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To the Graduate Council:

I am submitting herewith a thesis written by Ralph H. Martin entitled "A Biracial Study of Entry Job Facts Found Among Selected Manufacturing and Research Industries Located in Metropolitan Knoxville, Tennessee, and Their Implications for Selected Secondary Schools and Colleges." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Education, with a major in Curriculum and Instruction.

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A BIRACIAL STUDY OF ENTRY JOB FACTS FOUND AMONG SELECTED MANUFACTURING AND RESEARCH INDUSTRIES LOCATED IN METROPOLITAN KNOXVILLE, TENNESSEE, AND THEIR IMPLICATIONS FOR SELECTED SECONDARY SCHOOLS AND COLLEGES

A Thesis
Presented to
the Graduate Council of
The University of Tennessee

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

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by
Ralph H. Martin
March 1961

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CHAPTER I

INTRODUCTION

Technological and social improvements have created rapid and complex changes in our present social order. The progressive advancement from the machine to the atomic to the space age, along with social changes, has created new sectional, national and international behaviors among people. Community, national and international leaders have attempted and are presently concerned with efforts to identify and remedy many of these problems arising from the "Age of Science and Technology."

The development of atomic energy, the rapid improvements in land, water, and air travel, the control of certain communicable diseases, the development of automation, and the increase in life expectancy are some of the scientific innovations that have caused many concerns among many members of our society. The almost unlimited possibilities for the use of atomic energy for industrial, agricultural, and health purposes pose challenges to atomic scientists to channel atomic energy in ways useful to man's living. The development of atomic and hydrogen bombs, together with inter-continental and outer space missiles, tends to disturb the peace of the world. Global distances have decreased as a result of rapid technical changes in the means of

transportation. Medical research has reduced the mortality rates of certain diseases that have plagued mankind, and continued medical research promises a better understanding of many other diseases that have high mortality rates.

Automation, defined by Kinker as ". . . the application of electronic, hydraulic, and pneumatic devices to power machines in order to control automatically the quantity and quality of their output,"[1] poses a serious problem to many members of the labor force because the use of automatized processes eliminates many manually performed jobs. To survive, workers threatened with job loss from automation must acquire new job skills. The utilization of automatized processes in industry has created the need for more technicians who understand the basic principles of machine operation.

Life expectancy has been increased through scientific discoveries and improved medical know-how. The present longer length of life has been due to the prevention of premature deaths. Meredith[2] stated that from 1893 to 1939, increase in life expectancy had been at the rate of five

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[1]H. Robert Kinker, "Automation and Vocational Education," Industrial Arts and Vocational Education, 46:175, June, 1957.

[2]Florence L. Meredith, Hygiene (Philadelphia: The Blakiston Company, 1941), p. 10.

months annually. Diehl[3] reported statistics obtained from 1800 to 1950 that male life expectancy had increased from approximately thirty-five years in 1800 to approximately sixty-seven years in 1950, and female life expectancy had increased from thirty-six years in 1800 to approximately seventy-three years in 1950. That increase in life expectation creates other problems is evident. Knox identified one of these problems and stated, "The class struggle of the future will be not between capital and labor or workers and management, but between the old and the young."[4]

Attitudinal changes among people in our Nation have been and are presently seen as a result of new laws enacted by either state legislatures or the Federal government. Some of the laws creating attitudinal changes were: (1) the Minimum Wage Law which provided a wage base for workers; (2) the Social Security Law that afforded unemployment compensation and old age benefits to workers and their families; (3) the Federal Housing Law which created better housing conditions for many persons; (4) child labor laws which prevented the exploitation of child labor; and (5) the United States Supreme Court decision which declared segregation in public education a violation of the equal

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[3]Harold S. Diehl, Healthful Living (New York: McGraw-Hill Book Company, Inc., 1955), p. 5.

[4]John B. Knox, The Sociology of Industrial Relations (New York: Random House, 1955), p. 220.

protection of the law clause of the Fourteenth Amendment to the Constitution of the United States, as well as the due process of law clause found in the Fifth Amendment to the Federal Constitution.

The May 17, 1954, unanimous decision of the United States Supreme Court stated in part:

> . . . In each of the cases, minors of the Negro race, through their legal representatives, seek the aid of the court in obtaining admission to the public schools of their community on a non-segregated basis. In each instance, they have been denied admission to the schools attended by white children under laws requiring or permitting segregation according to race. This segregation was alleged to deprive plaintiffs of the equal protection of the laws under the Fourteenth Amendment. . . . The plaintiffs contend that segregated public schools are not "equal" and cannot be made "equal," and hence they are deprived of the equal protection of laws. . . . Today, education is perhaps the most important function of the state and local governments. . . . Today, it is a principal instrument in awakening the child to cultural values, in preparing him for later professional training, and in helping him to adjust normally to his environment. In these days, it is doubtful that any child may reasonably be expected to succeed in life if he is denied the opportunity of an education. Such an opportunity, where the state has undertaken to provide it, is a right which must be made available to all on equal terms. . . . Does segregation of children in public schools solely on the basis of race, even though the physical facilities and other "tangible" factors may be equal, deprive the children of the minority group of equal educational opportunities?. . . . Segregation of white and colored children in public schools has a detrimental effect upon the colored children. The impact is greater when it has the sanction of the law, for the policy of separating the races is usually interpreted as denoting the inferiority of the Negro group. A sense of inferiority affects the motivation of a child to learn. Segregation with the sanction of the law, therefore, has the tendency to retard the educational and mental development of Negro children, and

> to deprive them of some of the benefits they would receive in a racially integrated school system. . . . We conclude that in the field of public education, the doctrine of "separate but equal" has no place.[5]

This unanimous decision from the United States Supreme Court of the United States declaring segregation in public education illegal has been described as the greatest civil rights legal pronouncement since the Emancipation Proclamation. This decision was greeted with mixed feelings by persons residing in the areas to be affected by the Court's ruling. To date, many communities are attempting to implement school programs in agreement with the Court's decision, but there still remain many persons unalterably opposed to a legal decision that promotes any changes in a "way of living."

That technological and social changes have created rapid and complex changes in our society is obvious. Adjustments to these many changes can be met through the effective use of the educational process. Thus, schools and other community institutions are challenged to provide equitable educational experiences that promote productive citizenship for all members.

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[5]Editor, "Supreme Court Decision on Desegregation," National Education Association Journal, 43:349-350, September, 1954.

A. STATEMENT OF THE PROBLEM

The problem of this research was to make a biracial study of entry job facts found in six manufacturing and research type industries located in Metropolitan Knoxville, Tennessee, and to relate this information to policies in secondary schools, colleges, and other elements of community life.

B. ORIGIN OF THE PROBLEM

Guidance counselors are primarily concerned with occupational information that can aid in the vocational counseling process; and school administrators regard the curriculum as a means through which students learn to become productive participants in our society. In view of the rapidity of change in our social order, the investigator was interested in obtaining valid occupational information from a sampling of manufacturing and research type industries located in Metropolitan Knoxville, Tennessee. Further, it was felt that a need existed to discover the educational experiences provided by selected secondary schools and colleges to determine the adequacy of these educational experiences to prepare students to enter industrial occupations. Thus, research conducted on this problem could reveal pertinent data that relate to more effective operation of school programs for the development of

adequately prepared workers to meet some of the labor needs of local industry.

C. PURPOSES OF THIS INVESTIGATION

The programs of educational institutions must reflect sensitivity to the personal and cultural needs of students in order to aid students to become adjusted workers in our industrial society. With evidences of many changes, especially in industry, this research was designed: (1) to provide valid job information to school administrators as guides to curriculum planning; (2) to assemble job facts leading to entry employment in selected industries useful to guidance counselors to help high school, non-college, and college graduates to make occupational choices; (3) to acquaint guidance counselors with occupational information that may be used in promoting experiences that can be useful in a study of occupations; (4) to discover new work opportunities for Negroes; (5) to understand factors considered important by employment officers in the employment process; and (6) to develop closer relationship between educational institutions and industry.

D. BASIC ISSUES OF THIS INVESTIGATION

In this investigation, the following questions were considered important: (1) What are entry employment requirements for jobs in selected manufacturing and research

type industries for high school, non-college, and college graduates? (2) What attitude does industrial management have in selected industries concerning the full employment of qualified Negro workers? (3) Are educational institutions for Negroes providing adequate educational experiences for those students who seek industrial employment? (4) Does racial discrimination continue to exist in job selection among industries reported in this investigation? (5) What are some career opportunities available in industrial employment? (6) What advice does industrial management offer workers seeking industrial employment? (7) What personality traits do employment officers consider important in the employment process? (8) At the two high schools reported in this investigation, were the educational experiences comparable in identical vocational educational programs? and (9) What implications can be made from this research to secondary schools, colleges, and other elements of community life?

E. DEFINITION OF TERMS

Terms used in this investigation were defined as follows:

Occupational activity denoted the content of the work or job, the context in which work is performed, and the people with whom it is done.

Metropolitan Knoxville, Tennessee, included Knoxville

and Oak Ridge, Tennessee.

Educational experiences meant a systematic group of courses or over-all plan of specific materials of instruction that schools offer students to prepare them for entrance into industrial employment.

The term, non-white worker, was used interchangeably with Negro worker as over 95 per cent of non-white workers were Negroes.[6]

Manufacturing industries were industries engaged in fabricating articles.[7]

Research industries included industries engaged in conducting research to improve present products, to discover new products, and to plan and execute experimental work, to accept, to reject or to modify advanced theories.[8]

The Dictionary of Occupational Titles described the the following major occupational groups reported in this investigation:[9]

Professional major occupational group represented

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[6]United States Bureau of the Census, 1950 Census of the United States: Population, Bulletin P-C1, Table 128 (Washington: Government Printing Office, 1950), pp. 276-278.

[7]United States Employment Service, Dictionary of Occupational Titles, Part I. (Washington: Government Printing Office, 1939), p. XXIV.

[8]Ibid., p. 741.

[9]Ibid., p. XXIII.

those occupations requiring a high degree of mental activity and demand rather extensive academic study.

Clerical major occupational group typified those jobs that related to the preparation, transcribing, systematizing, or preserving written records and communications in office, shops and other places of work.

Skilled major occupational group meant occupations of a craft and manual description requiring a high degree of skill and a comprehensive knowledge of the processes of the work.

F. DELIMITATIONS

The divergent nature of industrial activity in Metropolitan Knoxville made difficult the selection of entry job facts from all industries that provided jobs for high school, non-college, and college graduates. High schools were selected whose curriculum provided educational experiences leading to industrial employment for Negro and white students. Two colleges were chosen that offered majors and/or minors in educational programs that led to industrial employment for Negro and white students. For these reasons, data for this investigation were delimited to:

1. Job facts for initial employment on jobs found in the Professional, Clerical, and Skilled major occupational groups among the following industries: Atomic Energy Commission, Oak Ridge; Dempster Brothers Manufacturing

Company, Knoxville; Oak Ridge Institute of Nuclear Studies, Oak Ridge; Rohm and Haas Manufacturing Company, Knoxville; Tennessee Valley Authority, Knoxville Division; Union Carbide Nuclear Company, Oak Ridge.

2. Educational experiences provided at two high schools, Austin (Negro) and Fulton (white), and two colleges, Carson-Newman (white), Jefferson City, and Knoxville College (Negro).

3. Guidance services provided at the four reported educational institutions.

G. METHODS AND PROCEDURES USED IN THIS INVESTIGATION

The following methods and procedures were used in conducting this research:

1. Description of the investigation. The design of this investigation included: (a) an analysis of occupational information obtained from Atomic Energy Commission, Oak Ridge; Dempster Brothers Manufacturing Company, Knoxville; Oak Ridge Institute of Nuclear Studies, Oak Ridge; Rohm and Haas Manufacturing Company, Knoxville; Tennessee Valley Authority, Knoxville Division; and Union Carbide Nuclear Company, Oak Ridge; (b) the examination of educational experiences leading to industrial employment provided at four educational institutions, two high schools, Austin (Negro) and Fulton (white), and two institutions of higher education, Carson-Newman College (white) and

Knoxville College (Negro); (c) the characteristics of guidance programs conducted at the four educational institutions; and (d) the implications: (1) to curricular changes in educational programs, and (2) to other elements of community life.

