Evaluation of Academic and Career Counselling Information and Its Relation to Students' Educational Orientation

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Abstract

One hundred and ninety-three participants responded to a questionnaire about the types of academic and career advising they had received from high school guidance counsellors, high school teachers, university guidance counsellors, and university professors. Responses were classified in terms of the content and perceived usefulness of the information received, and were analyzed on the basis of students' gender and scores on the Learning Orientation-Grade Orientation Scale (Eison, Pollio, & Milton, 1986). Generally, students perceived advice from high school and university guidance counsellors to be less useful than advice received from high school teachers and university professors. In addition, students reported receiving more encouragement and support from high school teachers and university professors than from guidance counsellors. Implications of these findings for the relationship between students' characteristics and advising needs are discussed.

Résumé

Cent quatre-vingt-treize participants ont répondu à un sondage sur les divers conseils relatifs à leurs études et à leurs carrières donnés par des conseillers d'orientation et des professeurs du secondaire et d'université. On a classé les réponses selon leur contenu et leur utilité; ensuite, on les a analysées en tenant compte du sexe de l'étudiant et des scores de "the Learning Orientation—Grade Orientation Scale" (l'Échelle de l'orientation d'apprentissage—l'orientation de notes) de Eison, Pollio et Milton (1986). En général, les conseils donnés par les conseillers d'orientation du secondaire et d'université ont été considérés par les étudiants moins utiles que les conseils donnés par les professeurs aux mêmes niveaux. De plus, le sondage révèle que les étudiants ont reçu plus d'encouragements et de soutien de la part des professeurs aux niveaux secondaire et universitaire que des conseillers d'orientation. L'auteur examine les conclusions du sondage et en dégage les implications pour les besoins de counseling des étudiants selon leurs caractéristiques.

Teachers and guidance counsellors at both the high school and university level can have an important impact on students' educational and career goals, aspirations, and values (Terenzini & Pascarella, 1980; Tomini & Page, 1992, 1994). For example, Terenzini and Pascarella (1980) found that students' interactions with university faculty were positively correlated with students' intellectual and personal growth. Others (e.g., Glennen, 1976) have found that the quality of advising is associated with increased student retention. Despite the importance of advisors in the academic and career development of students, some researchers (e.g., Andrews, Andrews, Long, & Henton, 1987; Hutchinson & Bottorff, 1986) have noted that students are generally dissatisfied with the types of advising they are receiving (Tomini & Page, 1992).

An explanation for this dissatisfaction may be that students are often not provided with information that is tailored to their individual needs and characteristics, and that all students are given similar types of advice (Andrews et al., 1987; Hutchinson & Bottorff, 1986). To address this issue, Andrews et al. (1987) examined whether students with different academic and personal characteristics had different advising needs and preferences. They found that younger, more emotionally expressive students had a higher need for information from college advisors than older and less emotionally expressive students. Moreover, advising needs have also been found to differ on the basis of gender (Weissberg, Berentsen, Coté, Cravey, & Heath, 1982). In this study, female students reported a stronger need for discussing career opportunities with their advisors than male students.

These studies demonstrate the value of matching counselling information to student characteristics such as gender, age, and personality; however, an additional, potentially important student characteristic has not been examined in relation to the type of advising that students need or prefer—educational orientation. Recent research (e.g., Alexitch, 1994; Eison et al., 1986; Kroll, 1988; Stark, Bentley, & Lowther, 1991) has shown that a student's educational orientation (i.e., a student's views about education) is related to academic skills, reasons for entering university, views about the purpose of education, and academic and career goals. It is conceivable, then, that a student's advising needs, and how he/she evaluates the information received from advisors, may vary on the basis of a student's educational views, goals, and priorities.

In general, researchers (e.g., Alexitch, 1994; Eison et al., 1986; Stark et al., 1991) have found that students who are primarily learning-oriented attend university to acquire critical thinking skills, a general education, and communication skills. These students value learning for its own sake, are self-motivated learners, and engage in behaviours that enrich them both personally and professionally. In contrast, students who are primarily grade-oriented enter university to obtain specialized preparation for a future career. These students tend to approach the world in a concrete manner, have poor study skills, and are highly test anxious. Eison et al. (1986) also found that there are two additional types of students, those who are low or high on both learning- and grade-orientation. Students who are low on both dimensions have been found to be highly anxious and introverted, and to have only average academic skills when compared to the other groups (Alexitch, 1994; Eison et al., 1986). On the other hand, students high on both dimensions have been found to be highly test anxious, have poor abstract reasoning skills, and to rely on grades as a source of feedback (Alexitch, 1994; Eison et al., 1986).

