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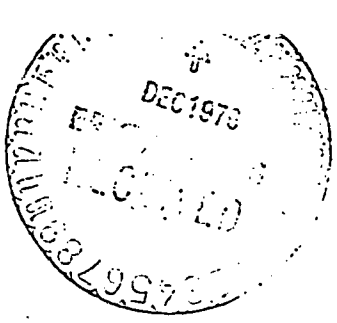
ABSTRACT

The study determined whether rural students enrolled in vocational programs which were considered to be exemplary for training disadvantaged youth differed in attitudes related to school and work from similar disadvantaged youth not enrolled in vocational studies. Ranging in age from 15 to 19 years, 115 students from 4 on-going vocational programs recognized as exemplary by state level vocational educators and 93 students from schools not having special vocational programs for disadvantaged youth were administered the Survey of Pupil Opinion, the Career Maturity Inventory, and the Work Value Inventory. Although the majority of the youth in both samples were male and black, comparable proportions of females and whites were included. The instruments measured the students' attitudes toward themselves, school, teachers, and work. Value was measured in 15 areas: creativity, management, achievement, surroundings, supervisory relations, way of life, security, associates, esthetics, prestige, independence, variety, economic returns, altruism, and intellectual stimulation. Findings included: the disadvantaged vocational group expressed more positive attitudes about themselves as students, gave better opinions of their teachers, and saw themselves as more effective in school and social interactions; and the vocational group displayed attitudes characterized by more involvement with career choice processes, more positive orientations to work, and more independence in decision making. (NQ)



# Vocational Readiness Attitudes of Rural Disadvantaged Adolescents from Exemplary Vocational, and Nonvocational Educational Backgrounds

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The research reported herein was performed pursuant to a contract with the United States Office of Education, Department of Health, Education, and Welfare. It was conducted in cooperation with the Mississippi State Division of Vocational and Technical Education and the Research and Curriculum Unit for Vocational and Technical Education, Mississippi State University.

During the past seven years over 300 programs have been designated by the Mississippi State Division of Vocational Education to train severely educationally deprived youth in semiskilled areas so that they can secure and responsibly maintain a job after completion of their high school studies. Students who participate in these special programs are those, who in the judgment of their counselors, are not physically handicapped or mentally retarded and yet have academic, socioeconomic or other handicaps that prevent them from succeeding in regular programs in vocational education.

The reported study was developed to determine whether rural students enrolled in vocational programs of this type which were considered to be exemplary for training disadvantaged youth differed in attitudes related to school and work from similar disadvantaged youth who were not enrolled in vocational studies.

This investigation was structured on the premise that attitudes which students hold toward themselves and school and toward the world of work are correlated with their growth toward vocational maturity (Perryman, 1972; Westbrook, 1970; Crites, 1967). As discovered by Almen (1971) it was also assumed that well planned programs in vocational education would foster positive attitudinal growth for educationally disadvantaged youth.

## Hypotheses

Specifically, it was hypothesized that rural disadvantaged students who participated in the well implemented vocational programs, as contrasted to disadvantaged students in regular school curricula, would exhibit more positive concepts of themselves as students, more maturely developed attitudes about

career choices and more instrinsically motivated work values. In short, the disadvantaged students would exhibit attitudes more descriptive of career readiness, a condition described by Westbrook (1970) as necessary for meaningful vocational training at more advanced levels.

Answers to the following research questions were sought:

1. How do vocational and nonvocational groups of disadvantaged high school students compare on attitudes toward self and school, career maturity, and work values when these criteria are considered as separate dimensions of behavior?

2. How do these two groups compare on patterns of attitudes when separate behavioral traits related to career maturity, attitudes, work values and attitudes toward school and self are reduced to principal components?

3. What combination of attitudes is more significant in discriminating between the disadvantaged vocational and disadvantaged nonvocational groups?