2. Sources of data. The six industries and four schools listed under Description of the Investigation, under (a) and (b), provided data for this study.

3. Items selected. Items selected for this investigation were included on pre-constructed interview forms used to gather information from employment officers, school administrators, and guidance counselors at the reported industries and educational institutions. Copies of these interview forms comprise Appendixes A and B. The industrial interview form contained the following items: job title, nature of work, job preparation, economic returns, personal requirements, size and composition of workers, working conditions, entry to job, and job outlook. The interview form used to gather information from school administrators and guidance counselors consisted of the following items: number of majors and minors leading to industrial employment, subject matter requirements supporting these majors and minors, number of semester hours or units required for graduation, and descriptive statements characterizing guidance programs at the institutions.

4. Analysis of data. Occupational data from the six manufacturing and research type industries were analyzed to discover available jobs to high school, non-college, and college graduates, the entry requirements, the major occupational group, the nature of work, the size and composition of workers, the job outlook, personal requirements, job preparation, the working conditions, and the economic returns. Educational experiences at the four reported institutions were studied in terms of major and minor offerings leading to industrial employment, the subject matter requirements supporting these majors and minors, number of units and semester hours required for graduation, and the types of guidance services provided at the educational institutions, especially the vocational counseling services.

5. Recording of data. Data from industries and educational institutions were tabulated according to items appearing in Part 3 of this section.

H. ORGANIZATION OF THIS STUDY

Chapter I discussed events leading to the importance of occupational choice in a rapidly changing society. Statement of the problem, origin of the problem, purposes of the study, basic issues of the investigation, definition of terms, delimitations, and methods and procedures used in this study were presented in Chapter I.

Literature related to theories of occupational

choice was reported in Chapter II.

Occupational information from six manufacturing and research type industries was presented in Chapter III.

Chapter IV reported the educational experiences and guidance programs provided students at the four educational institutions.

Discussions on the basic considerations, appearing in Chapter I, and implications to secondary schools, colleges and other elements of community life appeared in Chapter V.

In Chapter VI the findings, conclusions, recommendations, and suggestions for further research were reported.

CHAPTER II

REVIEW OF RELATED LITERATURE ON THEORIES OF OCCUPATIONAL CHOICE

This investigation attempted to assemble occupational information about entry jobs for high school, non-college, and college graduates in selected manufacturing and research type industries located in Metropolitan Knoxville, and to relate this information to policies in secondary schools, colleges and other elements of community life.

A careful search was made of research studies relating to the design of this investigation, but none were found. However, job samplings have been made nationally and regionally. These samplings consisted of the making of job analyses, but did not attempt to relate job requirements to educational experiences provided by secondary schools and colleges. Because of the divergent nature of industrial job opportunities in many communities, samplings of jobs made on a national or regional basis would likely deviate from the array available in Metropolitan Knoxville. Too, the samplings might obscure the availability of job openings in one community and scarcity of jobs in others.

In this chapter, theoretical frameworks of occupational choice were discussed; and those theories utilized include: (1) the trait centered theory; (2) the

psycho-social or need theory; and (3) the developmental theory.

The trait centered theory of occupational choice is based upon the psychological principle that individuals differ in aptitudes, interests, and capabilities. Jobs or occupations, too, have certain traits or requirements that must be considered by the counselee in occupational choice. The synthesis of the two, individual and job traits, forms the operational belief of the proponents of the trait centered theory of occupational choice. Guidance counselors, who subscribe to this theory, use instruments to measure individual traits, and then attempt to match these individual traits with the traits required in the performance of certain jobs.

The most comprehensive study ever attempted in support of the trait centered theory of occupational choice was done by Fine and Heinz.[1] These researchers were concerned with: (1) an attempt to match men with jobs; (2) the need to relate information to the United States Employment Service General Aptitude Test Battery and measures of interest and personality, referred to in Part IV of the Dictionary of Occupational Titles; and (3) the assembly of

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[1]Sidney A. Fine and Carl A. Heinz, "The Estimates of Worker Trait Requirements for 4000 jobs," Personnel and Guidance Journal, 36:168-174, November, 1957.

more uniform and comprehensive definitions of traits and to which jobs they could be compared.

In conducting this research, the authors used a sampling of jobs in Part IV of the Dictionary of Occupational Titles, all jobs on the 1950 list of critical occupations, and all jobs for which the United States Employment Service General Aptitude Test Battery standardization data were available. The worker trait estimates included six components, namely, training time, aptitude, temperament, interest, physical capacities, and working conditions. Each trait component was rated separately by different raters, and the combined rating on a particular job represented the ratings of several raters arrived at independently.

The findings from the research conducted by Fine and Heinz revealed that the Interest and Aptitude trait components were comparable to similar findings measured by aptitude tests and interest measures; the Temperament trait component is most characteristic of work situations calling for adjustment; the Physical Capacities and Working Conditions trait components provided information both for physical demands of the job and the kinds of adjustments that need to be made by workers; and the Training Time trait component gave a general education base to make meaningful the vocational preparation required on specific jobs. Further, the authors reported that the data can be grouped

according to job families within each trait component and stated, ". . . these estimates are not norms but reference points to be used for exploration, not selection."[2]

Guidance counselors relying solely on the trait centered theory of occupational choice may find this model of matching individual traits with job traits ineffective at times because: (1) consideration is not given to the psychological needs of workers in making vocational decisions; (2) the trait centered theory of occupational choice presupposes that workers are solely economic men; and (3) occupational literature will not be available to parallel the rapidly changing nature of jobs found in industrial enterprises. However, the trait centered theory of occupational choice has provided a basis for further researches on other theoretical frameworks of occupational choice.

The psycho-social theory of occupational choice advanced by Roe is based on the rationale that the strength of a specific need is significantly related to occupational choice. This theory considers man or worker not only an economic being but also a psychological one. The need to make a living is a basic concern of every individual in choosing an occupation. The economic returns from work provide opportunities for individuals to meet needs that reflect living standards, the friends made, and the values

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[2]Ibid., p. 174.

that direct behaviors.

The psycho-social theory of occupational choice is based upon Maslow's arrangement of basic needs in order of their predominance. These basic needs include:

> (1) the physiological needs; (2) the safety needs; (3) the need for belongingness and love; (4) the need for importance, self-respect, and independence; (5) the need for information; (6) the need for understanding; (7) the need for beauty; and (8) the need for self-actualization.[3]

The fundamental principle underlying the psycho-social theory of occupational choice is that the individual will likely choose an occupation through which his psychological needs may be satisfied. The job selected by the client provides the single opportunity for the fulfillment of all basic needs. Under the psycho-social theory of occupational choice the basic psychological need consideration is recognized in relationship to fitness of the selected job to provide opportunities for need satisfaction.

The research reported by Centers[4] is in harmony with the psycho-social theory of occupational choice. This researcher reported the results of interviewing a sample of 1100 white male adults representing a national cross section of workers in large and small business (owners and

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[3]Anne Roe, The Psychology of Occupation (New York: John Wiley and Sons, 1956), p. 25.

[4]R. Centers, "Motivational Aspects of Occupational Stratification," Journal of Social Psychology, 28:187-217, 1948.

managers), white collar, skilled, semi-skilled, farm owners and managers, and farm tenants and laborers. The findings revealed that all business, professional, and white collar workers received the greatest satisfactions from their work, while all manual workers, except skilled, received the greatest dissatisfactions from their work. To the question, "If you had a choice of one of these kinds of jobs, which would you choose?" Centers found that all respondents indicated work opportunities more closely related to specific psychological needs.

Roethlisberger and Dickson,[5] in the Hawthorne Study, reported the effects of varying amounts of illumination on production schedules. When illumination was increased from twenty-four to twenty-six and then to seventy foot candles for both experimental and control groups, production increased. However, when illumination was decreased from ten to three foot candles for the experimental group, production rate showed an increase. The researchers deduced that the members of the experimental group felt that management recognized them as individuals, possessing worth and dignity, as well as a feeling of belonging to the group. Such job satisfactions and feelings are essential to any individual

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[5]F. J. Roethlisberger and W. J. Dickson, Management and the Worker (Cambridge: Harvard University Press, 1939), p. 90.

worker on any given job. Warner and Low,[6] in the Yankee City Study, pointed out negative effects of depersonalization of workers. The introduction of machinery in the shoe factory by absentee owners caused a de-classification of workers from skilled to unskilled status. These worker dissatisfactions led to the formation of a union, which later called a strike in the shoe factory. Satisfactory inter-personal relations are important between management and workers and between workers and other workers on the job. That workers are more than economic symbols or representations is evidenced by the findings from researches conducted by Centers, Roethlisberger and Dickson, and Warner and Low. Basic psychological needs of workers were significantly related to the jobs that workers preferred. Such evidence supports the basic principle of the psycho-social theory of occupational choice.

Guidance counselors, who believe and work under the psycho-social theory of occupational choice, must not only have an abundance of occupational literature available for clients, but also must have a clinical understanding of psychological needs and how they manifest themselves in human behavior. Such understandings of these basic needs call for inter-disciplinary orientations for effective

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[6]W. Lloyd Warner and J. O. Low, The Social System of the Modern Factory (New Haven: Yale University Press, 1947), pp. 159-180.

vocational counseling.

The efforts of Ginzberg and associates gave rise to the developmental theory of occupational choice. These researchers pointed out in 1951 that vocational psychologists had failed to develop an adequate theory of occupational choice, and they proposed a theory based upon the following:

> 1. Occupational choice is a developmental process: it is not a single decision, but a series of decisions made over a period of time, ten years or more. Each step in the process has a meaningful relation to those which precede and follow it.
>
> 2. The process is largely irreversible. This is due to the fact that each decision made during the process is dependent on the chronological age and development of the individual. Time cannot be relived; basic education and other exposures can only be experienced once.
>
> 3. The process ends in compromise.
>
> 4. There are three periods of occupational choice: the period of fantasy, governed largely by the wish to be an adult; the period of tentative choices, beginning at about eleven years of age, and determined largely by interest, then capacities, beginning at about age seventeen, in which exploratory, crystallization, and specification phases succeed each other.[7]

The criticism directed at vocational psychologists concerning the lack of an adequate theory of occupational choice, and the research initiated by Ginzberg and associates caused Super to state:

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[7]E. Ginzberg and Associates, Occupational Choice (New York: Columbia University Press, 1951), pp. 185-198.

> The study conducted by Ginzberg and associates is dynamic in conception, inspired partly by the Buehler-Lazarsfeld stress on the importance of understanding the entire life span. But as a compromise, with time and other practical considerations, it was cross-sectional rather than longitudinal, studying different boys and young men at different age levels; the main study dealt with only sixty-four cases, plus a smaller number of upper middle class girls and lower class boys as controls; and it focused only on the preference ("choice") process in adolescence, leaving the entry (implemented choice) and the adjustment process for other investigations.[8]

The research initiated by Ginzberg and associates on a theory of occupational choice caused Super and others to begin to establish propositions underlying the developmental theory of occupational choice. Ten propositions supporting this theory were:

1. People differ in their abilities, interests, and personalities.

2. They are qualified, by virtue of these characteristics, each for a number of occupations.

3. Each of these occupations requires a characteristic pattern of abilities, interests, and personality traits, with tolerances wide enough, however, to allow both some variety of occupations for each individual and some variety of individuals in each occupation.

4. Vocational preferences and competencies, the situations in which people live and work, and hence their self-concepts, change with time and experience (although self-concepts are generally fairly stable from late adolescence until late maturity), making a choice and adjustment a continuous process.

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[8]Donald E. Super, The Psychology of Careers (New York: Harper and Brothers, 1957), p. 173.

5. This process may be summed up in a series of life stages characterized as those of growth, exploration, establishment, maintenance, and decline, and these stages may in turn be sub-divided into (a) the fantasy, tentative, and realistic phases of the exploratory stage, and (b) the trial and stable phases of the establishment stage.

6. The nature of the career pattern (that is, the occupational level attained and the sequence, frequency, and duration of the trial and stable jobs) is determined by the individual's parental socio-economic level, mental ability, and the personality characteristics, and by the opportunities to which he is exposed.

7. Development through the life stages can be guided, partly by facilitating the process of maturation of abilities and interests and partly by aiding in reality testing and in the development of the self-concept.