Based on these findings, it follows that educational orientation may have a considerable impact on the type of academic and career information a student seeks, or prefers to receive and on how this advice is evaluated. Given the importance of academic and career counselling in high school and university, and how particular student characteristics such as gender or age may affect the advising needs of students, the present study examined the relationship between two meaningful student variables (educational orientation, gender) and the type of advising provided to students by four sources of student advising (high school guidance counsellors, high school teachers, university guidance counsellors, and university professors). The type of information sought by students, the type of information received, and students' evaluations of the advice were analyzed on the basis of gender and educational orientation.

METHOD

Participants and Procedure

The 193 participants were 154 undergraduate students (118 females and 36 males) with a mean age of 22.5 years (SD = 6.30), and 39 alumni (18 female and 21 males) with a mean age of 31.3 years (SD = 6.49), all of whom had attended high school throughout Ontario. The enrollment status of the undergraduate sample ranged from first-year to fourth-year, with the majority of the sample enrolled full-time (n = 137, 89.0%). Alumni were included in the study because they had recently graduated from university, and it was felt that they would be able to provide valuable information concerning the content and utility of advice received from university guidance counsellors and professors. Participants were enrolled in or had graduated from a variety of programs in the Faculty of Arts and Science at the University of Windsor; half of the participants were in Social Sciences (n = 97, 50.3%), 21 (10.9%) were in Arts, 46 (23.8%) were in Sciences, and the remaining students (n = 29, 15.0%) were in Other/Non-Specified programs.

To obtain the undergraduate sample, courses were randomly selected from departments in three discipline areas (Social Sciences, Sciences, and Arts). Instructors of these courses were asked if they would allow their students to participate in the study. Measures were administered to the undergraduate students in these courses, under supervision of the first author. All students gave written consent for participation, and were informed that all data would remain completely confidential.

Alumni were selected from a list of recent University of Windsor graduates. As with the undergraduate group, individuals were selected from the three discipline areas. Alumni participants were contacted by mail, and returned their completed questionnaires via stamped, addressed envelopes.

Materials

Advising Questions. Students were asked about the type of advice and information provided by four sources of counselling: (1) high school guidance counsellors, (2) high school teachers, (3) university counsellors, and (4) university professors. For each of these sources, four questions were presented to students:

- (1) Did you seek advice/information from your [high school guidance counsellor/high school teacher/university counsellor/university professor] concerning university [Yes/No] and/or concerning careers [Yes/No]? If they answered "Yes" to either or both of these, participants were then asked to respond to the following questions:
- (2) What type of advice or information were you given?;
- (3) How useful did you find this advice or information?;
- (4) In what way was this advice useful or not useful?.

Question #3 was a 5-point Likert scale ranging from "1" (Not Very Useful) to "5" (Very Useful). To avoid restricting participants' responses to predetermined categories, Questions #2 and #4 were open-ended, and participants were allowed to give multiple responses to these questions. The method of classifying students' responses to these questions is illustrated in the Analyses section below.

Educational Orientation. To assess respondents' priorities and motivation pertaining to education, students also completed the Learning Orientation-Grade Orientation (LOGO-II) Scale (Eison et al., 1986). This 32-item scale measures learning-oriented attitudes and behaviours (e.g., "I browse in the library even when not working on a specific assignment"), and grade-oriented attitudes and behaviours (e.g., "I will withdraw from an interesting class rather than risk getting a poor grade."). Each LOGO-II item is scored on a 5-point Likert scale. Cronbach's alphas for the learning-orientation and grade-orientation subscales are .77 and .81, respectively (Alexitch, 1994). Information on the LOGO-II's validity may be found in Eison et al. (1986).

Respondents scored high or low on both learning-orientation (LO) and grade-orientation (GO), or scored high on only one of these dimensions. A median-split procedure applied to the LO and GO scores (as described in Eison et al., 1986), resulted in four groups of educational orientation: (1) Low LO/Low GO (n = 27), (2) Low LO/High GO (n = 54), (3) High LO/Low GO (n = 48), and (4) High LO/High GO (n = 23) for the undergraduate sample; and (1) Low LO/Low GO (n = 6), (2) Low LO/High GO (n = 12), (3) High LO/Low GO (n = 14), and (4) High LO/High GO (n = 7) for the alumni sample. Two participants did not complete the LOGO-II scale, and therefore, were not included in analyses conducted with this scale.

