CONSISTENCY OF EDUCATIONAL AND OCCUPATIONAL ASPIRATIONS AND EXPECTATIONS FOR FLORIDA'S EIGHTH-GRADE STUDENTS[1]

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The purpose of this study was to determine the consistency of eighth-grade students' occupational aspirations and their educational aspirations, as well as the consistency of their occupational expectations and educational expectations. In addition, the relation between these consistencies and scores on an occupational information test was explored.

Many eighth-graders are passing through a "fantasy stage" of occupational and educational exploration. However, these students are required to plan a high school program of study which will largely determine their future educational and occupational options. The consistency of their educational and occupational plans is one indication of their vocational maturity. For example, students who aspire to professional occupations should have appropriate educational aspirations and expectations.

Research has indicated sexual and racial differences in educational and occupational aspirations and expectations. Therefore, analyses of this study are controlled for race and sex.

Perspective

Career education has become an important element in the school curriculum. The 1973 Florida legislature appropriated $5 million for development and implementation of career education in the state. It was decided at that time that each school district should develop a plan for implementing a career education program. While the districts have taken different approaches, there appears to be agreement on eight elements and outcomes which should result from a career education program: self-awareness, educational awareness, career awareness, economic awareness, decision-making, beginning competence and skill awareness, employability skills, and attitudes and appreciations. This study deals with several of these elements, but focuses most directly on the second and third.

Educational and career awareness requires the ability to recognize that different careers need different kinds of educational preparation. If a career education program has been successful, the student should be able to identify how much education is required for a given career, and the student should utilize the information in making career selections.

Ginzberg, Ginsberg, Axelrad, and Herma (1951) divided the vocational maturity process into three periods. The first of these is "the fantasy period, in which the desire to be grown up determines a child's choices." The second is "the tentative period in which choices are based successively upon a consideration of the adolescent's interests, capacities, and values." The final state is the "realistic period, in which there is an increasing cognizance of the limits of choice and a progressive narrowing down of feasible career options until one is specified and implemented." The typical eighth-grade class will include students at the first two maturity levels.

The theory of vocational maturity has been further developed by Super (1955) and by Crites (1972). Their work has resulted in a more refined definition of stages, and in measuring devices to assess student development in terms of stages. Super found that agreement between levels of preferred and expected vocation correlated significantly ($P < .01$) with all but one of his "indices of vocational maturity." Gribbons and Lohnes (1968) found that educational aspirations, and extent of educational and career planning, correlated highly with vocational maturity.

Some of the earlier research dealing with educational and occupational goals failed to clearly differentiate between the terms "aspirations" and "expectations." More recently, the term "aspiration" has been defined as what the individual wants or desires while the term "expectation" refers to what the individual thinks he or she will obtain. Research has indicated adolescent students do differentiate between occupational aspirations and occupational expectations (Stephenson, 1957).

In summary, theories of vocational development maturity support the differentiation between aspiration and expectation and suggest that consistency in educational and career choice is indicative of vocational maturity.

The main questions of interest to this study were:

1. What proportion of eighth-grade students *aspire* to obtain an education appropriate for their *aspired* occupational level?
2. What proportion of eighth-grade students *expect* to obtain an education appropriate for their *expected* occupational level?
3. Is consistency in educational and occupational choice related to amount of information a student possesses about occupations?

In addition, racial and sexual differences in aspirations and expectations were explored.

Method

Subjects

Subjects for this study were systematically selected from the 129,570 students who took the Florida Eighth Grade Test (FEGT) during the 1975 administration. The sample was generated at the time the test data were analyzed by selecting every fiftieth person from the population. This procedure yielded a sample of 2,608 cases which seems to have some of the advantages of a stratified random sample as every county in the state was sampled proportionately. Stu-

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dents with incomplete data for an analysis, or which were a race other than black or white, were deleted from the sample before any analyses were carried out. For this reason, the reader will notice different sample sizes throughout the study.

It should be noted that the information in Table 1 was generated at the time the test data were analyzed, and hence contains information obtained from the entire population.