8. The process of vocational development is essentially that of developing and implementing a self-concept: it is a compromise process in which the self-concept is the product of the interaction of inherited aptitudes, neural and endocrine make-up, opportunity to play various roles, and evaluations of the extent to which the results of role playing meet with approval of superiors and fellows.

9. The process of compromise between individual and social factors, because of self-concept and reality, is one of role playing, whether the role is played in fantasy, in the counseling interview, or in real life activities such as school, classes, clubs, part-time work, and entry jobs.

10. Work satisfactions and life satisfactions depend upon the extent to which the individual finds adequate outlets for his abilities, interests, personality traits, and values; they depend upon his establishment in a type of work, a work situation, and a way of life in which he can play the kind of role which his growth and exploratory experiences have led him to consider congenial and appropriate.[9]

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[9]Donald E. Super, "A Theory of Vocational Development," American Psychologist, 23:185-190, May, 1953.

The theory of occupational choice advanced by Super and others represented the integration of some of the features of the trait centered, psycho-social, and Ginzberg's theories of occupational choice. Individual interests, capabilities, and personality traits, together with the establishment of harmony between the individual and reality testing on job situations, were closely associated with the trait centered theory of occupational choice; individual differences and the development of self-concepts in relation to need satisfaction were related to the psycho-social theory of occupational choice; and vocational development as a process requiring long spans of time, approximately twenty-one years, was featured in the theory of occupational choice advanced by Ginzberg and associates.

To validate the theory of vocational development advanced by Super and others, these researchers are undertaking a longitudinal study covering fifteen years among 276 boys enrolled in the eighth and ninth grades in junior and senior high schools in Middletown, New York.[10]

Of the 276 boys included in Super's study, 142 and 134 were enrolled in the eighth and ninth grades respectively during the 1951 school year. Cooperation for this

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[10]Donald E. Super et al., Vocational Development: A Framework for Research (New York: Columbia University Press, 1957), Monograph Number One.

research was obtained from school administrators, teachers, parents, and other elements of the community. Standardized tests and newly devised tests were administered to all subjects, and interviews were conducted with students to obtain all available information needed for the research. Non-test data were gathered on three variables, namely, father's occupation, house, and dwelling area, together with social attitudes and occupations in Middletown. During 1951-1952, all field work was done, and during 1955-1956, all subjects were re-interviewed. During 1956, tests were scored and quantitative and qualitative data from the ninth grade group have been organized for statistical treatment. Six monographs are to be prepared on the research, covering ages of the boys from fourteen to thirty-five.

The validation of the developmental theory of vocational choice by Super and others might prove valuable to guidance counselors in the vocational counseling process. Such validation of this theory of occupational choice can be a milestone in the work of the vocational counselor because the choice of an occupation is one of the important events in the life of any individual. For that reason, individual job satisfactions that workers receive from their work will depend primarily upon the making of vocational choices that lead to productive lives.

Summarily, the trait centered, the psycho-social, and the vocational development theories of occupational choice

have been discussed in this chapter, together with research results related to each approach. The trait centered theory attempts to match worker traits with job traits; the psycho-social theory of occupational choice relates the strength of Maslow's prepotent arrangement of basic psychological needs to individual satisfactions accruing from occupational choice; and the developmental theory of occupational selection states that occupational choice is a process requiring long periods of time. Individuals develop self-concepts, engage in role playing, and attempt to modify the job requirements to meet the self-concept or alter the self-concept to meet the job requirements.

CHAPTER III

INDUSTRIAL OCCUPATIONAL INFORMATION

The rapidly changing nature of our industrial society must be considered by a person choosing a vocation. New methods of manufacturing products, consumer demands for new products, and changing patterns of living are constantly causing changes in the kinds of jobs that workers perform. Mitchell[1] reported that eleven million workers or about 7 per cent of all male workers were living in a different county in March, 1958, from the one in which they had resided in March, 1957, and about one-half of these workers were living in a different state. These population shifts represented job changes, and many resulted in changes to other occupational groups.

During the decade, 1960-1970, Mitchell predicted the following changes in the labor force and among industries:

> By 1970, our national population will increase to 208 million people, or 15 per cent over the last decade. The number of young people reaching eighteen years of age either ready to go to college or to enter the labor force will increase from 2.6 million to 3.8 million in a single year, 1965, or a rise of nearly 50 per cent. In 1960, approximately seventy-four million persons will make the working population of our nation; but by

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[1]James P. Mitchell, Manpower--Challenge of the 1960s (Washington: Government Printing Office, 1960), p. 12.

> 1970, the total number of workers will increase to eighty-seven million. Forty six per cent of the changes in the working population during this decade will come from young workers under twenty-five years of age; twelve per cent of the changes will be caused by workers between the ages of twenty-five to thirty-four; one per cent decrease in working population will come from workers between the thirty-five to forty-four age group, due principally to the low birth rates during the depression of the 1930's; and 20 per cent of the changes will occur from workers forty-five years and older. By 1970, there will be approximately thirty million women workers, an increase of six million more than in 1960.
>
> In production industries, manpower needs will decrease due to advancement of technology; while in the service industries, more workers will be needed to provide the increasing service required as our standard of living increases. The biggest increase in worker population will occur in occupations requiring the most education and training. This trend is due to: (1) the continuing shift from an agricultural economy to one that is predominantly industrial; (2) the rapid expansion in research and development activities; (3) the tremendously rapid increase in the application of technological improvements; (4) the increasing size and complexity of business organizations; (5) the widespread growth of record keeping among all types of enterprises; and (6) the growing need for educational and medical services.[2]

The impact of these worker and industrial changes predicted for this decade will cause many changes in educational programs conducted by educational institutions. Public, non-public, and higher education school administrators must become concerned with the development of curricula that provide adequate experiences to students, thus aiding them to make better adjustments in our industrial society.

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[2] Ibid., pp. 4-21.

Negro workers represent an important manpower resource. Lack of education and experience, together with discrimination, have caused many members of this racial group to be denied work opportunities that utilize their fullest potential. Adequate education and experiences, together with improved intercultural understandings, can be influential factors to promote better job opportunities for members of this racial group.

Table I reports the total annual work force of the Nation and per cent of white and non-white workers employed in nine major occupational groups from 1949-1959. Too, Table I portrays national trends in employment for both white and Negro workers. A review of the data presented in Table I revealed the following: (1) in 1959, 80 per cent of all non-white workers were employed in the semi-skilled, service, farmers and managers, farm laborers and foremen, and laborer major occupational groups, while 79.5 per cent of all white workers were employed in the professional and technical, managers and proprietors, clerical and sales, and skilled major occupational groups; (2) although a 14 per cent increase in worker population was noted from 1949-1959, white workers showed greatest increases in the professional and technical and clerical and sales major occupational groups; (3) during this same period, non-white workers indicated a gradual increase in professional and technical and skilled major occupational groups, and

increased 110 per cent in the clerical and sales major occupational group; (4) during 1949-1959, decreases of 21.1 and 5.3 per cents were noted for white and non-white workers respectively in the farm laborers and foremen major occupational group, and these decreases reflected the utilization of machinery in the farm industry; (5) data showed that increasing numbers of both white and non-white workers entered the professional and technical, and clerical and sales major occupational groups; and further, non-white workers showed a 52 per cent increase in the skilled major occupational group; and (6) the ratio between white and non-white workers employed from 1949-1959 was approximately 9:1, or for every ten workers employed from 1949-1959, nine were white and one was non-white.

Table II presents statistics describing the average number of white and non-white workers employed during 1949-1959 in nine major occupational groups. The average number of white workers was 5,382,000 or 8.6 per cent of the average working population in the professional and technical occupational group. The average number of non-white workers in the same major occupational group was 226,000 or .4 per cent. The average working population from 1949-1959 in nine major occupational groups in contrast to the total working population in 1959, reported in Table I, revealed the following: (1) in the professional and

TABLE II

AVERAGE NUMBER AND PER CENT OF EMPLOYED WHITE AND NON-WHITE WORKERS IN OCCUPATIONAL GROUPS FROM 1949-1959[a]

Occupational Group	Average number employed[b]		Per cent	
	White	Non-white	White	Non-white
Professional and Technical	5,382	226	8.6	.4
Managers and Proprietors, except farm	6,376	144	10.2	.2
Clerical and Sales	11,894	374	19.1	.6
Skilled	8,025	339	12.9	.5
Semi-skilled	11,077	1,257	17.8	2.1
Service				
Private	991	959	1.6	1.4
Other	4,062	1,069	6.5	1.7
Farmers and Managers	3,405	350	5.5	.6
Farm Laborers and Foremen	2,100	631	3.4	1.0
Laborers, except farm and mine	2,698	982	4.3	1.6
Total	56,008	6,371	89.90	10.10
Grand Total	62,379		100.00	

[a]Table made from data prepared by United States Department of Labor, Bureau of Labor Statistics, Washington, D. C., May 4, 1960.

[b]000 omitted.

technical major occupational group, both whites and non-whites made gains of 1.8 and .1 per cents respectively; (2) a gain of .1 per cent was found for white workers, while non-white workers were stable in the managers and proprietors major occupational group; (3) gains of 1.1 and .2 per cents were noted for white and non-white workers respectively in the clerical and sales major occupational group; (4) white workers reflected a .4 per cent decrease and non-white workers showed a .1 per cent increase in the skilled major occupational group; (5) in the "Private" sub-class of the service major occupational group, white workers increased .2 per cent, and non-white workers were static; (6) gains of .5 and .1 per cents for white and non-white workers respectively were noted in the "Other" sub-class of the service major occupational group; (7) in the farmers and managers major occupational group, decreases of .7 and .2 per cents were apparent for white and non-white workers respectively; (8) non-white workers remained at the average, while white workers decreased .5 per cent in the farm laborer and foremen major occupational group; (9) in the farmers and managers major occupational group, 1.3 and .2 per cent decreases were noted for both white and non-white workers respectively; and (10) non-white workers remained at the average, while white workers decreased .3 per cent in the laborers major occupational group.

Table III depicts data showing employed white and non-white workers in 1959, expressed in per cent, number, and ratio between white and non-white workers in each major occupational group, and a breakdown of number employed, based upon a 9:1 ratio, in per cent and number, together with per cent of gain or loss for white and non-white workers in each major occupational group. The distribution of workers employed in 1959, reported in Table I, was 89.6 per cent or 58,761,000 white workers, and 10.4 per cent or 6,820,000 non-white workers, or there existed an approximate ratio of 9:1 between white and non-white workers. By using the 1959 employment statistics in nine major occupational groups, and by extending the 9:1 ratio between white and non-white workers, a projection of the number of workers was made to determine the number of white and non-white workers who would have been employed in each of the nine major occupational groups. By so doing it is possible, if the factors of equal training and experience and no discrimination were operating, to discover inequities in the distribution of workers in the nine major occupational groups, and to compute per cents of gain or loss for either white or non-white workers. Table III should be read in two parts: (1) in the professional and technical occupational group in 1959, white workers numbered 6,820,000 or 10.4 per cent of the total working population, and 328,000 or .5 per cent of the total working population was classed

non-white; and the ratio between white and non-white workers in this same major occupational group was 21:1, i.e., for every twenty two workers employed in the professional and technical major occupational group in 1959, twenty-one were white and one was non-white; and (2) if the 9:1 ratio existed between white and non-white workers in the professional and technical major occupational group as it did for the labor force generally, white workers would number 6,427,000 or 9.8 per cent of the total working population, and non-white workers would number 721,000 or 1.1 per cent of the total labor force in 1959. Further, the extension of the 9:1 ratio in this occupational distribution would show a 6 per cent decrease in the white workers and a 120 per cent increase among the non-white workers in the same major occupational group. From Table III, it is apparent that the large percentage gains for non-white workers, using the 9:1 ratio, in some of the major occupational groups were caused by the large ratios between white and non-white workers employed during 1959. The ratios between white and non-white workers in 1959 in nine major occupational groups ranged from 52:1 to 6:5.

Table III revealed the following: (1) in only the semi-skilled major occupational group did non-white workers approach the ratio of 9:1; (2) using the 9:1 ratio, very large percentage gains were noted for non-white workers in the professional and technical, managers and proprietors,

clerical and sales, and skilled major occupational groups, with small corresponding percentage losses among white workers in the same major occupational groups.

