In order to determine if there are differences in the work values of two-year college students among various vocational/occupational majors, Super's Work Values Inventory was administered to 391 freshmen entering Middlesex Community College in the fall of 1973. Among the 127 males and 268 females surveyed, there were 178 liberal arts majors, 73 secretarial majors, 53 allied health majors, and 87 business administration majors. Altruism was shown to be positively related to being female, perhaps due to the dominance of females in allied health programs. Economic Return was positively related to being male, especially for those in the business administration program. Liberal arts males tended to be more altruistic and security minded. The secretarial group showed a high value orientation to Surroundings, but also rated Economic Return and Supervisory Relations as important. Another aspect of this study examined the effectiveness of the Work Values Inventory in predicting college grades, as compared to the predictive effectiveness of high school grades. For a majority of open-admissions programs, measurement of work values is a better predictor of community college success than high school grade point average, since work values are an important dimension of the motivation variable. (Author/NHM)
Work Values of Community College Students

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INTRODUCTION

One of the glaring omissions in the study of Community College students has been in the area of work values which are usually considered an important dimension of motivation. This non-academic measure is an important consideration for counselors, admissions personnel, and curriculum planners.

Psychologists and counselors have been working for decades on theories and instruments to facilitate student decision making. One of the most fruitful approaches to vocational decision making may lie in the area of measurement of student values. To be able to give reliable and meaningful information to students regarding their own patterns of work values seems essential for enlightened vocational and educational decision making.

One problem seems to be in the current tendency among the young (and not so-young) to view the work centered world of the Protestant Ethic as unimportant. For many of the young, today's emphasis is on "doing their thing". We do not know how many adhere to this philosophy or how long that attitude will last. And, so we wonder if maybe the work ethic is becoming a "minority creed" adhered to by individuals only in ethnic groups that have not known affluence. Or, maybe rejection of the work ethic is becoming more universal.

F. Kluckkohn, (1956) thinks that, "They, (students) reject the earlier activity-orientation of our culture, denying that work is intrinsically virtuous, or that material goods are worthy ends as means. And, they reject competition as the primary basis for human relationships". (1)

If today's adolescents and young adults in great numbers also reject adult behavior, attitudes and goals, it is not difficult to understand why counseling, curriculum development, and college admissions have become such major problems in institutions of higher education.

Today's emphasis may have to be different from the values of the "affluent society" which praised accomplishment, achievement, completion, and fulfillment keyed primarily to economic effort. But, what should the emphasis be? Fulfillment through individual or personality completion or self-actualization? A new system of rewards based on inner satisfaction? If so, how can it be accomplished? By shortened work-weeks and more leisure time? By different stresses on vocational and non-vocational preparation? By different life styles - such as, communal living?

Whether there is a complete or universal transition from work to non-work, more leisure oriented goals, more communal communication is debatable. Without research, one does not know how the community college segment of today's students feel about the dimension of work values.

PURPOSE OF THE STUDY

The basic choice between vocation, occupation, employment, and non-work is essentially a choice between arrays of values or value systems. Katz, 1963), identified values as characteristic expressions and culturally influenced manifestations of needs. (2) And, Donald Super (1957) said that in expressing a vocational preference, a person puts into occupational terminology his idea of the kind of person he is; that in entering an occupation he seeks to implement a concept of himself; that in getting established in an occupation he achieves self-actualization, (3) And, the individual's value system specifies the nature of the gratifications and rewards he seeks. Thus, exploration and examination of individual value systems are early steps in the basic choice between vocation, occupation, employment and non-work.

One of the major tasks of community colleges is counseling students towards appropriate vocational/occupational choices. And, since counseling is one of the major functions of student personnel which helps interpret the college to the student and helps the student explore the effect of his value system on his behavior, this whole problem falls directly under the supervision of student personnel workers.

This study was done to examine the work values of two-year college students in order to determine if there are differences in these values among various vocational/occupational groups. Donald Super's Work Values Inventory was used to determine if it might be a suitable diagnostic tool for counseling purposes.

