

THE VOCATIONAL INTERESTS OF TENTH GRADE STUDENTS

Raymond E. Schultz and Howard W. Stoker
Florida State University

This article reports one aspect of a study which began in the fall of 1959 and involved 3478 tenth grade students in 58 white Florida high schools. Reported here are the findings of one aspect of the study, vocational interests and the relationship between interests and ability. High schools selected for the study were those located in counties where the proportion of white high school graduates matriculating to college was less than one-third and ranged as low as 5.9 per cent. Consequently, the sample represented a disproportionate number of small high schools and rural areas of the State.

Background and Conceptual Framework

This aspect of the investigation was limited to identifying the vocational interests of tenth grade students and did not involve the question of how students arrived at their vocational preferences and dislikes. In no way does this imply a lack of recognition by the investigators of the importance of the process of career decision-making. In fact, we urge the reader, if he has not done so to read the article by Hilton (4) which treats this matter. It presents an excellent theoretical framework for studying career decision-making. A concise review of earlier vocational choice theory and investigations has been prepared by Wenn and Parker. (3) Two interesting and especially well-designed more recent studies on factors related to vocational choices are those by Galinsky (2) and (5).

Of more direct relevance for the phase of our investigation reported here is the correlation of vocational interests of students in the early years of high school to actual careers pursued. The evidence fails to give a clear answer on the extent of the relationship. Some research has shown considerable change in interests even during the high school period. (6) Other investigations have obtained results which show a substantial degree of stability of interest during adolescence. One such investigation employing the Strong Vocational Interest Blank produced results that lead the authors to conclude that in a great majority of cases one can expect high and low interest scores to remain such during high school or college years. (1)

Even though one may remain unconvinced of the stability of vocational interest on the part of high school youth, such information still has value for those who work with these youth. First, counselors can help the student become aware of the realism of vocational interest in terms of his being able to meet its demands. Second, where a vocational interest is realistic in terms of the ability level required, they can guide the student in his selection of high school courses along lines compatible with the interest.

Questions Considered

Two major questions were considered in this investigation. Both are stated below and are followed by the sub-questions which were explored under each major question. They were:

I. Were there particular occupations with which these tenth grade students as a group, strongly identify or which they definitely reject?

1. What vocations were especially popular?
2. What vocations were strongly rejected?
3. Did the interest patterns of boys and girls differ?

II. Were there differences in the vocational interests of these students when grouped according to ability?

1. In what occupations did capable students express more interest than did students of lesser ability?
2. In what occupations did students in the lower ability groups express more interest than did students of above average ability groups?
3. What occupations did capable students reject more frequently than did students of less ability?
4. What occupations did the less capable students reject more frequently than did students of greater ability?
5. Did boys and girls of comparable ability present similar interest patterns?

Procedure

A questionnaire was administered containing one list of vocations for boys and another list for girls based on the classifications employed by the U. S. Census Bureau. Nineteen occupational groups, for each sex, were established such that the occupations within a group would require approximately the same level of educational achievement (e.g. dental technician, laboratory assistant, and X-ray technician were grouped together for girls, as were draftsman, engineer's assistant, medical technician, etc. for boys). Occupational groups covered the full range from professional through unskilled labor. A pilot administration and interviews with

students indicated that the lists communicate what was intended. Throughout this paper the terms "occupation" and "vocation" are used interchangeably in a generic sense.

Following each vocational category listed were the words "MUCH" and "LITTLE." The student was instructed to circle the word "MUCH" after each of the three categories in which he was most interested from among those listed. Next the student was instructed to circle the word "LITTLE" after each of the three categories which interested him least from among those listed. Thus, each student identified a total of six of the eighteen vocational categories listed.¹

Findings

Results obtained from this study distinctly show that, for students in the sample, some vocations were much more popular than were others. Further, certain occupations were quite popular with these youth. Table 1 contains a list of those vocations in which at least 20 percent of the boys and girls included in this study said they were most interested. Table 2 contains the same information for those vocations listed in which they indicated the least interest.

The likelihood of a vocation being selected as of "most" or "least" interest by chance was 1 in 7 or approximately 14 percent of the group. This can be compared with the percentage of boys and girls choosing each vocation included in Tables 1 or 2 to observe the extent to which it is removed from a chance selection.

Most Popular Vocations

Of some surprise to the investigators was the fact that a military career ranked highest in popularity among the boys. This raises a number of interesting questions. To what extent does this represent a sign of the times? Does this suggest exceptional success in efforts to sell youth on the merits of a military career? It may be that military service has only a temporary popularity with youth this age. The fact that these students lived in counties where the proportion of high school graduates matriculating to college was low may suggest that many of the boys see military service as the means to extricating themselves from their home environment. Also, it may be a reflection of the fact that youth are facing the reality of required military service. However, in this case, one might conjecture that youth would look upon military service as only a temporary activity which is resented because of its compulsory requirement.