A. ASPECTS OF OCCUPATIONAL UNDERSTANDING

In conducting a special occupational study, Baer and Roeber listed, "nature of work, job preparation, economic returns, personal requirements, size and composition of workers, working conditions, entry to job, and job outlook"[3] as being basically essential to the study of occupations. In this investigation, these same aspects of occupational understanding were applied to entry jobs found in six manufacturing and research type industries located in Metropolitan Knoxville for high school, non-college and college graduates.

Nature of work. Descriptive statements characterizing a job or occupation are important to the client as he attempts to understand the role that he is expected to play in a chosen occupation. Such information aids in the orientation process as the client considers the unique characteristics of each job. What tasks are required in the efficient performance of the job? Does the client

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[3]Max F. Baer and Edward C. Roeber, Occupational Information (Chicago: Science Research Associates, 1958), pp. 64-162.

possess the mental ability, skills, aptitude, and other socio-psychological factors to make good job articulation? Does the client manifest evidence of maintaining a realistic understanding of himself and his abilities as they relate to the requirements of the job?

Job preparation. The factor of job preparation goes beyond the interests in, and capacities for a job selected by the client. Basic questions to be considered are: What general education requirements must the client meet in order to become a productive worker on the job? What special training must the applicant have in order to become a productive worker? What subject matter competencies should the client possess? Does the chosen industry provide educational opportunities for job advancement?

Economic returns. One of the factors important to the choice of a vocation is the material compensation derived from the job. Some socio-economic factors related to choosing a vocation are: the ability of the job to permit creativeness and other forms of personal expression, the opportunity to make friends, the chance to develop stimulating experiences, and the experience to serve one's fellowman. Other economic factors worthy of consideration are: entrance salary, annual increments, retirement benefits, annual and sick leave, social security and other health benefits.

Personal requirements. Personality, mental and character traits, aptitudes and special abilities are important to the client as he views a chosen vocation. Does the client possess the personal requirements required of an efficient worker on a specified job? Does the personality of the client fit the personality of the job? This aspect of occupational understanding is important to the client in order for the worker to experience job satisfactions.

Size and composition of workers. Number of workers on a given job is important as such information has value because the client can picture opportunities arising from deaths, retirements, and transfers. The larger the number of workers on a given job or in a specific industry the larger are the requirements for replacements. Knowledge of the composition of workers on specified jobs is important information to non-white workers. However, the fact that non-whites may not be presently employed on specific jobs should not deter the efforts of the members of this group to gain educational experiences and training for these new jobs. If non-whites pursue adequate educational experiences for new jobs, industrial management cannot say that there exist no qualified non-white applicants for newly opened jobs.

Working conditions. The type of environment in which the job holder performs the tasks required of his job is basic to the choice of a vocation. Will the environment affect negatively the health of the individual? Under what hazardous conditions to the workers and others must the job be performed? What kind of mental attitude is required in the performance of the job?

Entry to job. Information given to the client as to how an individual may gain entrance into the job aids the client in choosing a vocation, and serves as a guide during the period of and after the termination of educational and training experiences. Is membership in a union or the serving of an apprenticeship a requirement for entrance into the job? Is a high school or college transcript reviewed by personnel officers as they make job selections? Has the behavior of the applicant been of such a nature or quality that others may adequately describe his general characteristics as they relate to job requirements? In the interviewing process, what factors are considered important to the interviewer?

Job outlook. This aspect of occupational understanding is complicated. Many factors enter into the determination of what makes a job possess high or low job stability. Some of these are: continuation of high levels of economic activity, continued consumer demands for the

manufactured products, the application of research to methods of production, and the absence of national or international crises causing major shifts in manpower, thereby, altering the rate of economic growth. The client should be concerned with rate of turnover, and demand for and supply of workers. Occupational outlook should be projected far enough into the future for usefulness to the applicant after the completion of education and training experiences required for entrance into the job.

These aspects of occupational understanding have a threefold value: (1) school administrators are provided essential information that can serve as guides in curriculum planning; (2) the counselor has facts about the world of work in which the counselee will find himself; and (3) the counselee has vital information about specified job requirements and the role that the job will require him to play.

From the application of eight aspects of occupational understanding, previously discussed in this chapter, to entry jobs found in six manufacturing and research type industries located in Metropolitan Knoxville for high school, non-college and college graduates, Table IV presents job facts based upon "nature of work, job preparation, economic returns, personal requirements, size and composition of workers, working conditions, entry to job,

and job outlook"[4] for entry jobs in the professional and technical major occupational group. Jobs or occupations classified in the professional and technical major occupational group require a high degree of mental activity and demand rather extensive academic study. Under each aspect of occupational understanding was reported descriptive, and valid information found in job descriptions, job specifications, job analysis sheets and/or replies to questionnaires given by personnel officers at the six manufacturing and research type industries reported in this investigation.

Table IV pointed out the following: (1) most entry jobs found in the industries reported in this study required a liberal arts college education, with majors in physics, chemistry, mathematics, biology, business administration, personnel administration, or one of the engineering branches; (2) entry jobs for high school and non-college graduates required special competencies in chemistry and art; (3) career jobs were available in this major occupational group; (4) all entry jobs required the ability to work well with other people and present evidence of emotional maturity while on the job; (5) all jobs were presently held by large numbers of white and few Negro workers, but employment is available to qualified Negro workers; (6) application, standardized tests, high school or college

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[4] Ibid., pp. 64-162.

transcript, personal interviews and references are required for job consideration; and (7) job outlook ranged from excellent to fair, based upon labor turnover, high or low job stability, and supply and demand for workers.

Table V discusses the eight aspects of occupational understanding in the clerical major occupational group in relation to entry jobs found in six manufacturing and research type industries located in Metropolitan Knoxville, for high school, non-college and college graduates. Jobs or occupations in the clerical major occupational group require tasks related to the preparation, transcribing, systematizing, or preserving written records and communications in places of work.

Table V revealed the following information: (1) all entry jobs in the clerical major occupational group required high school graduation with special competencies in typing, filing, stenography, and business English; (2) some entry jobs required advanced training from one to two years beyond high school graduation; (3) salaries for beginning workers were good in comparison to other jobs requiring an equivalent level of education; (4) career job opportunities were available in this major occupational group; (5) ability to work well with others, out-going personality traits, and a command of the communicative skills were basic personal requirements of all applicants; (6) application, scores from standardized tests, including clerical and intelligence,

personal interviews, and references are used by personnel officers in job selection; (7) job outlook is excellent, with good chances for advancement; and (8) a large number of white workers and a very small number of Negroes were employed in this major occupational group, but employment opportunities are open to qualified Negroes.

Table VI depicts job facts related to the eight aspects of occupational understanding for the skilled major occupational group. These job facts pertain to entry jobs found in six manufacturing and research type industries located in Metropolitan Knoxville, for high school, non-college and college graduates. Jobs or occupations classed in the skilled major occupational group require skills of a craft nature and other manual skills calling for a high degree of skill and comprehensive knowledge of the processes of the job.

From Table VI, the following can be noted: (1) all of the entry jobs in the skilled major occupational group required high school education and/or graduation; (2) apprenticeship programs, where available, are sponsored jointly by the local unions and management; (3) in many apprenticeship programs Negroes face discrimination in their efforts to become apprentices; (4) some jobs required training and experience before applicant can enter the job; (5) economic returns were excellent, with opportunities for annual and sick leave, hospitalization,

retirement and social security benefits; (6) strong, healthy persons, with mechanical ability and mentality to learn new tasks, are basic personal requirements; (7) many whites and very few Negroes were employed in this major occupational group; (8) standardized tests, including mechanical and educational, personal interviews, references and job performance tests are required to enter the job; and (9) job outlook ranged from excellent to poor, due to demand for workers and a limited number of job openings; and all jobs showed high job stability, with temporary lay-offs in the construction industry.

Chapter III of this study described the forecasts made as they related to labor and industrial changes during the decade, 1960-1970. Tabulations showed per cents, numbers, ratios between white and non-white workers, and average number of employed white and non-white workers from 1949-1959. Eight aspects of occupational understanding were discussed and applied to entry jobs in the professional, clerical and skilled major occupational group found among six manufacturing and research type industries located in Metropolitan Knoxville, for high school, non-college and college graduates.

CHAPTER IV

EDUCATIONAL EXPERIENCES AT REPORTED INSTITUTIONS

The sharp increase of births in America since World War II has caused school population increases in elementary and secondary schools, and institutions of higher education. During the decade, 1960-1970, enrollments in grades nine through twelve in Continental United States in public and non-public schools will increase from 8,291,000 in 1960 to an estimated 11,906,000 students in 1970, or 43.6 per cent; enrollments in institutions of higher education will increase from 3,964,000 in 1960 to an estimated 6,676,000 students in 1970, or 68.4 per cent.[1]

The numerical increase in school population has created many problems for schools and other social agencies. Some of the problems that concern school administrators are: (1) the difficulty in finding a sufficient number of qualified teachers; (2) the inadequacy of school plant facilities; (3) the location of new sources of revenue to pay additional costs to provide adequate educational services; (4) the need for the re-evaluation of the curriculum to determine its adequacy to meet personal and cultural

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[1]United States Department of Health, Education, and Welfare, Projected School Enrollments for High School and Colleges in Continental United States (Washington: Government Printing Office, 1960), p. 6.

needs of students; and (5) the development of methods to increase the holding power or retention rates of students presently enrolled in schools.

The rapidly changing nature of some of the socio-economic aspects of our society demands that students receive the maximum educational experiences to insure progress and stability of our form of government. Increases in the holding power or retention rates of students enrolled in our schools provide greater opportunities for students to acquire general knowledge and to develop healthy attitudes and values that are basic to the making of satisfying adjustments in our society. These satisfying adjustments should lead to productive citizenship, the ultimate goal of all educational experiences.

Holding power or retention rates among educational institutions have increased in many states and local school systems. In view of these increases, drop-outs continue to pose problems to school administrators. Concerning the drop-out, Mitchell stated:

> Education and training in the United States will get even more emphasis during the 1960s, but millions of new young workers will not have had a high school education. 7.5 million young people entering the labor force during the 1960s will not have completed high school, and 2.5 million of these will not have completed even a grade school education. Of the 7.5 million drop-outs in school population, 31 per cent will have ninth grade education; 30 per cent will have tenth or eleventh grade education. . . . School drop-outs get the lowest level jobs and also experience more unemployment than high

> school graduates. Research indicates that dropouts tend to get lower paying service and laboring jobs, whereas graduates get office and sales jobs, as well as apprenticeships and other on-the-job training opportunities. . . . This points to the great need for persuading youngsters to stay in school, and for schools to provide vocational counseling even before the eighth grade. . . . In 1959, 8.9 per cent of the persons unemployed had less than a high school education; 4.8 per cent had graduated from high school; and 2.4 per cent had some college education. In general, these workers with more schooling have higher earnings; and unemployment is much higher among those with least education.[2]

Table VII depicts data related to retention rates of two ninth grades in 1948 and 1956 respectively in Tennessee, Knox County and the City of Knoxville high schools, and reports the per cents of students retained for each grade through graduation in 1951 and 1959 respectively. Retention rates found in Table VII were approximations as transfers were not considered in the computations. The following statements can be drawn from Table VII: (1) losses of approximately 19.5 and 23.3 per cents of student population occurred at the end of the ninth grade for both white and Negro students respectively in Tennessee during 1948-1951; in 1956-1959 in Tennessee, the greatest percentages of student losses occurred at the end of the ninth grade for white students (16.2), and at the completion of the tenth grade for Negro students (15.9); (2) in 1948 and 1956, Negroes constituted approximately 15.5 and 16.3 per

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[2]James P. Mitchell, Manpower--Challenge of the 1960s (Washington: Government Printing Office, 1960), pp. 16-17.

cents respectively of all ninth grade students in Tennessee; in 1951 and 1959, Negroes formed 13.4 and 14.8 per cents respectively of all high school graduates in Tennessee; (3) during 1948-1951 and 1956-1959, the holding power or retention rates for Tennessee secondary schools were 52.5 and 57.6 per cents respectively as compared to the holding power or retention rates of the nation's schools, 63.4 per cent for 1950-1951,[3] and 66.7 per cent for 1959;[4] (4) in Knox County and the City of Knoxville during 1948-1951, the greatest percentage of student losses was found at the completion of the ninth grade for white students (21.9), and at the end of the eleventh grade for Negro students (19.0); while during 1956-1959, 15.5 per cent loss of student population was noted for white students at the end of the ninth grade, and 19.0 per cent loss of student population for Negro students occurred at the end of the eleventh grade; (5) during 1948 and 1956, Negroes formed 9.1 and 9.7 per cents respectively of all ninth grade students in Knox County and the City of Knoxville high schools, and during 1951 and 1959, the graduating years for the two ninth grades, this same racial group constituted 9.3 and 7.9

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[3]Biennial Survey of Education in the United States, 1950-1951 (Washington: Government Printing Office, 1951), Table 17.

