full-time. Twenty-five percent had participated in a school co-operative work experience. Only 3 % had no work experience of any kind. Eighty-six percent of respondents planned to continue their education following high school, and five percent planned to go immediately into the workforce.

The interview participants included fifteen females and fifteen males, ranging in age from 16 to 20 years. Four participants were 16 years old, fourteen participants were 17 years old, ten were 18 years old, and two were 19 years old.

RESEARCH RESULTS

Situations

During the interviews, participants were asked to focus on a particular career-related decision. Ten participants¹ reported that they were trying to decide on what academic institution to attend following high school, nine participants were trying to decide on an area of concentration in college or university, and eight specifically indicated that they were trying to choose a possible career. Of the remaining three participants, one was trying to decide whether to continue with high school or enter college early, another was trying to choose high school courses, and another was deciding whether to continue his education after high school or look for a full-time job. Nine of the interview participants reported that they were seeking specific facts related to their decision, such as university entrance requirements. Ten participants were seeking general guidance and advice on their decisions, and seven wanted some personal experience with either their career choice or the academic institutions from which they were choosing (i.e. a tour, or sitting in on classes). Three participants simply wanted some emotional support during their decision-making, and one boy reported that what he really needed was some assurance that his post-secondary education could be financed.

The questionnaire respondents were also asked to focus on a particular question or concern that they had recently faced. Sixty percent of these respondents were seeking specific facts, and 25 % sought help regarding the

choice of a career. The questionnaire respondents most frequently turned to themselves (47 % of respondents), and to books and pamphlets (such as those found in school career centres) (47 %) when seeking help to answer their questions or concerns. Guidance counsellors were approached by 43 % of respondents, friends by 42 %, people in a career of interest by 38 %, mothers by 36 %, and fathers by 35 % of respondents. The least used source of help was the public library, used by 17 % of respondents.

Support for Dervin's (1983; 1992) categories of information situations (contexts), gaps (barriers), and helps (uses) was indeed evident in research data. On the basis of each interview transcript as a whole, I analyzed each interview participant's overall current situation according to Dervin's scheme.² I determined that eleven of the thirty participants felt that they were facing a decision in which they needed to *choose between two or more options*. For example, one boy said "I have to pick a particular program...I'm just trying to use the process of elimination to see what I'm interested in." Another girl noted that she is deciding "what field and what school to go to...those are the two decisions I feel that I have to make soon." Eight participants perceived themselves as *moving ahead* relatively unhindered. As one boy told me, "I'm going into law enforcement...I've always wanted to be a police officer," and he noted that the only help he needs is to "keep on the straight and narrow, don't get into any trouble." Six participants were in a *spin-out*, in which they had no plan at all. This situation was not particularly disturbing to some participants, such as the girl who blithely noted, "I haven't made much [sic] decisions...I'm not a person that looks ahead...I have no fixed future at all." Others were more concerned by their uncertain future, like the boy who said, "I haven't thought a lot about it [his future]...I don't have a set goal yet," and later remarked that thinking about this situation makes him feel "really bad." Three participants viewed themselves as *facing a barrier*, knowing where they wanted to go, but feeling blocked for some reason. For instance, one boy told me, "Right now I'm kind of like at a standstill, it's like I want to move on," but he could find no information on his field of interest from the sources he had approached, leaving him frustrated and discouraged. The final two participants viewed their situations as *problematic*, since they felt that they were being dragged down a road not of their own choosing. One boy told me, "the decision to go into the military was kind of forced upon me because of my financial situation. My parents couldn't afford to send me off to a civilian university, and I couldn't afford it."