Analyses

Responses were examined for gender and educational orientation group differences using chi-square statistics for Question #1 and the openended questions, and t-tests and oneway ANOVAs for Question #3. When significant 4×2 chi-squares were obtained, standardized residuals were also calculated using the method outlined in Siegel and Castellan (1988) to determine where cell differences occurred.

Both authors coded the responses to the open-ended questions on the basis of common themes and keywords. Although interrater reliability was not calculated, there was a high rate of agreement on themes between the two coders. The following seven categories were obtained for the types of advice provided by guidance counsellors and teachers/ professors (Question #2): (1) program/degree requirements including program options and course selections (e.g., "What courses I still needed to complete my degree"); (2) general information about a field/area of study (e.g., "What psychology was all about"); (3) career-related issues such as career opportunities and the use of career interest surveys (e.g., "Information on jobs and employment trends in the future"); (4) academic preparation and skills such as time management and study skills needed to continue one's education (e.g., "The marks I needed to gain entrance to university"); (5) general information on universities and graduate/professional schools such as programs offered, facilities available, and financial support (e.g., "Which schools were the best for my field"); (6) emotional support and encouragement (e.g., "I was told to continue on and that it was not a waste of time"); and, (7) miscellaneous.

Responses concerning the usefulness of this advice (Question #4) yielded three categories of effects due to the advice received. Positive effects indicated that the advice had encouraged further educational development (e.g., "Aided me in deciding what graduate school to attend"), improved academic skills and performance (e.g., "Prepared me for the number of essays and texts I would have to read"), and increased self-esteem and confidence (e.g., "Reinforced confidence in myself"). Negative effects indicated that the advice had discouraged further educational development (e.g., "Discouraged from entering my real field of interest"), worsened academic skills and performance (e.g., "Not prepared for intellectual changes and expectations"), decreased self-esteem and confidence (e.g., "Didn't understand me; my concerns not listened to"), and was inaccurate/not applicable (e.g., "Incorrect information on entrance and course requirements"). Lastly, a neutral category of responses indicated that the advice given had neither a positive nor negative effect on the student (e.g., "Not told much more than I already knew"). A remaining category consisted of miscellaneous comments.

RESULTS

All students provided a variety of information about the counselling and advice they had received while in high school and in university. The following sections present the responses to the four questions concerning advising. Each section presents gender and educational orientation differences for each source of advice (i.e., high school guidance counsellors, high school teachers, university guidance counsellors, and university professors).²

Types of Advice Sought

The number of students who sought advice about universities and/or careers from high school and university guidance counsellors, high school teachers, and professors is shown in Table 1. In general, slightly more participants sought advice on universities than on careers from their high school and university guidance counsellors and from their high school teachers. On the other hand, an almost equal number of participants sought advice on universities as on careers from their university professors.

TABLE 1
Types of Advice Sought from High School and University Advisors

Advisor	Type of Advice Sought			
	Universities		Careers	
	n	%	\boldsymbol{n}	%
High School (N = 154) ^a				
Guidance counsellor	112	72.7	99	64.3
Teacher	52	33.8	37	24.0
University $(N = 193)$				
Guidance counsellor	66	34.2	31	16.1
Teacher	59	30.6	57	29.5

^a Responses concerning high school advisors are from undergraduates only.

A series of 2 (Gender) \times 2 (Advice sought/not sought on universities), and 4 (Educational Orientation) \times 2 (Advice sought/not sought on universities) chi-square analyses were conducted for each source of advice. A similar series of chi-square analyses were conducted with advice sought/not sought on careers for each source of advice.

Gender Differences. Chi-square analyses revealed significantly more females (n = 83, 70.3%) than males (n = 16, 44.4%) reported seeking advice from their high school guidance counsellors on careers, $X^2(1, N = 154) = 8.06, p < .01$. In addition, the 2×2 chi-square with gender and

advice sought/not sought from high school guidance counsellors on university approached significance, $X^2(1, N = 154) = 3.20, p = .07$; a slightly greater proportion of females (n = 90, 76.3%) than males (n = 22, 61.1%) reported seeking this advice.