[4]United States Department of Health, Education, and Welfare, op. cit., p. 4.

per cents respectively of all high school graduates in Knox County and the City of Knoxville; (6) data indicate that Austin High School, the only high school in Knox County and the City of Knoxville for Negroes, lost 19.0 per cent of the student population at the completion of the eleventh grade during both periods, 1948-1951 and 1956-1959; and (7) at Austin High School, 8.6 per cent of the Negro students enrolled in the twelfth grade failed to graduate in 1951, while 12.6 per cent of the Negro students enrolled in the twelfth grade failed to graduate in 1959.

The import from Mitchell's statement about drop-outs in our nation's schools is singularly related to the drop-out problem in Tennessee, Knox County, and the City of Knoxville secondary schools. Data from Table VII of this investigation show that during 1956-1959, Tennessee lost 41.4 and 47.6 per cents of white and Negro high school students respectively; during this same period, Knox County and the City of Knoxville lost 40.3 and 52.8 per cents of white and Negro high school students respectively.

Summarily, Table VII portrayed the greatest loss of white and Negro students in Tennessee to be at the completion of the ninth grade during 1948-1951 and 1956-1959; in Knox County and the City of Knoxville during the same periods, the greatest loss of white students occurred at the completion of the ninth grade, while the greatest loss of Negro students was found to be at the completion of the

eleventh grade; in 1959, the 12.6 per cent loss of enrolled twelfth grade students at Austin High School before graduation appeared critical as compared to an 8 per cent loss of enrolled twelfth grade white students in Knox County and the City of Knoxville during 1959; and fewer Negroes, eligible for high school education, are graduating from Tennessee high schools than are white students.

Statistics from the high school population for ninth grade through graduation for Tennessee, Knox County, and the City of Knoxville for two periods, 1948-1951 and 1956-1959, reported losses of many white and Negro high school students. These losses from the high school population not only represent the unfulfillment of educational goals defined by our democratic society but also a small return on an economic investment made from public and other tax programs to support the education of all persons eligible for a high school education.

Smith,[5] in a study of the educational progress of 274 Knoxville Negro pupils over a sixteen year period, 1943-1959, reported a drop-out rate of 48.2 per cent or 132 students before high school graduation. Lakin[6] examined

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[5]Elizabeth L. Smith, "An Accounting Study of the Educational Progress of Knoxville Negro Pupils over a Sixteen Year Period" (unpublished Master's thesis, The University of Tennessee, 1960), pp. 30-41.

[6]Deaderick F. Lakin, "A Study of Early School Leavers of Halls School, Knox County, Tennessee"(unpublished

132 first grade pupils entering Halls, a Knox County school, in autumn of 1945 and discovered that 32, or 29.9 per cent, dropped from school before high school graduation. Barnett[7] studied 358 first grade pupils for the Fall term of 1940 at Brownlow and Park Lowery, two City of Knoxville schools, and reported a student loss of 135 students or 45.8 per cent before high school graduation. The reports from these researches tend to be closely related to the data reported in Table VII describing the drop-out rates for white and Negro students enrolled in Knox County and the City of Knoxville high schools.

Increased holding power or retention of students enrolled at institutions of higher education poses a problem to college and university administrators. Cope[8] studied the characteristics of a 30 per cent random sample of students who enrolled at Dillard University, New Orleans, Louisiana, from September 1946 through September 1956, but who dropped out of school before completing the requirements for graduation, and reported that approximately one-half or 50 per cent did not progress beyond the freshman

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Master's thesis, The University of Tennessee, 1957), pp. 20-31.

[7]Elizabeth H. Barnett, "A Pupil Accounting Study of First Grade Children" (unpublished Master's thesis, The University of Tennessee, 1954), pp. 40-52.

[8]William E. Cope, Jr., "A Study of Selected Characteristics of the Drop-outs at Dillard University" (unpublished Doctoral dissertation, Indiana University, 1958), pp. 16-17.

year in college; one-fourth or 25 per cent of the group dropped at the end of the sophomore year; the percentage of drop-outs decreased as the students progressed to the senior year. Cope further stated that the problem of retention of students enrolled at institutions of higher learning, as in public schools, is distinctly a problem of the individual educational institution.

Table VIII of this investigation reports information describing vocational educational programs at Austin and Fulton High Schools, including subject matter and Carnegie Units required for graduation from each vocational area. Graduation from each vocational education area, both at Austin and Fulton High Schools requires sixteen Carnegie Units, in which the State of Tennessee requires specified units in health education, language arts, mathematics, civics, American history, and vocational laboratory or shop. Conclusions that can be drawn from Table VIII include: (1) the vocational education programs offered at Fulton High School tend to be more economically productive than are the vocational education programs at Austin; (2) in the same vocational education programs offered at Austin and Fulton High Schools, the course offerings are not comparable; (3) at the time that data were gathered for this study, both high schools used no test data to help students to determine the most suitable vocational curriculum;

and (4) Austin High School has the Industrial Cooperative Training Program that is not provided at Fulton High School.

A description of curricular offerings leading to industrial employment at Carson-Newman and Knoxville Colleges is given in Table IX. Information from many of the personnel officers included in this study indicated the need for an excellent background in science and mathematics as necessary requisites for employment consideration. The curricula described in Table IX at both institutions meet the requirements for employment consideration in biology, mathematics, chemistry, pre-engineering, physics, and office administration or secretarial science in many of the manufacturing and research type industries reported in this investigation. A student following any one of the curricula in either institution must achieve above average in subject matter to be able to compete with the top 5 per cent of all applicants for the job. This 5 per cent level for competitive purposes in job selection is changed only when demand for workers exceeds the supply. Instructional staffs at the college level must give serious concern to this employment formula used by many employment officers to recruit workers. Student understanding of this formula could create an improved learning climate in many of these disciplines leading to industrial employment.

In secretarial science or office administration, three of the reported industries will employ Negroes who

have achieved specific skills in typing, business English, and stenography, and who can meet the competitive requirements of the labor market. Public school and college administrators might give consideration to these requirements and plan courses designed specifically to meet this need through two year terminal educational programs.

A. INSTITUTIONAL GUIDANCE PROGRAMS

Guidance programs in present day public and higher education have become more and more important to both school administrators, teachers, parents, and students. The guidance programs at the educational institutions reported in this investigation included testing and counseling. Standardized tests administered included: (1) intelligence; (2) achievement; (3) aptitude; and (4) interest inventories. Counseling services included: (1) academic for those showing above average ability as well as those showing low level performance; (2) social for those students needing help to solve personal problems; and (3) vocational counseling services for those students whose vocational plans are made as well as for those students whose vocational plans are not clear.

Intelligence, aptitude, and achievement tests are administered in both high schools to students enrolled in the ninth, eleventh, and twelfth grades, while in college these

tests form a part of the test battery administered to all incoming students. Interest inventories are made in high schools at the eleventh grade level; while in college, the inventory is usually made during Freshmen Week.

At the time data were gathered in one high school reported in this investigation, one guidance counselor devoted one-half day to promoting guidance services for 750 students, while at another high school, two guidance counselors worked full time to provide guidance services for 1400 students. The dean of the college, the personnel deans, dormitory counselors, departmental chairmen and director of guidance are responsible for academic, social, and vocational counseling at each college reported in this investigation.

During Freshmen Orientation Week at the two reported colleges, Freshmen students meet with the departmental personnel to become oriented with the course requirements related to certain vocational choices. Periodic meetings are held for advisors and advisees to discuss problems related to academic improvement and vocational choice. As the student progresses in his educational program, the departmental chairman assumes more responsibility for the program of the advisee. Occupational literature is available at the libraries, offices of the deans of the colleges, and the guidance counselors.

At one institution of higher education, a new aspect to vocational counseling will be implemented during this school year. The program has a three-fold approach, namely, (1) periodic chapel sessions to discuss general occupational information; (2) effective workers to point out specific job information to departmental majors and minors; and (3) individual referrals to guidance office to aid students in the selection of a vocation.

Chapter IV of this investigation reported statistics describing retention rates or holding power of high schools in Tennessee, Knox County, and the City of Knoxville for two ninth grades in 1948 and 1956 respectively, and high school graduates in 1951 and 1959 respectively. During these two periods, 1948-1951 and 1956-1959, white and Negro student losses were noted from the total school population. Curricular educational experiences leading to industrial employment and provided at the schools studied in this investigation were reported. Institutional guidance programs were described, with no attempt made to evaluate the suitability of these guidance services and practices.

CHAPTER V

BASIC ISSUES AND IMPLICATIONS

The background for the discussion of basic issues and implications of the findings from this investigation to schools and other elements of community life was provided by the identification of entry job facts for high school, non-college, and college graduates among six manufacturing and research type industries located in Metropolitan Knoxville, Tennessee, the study of curricular offerings leading to industrial employment provided at two high schools, Austin (Negro) and Fulton (white), and two colleges, Carson-Newman (white) and Knoxville College (Negro), and the report of guidance programs offered at the educational institutions. In Chapter I of this research under Basic Issues of This Investigation, nine questions were asked; in this chapter, responses were made to them. These responses were based upon discussions with employment officers at the six reported industries, with principals at the two high schools, with the academic deans at the two institutions of higher education, and with the guidance counselors at the four educational institutions, together with analyses of data reported on questionnaires used in this research. These reactions were given to the following questions:

1. What are entry employment requirements for jobs in selected manufacturing and research type industries

for high school, non-college, and college graduates?

Tables IV, V, and VI, found on pages 44, 45, 47 and 49 of this investigation, presented employment information about entry jobs in the professional, clerical, and skilled major occupational groups. In the professional major occupational group, job entrants must have excellent educational backgrounds in the subject matter areas in which employment is sought, exhibit emotional stability, possess the ability to work well with others, and have command of communicative skills. In the clerical major occupational group, all applicants must possess specific skills in typewriting, stenography, and business English, exhibit adequate behavioral traits as receptionists, reflect emotional stability, and have command of communicative skills. In the skilled major occupational group, applicants must show the ability to learn new job tasks, possess a healthy body to withstand varying weather conditions and other changeable work situations, demonstrate mechanical ability and a general knowledge of mechanical equipment, and exhibit the ability to manipulate a learned skill.

2. What attitude does industrial management have in selected industries concerning the full employment of qualified Negro workers?

The employment policies of three industries reported in this investigation revealed non-discriminatory

initial employment practices in the professional and clerical major occupational groups; among the other industries, entry employment in the professional and clerical major occupational groups reflected practices based upon community custom and habit. Employment on jobs in the skilled major occupational group among five industries reported in this investigation showed that Negroes can obtain entry employment on jobs in which they have membership in either an industrial or a craft union. In one non-union industry, all Negro workers were employed as laborers, and they reach jobs in the semi-skilled major occupational group, the highest level of their present employment.

3. Are educational institutions for Negroes providing adequate experiences for those who seek industrial employment?

Table VIII of this research reported vocational programs leading to industrial employment provided at Austin and Fulton High Schools. Of the vocational education programs conducted at Austin High School, namely, auto mechanics, business education, commercial foods, cosmetology, industrial electronics, woodwork, brickmasonry, diversified occupations, shoe repairing, and tailoring, six vocational areas, namely, auto mechanics, business education, commercial foods, industrial electronics, woodwork, and brickmasonry were related to work opportunities among the industries reported in this study.