Gaps

The gaps faced by the interview participants were also analyzed according to Dervin. Sixteen participants faced a need to *choose between options*, such as whether to return to high school or attend college next year. Seven were feeling the need to *follow someone* with more experience. For example, one girl

reported that she wanted to speak to her guidance counsellors, suggesting that "if I tell them what my interests are in subjects, and if they can give me a few...hints, like...you can get into this and this, with the stuff [courses] you have. And I think maybe something might catch my interest and I can follow it from there." Three faced a *barrier* blocking their paths, such as the girl who felt that her lack of knowledge about different job prospects was preventing her from making a career decision. She told me that "a lot of the information [she wants] just doesn't seem to be there. It's so impossible to find." Three felt *dragged down a road not of their own choosing*. One of these participants reported feeling pressured to make a particular career choice, although "I didn't feel like that was what I wanted, even though I said oh, yeah, that's what I'm going to do. But I know inside...that's not actually what I wanted." The last participant felt *out of control* and completely without a direction, noting that her future is "still sort of hazy...I don't want to think about a career, it's too tough right now." Clearly there was not a perfect match between obvious pairs of situations and gaps, in that a majority of participants faced a gap that required choosing between options, even though their overall situations may have more closely fit another type of situation. There is no doubt, however, that Dervin's categories of situations and gaps provided a close fit to the interview data.

Uses (Information Helps)

Dervin's helps, or uses to which information is put, also provided clearly applicable categories with which to analyze the data. Indeed, some distinct patterns in the sources of help to which the interview participants turned emerged from the data. The formal information sources, those that carried an expectation of particular kinds of help, included materials in school career centres (pamphlets and books), school and public libraries, guidance counsellors, teachers, and the Internet. The interview participants judged libraries to be least helpful, and related only negative comments about the librarians encountered. As one boy said, "I don't think they like anybody...they kick people out of the library for standing around looking for information...they don't help you...they just ignore you." Another boy commented that this lack of assistance means "I try to find it [information in the library] myself, but if I can't find it, I'm not going to ask them. I'm not going to have them ruin my day." The one participant who commented positively on his use of the library noted that he used the library only to expand his subject knowledge in his field of interest. Formal sources of help such as guidance counsellors and teachers were described as particularly helpful when their relationship with the participant was characterized as that of a friend or parent. As one girl noted of a helpful teacher, "She was just like a mom. Just made me feel good." Another commented about her guidance counsellor, "[he's] very much a friend to me as well...I don't know what I'd do without him." Informal information sources were less likely to be

purposively approached, with the exception of people in careers of interest, who were uniformly judged by the interview participants as very helpful. Informal conversations with friends, family members, and acquaintances who related personal experiences at college or university were frequently described as helping to provide support or reassurance, as well as motivation. Talking with people in careers of interest helped by providing a clearer picture of the day to day activities in a particular occupation.

The ways in which the information sources mentioned by interview participants were helpful were also categorized according to Dervin. Not surprisingly, people in a career of interest or people who shared their personal experiences of what it is like to attend university or college were accorded the greatest absolute number of helps by the participants (thirty-two helps). Of these, sixteen were instrumental kinds of help (*helping to gain ideas or understanding*, and *helping to plan, decide or prepare*, and *got connected to others*), and thirteen were emotional helps (*things got calmer or easier*, and *got support, reassurance, or confirmation*). Guidance counsellors also were reported to provide the instrumental kinds of help (18 citations), and the emotional kinds of help (7 citations). Parents provided more emotional kinds of help (9 citations), than instrumental helps (7 citations). Other family members provided more instrumental helps (6 citations) than emotional helps (3 citations). Books and pamphlets such as those provided in school career centres provided mostly instrumental helps (11 citations), but one student reported receiving support and reassurance from these sources as well. Friends provided emotional support (4 citations), as well as motivation (*got started or motivated*, 2 citations), and *helping to avoid a bad situation* (2 citations). This latter type of help was experienced by participants when they observed their friends experiencing difficulties making decisions, or making inappropriate decisions. A computer program, Choices, that is available in all the participants' schools and that assists students to identify fields of interest and provides information about particular careers, provided instrumental helps (2 citations). The public library reportedly provided instrumental helps (2 citations), as did school assignments and presentations (5 citations).