Educational Orientation Differences. Chi-square analyses showed that there was a significant association between educational orientation and the number of students who sought/did not seek information from their high school teachers on university, $X^2(3, N = 152) = 10.78$, p = .01. Examination of the standardized residuals (sr) revealed that this result was due to a greater than expected proportion of High LO/High GO students (n = 14, 60.9% of this group; sr = 2.47, p = .01) who sought this advice. There was also a significant association between educational orientation and the number of students who sought/did not seek information from their high school teachers on careers, $X^2(3, N = 152) = 21.65$, p < .001. Again, this result was due to a greater than expected proportion of High LO/High GO students (n = 14, 60.9% of this group; sr = 3.76, p < .001) who sought this information.

Lastly, a 2×4 chi-square analysis for educational orientation and advice sought/not sought on careers from university professors was significant, $X^2(3, N=191)=7.63$, p=.05. This result appeared to be due to a lower than expected proportion of Low LO/Low GO respondents (n=4,12.1% of this group; sr=-1.98, p=.05) who sought this advice. Overall, very few Low LO/Low GO respondents sought any type of information from either their high school teachers or professors when compared to the other educational orientation groups.

Types of Advice Provided

One hundred and twenty undergraduates generated 165 responses about the types of advice they had received from high school guidance counsellors (see Table 2). The most common types of advice concerned career preparation and opportunities available in a specific field (n = 60, 36.4% of responses), and general information about various universities (i.e., program offerings) (n = 45, 27.3% of responses).

Fifty-seven undergraduate students generated 79 responses about the types of advice they had received from their high school teachers. Similar to high school guidance counsellors, high school teachers also advised students on career opportunities (n = 16, 20.3% of responses), and provided students with information about various universities (n = 16, 20.2% of responses). However, the most frequently reported type of advice received from high school teachers was emotional support and encouragement (n = 20, 25.3% of responses).

Sixty-nine participants produced 94 responses describing the types of advice they had received from their university guidance counsellors. The

TABLE 2			
Categories of Advice Provided by High School and University A	Advisors		

	Advisor			
	High	High School		versity
	GC	T	GC	\boldsymbol{P}
Category of Advice	(n=120)	(n=57)	(n = 69)	(n=73)
Program/				
degree requirements	10 (8.3)	4 (7.0)	27 (39.1)	20 (27.4)
Field/area of study	18 (15.0)	5 (8.8)	6 (8.7)	2 (2.7)
Career opportunities/ options	60 (50.0)	16 (28.1)	23 (33.3)	27 (37.0)
Academic preparation/ skills	21 (17.5)	6 (10.5)	11 (15.9)	12 (16.4)
Universities/ graduate schools	45 (37.5)	16 (28.1)	21 (30.4)	21 (28.8)
Emotional support	5 (4.2)	20 (35.1)	4 (5.8)	14 (19.2)
Miscellaneous	6 (5.0)	12 (21.1)	2 (2.9)	5 (6.8)

Note. Numbers in parentheses represent percentage of respondents. Advice provided by high school guidance counsellors and teachers includes only undergraduate responses. GC = Guidance Counsellor; T = Teacher; P = Professor.

information provided most often concerned program or degree requirements in university (n = 27, 28.7% of responses), career preparation and opportunities (n = 23, 24.5% of responses), and graduate or professional schools (n = 21, 22.3% of responses).

A total of 73 participants produced 101 responses describing the types of information they had received from university professors in 101 responses. Like university guidance counsellors, university professors also gave information on program or degree requirements (n = 20, 19.8% of responses), career preparation (n = 27, 26.7% of responses), and graduate and professional schools (n = 21, 20.8% of responses). As with the advising provided by high school teachers, individuals also reported receiving emotional support and encouragement from their professors (n = 14, 13.9% of responses).

A series of 2 (Gender) \times 2 (Advice received/not received) chi-square analyses, and 4 (Educational Orientation) \times 2 (Advice received/not received) chi-square analyses were conducted for *each* category of advice.³ No significant gender or educational orientation differences were obtained in the types of advice received.