¹Sample copies of the lists for boys and girls are on file in the Department of Higher Education, School of Education, Florida State University, Tallahassee, Florida.

Table 1

Most Popular Vocations of Tenth Grade Boys and Girls

BOYS		GIRLS	
Rank Order	Per Cent Selecting	Rank Order	Per Cent Selecting
1.	Military Career 52	1.	Housewife 53
2.	Scientific or medical professions 36	2.	Office worker 50
3.	Building trades 29	3.	Professional social service 36
4.	Protective worker 27	4.	Stewardess or hostess 24
5.	Technician-professional assistant 20	5.	Beautician 22

Table 2

Least Popular Vocations of Tenth Grade Boys and Girls

BOYS		GIRLS	
Rank Order	Per Cent Rejecting	Rank Order	Per Cent Rejecting
1.	The arts 33	1.	Medical or dental technician 26
2.	Farm worker 26	2.	Scientific or medical profession 24
2.	Barber 26	3.	Legal career 22
2.	Politician 26	4.	Military career 20
5.	Baker or chef 22	4.	Food services manager 20
6.	Professional social 20	4.	Protective worker 20

One would have predicted the popularity among boys of the scientific and medical professions. These occupations typically rank high in investigations of adolescent boys' interest. While "technician-professional assistant" also appears in Table 1, it barely received sufficient selection to be included. Since the technician is a close cousin to the scientist, there no doubt is a status factor reflected here. Educators charged with responsibility for developing technical education programs can no doubt attest to this fact. In our modern technological age there may be cause for concern in the fact that the building trades and protective work had considerable more popularity with these youth than did becoming a technical or professional assistant.

Predictably, as shown in Table 1, being a "housewife" ranked highest with girls as a vocation. One can contend that this is not a vocation and should not be included. Serious thought was given to its omission but it was judged important to know the degree to which girls at this age identify with being a housewife as a primary vocational goal. These findings in no way suggest that being a housewife is "going out of fashion" as a career in the eyes of young adolescent girls.

Of the five vocational areas (including housekeeping) in which these girls showed greatest preference, only one, "professional social service," requires a college degree. This may indicate that a considerable number of them were not planning to attend or at least complete college. A possible explanation of the fact that "office worker" received such a high preference is that girls of this age have more familiarity with it both as to nature and opportunities than they have of other vocational areas which offer women good opportunities.

Least Popular Vocations

The vocations rejected by both boys and girls in the sample followed no pattern either as to nature of the work involved nor the preparation required.

The vocation most frequently rejected by boys was "the arts"; this was followed by "farm work." One might suspect that the high degree of rejection of the arts by boys is a reflection of the general background from which these students came. However, responses of the girls do not support this supposition in that "the arts" are not included in the occupations most frequently rejected by them. Other reasons may better explain boys' rejection of this occupational area. For instance, there may be a supposition on their part that material returns in this field are too uncertain. Also, a considerable number of boys this age may view the arts as "unmanly."

Rejection of two vocations appearing in Table 2--"farm worker" and "baker or chef" may reflect a cultural condition. These are vocations generally associated with Negro employment in the geographic areas where the study was conducted.

Disconcerting from the standpoint of society's needs is the fact that "politician" and "professional social service" were two of the six vocations boys most frequently rejected. This suggests that a poor job is being done of convincing youth of the importance of these fields--which includes teaching--or that other forces are effectively counteracting such efforts.

The two occupational groups rejected most frequently by girls were "medical or dental technician" and "scientific or medical professional." Apparently efforts to convince girls that scientific fields are not for men alone have not been successful with this group. The other fields rejected by them might have been successfully predicted.

Another type of analysis was made to determine occupations in which this sample had little interest. It consisted of identifying those vocations which were selected by less than 10 per cent of each group--boys and girls. These data are presented in Table 3, which, of course, overlap with Table 2 in terms of the vocations listed although some appear here that are not in Table 2. In the case of boys, these are "postal employee," "salesman," and "operator of a business." The fact that one of these represents a civil service position with considerable employment security whereas the other two entail occupations with greater risk but the potential of higher salary, tends to rule out a generalization that these youth were seeking either a rewarding competitive or a secure non-competitive occupation. Apparently their preferences are dictated by other motives.

The additional occupations for girls in Table 3 were "operator of a business," "business manager," "saleswoman," and "newspaper, radio, or television work." We have here evidence that these girls shied away from occupations in the competitive business world.