When asked what the perfect source of help would be, nineteen of the thirty interview participants specifically said that a person would be superior to any other type of source. The reasons given for this choice were that one can ask questions of a person, get an idea of her or his personal feelings, and get feedback responses. Two of the female interview participants suggested that the perfect source of help would be themselves (thinking); one girl told me that "you have to think through exactly what you want." Ten respondents indicated that a trusted advisor with expertise would be perfect, because they could rely on that advisor's knowledge. Relying on somebody else is also "easier," according to one girl, who noted that if she was seeking the help she needed independently, she would "be afraid that [she would] skip over something really important."

Four girls and one boy suggested that personal experience (in the form of observing or working in a job of interest, or touring a college or university of interest) is the perfect source of help. That would "be perfect...to see exactly what they do every day...so that way you'd know exactly what is going on...then you'd know what you were getting into," noted one girl. Several participants indicated that they felt that their decisions were being made in a vacuum if they did not have a clear understanding of the day to day experience of working in a particular job. A conversation with someone having personal experience in a job, or experience attending college or university, was described as perfect by three girls and six boys. As one boy said, he could trust that experience "because you know they've gone through it, and it's true, it's nothing fake that they're trying to tell you. And they're well informed about situations." Another noted that after hearing that kind of personal experience he felt that "now I can go away and go into a college [where] I know nobody, and [I'll] still feel pretty comfortable, because I know what to expect, work wise, socially." The kinds of pamphlets and books available in the high schools (typically providing information about college and university programs) would be perfect for one boy and one girl. The boy suggested that he finds these materials best since it is "easier to see straight out something that's someone's wrote [sic]...instead of just hearing it from one person, because someone else might be hearing something different from a completely different person." Finally, two boys suggested that the convenience of using a computer would make that the perfect information source.

Questionnaire respondents reported that formal information sources were most useful at providing instrumental types of help. For instance, books and pamphlets helped most in instrumental ways (*helping to gain ideas or understanding* [50 % of those who used this source],³ and *helping to plan, decide or prepare* [52 %]). Guidance counsellors and the media also helped in these ways; 40 % and 56 %, respectively, of respondents were helped *to gain ideas or understanding*, while 36 % and 24 %, respectively, were helped *to plan, decide or prepare*. These two kinds of instrumental helps (51 % and 25 %, respectively) were also the primary types of help reported by those respondents who used the public library, and those who used the Choices program (45 % and 38 % respectively).

Informal sources of help used by questionnaire respondents included themselves, people in a career of interest, friends, and parents. Respondents reported that they were most helped by their own thinking in *getting started or motivated* (46 %). People in a career of interest provided mostly instrumental help by *providing ideas and understanding* (49 %), and helping to *plan, decide, and prepare* (36 %). Friends provided emotional help in assisting respondents *to get support, reassurance, or confirmation* (35 %). This type of help was also the most salient for those who turned to their fathers for help (54 %), and those who

turned to their mothers (64 %). When questionnaire respondents were asked to rate the overall helpfulness of the sources that they used, people working in careers of interest were judged most helpful, followed in ranked order by: themselves, books and pamphlets, guidance counsellors, work experience, and other personal experiences.

Thus, formal sources of help, such as guidance counsellors, and books and pamphlets, appear mainly to provide adolescents with instrumental kinds of help, assisting them to understand or make sense of their situations and their options, and therefore also to help them make plans, decisions, and preparations for their futures. Informal sources of help, such as parents and friends, provide mostly emotional support for decision-making. When the formal sources provide their help within the context of a trusting, friendly relationship, then this help is judged to be more useful to decision-makers. Help providers within formal help systems that seek to provide instrumental help to those making career-related decisions must therefore consider the emotional aspects of their service delivery if they wish to be considered useful to their patrons.