Instruments

The study utilizes the Plans and Goals, and the Occupational Information sections of the FEGT.

The Plans and Goals section contains four brief scales which provided the student with an opportunity to report on his educational and occupational plans and goals. The item which indicated the student's educational aspiration level and the item which indicated the student's educational expectation level involved choosing a level of formal education from the following list of five levels:

1. Attend school beyond the eighth grade but not graduate from high school.
2. Graduate from high school.
3. Graduate from a two-year college or technical school.
4. Graduate from a four-year college.
5. Graduate from a four-year college and take further advanced training.

The item which indicated the student's occupational aspiration level and the item which measured the student's occupational expectation level provided the examinee with five lists of jobs titles. The examinee's task was to choose the list containing jobs most similar to the kind of work he would like most to do when his education is completed (occupational aspiration), and to choose the list of jobs most similar to the kind of work he expects to be doing when his schooling is completed (occupational expectation). Each list contains twelve jobs requiring a relatively common level of educational development which corresponds to one of the educational levels cited above. The jobs and the associated educational development were taken from Appendix C (Training Time-General Educational Development) of Supplement 2 to the *Dictionary of Occupational Titles, Third Ed., Selected Characteristics of Occupations by Worker Traits and Physical Strength* (1968).

The Occupational Information portion of the test consists of 40 questions which measure the student's knowledge of many of the jobs which comprise basic occupational categories of the world of work. Specifically, it tests knowledge of the training required, duties performed, special characteristics of, and compensation received for many of the occupations found in the state of Florida. The alpha reliability of the occupational information test is given as .91 in the FEGTP TR 6-73.

Analysis

The basic data used in the analyses were discrepancy scores. For each student a discrepancy score was obtained by subtracting his educational aspiration score from his occupational aspiration score. For example, a student aspiring to be a secretary (occupational level 3) but not aspiring to graduate from high school (educational level 1), would obtain a discrepancy score of +2. Discrepancy scores for expectations were obtained in a similar manner by subtracting the educational expectation score from the occupational expectation score. The discrepancy scores ranged from -4 to +4, with negative values indicating higher educational goals than occupational, positive values indicating higher occupational than educational, and a discrepancy score of zero representing complete agreement between educational and occupational goals. For some analyses the direction of discrepancies was ignored and their absolute values used as an index of inconsistency.

The distributions of discrepancy scores are shown by sex and race. Following these descriptive data are analyses of variance with discrepancy scores used as the dependent variable and sex and race as the independent variables. Scores on the occupational information test were found to correlate with the absolute values of the discrepancy scores; hence, the analyses were repeated partialing out the occupational information score from the absolute discrepancy scores.

Results

Table 1 indicates the number and percentage of examinees choosing each level on the four scales of the Plans and Goals section. Several trends indicated in Table 1 should be noted. Although the differences were not extreme, aspiration level was generally higher than expectation level on both the educational and occupational scales. It can be seen from Table 1 that there was a tendency for the majority of students to desire and to expect to attend a post-high school institution and to achieve a position in the world of work commensurate with such training.

For example, 83.4% of the examinees chose level three or higher (occupations requiring training beyond high school) on the occupational aspiration scale; 75.9% of the examinees chose level three or higher on the occupational expectation scale; 80.4% of the examinees indicated that they would like at least to graduate from a two-year college or technical school; and 71.5% of the examinees indicated that they expected to graduate from a two-year college or technical school or receive further advanced training. The highest percentage on all four scales corresponded to levels four and five (graduation from college or beyond and occupations requiring at least a college education).

The consistency of educational and occupational aspirations is shown in Table 2. It was recognized that the level of education required for a given occupation may vary as much as one educational level. For example, a nurse might graduate from a two-year college (level 3), or from a four-year college (level 4). For this reason, persons with educational and occupational aspirations no more than one level apart were grouped together and considered to have consistent aspiration levels. Discrepancies of two or more levels were considered inconsistent, and persons in these categories were grouped together according to the direction of the discrepancy for ease of interpretation.