Usefulness Ratings

Paired t-tests conducted on the usefulness ratings revealed that undergraduate students found the advice provided by high school guidance counsellors to be significantly less useful (M = 2.88, SD = 1.35) than the advice provided by high school teachers (M = 3.67, SD = 0.99) and university professors (M = 4.00, SD = 1.03), t(45) = -2.53, p < .05 and t(39) = -5.81, p < .001, respectively. Lastly, undergraduates and alumni rated the advice provided by university guidance counsellors as significantly less useful (M = 2.99, SD = 1.48) than the advice provided by professors (M = 4.10, SD = 0.99), t(36) = -3.28, p < .01.

Ratings of usefulness did not differ on the basis of gender or educational orientation for any of the sources of advice.

Effects of Advice Received

The effects of the advice received from guidance counsellors and teachers/professors is presented in Table 3. In general, respondents indicated that the advice they had received from high school guidance counsellors tended to have both positive effects (e.g., encouraged further education, improved academic skills) and negative effects (e.g., inaccurate/not applicable, worsened academic skills). In addition, more students indicated that the advice received from university guidance counsellors tended to have negative rather than positive effects. On the other hand, more participants indicated that the advice received from high school teachers and university professors had positive rather than negative effects. Lastly, a greater proportion of participants indicated that the advice received from university advisors had neutral effects (i.e., no change) than the advice received from high school advisors.

Gender Differences. A series of 2 (Gender) \times 2 (Effect of Advice indicated/not indicated) chi-square analyses were conducted for each category of advice consequence. A significantly greater proportion of males (n=9, 39.1%) than females (n=4, 9.8%) indicated that the advice received from university professors had a negative effect, $X^2(1, N=64)=6.14, p < .05$. Conversely, a significantly higher proportion of females (n=31, 75.6%) than males (n=9, 39.1%) reported positive effects due to the advice received from university professors, $X^2(1, N=64)=8.37, p < .01$.

Educational Orientation Differences. A series of 4 (Educational Orientation) \times 2 (Effect of Advice indicated/not indicated) chi-square analyses were also conducted for *each* category of advice consequence. A significant chi-square was obtained for educational orientation and negative effect of advice received from high school guidance counsellors, $X^2(3, N = 114) = 8.93$, p < .05. Examination of the standardized residuals did not reveal where group differences occurred; however, it would appear that a

TABLE 3			
Effects of Advice Provided by High School and University A	dvisors		

	Advisor				
	High	High School		University	
	GC	T	GC	P	
Effects of Advice	(n=116)	(n=49)	(n=65)	(n = 64)	
Positive (e.g., encouraged education, improved skills)	57 (49.1)	38 (77.6)	24 (36.9)	40 (62.5)	
Negative (e.g., inaccurate, worsened academic skills)	51 (44.0)	10 (20.4)	33 (50.8)	13 (20.3)	
Neutral (e.g., no change, no difference)	15 (12.9)	2 (4.1)	14 (21.5)	15 (23.4)	
Miscellaneous	2 (1.7)	1 (2.0)	3 (4.6)	3 (4.7)	

Note. Numbers in parentheses represent percentage of respondents. Effects of advice provided by high school guidance counsellors and teachers includes only undergraduate responses. GC = Guidance Counsellor; T = Teacher; P = Professor.

somewhat higher proportion of High LO/Low GO (n = 24, 63.2% of this group) and High LO/High GO (n = 9, 52.9% of this group) individuals indicated being negatively affected by this advice than Low LO/Low GO (n = 5, 26.3%) and Low LO/High GO (n = 15, 37.5%) individuals.

DISCUSSION

The data showed that students sought a variety of advice on university and career-related issues from their guidance counsellors and teachers in both high school and university. Participants reported that all four sources of advice had provided them with information on career opportunities in their field, and on universities and graduate/professional schools. Additionally, university guidance counsellors and professors provided individuals with information about program and degree requirements.

One would presume that the substance of the information received from high school and university guidance counsellors should have been useful to students; yet, respondents rated the usefulness of advice received from guidance counsellors less positively than advice received from either high school teachers or university professors, indicating that the information had been too vague and generally discouraging. In fact, respondents evaluated the advice received from university professors more positively than advice received from any other source. Although the advice provided by high school teachers and university professors was

similar in nature to that provided by guidance counsellors, more students felt that their teachers and professors had encouraged further educational and career development, and had helped students improve their academic skills.