Decision-Making

The data was further analyzed for evidence for Harren's (1979) career decision-making styles (rational, intuitive, and dependent), previously tested only with college students. Fourteen of those interviewed were found to exhibit a rational decision-making style, characterized by systematic information seeking, and logical and objective decision making. Twelve respondents were closer to the intuitive decision making style, since they conducted little purposive information seeking, relying more on self-awareness and emotional factors to make their career related decisions. Finally, I judged four respondents to be dependent decision makers. These adolescents were passive, taking no steps to overcome the gaps they faced, and did not take personal responsibility for their decisions.

It was clear, however, that Harren's categories of decision-makers are not mutually exclusive. Four of the rational decision makers (three girls and one boy) exhibited elements of the intuitive decision making style, in that they also relied to a certain extent on self-knowledge when making their career decisions. That a greater number of the girls than boys clearly indicated that self-knowledge was a significant factor in their career decision making is consistent with Belenky et al.'s (1986) argument that females may place generally more importance on self-knowledge than males. As well, one of the girls and two of the boys identified as intuitive decision makers exhibited traits closely tied with the dependent decision making style, since they conducted such a minimal degree of purposive information seeking. Therefore, perhaps Harren's decision making styles may be more usefully considered as steps on a continuum, rather than as mutually exclusive categories.

The Information Search Process

Methodologically, the interview data was expected to extend Kuhlthau's (1991) theory of the information search process (ISP), which has been grounded in contexts in which information seekers were required to produce a paper or presentation. The context in my research typifies a self-directed process of seeking information in order to make a life decision. Preliminary analysis of the interview transcripts has revealed a process fundamentally different from Kuhlthau's six-stage ISP. In that process, Kuhlthau describes identifiable feelings, thoughts, actions and tasks specific to each stage of the process of conducting library research. The process of information seeking for career decision making differs in several key ways from the ISP context. First, information seeking for career decision making is a far more heterogenous process, in that the situations and gaps that lead to information seeking are numerous, and vary considerably between individuals. The process of career decision making involves decisions regarding not only the ultimate goal of entering a particular career or job market, but a myriad of choices and decisions leading to that stage. Such decisions include determining one's interests and aptitudes, matching these with potential careers, investigating these options and the means to achieve them, and making decisions that will facilitate the achievement of the final career choice. Between individuals, these decisions appear to differ from each other in the length of time taken to reach them, the significance of each in the life of the individual, and the information sources perceived to be appropriate, available, and helpful.

As well, the sources of help to which individuals turn when making career decisions differ fundamentally from those used in the process of conducting library research to produce a paper. The adolescents in this study relied heavily on the people whom they trusted to advise and inform their decisions: themselves (self-knowledge), their families, guidance counsellors, and people perceived to have personal experience, and therefore expertise, with the situations being investigated (careers, and academic institutions). The ultimate goal of this information seeking process is also intrinsically different from that to which Kuhlthau's research participants were working. Adolescents making a career decision are very aware that this decision is intimately connected to their self identity, which imbues each stage of this process with far more personal import than would be experienced by the typical student engaged in researching a term paper. This long term significance of career decision making is frightening to some adolescents who feel unprepared to make serious decisions. This situation is new for most adolescents, and overwhelming for some of them. Qualitatively, then, the process of information seeking for career decision making differs from that of Kuhlthau's participants. Students engaged in library research to produce a paper have at least a minimal sense of how that process works. They know that they must glean some data from the library's resources, and use it to produce an

essay or presentation. Faced with a social expectation to make some decisions about what to do with their lives after high school, some of those same students have little sense of how to approach these decisions, or of an appropriate process of information seeking to help them overcome the gaps they face.

Thus, the feelings, thoughts, and actions, if not tasks in the career decision making process, differ enormously from those experienced by Kuhlthau's students, and also differ between individuals at each stage of the process. This is not to imply that no identifiable pattern exists in this process, but that any overall pattern that will emerge from the research data has yet to be identified.