In identical trade shop courses provided at Austin and Fulton High Schools, Fulton High School students receive more courses or subjects to support their vocational educational experiences. The subject matter differences between the two schools are shown as follows: auto mechanics--related arithmetic I and II, related science I and II, and two additional units in vocational laboratory; business education--business machine operation; commercial foods--art, psychology, related arithmetic I, general business, typewriting, and two additional units in vocational laboratory; cosmetology--art, related arithmetic I, related science I, psychology, general business, and typewriting; industrial electronics--algebra I and II, related science I, radio or television, related drawing; woodwook--related arithmetic I and II, related science I, related drawing, and two additional units in vocational laboratory.

From the above comparisons of educational experiences provided vocational education students at Austin and Fulton High Schools, evidence presented does substantiate that inequities exist in course offerings, which, in time, reflect inadequate educational experiences for Austin High School students. Further, these inadequacies existing among Austin High School students promote small chances for employment in the areas for which training has been received.

The Industrial Co-operative Training Program or diversified occupations program is designed to provide

on-the-job experiences to enrollees who plan to become a worker on a given job at the completion of high school education. Some of the basic principles underlying this program are:

> The program should be organized and conducted with the advice and counsel of an advisory committee consisting of representatives of employers and employees of the community. . . . During the time of employment in the on-the-job phase of the program, the pupil learner shall be legally employed in approved trade or industrial occupation which offers real opportunities for training, employment, and advancement for the pupil learner, and which is socially respectable to the community; shall be employed at a monetary wage at a rate commensurate with wages paid other employees doing similar work.[1]

In view of the rapidly changing nature of our industrial society, serious doubts are cast upon the desirability of the Industrial Cooperative Training Program or diversified occupations conducted at Austin High School. The features of the presently conducted Industrial Cooperative Training Program at Austin High School suggest the following assessments supporting the undesirability of such a program: (1) no systematic method exists of selecting enrollees for the various on-the-job experiences; (2) enrollees are restricted to special classes in vocational instruction, thus preventing enrollees from gaining additional vocational education experiences that might promote better job

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[1] 1959-1961 Rules, Regulations and Minimum Standards of the State Board of Education (Nashville: Tennessee State Board of Education, 1959), p. 71.

efficiency; (3) in making a vocational choice, the immature level of the enrollees might reflect a vocational choice based upon the wages paid by employers; (4) the program can lead to a source of cheap labor; and (5) if vocational interests of students are judged to be sufficient for additional vocational educational programs and a need exists for such training experiences, the school administrators should provide those programs to meet these interests. The inequities existing between the present trade training programs at Austin and Fulton High Schools would become more equalized, if the cost of conducting the Industrial Cooperative Training Program at Austin High School could go to improve educational experiences in the other trade training areas.

Curricular programs leading to industrial employment provided at Carson-Newman College and Knoxville College were comparable, except business administration for Carson-Newman College students. These comparable educational areas leading to industrial employment included majors and/or minors in: biology, chemistry, secretarial science, mathematics, pre-engineering, and physics.

College administrators might consider offering a two-year terminal program for clerical workers. Special emphasis could be placed upon typewriting, stenography, business English, and office practices. The outlook for clerical workers with adequate skills is excellent.

Although curricular offerings leading to industrial employment, except business administration, were comparable at Carson-Newman College and Knoxville College, other factors, namely, motivation, educational background, and parental attitudes, influence considerably academic performance of Negro secondary school and college students. The results from standardized tests indicate, in many instances, educational differentials between Negro and white students. Causal factors related to these educational differentials stem principally from inequities in secondary school programs, the relationship between socio-economic conditions of a substantial number of parents and levels of aspiration, the influence of segregation and discrimination upon the behavior of students and the absence of many Negro worker "images" in industry. Therefore, teachers of Negro students in both secondary schools and colleges must consider the inter-play of these societal forces and their relationship to the learning process.

4. Does racial discrimination continue to exist in job selection among industries reported in this study?

Job discrimination exists against qualified workers when non-essential factors are considered either at the initial stage of employment or at times of vertical promotions. Hope stated:

> Discrimination occurs when a person is deprived or disadvantaged in his efforts to obtain an opportunity

> or perform a service for reasons which are irrelevant to the function to be performed or the service sought and without regard to his objective qualifications for that purpose. Insofar as Negroes suffer competitive disadvantages in or are denied access to developmental or employment opportunities solely because of their race, they encounter unfair barriers to the full utilization of their productive resources and may, thus, contribute to unemployment or underemployment of the Nation's manpower.[2]

Negro workers have gained initial employment on jobs in the professional and clerical major occupational groups in three reported industries; no initial employment on jobs in the professional and clerical major occupational group has existed for Negroes among the three remaining ones. Discrimination is practiced against Negro workers in the skilled major occupational group, except brickmasons, carpenters, and cement finishers. At times, Negro workers experience discrimination in job placement on jobs controlled by the brickmason and carpenters' local unions of which they are members. Despite many years of service in one industry, Negro workers have obtained jobs in only the semi-skilled major occupational group. On production jobs in one industry, Negro workers can "bid" for jobs in other job classifications. If successful bidders, a trial period is given to evaluate work performance; if work performance is satisfactory during the trial period, work status changes occur

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[2]John Hope II, "The Problems of Unemployment as it Relates to Negroes," Studies in Unemployment (Washington: Government Printing Office, 1960), p. 205.

for Negro workers.

5. Are career opportunities available in industrial employment?

Jobs provide career opportunities whenever progressive vertical or horizontal job sequences are made by individual workers to reach a level of self maintenance and stability. Entry jobs found among the six manufacturing and research type industries reported in this investigation lead to career opportunities. These career opportunities come through either vertical job promotion or horizontal job stability. Productiveness of workers is the central factor considered by industrial management in making vertical job promotions.

Industry offers excellent fringe benefits to workers, thus providing incentives to industrial workers to continue employment. Fringe benefits offered workers included: social security, hospitalization insurance, sick and annual leave, savings plan, together with retirement benefits.

6. What advice does industrial management offer workers seeking industrial employment?

Industrial management advises future industrial workers: (1) to acquire good education that reflects knowledge of mathematics, English, science, art, music appreciation, history, and sociology; (2) to be able to use well the communicative skills; (3) to possess attitudes that indicate a willingness to do the required job tasks; (4) to

be able to interact well with others on the job; (5) to have the ability to learn new job tasks; and (6) to be emotionally stable.

7. What personality traits do employment officers consider important in the employment process?

Employment officers, as much as they are able to discern, look for traits that indicate sociability, personableness, self-confidence, emotional stability, dependableness, and consistency.

8. At the two high schools reported in this investigation, were educational experiences comparable in identical vocational education programs?

Under Question 2 in this chapter were described educational experiences provided Austin and Fulton High School students in identical vocational areas. Evidence was presented to show that the educational experiences provided students at the two schools in identical vocational education programs were not comparable. Table VIII in this study further substantiates this fact.

9. What implications can be made from this research to secondary schools, colleges, and other elements of community life?

A. IMPLICATIONS TO SECONDARY SCHOOLS AND COLLEGES

The development of adequate educational experiences for students is the principal concern of secondary schools and colleges. The adequacy of these educational experiences is reflected in the ability of persons to make vocational and social adjustments. Effective educational programs are singularly related to school experiences that are commensurate with the needs, abilities, and interests of students and that lead to productive citizenship. Productive citizenship includes: (1) the acceptance of civic responsibilities; (2) the full utilization of vocational skills from which the individual worker earns money to care for his dependents and himself; (3) the implementation of moral values in all aspects of behavior; and (4) the recognition of the worth and dignity of all people.

Central to the purpose of these educational experiences is the concept of vocational efficiency. In 1918, The Commission on the Reorganization of Secondary Education formulated seven cardinal principles of secondary education. Preparation for a vocation, one of the seven principles, was then and is now basic to secondary and higher education. In 1938, The Educational Policies Commission of the National Education Association divided the objectives of secondary education into four categories. The Objective of Economic

Efficiency,[3] one of the four categories, emphasized the need for: (1) providing occupational information to students; (2) helping students to realize the necessity and importance of job satisfactions; (3) understanding job requirements; (4) developing an appreciation for work; and (5) learning basic principles of consumer education. In 1951, by legislative act of the General Assembly of the State of Tennessee, the State Department of Education was delegated full responsibility for the development of "curricula and course of study" for grades one through twelve. The Tennessee State Curriculum Committee published a series of five bulletins related to curriculum development. Bulletin Number 2[4] emphasized the need for vocational competence as an educational need in order to meet the societal demands placed upon the individual to provide for his dependents and himself. In 1955, Ginzberg and David, through the National Manpower Council, outlined five broad objectives as the basis of a program to improve the work skills of the Nation. These objectives were:

1. Strengthening the contributions made by secondary education to the acquisition of skill;

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[3]Rudyard K. Bent and Henry H. Kronenberg, Principles of Secondary Education (New York: McGraw-Hill Book Company, Inc., 1955), p. 57.

[4]Tennessee State Curriculum Committee, Basing Instructional Program on Locally Identified Needs (Nashville: State Department of Education, 1954), p. 4.

2. Developing a more effective program of vocational guidance;

3. Providing more equal opportunities for all individuals to acquire skills;

4. Improving the facilities and methods used to train skilled and technical workers;

5. Increasing knowledge about the Nation's manpower resources.[5]

Thus, it is to be noted that from 1918 to the present, unequivocal policies, providing vocational educational experiences to all students with ability and interest, have been and are presently existing. Further, the faith that Americans have in public, private, and college educational programs is demonstrated by the continuous financial support that is given through taxation and other means. Such educational investments place major responsibilities upon school administrators, teachers and guidance counselors to insure adequate educational experiences that lead to productive citizenship in our economic society.

Of the 1957 workforce in the South, 30.3 and 9.8 per cents represented Negro workers who had not completed the fifth grade and who had graduated from high school respectively as compared to 7.3 and 27.0 per cents for white workers respectively at the same educational level and in

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[5]Eli Ginzberg and Henry David "The Problem of Skill Development," Improving the Work Skills of the Nation (New York: Columbia University Press, 1955), p. 6.

the same geographical area.[6] Such disparities between the educational attainments of Negro and white workers should suggest to school administrators, teachers, and guidance counselors in schools for Negroes that careful assessments should be made of current educational experiences to discover their adequacy to prepare Negroes to enter the world of work.

Ramaker[7] reported an opinion given by a president of one of the leading colleges for Negroes in the South to be one that indicts Negro colleges for preparing too many teachers and too few technicians. In some areas of the South, the report indicated, ratios of 281:1 and 150:1 existed between the available number of teachers and teacher vacancies.

Despite the continued emphasis on teacher preparation programs among many Negro colleges, some colleges have begun to develop curricula that provide education and training in special areas leading to employment consideration in certain technical occupations. One college has developed I.B.M. courses in accounting for more than a dozen Negro workers employed at a large industry; another Negro college

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[6]United States Bureau of Census, "Educational Attainment of Workers," Current Population Reports (Washington: Government Printing Office, 1957), Table 9.

[7]Robert Ramaker, The Wall Street Journal, July 15, 1959.

has initiated a two year terminal program leading to employment considerations as technicians; and another college has recently organized a curriculum in basic electronics that is related to industrial on-the-job training. Thus, the future position of Negroes in the workforce of any geographical region of the Nation is singularly dependent upon the educational experiences provided in high schools and colleges to prepare workers adequately to enter the highly competitive labor market.

Guidance services in secondary schools and colleges have become more and more important to school administrators, teachers, parents, and students. These services, according to Traxler, should:

> . . . enable each individual to understand his abilities, interests, and personality traits, to develop them as well as possible, to relate them to his life goals, and finally, to reach a state of complete self-guidance as a desirable citizen of a democratic social order.[8]

Thus, guidance counselors are primarily concerned with the development of self-understandings. The Tennessee State Curriculum Committee emphasized this principle of self-understanding in Bulletin Number 1, which stated:

> Guidance services . . . should assist each pupil in knowing himself as an individual and as a member of society; in making the most of his strengths and

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[8]Arthur E. Traxler, Techniques of Guidance (New York: Harper and Brothers, 1957), p. 2.