The results indicated that the educational and occupational aspirations of approximately 75% of the students were consistent. Of the remaining 25%, more inconsistencies were found in which educational aspirations were greater than occupational. Similar findings were found for Educational and Occupational Expectations.

Table 1

Frequency and Percentage of Students Choosing Levels of Occupational and Educational Aspirations and Expectations in 1975

	Occupational				Educational			
Level	Aspiration Freq.	%	Expectation Freq.	%	Aspiration Freq.	%	Expectation Freq.	%
OMIT	401	.3	652	.5	401	.3	745	.6
1	5,297	4.3	10,472	8.6	3,317	2.7	4,074	3.3
2	14,656	12.0	18,245	14.9	20,262	16.6	30,094	24.6
3	25,907	21.2	28,442	23.2	20,789	17.0	24,175	19.8
4	36,821	30.1	30,577	25.0	29,687	24.3	33,212	27.1
5	39,251	32.1	33,945	27.7	47,877	39.1	30,033	24.6

Table 2 shows that there are distinct differences in consistency between white and black students with white students showing more consistency than black. Substantially more black students than white held greater educational than occupational aspirations. Within the group of white students, there are only minor differences between male and female students. Within the group of black students there are several interesting elements. The black male students were considerably less consistent than black female with the major difference being that the black female students had substantially fewer instances where occupational aspiration was greater than educational and the black male students more. The similar pattern of relatively greater educational than occupational expectations for black students is also evident in Table 2.

Table 2

Percentage Distribution of Discrepancies by Race and Sex

	Male		Female	
Discrepancy	White	Black	White	Black
Aspirations N = 2160				
Educational aspirations two levels or more above occupational aspirations	14	25	11	24
Educational and occupational aspirations no more than one level apart	75	55	78	69
Occupational aspirations two levels or more above educational aspirations	11	20	11	7
Expectations N = 2155				
Educational expectations two levels or more above occupational expectations	10	28	11	27
Educational and occupational expectations no more than one level apart	74	53	77	63
Occupational expectations two levels or more above educational expectations	16	19	12	10

The mean aspiration discrepancy scores and the mean expectation discrepancy scores are given in Table 3. The negative values indicate higher educational than occupational aspirations. It should be noted that none of the means has an absolute value greater than one. Hence, utilizing the criteria established for Table 2, all of the group means would fall in the middle group consistency range. However, the mean values do confirm the findings of Tables 1 and 2.

Table 3

Mean Discrepancy Scores

	Aspiration N = 2166 OCCASP - EDASP			Expectation N = 2161 OCCEXP - EDEXP		
Group	Male	Female	Total	Male	Female	Total
White	-.07	.04	-.02	.22	.12	.17
Black	-.30	-.56	-.43	-.19	-.50	-.36
Total	-.11	-.10	-.10	.14	-.04	-.02

Table 4

Analysis of Variance Summary Table for Discrepancy Scores by Race and Sex

Source	Sum of Squares	df	Mean Square	F	P	eta^2
Aspiration Discrepancy: Raw Scores						
Sex	.3	1	.3	.15	.999	.000
Race	61.9	1	61.9	33.24	.001	.015
Sex by Race Interaction	11.8	1	11.8	6.33	.012	.003
Residual	3,996.2	2,147	1.9			
Total	4,069.9	2,150	1.9			
Expectation Discrepancy: Raw Scores						
Sex	11.0	1	11.0	5.4	.019	.002
Race	102.0	1	102.0	50.2	.001	.023
Sex by Race Interaction	3.9	1	3.9	1.91	.163	.001
Residual	4,361.2	2,147	2.0			
Total	4,479.4	2,150	2.0			

Table 5

Pearson Correlation Coefficients Between Occupational Information Scores and Absolute Discrepancy Scores

	Absolute Value Aspiration Discrepancy	Absolute Value Expectation Discrepancy
Occupational Information Score	N = 2164 r = -.21 p = .001	N = 2159 r = -.23 p = .001