Barriers to Information Seeking

Finally, the data was also analyzed to determine its consistency with Harris and Dewdney's (1994) summary of "roadblocks" to the effective transfer of information, to determine the degree to which the adolescents' information seeking behaviour in this context is blocked by one or more of the following: not knowing what information is needed; not knowing where to find the information that one realizes is needed; not knowing that sources of needed information exist; finding that no source exists for needed information; lack of communication skills, self-confidence or ability; discouragement by sources approached for information; delays encountered in information-seeking; inaccurate or inappropriate information received; and information scatter. Indeed, evidence was found for each of these barriers, and more barriers were identified.

The questionnaire was designed to provide some indication of possible barriers faced by respondents. A full 60 % of respondents reported that they find it difficult to find out about everything needed to make a career decision, attesting to the complexity of this process, and perhaps to the scatter of information available. Indeed, 40 % of respondents note that they need to go to too many different places to get answers to their questions about career decision making, and 35 % do not know where to go to get answers to their questions. Twenty-two percent admit to lacking self-confidence when asking for information related to career decision making. Thirty-six percent claim that they do not know what grades they need to achieve their career goals, 36 % do not know what courses they need in order to achieve their career goals, but only 8 % do not know how to find out about continuing their education. Twenty-one percent do not know how to find out about different jobs, and 35 % do not know how to find about how to get a job. Fifty-one percent of respondents do not know how to find out about obtaining money to finance further education, and 34 % do not know how to obtain job searching skills. Twelve percent do not believe that there are sources of help to answer their questions related to career decision making.

Eighteen percent of those respondents who reported that they did not try to get their original question or concern answered claimed that their reason for not doing so was that it was too difficult, or that there was insufficient information

available. However, 53 % claimed that they didn't have enough time or were not sufficiently concerned to try. Chi-square analysis of the questionnaire results revealed a significant association between respondents not trying to answer their questions or concerns, and reportedly not knowing what high school courses are needed to achieve their career goal ($p < 0.001$), not knowing what grades are needed to achieve their career goal ($p < 0.001$), and reporting that it is difficult to find out about everything needed to make a career decision ($p < 0.05$).

In addition, the interview respondents were asked whether they perceived any barriers in their search for help in making a decision related to their career plans. Their answers showed that most of Harris and Dewdney's (1994) roadblocks were indeed perceived by one or more of these adolescents. For example, four respondents reported that they feel embarrassed or stupid asking questions related to their information seeking for career decision making. A lack of self-confidence or lack of encouragement by others was cited as a barrier by five respondents. One respondent noted that she is hindered by her fear of finding information that will discourage her from her goal. Obtaining particular information that stops further information seeking was indeed a further barrier, reported by three girls and six boys. An example of this was realizing that one's high school marks are too low to enter a particular university program. Another girl reported that she feared making the 'wrong' decision, which stopped her from seeking the help she needed. Five participants admitted to not knowing where to go, or who to turn to, when seeking help for career decision making. Even when a source of help is identified, some adolescents simply do not know what information to seek. One boy said that although he attended a presentation by a university, "I didn't know what questions to ask, so I just sort of sat there, and I still don't know what questions to ask really...I don't know what I need to find out." One girl and two boys specifically said that they felt hindered by their own inexperience in career decision making and not knowing what help is needed. Distrust of their guidance counsellors was cited as a barrier by seven respondents. Another girl suggested that pressure from her friends was limiting her information seeking, since she didn't wish to leave them behind when high school finishes. Eight respondents claimed that their own lack of initiative or laziness prevented them from obtaining necessary help.

