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ABSTRACT

This study examined the effects of career testing and interpretation intervention on the retention and academic standing of first-year college students. A total of 78 mostly first-year students enrolled in 5 sections of an orientation course at the University of Maryland College Park (UMCP) during the fall 1994 semester completed the Strong Interest Inventory with in-class feedback; 71 students enrolled in 5 comparable sections of the same course were identified as the nontreatment comparison group. It was found that while there were no marked differences in retention rates between the treatment and comparison groups for their second semester at UMCP, there were such differences for the following semester, with retention rates of 90 percent for the treatment group and 79 percent for the comparison group. In addition, there were marked differences between the 2 groups in regard to retention in good academic standing for 3 semesters following the intervention, with retention in good academic standing rates of 80 percent for the treatment group and 62 percent for the comparison group. The findings support the belief that students should be encouraged to begin the career exploration process early in their undergraduate years. (MDM)

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A Low-level Career Testing and Interpretation Intervention

Research Report 18-97

Vivian Boyd, Patricia Hunt, Stanley Hunt,
Thomas Magoon, John VanBrunt

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University of Maryland College Park

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A Low-level Career Testing and Interpretation Intervention

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Career clarity in undergraduate students has been shown to be related to retention and graduation. The University of Maryland believes that students are to be encouraged to begin their career exploration process early in their undergraduate careers and continue it over time. With increased information about themselves, occupational information about various fields, and course sequence options, career options would be realistic, making selection of appropriate major likely, and degree completion more probable. The ideal response to students' vocational issues, therefore, would be to combine the resources of the Counseling Center, the Career Center, and the various undergraduate advising programs. The present study describes an effort to do just that.

A career testing and interpretation intervention, involving the Strong Interest Inventory with in-class feedback, was provided to five sections of mostly first-year students enrolled in an EDCP 108 O Orientation course during the Fall 1994 semester. Students in five comparable sections of the orientation course were identified as the non-treatment comparison group. The treatment and comparison groups did not differ significantly by sex, race, or age. Nor were there significant differences between them on the two subscales of the Career Decision Scale.

Analyses of the two outcome measures - retention rates and rates of retention in good academic standing - show that students in the treatment group had higher rates than the comparison group on both outcome measures for four semesters after the semester of intervention. These findings support the belief that students should be encouraged to begin the career exploration process early in their undergraduate years.

Because there are costs involved with large-scale usage of the Strong Interest Inventory, further studies should explore other ways to encourage and facilitate career exploration.

A Low-level Career Testing and Interpretation Intervention Counseling Center Retention Study Group*

Career clarity in undergraduate students has been shown to be related to retention and graduation. Research conducted at other institutions of higher education (e.g., Noel, 1985; Tinto, 1987), as well as findings from the Maryland Longitudinal Study (Maryland Longitudinal Study Steering Committee, 1986; Hunt, Schmidt, Hunt, Boyd, & Magoon, 1994), document the tie between vocational clarity and academic performance in the retention of students.

Many students enter college with an identified major. Seventy-five percent will change their majors at least once during their college careers (Noel, 1985). Tinto (1987) suggests that colleges should help students with the decision-making processes involved in thinking through the majors and kinds of careers they are suited for, and that this should be an effort that continues throughout the undergraduate experience.

Apart from the large numbers of students who individually seek career counseling, in recent years the University of Maryland Counseling Center has provided career testing and small group test interpretation sessions at the request of several campus programs (e.g., Office of Minority Student Education, Student Athletes). These sessions seek to determine whether students have the career interests and confidence that will lead to their success in and beyond college.

The University of Maryland believes that students are to be encouraged to begin their career exploration process early in their undergraduate careers and continue it over time. With increased information about themselves (from the Counseling Center), occupational information about various

* Vivian Boyd, Patricia Hunt, Stanley Hunt, Thomas Magoon, John Van Brunt

fields (from the Career Center), and course sequence options (via academic advisement), career options would be more realistic, making selection of appropriate major more likely, and degree completion more probable. The ideal response to students' vocational development issues, therefore, would combine the resources of the three campus programs most relevant to this process (e.g., the Counseling Center, the Career Center, and the various undergraduate advising programs). The present study describes an effort to do just that.

METHOD

A career testing and interpretation intervention was provided to a sample of mostly first-year students enrolled in the EDCP 108-Orientation course during the Fall 1994 semester.

Sample

Students in five sections of the orientation course were identified as the treatment group (N=78). Three of the five sections were recommended for students enrolled in the College of Letters and Sciences, designated for students with undeclared majors. Students in five comparable sections of the orientation course were identified as the non-treatment comparison group (N=71). Two of the five sections were recommended for students enrolled in the College of Letters and Sciences.

Instruments

The Career Decision Scale (CDS, Osipow, Carney, Winer, Yanico, & Koschier, 1976) was given as the pre-intervention instrument in all ten sections. This instrument consists of 18 four-point Likert items (with 1 = not like me and 4 = like me) plus an open-ended item. There are two subscales: a 2-item subscale with high scores reflecting career certainty, and a 16-item subscale with high scores measuring career indecision.

The Career Decision Scale Manual (Osipow, 1987) reports acceptable levels of test-retest reliability. Research as demonstrated the scale's validity as well as its sensitivity to relevant changes following treatments designed to reduce career indecision (p. 11).

The treatment group was also given the Strong Interest Inventory (Strong, 1994) with in-class feedback sessions within a week of having completed the instrument.