But what may be accounting for the higher usefulness ratings and the more positive reactions to advice provided by teachers and professors over that provided by guidance counsellors? Students felt that in addition to providing information on careers and postsecondary education, their high school teachers and university professors had also been important sources of emotional support and encouragement. Given the present findings, it would appear that teachers (whether at the high school or university level) are perceived by students as playing a more empathic and experientially-based, role in advising as compared to guidance counsellors.

As predicted, the results showed that guidance counsellors and teachers in both high school and university tended to provide similar types of information to all students, but that the advice sought, and how individuals reacted to it, sometimes differed on the basis of students' gender and educational orientation. For instance, more females than males sought information on both university and careers from their high school guidance counsellors, but they did not report receiving more university and career-related advice when compared to males. In addition, females were found to be more positive about the information received from their university professors than were males. It may be that the additional emotional and personalized support provided by professors may have matched the advising needs of female students more closely than those of male students.

The types of advice sought, and the effects of the advice received, also differed on the basis of students' educational orientation. Overall, the results of this study indicated that educational orientation may play a role in the type of advice sought from instructors (i.e., high school teachers and university professors) but not from guidance counsellors.

Students who were both highly learning- and grade-oriented sought more information from their teachers and professors than students who were neither learning-nor grade-oriented. In addition, learning-oriented individuals (whether only learning-oriented, or both learning- and grade-oriented) were more negative about the advice they had received from their high school guidance counsellors when compared to individuals who were not learning-oriented. In particular, these individuals felt that the advice they had received from their high school guidance counsellors had been too general and not applicable to them, and that it had discouraged further educational and career development. These results are consistent with those of Eison et al. (1986) who found that highly learning- and grade-oriented students have high levels of test

anxiety and place a great deal of importance on luck and fate in their lives. It may be that these students need more emotional support, as well as other types of information, from their advisors. In addition, because they are highly motivated concerning their education, learning-oriented students (regardless of grade-orientation level) may have higher expectations for their academic and career advisors.

In contrast, individuals who were low on both educational orientations sought less advice on either universities or careers from any of the counselling sources when compared to the other educational orientation groups. Previous research (e.g., Alexitch, 1994; Eison et al., 1986; Kroll, 1988) found that Low LO/Low GO students were highly introverted and were less likely to view powerful others as determinants of their fate. Karabenick and Knapp (1991) also noted that passive learners are less likely to seek advice when they need it, compared to active learners. Therefore, it is not surprising that these students appeared least involved with seeking information on their education or careers relative to the other educational orientation groups.

There are two limitations that need to be considered when interpreting the results of this study. First, the questions used may have been too general to elicit specific information. For instance, the question about seeking advice contained only two categories—universities and careers. It could not be determined whether the *specific* type of information that students sought about universities and careers differed on the basis of students' gender and educational orientation. Second, the more positive ratings given to advice received from teachers and professors when compared to guidance counsellors may be explained by the nature of the advisor-student relationship. That is, students often have more regular contact with teachers and professors than with guidance counsellors, and therefore, the positive ratings may be a reflection of the longer-term relationship between a teacher/professor and a student. In addition, students are often able to choose a teacher or professor that they trust and feel comfortable with to advise them, whereas they are not able to exercise this choice over guidance counsellors (who are often assigned to them). Despite these shortcomings, however, the present study makes an important contribution to understanding the relationship between students' educational orientation and their advising needs. Further research using validated measures is needed to clarify the relationship between the specific advising needs and preferences of students with different educational orientations.

In conclusion, the findings of this study suggest that all students may be receiving similar types of advice, and that as a consequence, some students, such as those who are high or low on both learning- and gradeorientation, may not be getting the particular assistance and guidance they need from high school and university advisors. This lack of individualized guidance may discourage some students, especially the low learning- and grade-oriented students, from taking a more active role in their education. In this view, since an increasing number of students are seeking guidance and direction from counselling services (Love, 1986), guidance counsellors in both high school and university might be well advised to employ a more personal, empathic, and diversified role in advising students (Smith, 1991; Zingle & Dick, 1989).

Notes

- ¹ Given the time which had elapsed since high school, the responses of alumni concerning advice received from high school guidance counsellors and high school teachers are not included. The responses of the alumni are combined with those of undergraduates in analyses concerning university guidance counsellors and professors.
- ² Educational orientation did not differ on the basis of gender.
- ³ A Yates' correction was applied to chi-square analyses when expected cell frequencies were less than five and df = 1.

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