Barriers to information seeking that could be categorized as external or structural, rather than internal, included time constraints, noted by six girls and one boy. Some of these respondents work at part-time jobs, do homework, and participate in several after-school activities. One girl noted that her use of the public library is limited since it is closed on Sundays, a time during the week when she normally has time to make use of it. Four respondents reported that their discomfort using the school or public libraries hindered their information seeking. This discomfort seems mainly to arise from the perceived unhelpfulness of librarians. Organizational problems with career-related activities and assign-

ments arranged by their schools were suggested by three girls and one boy to hinder their help seeking. Examples of this included barring students one year from high school graduation from attending program presentations by universities, and assigning research projects for jobs on a random basis, so that students could be researching possible careers that held no interest for them. Four girls and one boy noted that they experienced difficulties using their school's career centre, an area in the school library dedicated to stocking a wide variety of books and pamphlets that describe different careers, and college and university programs. One girl didn't know where to start, clearly feeling overwhelmed by the volume of material in the career centre, and lacking a strategy to locate items that could have helped her. As she said, "I don't actually feel comfortable just going in and using it by myself because I really wouldn't know...how to find things...I wouldn't know where to start." One girl and three boys said that some of the information readily available, such as that in the career centre, was not what was needed. The help that they sought seemed to be unavailable to them. Another girl was frustrated by her difficulties making connections with people in a career of interest, with whom she would have liked to discuss their work. One boy stated that he expected that he might be discriminated against, on the basis of his race, in an occupation of interest to him. This expectation had acted to prevent him from investigating that possibility. Other obstacles cited by respondents included information scatter. One girl noted, of the career centre information, that she wanted to find what she needed in one book, "because they've got tons of books and you find a little information in all the books." A lack of money or transportation also acted as barrier for three respondents. As one boy said, "I got up to the university a couple of times just to look up...stuff...but now I don't have a car...so...I can't go up there no more [sic] in this cold."

Three girls and six boys reported that they have faced no barriers when seeking help for career decision making. Despite this perception, one girl in this category mentioned that her poor marks and a lack of money had prevented her from pursuing a childhood career goal. Although she did not report specifically that this knowledge was a barrier, it clearly acted to stop her from conducting a serious investigation of this possibility. Indeed, at minimum, she could have sought information about student loans to overcome her financial difficulties. Perhaps she was simply unaware that such help exists. One 17 year old boy who reported facing no barriers revealed during his interview that he distrusts his guidance counsellor, that he believes it is too early to begin career decision making, and that he lacks experience in decision making. Any or all of these concerns could have hindered his efforts to seek the help he needs. Another boy, hoping to become a police officer like his father, did not perceive his estrangement from his father as a barrier to seeking help from the personal experience that his father undoubtedly could have provided. Thus, although some adoles-

cents may not consciously perceive the barriers that hinder their efforts in obtaining help with their career decisions, for a proportion of these individuals, barriers clearly exist.

CONCLUSION

The theoretical constructs brought to bear on this preliminary analysis of these research results were borrowed from Dervin (1983; 1992), Kuhlthau (1991), and Harren (1979). I found Dervin's situations-gaps-uses metaphor to provide a conceptual framework that fit closely to both the questionnaire and interview data. Harren's decision-making styles provided a sufficiently broad range of categories to analyze the styles exhibited by all interview respondents, but at the same time proved to be too rigid. Perhaps a more fluid conceptualization of these adolescents' decision-making styles is required to more fully describe their efforts. Finally, while the overall structure of Kuhlthau's ISP may provide a crude analysis of the information seeking process I investigated, nevertheless the context in which the ISP has been derived differs sufficiently from the present context and goal to suggest that an entirely different process of information seeking is occurring. This process will be analyzed further in the coming months.

The complexity of career decision-making was reflected in the diversity of information needs (gaps) and preferred sources of help. The information seeking patterns that did emerge from these data include the participants' emphases on personal sources of help for career decision making, taking the form of conversations with guidance counsellors, family members, and people with experience in jobs or at academic institutions of interest. Formal information sources were described as especially helpful when the information was delivered in the context of a trusting, friendly relationship. These formal information sources provided mostly instrumental kinds of help, while more informal help sources provided emotional support and empathy. I also found that the adolescents participating in this study face a wide variety of barriers as they seek help in their decision making. Formal help systems in secondary schools, such as guidance counsellors, career information centres, and libraries, must seek to overcome both the structural barriers and internal obstacles described by these adolescents. For instance, efforts could be made toward facilitating more opportunities for students to obtain work experience (such as co-operative programs), and to meet individually with people in careers of interest to observe their daily work activities, and to speak with them about their work. Facilitating contacts with people in universities and colleges would also help adolescents to achieve the understanding that they seek with regard to their futures.