## Research Procedures

### Subjects

Since the investigation was conceptualized as an ex post facto study, subjects for the disadvantaged vocational group were selected from four ongoing vocational programs which were recognized as exemplary for meeting the needs of disadvantaged youth by state level vocational educators. The 115 high school age youth who comprised this sample had studied in these model programs for at least one year. To secure the sample of disadvantaged nonvocational students, counselors in schools not having special vocational programs for disadvantaged were requested to nominate students whom they would like to recommend for such programs if the opportunity were available. Ninety-three students were so nominated and were included in this sample. Students in both groups ranged in

age from 15 to 19 years. Members of both sexes and races were present in both groups. More of the youth in both samples were male and black, but comparable proportions of females and whites were included in the vocational and non-vocational groups.

Instruments

The attitudes of students toward self and school were measured with the Survey of Pupil Opinion (SURPO), an instrument developed by Kilbane (1972) for use with disadvantaged students in Ohio. The instrument was restandardized with a norm group in Mississippi for use in this study. In addition to overall attitudes toward self and school the SURPO measured three dimensions of student attitudes: (1) self as student; (2) student perceptions of teachers and (3) school-social perceptions of students.

The attitude scale of Crites' Career Maturity Inventory (CMI) was employed for assessing attitudes of subjects associated with vocational maturity. The overall score on this instrument, according to Crites (1973), reflects subjects' involvement with the career choice process, orientation to work, independence in decision making and other related attitudes.

Super's Work Value Inventory was utilized to study the values which subjects seek in association with their future jobs. According to Super (1970), the instrument psychometrically determines the values which subjects have that are intrinsic, and extrinsic toward work. The instrument measures value in 15 areas: creativity, management, achievement, surroundings, supervisory relations, way of life, security, associates, esthetics, prestige, independence, variety, economic returns, altruism and intellectual stimulation.

Data Collection and Analysis

The data were collected during the second term of the school year so that

all students in the vocational group would have participated in the exemplary programs for at least one semester. The instruments were administered in small group settings. All of the questionnaires, including individual response items, were read aloud so that subjects would not be handicapped by poor reading skills in offering their responses. Sufficient time was allowed for each subject to respond to each item before the reading of items was continued.

Means for the disadvantaged vocational and the disadvantaged nonvocational groups were computed for scores on each of the 19 separate subscales of SURPO, CMI and WVI. These means were compared through use of analysis of variance to determine significant differences.

Then, subjects' scores on the separate 19 attitudinal subscales were factored in a principal component analysis developed by Veldman (1967) to reduce the number of dependent variables and to eliminate variance overlap. Means for the resulting factor were then compared for the two disadvantaged groups through analysis of variance.

To locate the pattern of individual attitudinal measures which best discriminated between the two groups, scores for subjects on the 19 attitudinal subscales were further subjected to discriminant analysis. This analysis, according to Nie and Associates (1975), in a stepwise manner, determines which of the variables has more power for discriminating between two groups of subjects. A set of independent variables is developed which maximally distinguishes one group from another.

## Results and Discussion

F ratios comparing the attitudes toward self and school for the two groups of disadvantaged youth are given in Table 1. On all three subscales, as well as the overall attitude score measured by the Survey of Pupil Opinion, significant

differences beyond the .01 level were indicated. The disadvantaged students who were enrolled in the model vocational programs expressed more positive attitudes about themselves as students, gave better opinions of their teachers and saw themselves as more effective in school-and-social interactions. Generally, they appeared to have a better overall attitude toward self in school than did their nonvocational peers.

The disadvantaged vocational group also differed significantly ($p \leq .01$) from the disadvantaged vocational group in attitudes measured by the Career Maturity Inventory. These data are given in Table 2. The higher mean for the disadvantaged vocational group on this instrument indicates that the students in the model vocational programs displayed attitudes characterized by more involvement with career choice processes, more positive orientations to work and more independence in decision making. It should be noted, however, that in comparison to national norms quoted by Crites (1973), both groups still scored in the lower 25th percentile.

The two disadvantaged groups differed significantly on 11 of the 15 separate work values measured with Super's Work Value Inventory. As noted in Table 3, the four values for which differences were indicated were creativity, management, achievement, way of life, esthetics, prestige, independence, variety, economic returns, altruism, and intellectual stimulation. Seven of these work values on which the disadvantaged vocational group rated higher were those which Super (1970) identified as intrinsic work motivators: creativity, achievement, way of life, esthetics, independence, altruism and intellectual stimulation.