METHODOLOGY

Super (1960) originally developed the Work Values Inventory in conjunction with the Career Pattern Study. It yields scores for 15 values. The initial form of the inventory was a forced-choice comparison of 225 items. Subsequent modifications recast the scales into 45 items with 5-point Likert type responses and a reliability of .80. The present standardized instrument used in this study employs 15 scales, which include:

- **Altruism**: a work value present in work enabling one to contribute to the welfare of others.
- **Esthetic**: a value inherent which permits one to make beautiful things and to contribute beauty to the world.
- **Creativity**: a value associated with work which permits one to invent new things, design new products or develop new ideas.

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Intellectual Stimulation: associated with work which provides opportunity for independent thinking and for learning how and why things work.

Achievement: a value associated with work which gives one a feeling of accomplishment in doing a job well.

Independence: associated with work which permits one to work in his own way, as fast or as slowly as he wishes.

Prestige: associated with work which gives one standing in the eyes of others and evokes respect.

Management: associated with work which permits one to plan and lay out work for others to do.

Economic Returns: a value or goal associated with work which pays well and enables one to have the things he wants.

Security: a value or goal associated with work which provides one with the certainty of having a job even in hard times.

Surroundings: a value associated with work which is carried out under pleasant conditions, environmental in nature.

Supervisory Relations: a value associated with work which is carried out under a supervisor who is fair and with whom one can get along.

Associates: a value characterized by work which brings one into contact with fellow workers whom he likes.

Way of Life: associated with the kind of work that permits one to live the kind of life he chooses and to be the type of person he wishes to be.

Variety: Associated with work that provides an opportunity to do different types of jobs.

David Tiedeman, writing an evaluation of the Work Values Inventory, in Buros, Seventh Mental Measurements Yearbook (1972) stated among other favorable comments that the Inventory has been around two decades; hence, there is quite a bit of valid data available in the Manual. These data suggest that the value constructs sought, have been approximated in the scales, that the items in the scales have content validity and that the inventory offers concurrent results, although results are not markedly different, merely statistically so.

A sample of 391 students was drawn from the entering freshmen at Middlesex Community College in the fall of 1973. This number included 178 Liberal Arts students, 73 secretarial, 53 allied health, and 87 business administration students. One hundred twenty-seven were males and 268 were females. This represents quite well the total population of the College which is about 62 percent female. (It is quite obvious that the programs included in the vocational/occupation offerings are those which have been predominantly female in the past).
Discriminant analysis, a technique for determining whether significant differences exist among student groups, was applied first to the total number of 391 cases with sex as the discriminant. It was then applied to the males in the Liberal Arts group (66) and in the Business Administration group (61). (There were no males in the Secretarial or Allied Health groups.) Discriminant analysis was then applied to the females in the four groups, i.e., Liberal Arts (112), Secretarial (73), Business Administration (26), and Allied Health (53).

**MALE-FEMALE ANALYSIS**

Using sex as the discriminating variable, some significant differences in work values were found between males and females. While Altruism was shown to be positively related to being a female, Economic Return was negatively related to being a female but positively related to being a male. The greatest significant difference between the sexes was found in these two variables.

It is not surprising that Altruism might be high with the female population at a college where there is a dominance of Allied Health programs. One might expect a high degree of Altruism among individuals who select "work which enables one to contribute to the welfare of others".

In respect to the positive relation of Economic Returns with the male population, one can speculate that because 50 percent of the men in the sample were enrolled in Business Administration, it is not unlikely that they would score high on the Value of Economic Returns. Thus, what appears to be a sex difference may be from the disproportionate number of males and females in the different groups based on program choice.

This is further substantiated by the evaluation of male values in liberal arts majors. Security, Economic Returns, and Altruism are the three variables with the greatest difference in means between male liberal arts and male business administration majors. Apparently liberal arts majors are more diverse in values relating to income, and place less emphasis on Economic Returns than do business administration majors. Intellectual Stimulation identified with Creativity was shown in this study to be of greater value to liberal arts male students than with business administration majors.

A discriminant analysis was then run between the females in all four groups, i.e., liberal arts, secretarial, business administration, and allied health. Allied health students were shown to be more altruistic and less economically oriented than business administration female students.