> in correcting or compensating for weaknesses that interfere with his progress.[9]

The importance of the identification of talent was recognized by the Federal Congress in 1958, when it enacted into law the National Defense Education Act. This Act embracing ten titles was based upon the following policy:

> The Congress hereby finds and declares that the security of the Nation requires the fullest development of the mental resources and technical skills of its young men and women. The present emergency demands that additional and more adequate educational opportunities be made available. The defense of the Nation depends upon the mastery of modern techniques developed from the complex scientific principles. . . . We must increase our efforts to identify and educate more of the talent of our Nation. . . . It is therefore the purpose of this Act to provide substantial aid in various forms to individuals, and to States and their sub-divisions, in order to insure trained manpower of sufficient quality and quantity to meet the national defense needs of the United States.[10]

Title V of the National Defense Education Act provided $15,000,000 for the fiscal year ending June 30, 1959, and for each of three succeeding fiscal years, as grants to State educational agencies to assist in the establishment and maintenance of programs in testing, guidance and counseling. All State educational agencies of the United States have been aided by this Act.

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[9]Tennessee State Curriculum Committee, What Do We Believe? (Nashville: State Department of Education, 1954), Bulletin Number 1, p. 4.

[10]National Defense Education Act, United States Congress, 1958, H.R., 10279.

Of the twenty-one recommendations included in the Conant Report, Recommendation Number 1 described the need for counseling systems in both elementary and secondary schools. This recommendation stated:

> In a satisfactory school system, the counseling should start in the elementary school, and there should be articulation between the counseling in the junior and senior high schools. . . . There should be one full-time counselor (or guidance officer) for every two hundred fifty to three hundred students in the high school. The counselors should have experience as teachers but should be familiar with tests and measurements of the aptitudes and achievement of students. . . . Through consultation, an attempt should be made each year to work out an elective program for the student which corresponds to the student's interest and ability as determined by tests of scholastic aptitude, the recorded achievement as measured by grades in courses, and by teachers' estimates.[11]

Many school systems are beginning to use this recommendation as a guide to the development of effective guidance programs. However, it should be noted that many school administrators find it financially prohibitive to employ one guidance counselor for every 250 or 300 students. As more money is allocated for educational purposes, it should be expected that this part of Recommendation Number 1 could be implemented in many school systems.

Vocational counseling, one aspect of guidance services, has importance to students in their efforts to make

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[11]James B. Conant, The American High School Today (New York: McGraw-Hill Book Company, Inc., 1959), pp. 44-45.

vocational choices. Super stated:

> The choice of an occupation is one of the points in life at which a young person is called upon to state explicitly his concept of himself, to say definitely, "I am this or that kind of person." Similarly, holding and adjusting to a job is for the typical beginning worker a process of finding out, first, whether the job permits him to play the kind of role he wants to play; secondly, whether the role the job makes him play is compatible with his self-concept (whether the unforeseen elements in it can be assimilated into the self or modified to suit the self); and finally, it is a process of testing his self-concept against reality, of finding out whether he can actually live up to his cherished picture of himself.[12]

Thus, Super pointed out the importance of vocational and other experiences for students as they engage in role playing experiences that are related to job requirements. Effective vocational counseling provides opportunities for students to understand certain job requirements and how these requirements relate to self-images.

Skills in organizing materials about occupations found in the world of work, understanding measurements of capabilities, aptitudes, interests, and achievement of students are essential to the effectiveness of vocational counseling. Fine described the duties of the vocational counselor as follows:

> The guidance counselor should provide (1) information about the world of work; (2) information

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[12]Donald E. Super, "Vocational Adjustment: Implementing a Self-Concept," Occupations, 30:88-92, 1951.

> about workers and the ways they function in relation to different contents of job worker situations; and (3) information about job worker situations as a form of behavior, as an area of human relations. . . . Essentially consideration is given to suitability of an opening or career pattern in terms of the life experience of the applicant or counselee.[13]

That effective vocational counseling services and adequate vocational experiences are basic to the development of human talent to meet the manpower needs of the nation is evidenced by the definitive concept of vocational choice by Super and the descriptive duties of vocational counselors outlined by Fine.

In summary, school administrators, teachers, and guidance counselors should endeavor: (1) to design educational experiences that prepare students for adequate entry into the world of work; (2) to improve instructional programs in order to counteract the influence of the interplay of societal forces; (3) to develop equitable educational programs; (4) to reassess educational experiences to determine their adequacy to meet personal, social and vocational needs; and (5) to help students to acquire knowledge about the changing nature of society and its needs.

B. IMPLICATIONS TO PARENTS

The family represents the basic unit of our society. From this important societal unit come values, economic

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[13]Sidney A. Fine, "What is Vocational Information?" Personnel and Guidance Journal, 30:504-509, 1955.

efforts, child guidance, levels of aspiration, protection and care for members of the family. Both parents and offspring are expected to perpetuate, to change, and to improve cultural heritages of the past and present in order to insure more effective living in the future.

Societal conditions favoring many families place them in advantaged positions with respect to economic income, the ability to provide child guidance and to make educational investments in their children, and to provide adequate food, flothing, and shelter for all members of the family unit. Other families are placed at disadvantaged positions to provide adequately for family needs due to both low economic income and educational attainment. Statistics from the United States Bureau of Census[14] revealed that 30.3 per cent of all Southern non-white workers in 1957 had not completed the fifth grade as compared to 7.3 per cent for white workers; 9.8 per cent of all Southern non-white workers in 1957 had completed high school as against 27.0 per cent white workers; and 3.5 per cent of all Southern non-white workers in 1957 had earned a college education as contrasted with 9.2 per cent white workers. Hope[15] reported the average income for non-white families in 1956 to be approximately 53 per cent of that of white

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[14]United States Bureau of Census, op. cit., Table 9.

[15]Hope, op. cit., p. 196.

families in the nation; the median income for non-white families in the nation in 1956 was $2,628 as compred to $4,933, the median income for white families in the nation in 1956.

The low educational attainment of many workers places them on jobs with low earnings and from which they experience periods of unemployment. The low job earnings influence the standard of living of many workers and their families. Therefore, parents faced with this condition are neither able to provide proper guidance to offspring, nor able to make educational investments in their children; such low socio-economic conditions promote both low motivation and levels of aspiration, and little concern to participate in self-improvement educational programs. Whatever their economic status, most parents wish for their children better opportunities for survival than they have experienced. Therefore, in view of these societal forces impinging upon a substantial number of families, and also the need for the children to gain educational attainment in order that they might gain improved work opportunities in the future, it is suggested that: (1) parents insist that their children attend public schools in order to receive a better education, thus enhancing their chance for better employment opportunities; (2) parents, as much as possible, engage in educational programs for self-improvement; (3) parents participate in civic programs, thus enabling the children to construct other "images" of their parents; and (4) parents

become interested in the schools to which their children attend, because such interest will reflect in the general achievement level of the children.

C. IMPLICATIONS TO LABOR UNIONS

Labor organizations exist principally to control manpower skills used in construction, industrial, and other production efforts and to gain maximum wages and other protective benefits for members. In large industrial enterprises, the union provides management with a better opportunity to treat with many employees through representatives than through a method of treating with all workers individually. Many of these unions, in their efforts to protect jobs for their members, have established barriers to membership. Many of these local unions, craft or industrial, refuse membership to Negroes; two, brickmasons and cement finishers' locals, will admit Negroes as members, while a separate union exists for Negroes in the carpenters' trade. Negro workers on menial tasks form industrial locals, but they cannot gain membership in other industrial unions.

Despite the fact that encouragement is given local unions to have open membership policies from the international unions, final authority for determining membership policies rests with local unions. Such operational policies at the local level have militated against a substantial number of Negro workers in efforts to seek full

employment. This restrictive membership view held by many industrial and craft union members is due principally to tradition, which assigns certain industrial and construction jobs to Negroes, and to economic reasons.

The educational process has contributed to the making of social changes in many aspects of community life. Attitudinal changes are needed among the membership of local unions that do not offer membership to Negroes. Educational programs, endorsed by national and local labor leaders, can do much toward correcting this undemocratic feature of many labor organizations. With the expanding economy comes the need for many skilled workers. Further the need to implement democratic principles in our society is of serious concern to those engaged with world problems. Therefore, labor organizations must realize that their efforts are important to the cause of our democratic society and improved world understandings of American democracy.

D. IMPLICATIONS TO INDUSTRY

The consumer demands of members of our economic society must be met through the productive efforts of industry. A population growth of 178.8 million in 1960 to an expected population of 208.2 million in 1970 forecasts the need for an abundance of manpower skills. The gross national product is expected to increase from $500 billion in 1960 to $750 billion in 1970; the per capita share or

the ratio between gross national product and total population is predicted to increase from $2800 in 1960 to $3500 in 1970.

To meet these productive demands, industry, through the use of many technological advancements, will require workers who have attained high levels of education and who have acquired adequate skills to operate complex machinery used in the manufacturing processes.

In the employment process of many industries, problems of union member attitudes about Negroes, and community custom and habit have caused many employment officers consciously to overlook employment opportunities for many qualified Negro workers. However, in three of the industries reported in this investigation, employment officers reported that qualified Negro workers would be given employment consideration on jobs in the professional and clerical major occupational group, but union membership determined employment opportunities on many jobs in the skilled major occupational group.

In a study of forty-four industries, which employed Negroes, and located in many geographical sections of the United States, Norgren and others[16] discussed the following positions that industrial management should take in the

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[16]Paul H. Norgren, et al., Employing the Negro in American Industry (Scranton, Pennsylvania: The Hadden Craftsmen, Inc., 1959), pp. 59-60.

employment of competent workers: (1) top management should declare a policy of employment practices as this policy relates to the employment of qualified Negro workers; (2) managerial subordinates should be notified of this employment policy, thus providing top management support for the employment of competent workers; (3) management should implement this stated policy of employment; and (4) management should publicize this stated policy of employment because this information can aid other elements of community life to make social progress.

Management not only has a responsibility to see that competent workers are employed but also to provide educational experiences, either through management or union-management programs, to improve the skills of workers. Ginzberg and David, through the National Manpower Council, reported three major functions of management:

> 1. Employers seek to provide greater opportunities for their employees to acquire increased skills through a planned system of varied job assignments, broader training on and off the job, and increasing the training competence of their supervisory staffs.
> 2. All employers hire and promote employees and all unions admit individuals to membership without regard to their race, creed, color, national origin, or sex;
> 3. Employers and unions and the Joint Apprenticeship Councils and Committees eliminate the practice, wherever it exists, of barring individuals from admission to apprenticeship programs because of their race or national origin.[17]

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[17]Ginzberg and David, op. cit., p. 7.

Thus, industrial top management has responsibilities to see that equal employment policies exist to insure the employment of competent workers, to make this policy known to managerial subordinates, to develop on-the-job training programs from which vertical job promotions can be made, to encourage certain craft and industrial unions to permit qualified Negro workers to participate in union-management sponsored apprentice trade training programs, and to cooperate with other community efforts to promote social progress.

Summarily, in Chapter I of this investigation, nine questions were asked that appeared pertinent to the findings from this study; this chapter gave reactions to those questions. Employment on jobs in the professional and clerical major occupational groups requires high educational attainment, willingness to perform job tasks, the ability to get along well with other workers, and emotional stability.

Many qualified Negro workers face discrimination that is practiced by certain craft and industrial unions as well as employment practices of industry. In one non-union industry, Negroes were employed as laborers and advanced to semi-skilled jobs, the highest level of their employment.

Implications from the findings of this investigation were made to secondary schools and colleges, parents, labor unions, and industry. School administrators, teachers, and guidance counselors were implicated to design adequate

educational experiences for all students, to improve the quality of instruction in order to counter certain societal forces that interfere with the learning process, to identify aptitudes and abilities of students and promote the development of adequate educational climates, to reassess educational experiences in relationship to their adequacy to meet personal, social, and vocational needs of students, and to help students to acquire knowledge of the changing nature of society and its needs. Parents should encourage their children to attend public schools in order to get a better education, thus enhancing their chances for improved work opportunities, participate in civic programs as a means to aid children construct other "images" of their parents, engage in activities that relate to self-improvement. Labor union management should attempt to implement educational programs as a means to aid in attitudinal change about Negro workers as members of certain craft and industrial unions. Industrial top management should declare an open policy of employment, inform managerial subordinates about such an open employment policy, develop on-the-job training programs, encourage craft and industrial unions to permit qualified Negro workers to participate in union-management sponsored apprentice trade training programs, and cooperate with other community efforts to promote social progress.