Table 3
Vocations Selected by Less Than Ten Per Cent of the
Tenth Grade Boys and Girls

Boys		Girls	
Rank Order	Per Cent Selecting	Rank Order	Per Cent Selecting
Baker or chef	1	Operator of a business	1
Barber	2	Food Services manager	1
Postal employee, mail carrier	2	Legal career	2
Farm worker	3	Business manager	2
Political career	4	Saleswoman	3
Salesman	8	Newspaper, radio, or tele- vision work	5
Operator of a business	9	Protective worker	8

Selection of Vocations According to Ability Levels

A single measure of ability was available on all students in the form of the Total Score of the School and College Ability Test, published by Educational Testing Service, Princeton, New Jersey. This test was administered to these students as part of the Florida State-Wide Ninth Grade Testing Program. For purposes of this aspect of the study, students were divided into five quintiles based on their abilities as reflected by the SCAT score received. The fifth or highest quintile includes those students whose test scores placed them in the 80 to 99th percentile whereas the lowest quintile includes those students whose test scores placed them in the 01 to 19th percentile.

For each occupational group, for boys and for girls, analyses were completed to test the hypothesis of independence for ability group membership and mode of response (much, little, no response). In twenty-seven of thirty-eight cases this hypothesis was rejected at the .05 level of significance.

Comparisons for Boys

The five most popular vocations for boys all showed a significant relationship to ability group membership. Table 4 shows the per cent of boys in each category who listed the vocation as "most" liked. An examination of these values indicates considerable realism as to their ability on the part of the boys. That is, those with highest ability expressed interest in the scientific and technical vocations much more frequently than did those of lesser ability. Conversely, those boys who were in the lowest three-fifths on the SCAT, tended to prefer vocations which do not require a college education, i.e., "military career," "building trades," and "protective worker."

Table 4

Selection of Most Popular Vocations by Boys of Differing Ability Levels

(Table values are the per cent listing each vocation as "most" liked)

Vocation	(N=1743)	(80-99)*	(60-79)*	(40-59)*	(20-39)*	(01-19)*
	Total Group	Fifth Quintile	Fourth Quintile	Third Quintile	Second Quintile	First Quintile
Military career	52	43	50	56	55	57**
Scientific or medical professions	38	67	50	35	29	16**
Building trades	29	17	25	34	32	36**
Protective worker	27	14	27	29	29	35**
Technician	20	32	24	20	16	11**

*Range of percentile scores in each quintile.

**Relationship between response and ability significant at .05 level.

Table 5 indicates the per cent of boys who marked each of the least popular vocations "least" liked. Of these six vocations, only the rejection of the vocations including the arts, and professional social service failed to show a relationship with ability group membership. For all five groups the rejection was at approximately the same level.

Where the rejection pattern was related to ability the order of rejection is in the expected direction; higher ability groups rejecting unskilled and semi-skilled labor vocations at a higher rate than the lower ability groups.

Table 5

Selection of Least Popular Vocations by Boys of Differing Ability Levels

(Table values are the per cent listing each vocation as "least" liked)

<u>Vocation</u>	(N=1735)	(80-99)*	(60-79)*	(40-59)*	(20-39)*	(01-19)*
	<u>Total Group</u>	<u>Fifth Quintile</u>	<u>Fourth Quintile</u>	<u>Third Quintile</u>	<u>Second Quintile</u>	<u>First Quintile</u>
The Arts	33	30	34	35	33	33
Farm workers	26	43	26	22	21	24**
Barber	26	32	30	22	24	21**
Politician	26	26	27	30	28	19**
Baker or chef	22	24	26	22	22	16**
Professional social service	20	21	20	19	20	22

*Range of percentile scores in each quintile.

**Relationship between response and ability significant at .05 level.

Comparisons for Girls

The data in Table 6 summarizes the response for the most popular vocation for girls. As was the case for boys, the response patterns for these vocations were all significantly related to ability group membership. Girls of high ability tended to prefer occupations requiring superior intellectual ability whereas those of lesser ability were more likely to express a preference for

other types of vocations. For example, half of the girls in the highest ability group identified with "professional social service" as a vocational area in which they were most interested, while 29 per cent of the lowest ability group made this selection. The opposite pattern is found in the preferences for "office worker," "stewardess or hostess," and "beautician."

Table 6

Selection of Most Popular Vocations by Girls of Differing Ability Levels

(Table values are the per cent of girls listing vocation as "most" liked)

<u>Vocation</u>	(N=1743)	(80-99)*	(60-79)*	(40-59)*	(20-39)*	(01-19)*
	Total Group	Fifth Quintile	Fourth Quintile	Third Quintile	Second Quintile	First Quintile
Housewife	53	48	49	56	53	57**
Office worker	50	29	47	58	59	52**
Professional social service	36	50	41	37	34	29**
Stewardess or hostess	24	16	25	27	24	27**
Beautician	22	12	17	21	25	30**

*Range of percentile scores in each quintile.