The secretarial group showed a high value orientation to Surroundings which is associated with pleasant working conditions and the environmental setting. The Allied Health group did indicate Variety as having some importance. This value is associated with work which provides opportunity for doing a variety of different types of work. Since the Allied Health group included Radiologic Technician, Medical Laboratory Assistant Nursing, Dental Hygienist and Dental Assistant, this would seem to account for the Variety Scale with this particular group.

The dominant finding was that of Altruism which distinctly differs between Business Administration women and other women students. While the women in business have a low altruistic motive and a high Economic motive, it is not equal to that of the male business majors.
In summary, Altruism appears to be the dominant value with allied health majors and with females in general. Surroundings are of utmost importance to secretarial majors and Economic Returns to males in general. Liberal arts students (both male and female) value Intellectual Stimulation and Creativity.

WORK VALUE ANALYSIS AND GRADE PREDICTION

The Curricular Programs under study were Liberal Arts, Secretarial, Business Administration and Allied Health. A multiple regression analysis was used to determine if any of the 15 values could be used to predict college grades as freshmen began these community college programs. A regression was run first on high school grades to determine the variance among the four groups of students. Another regression was then run with just the 15 variables for each group.

A problem was encountered with the first regression because of the assumption that high school grades were the only influential variable. It was shown to account for only 15% of the variance among the groups college grades. However, in some groups there was a significant correlation between high school grades and the college grade point average.

Before an analysis is made of work values, and further analysis of the grade point averages of the four groups of community college students, it is necessary to compare the grades of the four groups. Allied Health students have the highest overall grade point averages in high school with the secretarial group rating second. The business administration and liberal arts groups are lower in high school grades.

A simple correlation between high school grades and Surroundings is negative for allied health majors but a simple correlation between high school grades and college grades was shown to be positive. This was the only group of the four to show a whole sample or class correlation between high school and college grades.

For Liberal Arts Students, Management and Independence values are negatively related to college grades, while Variety is positive. This could be interpreted as meaning that people who are best suited for a liberal arts major seek variety in their future jobs and are not interested in management. This appears consonant with Super's Manual (p. 43) that Management is most stressed by business students and Variety by Peace Corps teachers. Independence as a negative value may be explained for liberal arts students by the manual which states that it is a value "more characteristic of low rather than high level-occupations." (4)

One would expect Supervisory Relations to be important for successful business administration students because most of them will work under supervisors and much of their job satisfaction will depend on the quality of their relationships with their supervisors. Students who are less realistic about business administration or are less committed to it, will not rate as high on this scale.

Security is usually given more importance by semi-skilled factory workers according to the Manual. Hence, the fact that Security was not a high value for business administration majors is understandable, because rather than being worried about a job, even in hard times, they are apparently more confident of job tenure in choosing a business career.

Because the Allied Health group is the most selective and limited by admissions, one cannot fairly compare their academic achievement with the other three groups which are more nearly equated to "open-door" admissions.

OTHER STUDIES K. Patricia Cross, Senior Researcher of Educational Testing Service, Berkeley, and one of the few comprehensive researchers of repute in the area of community college students, wrote in 1968 that:

Senior college students seem somewhat more likely to express an interest in humanitarian concerns . . . . . such as helping others, whereas junior college students seem to be somewhat more concerned about business and financial matters (p. 30), (5).

The high altruism score of the females in this study varies from her findings in general. The pragmatic student that the junior college student has been considered, bi-polar in value to the altruism scale, may be erroneous, when taking one group (such as the allied health major) into consideration.

The allied health females may not differ markedly from their senior college counterparts in their high degree of altruism. In the second regression analysis, Altruism was found to be related to Social-Artistic values but in no way related to Economic Returns.

Author, James A. Michener may have shed some light on the current young peoples motives and values when he said that they haven't abandoned the work ethic, but are looking for more human ways to satisfy it and themselves.

Cross (1968) also stated:

Taken as a whole, the research picture reveals young people who are not sufficiently sure of themselves to venture into new and untried fields and they appear to seek more certain pathways to success and financial security (p. 51).

Neither Prestige nor Independence appeared as a dominant value in this study, but Economic Returns, Surroundings, and Supervisory Relations all appeared important to the business secretarial majors. These values may be related to the uncertainty that has been shown in community college students in general.