In these univariate analyses it became apparent that there was considerable overlap in the separate attitudinal measures for the disadvantaged students in both groups. To compensate for this innercorrelation among dependent variables

and, hopefully, to reduce the number of criterion variables, a principal component analysis was conducted. When scores for the subjects on the 19 separate subscales considered in the study were factor analyzed, only two independent factors or attitudinal dimensions were discovered. The relationship of the separate subscores to these two factors are given in Table 4. These two factors explained 66.87 and 17.21%, respectively, of the total variance among variables for all subjects in the study.

Factor I incorporated the three subscales of SURPO , the attitude score of the CMI and four of the work values identified by Super as intrinsic work motivators. Then, persons who scored higher on this factor had more positive attitudes toward school and self, had attitudes associated with career maturity and had work values characterized by more intrinsic motivation.

As indicated in these data, six of the variables independently contributed to the discrimination of group differences for the two groups of disadvantaged. In their order of influence, the variables were intellectual stimulation as a work value, independence as a work value, career maturity attitudes, attitudes toward self as student, student perceptions of teachers and achievement as a work value. As noted in the univariate studies, the disadvantaged students from the exemplary vocational classes scored significantly higher on each of these traits than did the nonvocational group.

## Implications

The hypothesis that students who participated in well-implemented vocational programs, as contrasted to disadvantaged students studying in regular curricula, would exhibit a more positive concept of themselves as students, more mature career attitudes and more intrinsically motivated work values was supported in this ex post facto study.

In univariate studies significant differences were found between the two groups on 16 of the 20 criterion variables investigated. When the total set of criterion variables were reduced to principal components by factor analysis, two factors emerged. On the first of these, which described positive attitudes toward self, the school experience and career maturity, as well as intrinsically motivated work values, the disadvantaged vocational group scored significantly higher than the nonvocational group. On the second factor which appeared to characterize the extrinsic values of future work, such as economic return, security, surroundings, both groups were equally motivated.

The more clearly delineated profile of traits which differentiated between the two groups was isolated in the discriminant analysis. This computation compensated for the relatively high correlations found to exist among the criterion variables. It also ranked the variables in order of their influence for predicting group identifications. The pattern of attitudes and work values which emerged indicated that the disadvantaged youth enrolled in the model curricula in vocational education were more motivated by the challenge, independence and achievement of future work. They also felt better about themselves as students, about teachers and about schools in general. They scored significantly higher on the attitude scale of the career maturity inventory. This profile of traits is congruent with that proposed by Westbrooks (1970) in his model for positive vocational development in disadvantaged rural youth.

TABLE 1

COMPARISON OF ATTITUDES TOWARD SELF AND SCHOOL FOR DISADVANTAGED VOCATIONAL AND DISADVANTAGED NON VOCATIONAL STUDENTS

| Criterion | Disadvantaged Vocational $\bar{X}$ | S.D. | Disadvantaged Non-Vocational $\bar{X}$ | S.D. | F Ratio |
|---|---|---|---|---|---|
| Self in School | 43.74 | 6.83 | 29.55 | 11.87 | 16.28** |
| Teacher Perceptions | 12.78 | 2.57 | 11.09 | 3.24 | 7.21** |
| Social Perceptions | 44.32 | 5.90 | 35.44 | 11.43 | 19.72** |
| Overall School Attitudes | 107.85 | 12.87 | 81.77 | 26.32 | 21.59** |

** ($P < .01$ df 1 and 207)

TABLE 2

CAREER MATURITY ATTITUDES FOR DISADVANTAGED VOCATIONAL AND DISADVANTAGED NONVOCATIONAL GROUPS

| GROUP | $\bar{X}$ | S.D. | F |
|---|---|---|---|
| DISADVANTAGED VOCATIONAL | 26.20 | 5.62 | 33.21** |
| DISADVANTAGED NONVOCATIONAL | 20.26 | 9.01 | |