**Relationship between response and ability significant at .05 level.

Table 7 presents the summary statistics for the least popular vocations for girls. Of the six vocations, only two, "legal career" and "protective worker" failed to show response patterns related to ability. For the other four vocations, the rejection pattern follows the expected direction.

Table 7

Selection of Least Popular Vocations by Girls of Differing Ability Levels

(Table values are the per cent of girls listing vocations as "least" liked)

<u>Vocation</u>	(N=1735)	(80-99)*	(60-79)*	(40-59)*	(20-39)*	(01-19)*
	<u>Total Group</u>	<u>Fifth Quintile</u>	<u>Fourth Quintile</u>	<u>Third Quintile</u>	<u>Second Quintile</u>	<u>First Quintile</u>
Medical or dental technician	26	15	25	25	29	21**
Scientific or medical professions	24	17	22	26	24	28**
Legal career	22	20	20	23	20	25
Military career	20	23	21	22	18	16**
Food services manager	20	30	23	18	17	16**
Protective worker	20	23	18	18	20	19

*Range of percentile scores in each quintile.

**Relationship between response and ability significant at .05 level.

Summary of Findings

The study reported in this article undertook to answer two general questions and a number of related subsidiary questions. The answers obtained are here presented in summary forms.

Question I, Were there particular occupations with which these tenth grade students, as a group, strongly identify or definitely reject? This question was answered in the affirmative.

1. What vocations were especially popular? "Military career" and the "scientific and medical professions" were distinctly the most popular vocations for boys and "housewife," "office worker," and "professional social service" in that order were the most popular vocations for girls.

2. What vocations were strongly rejected? Except for "the arts" no particular vocation stood out in its rejection by boys. There was no single vocation which girls rejected to a pronounced degree; "medical or dental technician" was rejected most frequently, followed closely by "scientific or medical profession."

3. Did the interest patterns of these boys and girls differ? The interest patterns were very different. Boys preferred military and scientific vocations whereas the girls wanted first of all to be housewives but also indicated a pronounced interest in office work and professional social service.

Question II, Were there differences in the vocational interests of these students when grouped according to ability? This question was answered in the affirmative. The response patterns for all of the most popular vocations, for boys and for girls were significantly related to ability as were the response patterns for the majority of the least popular vocations.

1. In what occupations did capable students express more interest than did students of lesser ability? One vocational area stands out in this respect. A great many more boys of high rather than of low ability selected the scientifically related occupations, i.e., scientist, medical doctor, and technician. For the case of girls of high ability, many more of them wanted to be professional social service workers than did girls in the lower ability groups.

2. In what occupations did students in the lower ability group show more interest than did students of above average ability? A high proportion of low-ability boys choose the building trades and protective work as vocations of primary interest. Appreciably more girls in the lower ability wanted to be office workers, stewardesses or hostesses, and beauticians.

3. What occupations did capable students reject more frequently than did students of less ability? For boys, the rejected occupations were "farm worker," and "barber"; for girls "food services manager" was rejected.

4. What occupations did the less capable students reject more frequently than did students of greater ability? For boys, there were no occupations where this was the case and only for the scientific and medical professions did this apply for girls.

5. Did boys and girls of comparable ability present similar interest patterns? A pattern evolves which shows boys and girls of high ability preferring the professions and those of less ability interested in semi-skilled occupations.

Observations

These findings provide some bases for both ease of mind and anxiety on the part of those concerned with America's manpower needs. The evidence suggests that these tenth-grade students have a considerable degree of realism as to their ability. Those who scored high on ability are, as a group, interested in vocations which require a college degree. Conversely most of these with below average ability are thinking in terms of vocations which require no college preparation.

Of concern was the failure of the capable students to identify with certain professions. In the case of girls it was the scientific fields and in the case of boys it was the professional social service occupations--both being areas of need and opportunity. The pronounced interest by these boys in military careers can be judged desirable or cause for concern depending upon one's frame of reference.

In summary, these findings suggest that the vocational interests, while reflecting desirable trends, leave something to be desired. Those who staff our high schools--teachers and guidance personnel--can help to make sure that students with realistic vocational goals take appropriate high school programs. Further, they can provide information as to society's manpower needs and the opportunities in vocations that seem compatible with a student's talents and disposition. And, of course, to do any of this they must know their students with respect to abilities, motivations, and home support.

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