During February 1995, students in the treatment and non-treatment comparison groups were mailed a packet of materials. The packet included a cover letter from the Dean for Undergraduate Studies asking them to complete the Career Decision Scale once again, and a brief set of related questions, as an evaluation of EDCP 108-O's contribution to student development. A chance at winning a \$25 gift certificate to the University Book Store was provided as incentive for returning the materials.

Outcome variables

The impact of the career intervention on subsequent retention was assessed by comparing the re-enrollment rates of the treatment group with that of the non-treatment comparison group for four semesters subsequent to the semester of intervention (Fall 1994). Two outcome variables were studied:

- 1) academic retention, defined as enrollment throughout a given semester;
- 2) academic retention in good standing, defined as enrollment throughout a given semester and with no academic action taken as a result of that semester.

All data concerning registration status and academic performance were obtained from University records.

RESULTS

Age of students in the two groups ranged from 17 to 23, with 93% 18 or under. Females comprised 56% (n=83) of the sample. Seventy-six percent of the sample were white; 9% were Black; 6% were Asian American; 7% were Hispanic; and 1% were "race unknown." Treatment and comparison groups did not differ significantly by sex, age or race.

Items 1 and 2 of the Career Decision Scale (CDS) comprise the Career Decisiveness subscale. Items 3-18 comprise the Career Indecision Subscale. Means and standard deviations for the two groups on the two sub-scales on the pre-test did not differ significantly from each other. See Table 1.

Table 1.
Career Decision Scale Means and Standard Deviations, by Group

<u>Group</u>	<u>N</u>	<u>CDS</u>		<u>SCALES</u>	
		<u>Mean</u>	<u>S.D.</u>	Career Indecision <u>Mean</u>	<u>S.D.</u>
Treatment	78	4.29	2.08	32.80	8.54
Comparison	71	4.50	2.16	32.01	9.41

Despite a phonecall reminding students to complete the followup Career Decision Scale, only 35% (n=52) did so. Unfortunately this number is too small to permit post-intervention evaluations using the CDS.

The brief set of questions included in the followup packet asked respondents to check any of seven listed career-related behaviors they engaged in since November 1994. The list included discussing their career options with others, visiting the Counseling Center for career counseling, and visiting the Career Center for occupational information. Table 2 shows the proportion of the followup respondents who reported having engaged in career-related behaviors.

Table 2.

Frequency of Career-related Behaviors by Group

	GROUP	
	Comparison %	Treatment %
Discussed career options with:		
• family members	90	90
• person(s) in the career(s) of interest	38	40
• professor or instructor	5	33
• academic advisor	52	60
• UMCP staff person	10	33
Visited the Counseling Center for career counseling	5	7
Visited the Career Center for occupational information	14	17

Table 3 shows the academic retention rates of the treatment and non-treatment comparison groups.

Table 3.

Academic Retention Rates by Group

initial n	<u>Treatment</u> 78		<u>Comparison</u> 71		χ^2	p
	n	%	n	%		
<u>Semester</u>						
Spring '95	75	96	65	92	3.36	n.s.
Fall '95	70	90	56	79		.066
Spring '96	65	83	54	76		n.s.
Fall '96	61	78	54	76		n.s.

While there were no marked differences between the Treatment and Comparison Groups on retention rates for these students' second semester at UMCP, there were such differences for the following fall semester, with the Treatment Group being retained at higher rates than the Comparison Group. This trend, albeit not significant at the .05 level, continued.

Table 4 shows the rates of retention in good academic standing of the treatment and non-treatment comparison groups.

Table 4.

Rates of Retention in Good Academic Standing by Group

initial n	<u>Treatment</u>		<u>Comparison</u>		x ²	p
	78		71			
Semester	n	%	n	%		
Spring '95	62	80	48	68	2.71	.09
Fall '95	62	80	41	58	8.23	.004
Spring '96	62	80	44	62	5.55	.018
Fall '96	58	74	44	62		n.s.

There were marked differences between the Treatment and Comparison Groups on rates of retention in good academic standing, for three semesters following the semester of intervention, with 80% of the Treatment Group ending the three semesters with at least a 2.0 gpa. While there was some recovery in the Comparison Group of the rates of retention in good academic standing during the second year under analysis, there is still a statistically significant difference (of 18%) between the Treatment and Comparison Groups during the Spring '96 semester. This gap narrows to 14% for Fall '96.

DISCUSSION

The followup mailing of the Career Decision Scale took place early in the second semester, before the press of papers and mid-terms was heavy. The small overall return rate (35%) perhaps suggests that career decision-making is not a compelling issue for the majority of lower level undergraduate students. However, students in the treatment group were more likely (42%) than those in the non-treatment comparison group (21%) to return the followup

instrument. The Strong Interest Inventory administration and feedback sessions may have put a career context into the treatment sections' class agenda. Recall that three of the five sections in the treatment group (as opposed to two of five in the non-treatment comparison group) were recommended for students with undeclared majors. The sections with the highest response rates on the CDS (50%, 47% and 42%) were all sections comprised of undeclared majors, two sections of which were in the group which did not receive the treatment under study.

Analyses of the two outcome measures - retention rates and rates of retention in good academic standing - show that students in the Treatment Group have higher rates than the Comparison Group on both outcome measures for four semesters subsequent to the semester of intervention. These findings support the belief that students should be encouraged to begin the career exploration process early in their undergraduate years.

There are costs involved with usage of the Strong Interest Inventory, in terms of materials, clerical time, mailing costs if scored elsewhere, computer time if scored in-house, and professional interpretation time. These costs could make large-scale usage of the Strong Interest Inventory unrealistic. Further studies should explore other ways to encourage and facilitate career exploration.

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