** ($P < .01$, DF 1 AND 207)

TABLE 3

COMPARISON OF WORK VALUES FOR DISADVANTAGED VOCATIONAL AND DISADVANTAGED NONVOCATIONAL STUDENTS

| Work Values | Disadvantaged Vocational $\bar{X}$ | S.D. | Disadvantaged Non-Vocational $\bar{X}$ | S.D. | F Ratio |
|---|---|---|---|---|---|
| Creativity | 11.99 | 2.05 | 7.41 | 3.63 | 38.71** |
| Management | 11.23 | 2.07 | 6.94 | 3.61 | 36.42** |
| Achievement | 12.44 | 1.73 | 9.83 | 2.64 | 32.83** |
| Surroundings | 12.55 | 1.72 | 11.86 | 2.67 | 3.12 |
| Supervisory Relations | 12.43 | 2.11 | 12.06 | 2.09 | 1.21 |
| Way of Life | 12.98 | 1.94 | 11.30 | 2.32 | 13.13** |
| Security | 13.66 | 1.41 | 13.59 | 1.71 | 1.71 |
| Associates | 11.95 | 1.66 | 11.37 | 1.99 | 2.31 |
| Esthetics | 11.37 | 2.15 | 9.66 | 3.22 | 13.26** |
| Prestige | 12.14 | 2.09 | 9.41 | 2.47 | 23.71** |
| Independence | 12.50 | 1.95 | 8.13 | 3.13 | 54.23** |
| Variety | 11.12 | 2.28 | 6.85 | 3.70 | 51.72** |
| Economic Returns | 14.14 | 1.49 | 13.08 | 1.99 | 7.32** |
| Altruism | 12.16 | 1.93 | 9.99 | 2.47 | 18.19** |
| Intellectual Stimulation | 12.06 | 1.87 | 6.80 | 3.67 | 93.67** |

** ($P < .01$, DF 1 AND 207)

TABLE 4

FACTORS FOR COMBINED SUBSCALE SCORES OF SURVEY OF PUPIL OPINION, CAREER MATURITY INVENTORY AND WORK VALUE INVENTORY*

| Subscale Scores | Instrument | Factors I | Factors II |
|---|---|---|---|
| Career Maturity Attitudes | CMI | .648 | |
| Self as Student | SURPO | .739 | |
| Teacher Perceptions | SURPO | .526 | |
| Social Perceptions | SURPO | .880 | |
| Achievement | WVI | .347 | |
| Surroundings | WVI | | .380 |
| Supervisory Relations | WVI | | .487 |
| Way of Life | WVI | | .382 |
| Security | WVI | | .648 |
| Associates | WVI | | .587 |
| Esthetics | WVI | .482 | |
| Prestige | WVI | | .493 |
| Economic Returns | WVI | | .544 |
| Altruism | WVI | .330 | |
| Intellectual Stimulation | WVI | .343 | |
| Percentage of Trace | | 66.82 | 17.21 |

*Subscales which correlated < .30 were omitted for clarity.

TABLE 5

COMPARISON OF MEANS FOR TWO GROUPS OF DISADVANTAGED STUDENTS ON OVERALL FACTORIAL MEASURES OF ATTITUDES

| | Means | | |
|---|---|---|---|
| | Disadvantaged Vocational | Disadvantaged Non-Vocational | F Ratio |
| I | 113.65 | 84.95 | 84.26** |
| II | 43.24 | 41.89 | 3.47 |

**Significant at .01 level.

TABLE 6

SUMMARY TABLE INDICATING ORDER OF ENTRY FOR ATTITUDINAL MEASURES AND THEIR SIGNIFICANCE AS VARIABLES FOR DISCRIMINATING BETWEEN VOCATIONAL AND NONVOCATIONAL DISADVANTAGED GROUPS

| Step No. | Variable Entered | F When Entered |
|---|---|---|
| 1. | Intellectual Stimulation | 172.59** |
| 2. | Independence | 15.48** |
| 3. | Career Maturity Attitudes (CMI) | 14.04** |
| 4. | Self As Student (SURPO) | 9.47* |
| 5. | School-Social Perceptions | 3.35 |
| 6. | Student Perceptions of Teachers | 4.22* |
| 7. | Achievement | 7.89* |
| 8. | Creativity | 2.37 |
| 9. | Economic Returns | 1.35 |
| 10. | Security | 1.08 |

*Significant at .05 level.

**Significant at .01 level.

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