To test the significance of the racial and sexual differences found in Tables 2 and 3, several analyses of variance were performed. The results of the first of these are given in Table 4. The raw aspiration discrepancy scores were used as a dependent variable and sex and race as the independent variables. For these analyses, α was set at .05. The results substantiate the previous findings in that the race effect was significant and there was a significant interaction between race and sex, while sex alone was not found to be significant. Some explanation for the interaction can be obtained by looking at directional differences illustrated in Table 2. The significant interaction may be attributed to the fact that most inconsistent black females aspired to higher educational than occupational levels while black males tended to be less consistent, and to select occupational above educational aspirations more frequently than any other category of person.

The results of a similar investigation related to expectation can also be seen in Table 4. In this case the mean expectation scores were significant by race and sex. However, the interaction between sex and race was not found to be significant.

The third area of interest was the relationship between the discrepancy scores and the occupational information scores. Here it was necessary to examine the magnitude of discrepancies, without regard to direction. To illustrate this relationship, the absolute values of the aspiration discrepancy scores and the absolute values of the expectation discrepancy scores were correlated with the occupational information scores. The resulting two significant negative correlations (see Table 5) indicate that higher scores on the occupational information test were associated with greater consistency.

Finally, these significant correlations raised a question as to what would happen to the previously established race effect if occupational information scores were held constant. To examine this question, an analysis of covariance was performed using occupational information scores as the covariate and absolute aspiration discrepancy scores as the dependent variable. The results, shown in Table 6, still indicated race was a significant effect. Repeating the procedure using the absolute expectation discrepancy scores as a dependent variable produced similar results.

Table 6 also provides information relevant to the race by sex interaction found in Table 4. The theory that the interaction was caused by the direction of the inconsistent responses seems to be further substantiated. Direction of dis-

Table 6

Analysis of Covariance Summary Table For Discrepancy Scores by Race and Sex

Source	Sum of Squares	df	Mean Square	F	P	eta^2
Aspiration Discrepancy: Absolute Scores						
Covariate Occupational Information	85.8	1	85.8	93.12	.001	.042
Sex	.0	1	.0	.05	.999	.000
Race	4.0	1	4.0	4.32	.035	.002
Sex by Race Interaction	.3	1	.3	.32	.999	.000
Residual	1,974.2	2,144	.9			
Total	2,064.2	2,148	.9			
Expectation Discrepancy: Absolute Scores						
Covariate Occupational Information	108.0	1	108.0	120.44	.001	.053
Sex	.0	1	.0	.00	.999	.000
Race	19.1	1	19.1	21.31	.001	.009
Sex by Race Interaction	.6	1	.6	.62	.999	.000
Residual	1,922.3	2,144	.9			
Total	2,050.0	2,148	1.0			

crepancy was eliminated as a possible factor since the absolute values of the discrepancy scores were used as a dependent variable. In neither case was the interaction significant. Similar results were also found when an analysis of variance, using the absolute discrepancy scores as the dependent variable, was done.

Summary and Conclusions

The following findings of this study should be of interest to those who are currently involved in helping middle school students orient themselves to the world of work.

First, approximately 75% of Florida's eighth-graders indicated educational goals which were consistent with their occupational goals.

Second, the amount of information which students had about occupations was only modestly related (r = -.21 and -.23) to the consistency of their occupational and educational goals. The data suggest, then, that simply providing the pupil more information about careers is unlikely to yield substantial increases in the consistency of educational and occupational goals.

Third, the amount and direction of inconsistencies were related to the race of the student. Black students were less consistent in their educational and occupational goals than white students and the black students chose higher educational than occupational goals more often than the reverse. This direction of inconsistency was especially pronounced for black female students. This finding held after occupational information scores were partialed out, indicating that the cause was not lack of information. Perhaps this finding may indicate that educational opportunities for black citizens are seen as greater than occupational opportunities.

Fourth, it is interesting that more students had educational goals greater than their occupational goals. Only 10% of Florida's eighth-grade students had occupational goals inconsistently greater than their educational goals.

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