Knoll and Medsker, in 1965 found in a study of junior college students who transferred to 4 year colleges and universities that almost one-fourth were uncertain about their plans for a major or career field and this was a major factor of considerable importance in their decision to attend a junior college. (p. 50). (6)

Perhaps more emphasis in counseling with the community college student should lie in understanding that much of the high drop-out rate may be due to postponed or protracted vocational exploration and crystallization rather than low academic achievement.

The lower self-esteem and confidence factor of the community college student may also relate to the fact that neither Management which is described by Super as "work which permits one to plan and lay out work for others to do", nor Independence, i.e., "work which permits one to work in his own way" were highly valued by liberal arts or business administration groups. (1970, p.9.)(7)

Thus, the business administration community college students are not the usual stereotype of the independent, aggressive business student, but rather those of the clerical, more willing to get along, a strong desire for economic returns, but also willing to let others supervise them and be responsible for the goal setting. This again shows that counseling should focus on the area of self-esteem and self-concept.

Again, in factor analysis, Intellectual Stimulation and Creativity are linked within a factor called Heuristic-Creative, in the research of O'Connor and Kinnane (Super 1970, P. 32) (8). Therefore, with about 50 percent of the total male sample in the liberal arts group, it is quite comprehensible that one would find these scales differentiating these males. The work values patterns between two and four year college students may differ little, except in the self-concept domains. Community college counselors should begin to explore this dimension of vocational counseling with two-year college students in far greater depth, even though their initial problems may be information seeking and test oriented.


CONCLUSIONS

Therefore, it is possible to detect differences in occupational groups, as judged by their performance on certain scales of the Work Values Inventory, prior to their entrance into an occupational cluster.

Of what use may the counselor make of such information? It could be used very positively in setting counseling goals, both with the individual student, and with potential student personnel offerings, for example, group dynamics in self-esteem, self-concept and identity exploration and evaluation. Such programs and counseling could be both prior to and consonant with the career development planning and assessment of each community college student. Much dropping-out, lateral and vertical transfers, as well as loss of time and money, in a student's life and in service to society, could be avoided.

In evaluating the results of an analysis of the second major question under study, i.e., can work value scores predict college grade point average, the answers are not quite so definitive.

The majority of studies, (Chase and Thompson, 1973, Pugh, 1970, Black, 1969, among many others), find a moderate to high correlation between high school grade point average and college grade point average. (9)

On the other hand, at least one study, (Pemberton, 1970), found a very similar situation to the low correlation results in this study, between high school grade point average and college grade point average. In fact, Pemberton projected even more generally and stated, "As a 'predictor' of success, grade point average has not been particularly valid for either graduate school or occupation, (p. 40)." (10)

There is also another possible explanation for the low correlation, particularly for community colleges that accept students on an open-admissions basis to the majority of programs. Since diversity in academic abilities and programmatic backgrounds is a feature of American Community Colleges, it is natural that the relationship between high school grade point average and college grade point average will be reduced.

There would seem a path now open, to eliminate in the near future, the continuing statistical debate or inability to validly and finitely predict future success of any human behavior, with all its changing, unpredictable variables. With decreasing college enrollments in American higher education, the open-door policy might become acceptable, and the most valid and honest approach for all colleges, even the most prestigious. Why?

(9) Chase, C.J. & Thompson, R., Predicting Success for University Freshman. Bloomington, Indiana University, Bureau of Educational Studies, 1973
Pugh, R.C. etc . . . 1970
Black, H.P. etc . . . 1969

(10) Pemberton, . . . etc. 10
It has been a proven fact in economic theory, that when currency is allowed to "float", stability results. The homespun addage that "water seeks its own level", might have more universal applicability to sophisticated theories in education, than heretofore believed. An example of a large college system that had the courage to try a non-quantitative approach to college admissions is the City College System of New York. While the system has not been found perfect, the dire results of complete doom to the college, and to the reflection of the calibre of educational standards for former alumni, have not resulted either.