The results of this study are still being analyzed. These results may be limited in their general applicability, since the participants derived essentially from the

same milieu. Information seeking for career decision making must be explored further, in other locales. As well, information seeking needs to be investigated longitudinally, to examine whether a developmental aspect is apparent in information seeking generally, and specifically in the context of the career decision making process.

NOTES

- 1 When reporting results from the interviews, I cite separate numbers of boys and girls where the results differed notably by gender; otherwise, only a total number of participants is cited.
- 2 The results of all content analyses have been independently verified.
- 3 All percentage figures for ways that sources helped are calculated for those students who actually used that source of help.

REFERENCES

- Baker, Linda (1996), A study of the nature of information needed by women with Multiple Sclerosis. *Library and Information Science Research* 18, 67-81.
- Belenky, Mary Field, Blythe McVicker Clinchy, Nancy Rule Goldberger and Jill Mattuck Tarule (1986), *Women's ways of knowing: The development of self, voice and mind*. n.p.: Basic Books, Inc.
- Cairns, Kathleen V., J. Brian Woodward and Laurie G. Hashizume (1992), Employment counsellors' and youths' views of the transition to work: Preparing to develop a work skills simulation. *Canadian Journal of Counselling* 26(4), 222-39.
- Chatman, Elfreda (1992), *The Information World of Retired Women*. Westport, CT: Greenwood Press.
- Dervin, Brenda and others (1982), "When Cancer Strikes: How Cancer Patients Make Sense Out of Their Health Situations: Final Report" (June). Seattle. Unpublished.
- Dervin, Brenda (1983), *An overview of sense-making research: concepts, methods, and results to date*. Seattle: University of Washington School of Communications.
- Dervin, Brenda (1992), "From the mind's eye of the user: The sense-making qualitative-quantitative methodology." In *Qualitative research in information management*, edited by Jack D. Glazier, and Ronald R. Powell. Englewood, CO: Libraries Unlimited, 61-84.
- Dewdney, Patricia and Catherine Sheldrick Ross (1994), Flying a light aircraft: Reference service evaluation from a user's viewpoint. *RQ* 34(2), 217-30.
- Dupont, Pierrette and Marcelle Gingras (1991), Career development for young people in secondary schools: A new approach is needed. *Guidance and Counselling* 7(2), 7-35.
- France, M. Honore (1990), Toward tomorrow: Career education for the secondary school. *Guidance and Counselling* 6(1), 14-24.
- Harren, Vincent A. (1979), A model of career decision making for college students. *Journal of Vocational Behavior* 14, 119-33.
- Harris, Roma M. and Patricia Dewdney (1994), *Barriers to information: How formal help systems fail battered women*. Westport: Greenwood Press.
- Herr, Edwin L. and Elaine Johnson (1989), General employability skills for youth and adults: Goals for guidance and counselling programs. *Guidance and Counselling* 4(4), 15-29.

- Jepsen, David A. (1989), Antecedent events to adolescent career decision processes. *Guidance and Counselling* 4(5), 5-14.
- Kuhlthau, Carol C. (1991), Inside the search process: Information seeking from the user's perspective. *Journal of the American Society for Information Science* 42(5), 361-71.
- Savolainen, Reijo 1995. Everyday life information seeking: Approaching information seeking in the context of "Way of Life." *Library and Information Science Research* 17, 259-94.
- Zweizig, Douglas and Brenda Dervin (1977), Public library use, users, uses: Advances in knowledge of the characteristics and needs of the adult clientele of American public libraries. In *Advances in Librarianship*, edited by Melvin J. Voight, and Michael H. Harris. New York: Academic Press, 231-255.