CHAPTER VI

FINDINGS, CONCLUSIONS, RECOMMENDATIONS, AND SUGGESTIONS FOR FURTHER RESEARCH

This biracial research was designed: (1) to determine entry job facts found in selected manufacturing and research type industries located in Metropolitan Knoxville, Tennessee, for high school, non-college, and college graduates; (2) to report educational experiences leading to industrial employment provided at selected secondary schools and colleges; (3) to describe guidance programs at the reported educational institutions; (4) to make implications from the findings of this investigation for secondary schools and colleges and other elements of community life; (5) to provide valid information to school administrators as guides to curriculum planning; (6) to assemble job facts for initial employment in selected industries useful to guidance counselors to aid high school, non-college, and college graduates to make occupational choices; (7) to acquaint guidance counselors with local industrial employment opportunities; (8) to discover new work opportunities for Negroes; (9) to understand factors considered important by employment officers in the employment process; and (10) to develop closer relationship between educational institutions and industry.

Six manufacturing and research type industries employing approximately 18,000 Negro and white workers

reported in this research were: Atomic Energy Commission, Oak Ridge; Dempster Brothers Manufacturing Company, Knoxville; Oak Ridge Institute of Nuclear Studies, Oak Ridge; Rohm and Haas Manufacturing Company, Knoxville; Tennessee Valley Authority, Knoxville Division; and Union Carbide Nuclear Company, Oak Ridge.

Entry job facts found in the professional, clerical, and skilled major occupational groups were determined, and each job was discussed in relationship to the eight aspects of occupational understanding, namely, nature of work, job preparation, economic returns, personal requirements, number and composition of workers, working conditions, entry to job, and job outlook. Interviews were conducted with employment officers at the reported industries, and responses were tabulated on Interview Form A, a copy of which comprises Appendix A.

Educational experiences leading to industrial employment and guidance programs at two high schools, Austin (Negro) and Fulton (white), and two colleges, Carson-Newman (white) and Knoxville College (Negro) were reported in this research. Interviews were conducted with high school principals, the Co-ordinator of Industrial Co-operative Training Program at Austin High School, and academic deans at the two colleges to obtain subject matter courses, and unit and semester hour requirements for graduation with majors or minors in educational programs leading

to industrial employment. Guidance counselors at the reported educational institutions were interviewed to determine the characteristics of their vocational counseling services. Information obtained from school administrators and guidance counselors was recorded on Interview Form B, a copy of which comprises Appendix B.

A. FINDINGS

From entry job facts in the professional, clerical, and skilled major occupational groups among six manufacturing and research type industries, and educational experiences leading to industrial employment provided at four educational institutions, together with guidance programs at the reported educational institutions, the following findings were revealed:

1. A substantial number of the jobs found in the professional major occupational group required college graduation, with major or minor in subject matter areas requiring above average academic achievement.

2. Work tasks required on these jobs in the professional major occupational group consisted of special assignments, under supervision, related to job title, and these job tasks are done in office, laboratory, or in the field.

3. Entrance salaries for employees on jobs in the professional major occupational group ranged from $4,000 to

$5,540 per year, with fringe benefits.

4. A small number of jobs found in the professional major occupational group required high school graduation, with emphasis in science and mathematics.

5. Job outlook was excellent for all jobs found in the professional major occupational group.

6. A substantial number of the jobs found in the clerical major occupational group required high school graduation, with special training and skill in typewriting, stenography, business English, systematic filing, and the ability to operate business machines.

7. Entrance salaries for employees on jobs in the clerical major occupational group ranged from $3,000 to $4,000 per year, with fringe benefits.

8. Job outlook was excellent for all jobs found in the clerical major occupational group.

9. On all jobs found in both the professional and clerical major occupational groups, college and high school transcripts are reviewed, personal references are evaluated, and interviews are conducted. In addition, applicants for jobs in the clerical major occupational group are required to make satisfactory scores on clerical aptitude and mental ability tests.

10. Non-discriminatory employment practices existed in three industries for the employment of qualified workers

on jobs in the professional and clerical major occupational groups, while community custom was reflected in the employment of qualified workers in the other three industries in the same major occupational groups.

11. Jobs found in the skilled major occupational group consisted of work in approximately twenty crafts and machine operation jobs found in a majority of the reported industries. High school graduation was required to enter a large number of jobs, and high school education was preferred on others. Vocational education experiences provided at the secondary school level help to gain admission to apprenticeship programs.

12. Salaries and wages for jobs found in the skilled major occupational group ranged from $3,500 to $5,000 per year, with fringe benefits.

13. The restrictive membership clause of many local craft and industrial unions prohibits many Negroes from becoming members of many craft or industrial unions.

14. Presently, Negro workers can gain membership in the brickmason and cement finishers' local union, and also a separate local union for carpenters.

15. Due to the rapid expansion of the construction and manufacturing industries, job outlook is excellent for workers in the skilled major occupational group.

16. Applicants for jobs in the skilled major occupational group must exhibit the ability to use the skills of

the trade, demonstrate mechanical ability, make a satisfactory score on a mechanical aptitude test, possess physical features to be able to withstand varying weather and job conditions, and relate well to others in the work group.

17. In identical vocational educational programs conducted at Austin and Fulton High Schools, the educational experiences are not comparable. See Table VIII of this investigation.

18. The Industrial Co-operative Training Program conducted at Austin High School is not provided for students at Fulton High School.

19. Educational programs provided at Carson-Newman College and Knoxville College in curricula leading to industrial employment were found to be comparable.

20. At the time that data were gathered for this investigation, vocational counseling services at all of the reported educational institutions were inadequate.

B. CONCLUSIONS

School administrators of schools for Negroes must be concerned with providing adequate educational programs to prepare workers for adequate entry into many of the presently existing industrial jobs. The work opportunities open to qualified Negroes on jobs in the professional and clerical major occupational groups in three industries reported in this investigation provide opportunities to

design educational programs that relate to adequate worker preparation. Further, guidance counselors must identify talent and promote understandings of job tasks in order that students might begin to relate self-images to job tasks. The 1959 worker ratios of 21:1 and 25:1 on jobs in the professional and clerical major occupational groups respectively can be changed only as adequate educational programs are planned for those students showing aptitude, mental ability and interest to pursue such curricula.

Discriminatory employment practices have been found among some of the industries reported in this investigation on many jobs in the professional, clerical and skilled major occupational groups. The fact that 80 per cent of all Negro workers in the 1959 workforce of the nation were employed on semi-skilled jobs or lower reflected a serious wastage of human talent in our democracy. Increased productive efforts will be needed to meet the growing consumer demands at home and abroad; and new concepts must be formed about our democratic government at home and abroad. Such new concepts can come from domestic implementation of basic democratic principles. Therefore, the challenge to the adherents of community custom and habit and other discriminatory practices relating to full employment opportunities for Negro workers is one that is vital to the welfare of the nation as well as to the world.

Inequities in educational programs for Negro and white students place many Negro workers at serious disadvantages at the time of employment consideration. The inequities existing between the trade programs conducted at Austin and Fulton High Schools reflect inadequate preparation of many Negro workers for entrance into the world of work. The fundamental beliefs of education have been distorted by the thinking and actions of responsible persons who resort to habit and community custom in matters pertaining to policy that affects all students. Therefore, school administrators must provide equitable educational experiences for all students in order to have available the manpower needed to meet the consumer demands and produce the defense needs of our nation.

Teachers of Negro students pursuing courses in secondary school or college should be aware of the interplay of many societal forces that interfere with the learning process. Low socio-economic conditions among many families create motivational problems, develop low levels of aspiration, and cause large percentages of school dropouts. The reported median income of $2,628 for Negro families in the nation in 1956, a low level of educational attainment among many Negroes in the 1957 Southern workforce, and the below average retention rates in many secondary schools indicate the existence of these societal factors

and how they may affect the learning process. Therefore, teachers of Negro students should develop improved understandings about these societal forces and their relationship to behavior, should plan instructional programs that consider the inter-play of these forces, and should attempt to develop parental interest in the general achievement level of students. These principles are basic to the future welfare of students in their efforts to become productive citizens.

C. RECOMMENDATIONS

From the analysis of data presented in this investigation, the following recommendations are made:

1. That a local community organization contact industrial managements, organized labor, secondary school and college administrators, and other community elements to form a committee to identify problems, to discover "pilot" jobs, and to implement educational programs in the school's curriculum to aid qualified Negro workers to gain new jobs. The fact that in the 1959 workforce of the nation, 80 per cent of all Negro workers were employed on semi-skilled jobs and below provides a valid reason for such a committee to function in Metropolitan Knoxville.

2. That the City of Knoxville School Board critically assess the Industrial Co-operative Training Program

conducted at Austin High School to determine: (1) the need for this type of vocational program for Negro students in view of the inequities existing between the trade training programs conducted at Austin and Fulton High School, and (2) the relationship between the basic design of this program and preparation of Negroes for adequate entry into the world of work.

3. That all students enrolled in vocational classes in the City of Knoxville school system attend the trade shop programs at Fulton High School.

4. That a Vocational Counselor-Co-ordinator of Vocational Education be appointed at Austin High School, if a trade shop program continues to be developed at Austin High School. The principal functions of this job would be: (1) to promote vocational guidance services for students, emphasizing a systematic method of determining the vocational interests of students; (2) to develop a job placement program for qualified graduates from specialized vocational areas; and (3) to explore apprentice trade training programs with labor organizations and industrial managements.

5. That a local community organization appoint a committee to discuss with top level local and national labor leaders the need for the employment of a person to serve as an Educational-Relations Officer. Such a worker would: (1) implement educational programs among local labor union officials and members; and (2) formulate

apprentice programs in work areas presently open to Negroes. Discrimination, as practiced by many labor unions, has been the major cause of the under-utilization of many qualified Negro workers. Such a worker, endorsed by national labor leaders, could aid in creating new attitudes among workers, thus opening new work opportunities for qualified Negro workers.

6. That college administrators explore with industrial managements the possibility of developing two year terminal programs for technicians. In view of the large percentage of drop-outs among college students, such programs might aid many non-college graduates to become productive workers.

D. SUGGESTIONS FOR FURTHER RESEARCH

1. The rapidly changing nature of our industrial society suggests the need for research to be conducted on the State level to obtain data on the vocational educational programs conducted at all high schools for Negro and white students, and how these prior educational experiences related to productivity on present employment of workers who have received vocational educational and training experiences.

2. This investigation attempted no evaluation of instructional programs that led to industrial employment. At either the secondary or college level, research could be

conducted to assess instructional programs, giving basic consideration to professional preparation of teachers, classroom instructional methods, techniques of evaluating student learning, laboratory equipment used in the instructional program, and class size.

3. Further research could assess the jobs of graduates from the trade courses at Austin and Fulton High Schools to discover the relationship between trade training acquired at school to present employment, together with job satisfactions received, barriers to job promotions, and educational needs to gain job promotions.

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APPENDIXES

APPENDIX A

Industrial Occupational Information Interview Form A

Name of Industry _____

Type of Industry - manufacturing ( ); research ( );
combination ( )

Principal business of industry _____

Total number of employees _____

I. Title of job: _____

II. Occupational group:
A. Professional ( )
B. Clerical ( )
C. Skilled ( )

III. Nature of work (Give brief description of job duties and equipment used in the performance of job):

_____

_____

_____

_____

IV. Personal requirements: _____

_____

_____

V. Economic returns (include salary per year, wages per hour, and fringe benefits):

_____

_____

_____

_____

VI. Size and composition of workers in this job classification:

Racial composition of workers: Negro_____; white_____

VII. Job preparation:

_____

_____

_____

VIII. Working conditions (state explicitly the conditions under which the job is performed):

_____

_____

_____

_____

IX. Entry into job (state all requirements for entrance into job, including standardized tests, personal references, and interviews):

_____

_____

_____

X. Job outlook:

Future outlook for job - good_____; fair_____; poor_____.

Supply of workers for job - good_____; fair_____; poor_____.

Job turnover on job - high_____; low_____.

APPENDIX B

Educational Experience Interview Form B

Name of institution _____

Type of high school _____

Type of college _____

Educational programs with major or minor leading to industrial employment:

_____

_____

_____

Subject matter requirements of each program leading to industrial employment: _____

_____

_____

_____

_____

Number of units or semester hours required for graduation _____ Describe testing program at the institution:

_____

_____

How does the school help students to make vocational selections: _____

_____