Perhaps what one might conclude, with the most certainty, is, that human behavior is not truly a measurable quantity, but rather a descriptive entity. The domain of motivation is probably the most potent realm, underlying all action, including education and work, in life. Yet, it is also the most elusive to predict. Eventually, most individuals have to make many adjustments and lateral directions, due to the unforeseen circumstances and vicissitudes of life, despite the most determined setting of behavioral objectives. All of these forces act upon attaining goals, regardless of predicted ability, interest or congruence.

In discussing the generic term, motivation, however, vocational goals and attitudes toward work would seem one of the most basic components. Maslow's hierarchy of needs is based upon work by an individual to satisfy even the most primary levels, as well as a more conceptual form of work to assuage the demands for self-actualization and self-worth.

Therefore, one basic conclusion of this study is that examination of work values is a very specific measure, and yet crucial dimension of the overall primary source of behavior, motivation.

With the high drop-out rates or transfer rates to other programs that are characteristic of two-year college students, (Thorton, Orange Coast Junior College, California and Illinois studies, among others), (11) and the fact that lack of academic ability accounts for only one-third of the drop-outs in community colleges, (Monroe, 1972), (12) (indeed, academic ability scores appear to be of no value in predicting drop-outs, Roueche, 1967, p. 2), (13) then other aspects of the community college student have to be surveyed. The more dimensions within which entering Freshmen can assess themselves, the more realistic will be their decisions and goals.

(11) Thorton, etc. . . .
(12) Monroe, etc. . . .
(13) Roueche, etc. . . .
Monroe, President of Kennedy King College, (1972), has stated: No one can say what percent of college failure can be attributed to lack of motivation. But it must be the most predominantly single factor. The failure to work hard, to persist, to carry on, no matter what the academic obstacles are, is a most important cause of drop-outs in colleges. Motivation is a complex force including the student's set of values, among other factors, (p. 211). (14)

In discussing specific conclusions as to whether the Work Values Inventory scores might predict college grade point-average, one might assume the following from this study.

1. High school grade point average does not influence predictive power towards the college grade point average of the entire class, (only about 5%), nor for the Liberal Arts, Secretarial and Business Administration groups, when used, in addition to their performance on the WVI.

2. High school grade point average does improve predictive power substantially, for the college grade point average, of the Allied Health group, when used in conjunction with their performance on the WVI scales. This may be because the Allied Health group were the most highly screened on academic achievement, as a pre-admissions requirement.

3. As a corollary of the findings in 1 and 2 above, one might say that high school grade point average only improves predicted academic success in highly screened or selective programs, when used in conjunction with work values scores. In situations of predicting in open-admissions colleges, except for selected programs, high school grade point average does not contribute significantly to the predictability of future student success, because such a range of entering high school abilities tends to scatter the effect of obtaining a mean grade point average for the class, as a whole.

4. The Work Values Inventory scores, predicted up to 20% of the variance in either Regression Analysis 1 or Regression Analysis 2.

5. Therefore, it seems logical and valid to assert that measurement of work values is a better predictor of community college success than high school grade point average, for a majority of open-admissions programs.

While the entire study indicates there are many other variables that enter into prediction of academic success, the major one would seem to be, as previously discussed, motivation, and work values are an important dimension of the motivation variable. Work values are also a way to arrive at least at a partially quantitative measure of the most elusive overall component.

(14) Monroe, etc. . . . (op. cit.)
Since one of the values of research is to generate further questions, other questions that might be examined with different research designs, are — how disparate are counselor work values from their counselors? The implication for counselor education could be most important.

The impact of the work values of community college students, for curriculum planning, should be of critical import, if, indeed, such students are not as fundamentally pragmatic as this study shows, versus previous research. This is particularly vital information when evaluated in terms of admission and potential drop-outs.

Lastly, since patterns of work values do differentiate various groups of students from each other, how divergent are such values from the contemporary world of work demands in American society?

One fact, above, all, should emerge to the reader. The problem undertaken, that of evaluating work values of community college students and examining any predictive use for counseling, is very complex. While this study was confined to exploratory dimensions, one certainly may say, validly, that a most interesting and useful counseling as well as predictive avenue has been opened in considering work values, particularly with the community college student. Further analysis is highly encouraged.