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ABSTRACT

The project focused on the awareness role of the elementary school within career education and is based firmly on the School-board Comprehensive Career Education Model and the Occupational Clustering System. A Theoretical basis for the element of career awareness in career education was defined. The existence of career awareness and the differences within this element were determined by an original instrument designed and validated for use at these age levels. Implications for educators and for curricular implementation were suggested by the research findings. The instrument is intended as a tool for classroom teachers and other educators interested in assessing the career awareness element as demonstrated by their students. An administration manual, sample instrument, and two-page bibliography are included. (Author/AG)

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AN INSTRUMENT TO DETERMINE CAREER AWARENESS

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AN INSTRUMENT TO DETERMINE CAREER AWARENESS

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FOREWORD

The measurement of pupil growth is essential to the assessment of instructional effectiveness in any public school program. It becomes incumbent upon educators to develop appropriate measuring devices when undertaking substantial curriculum change. Career Education has developed to a stage where the need for measuring devices is critical. Dr. Fadale's contribution through this Career Awareness Inventory is especially timely.

The user should be fully aware that the rationale for the Career Awareness Inventory is based firmly on the School-Based Comprehensive Career Education Model and the Occupational Clustering System. Dr. Fadale has drawn upon the writings of Robert Havighurst and E. H. Erikson to ensure recognition by this instrument of basic principles of readiness and development in children.

Within the resources available to this Institute, field tests have been conducted and Stanine Scores established. We wish that our resources could have supported a greater scope of field testing. We invite you to tabulate and share the scores obtained from your administration of this inventory. Your assistance will enable us to analyze performance under a greater variety of conditions, e.g. urban, rural, geographic, ethnic, etc. The accumulation of such data will enable us to provide further information to assist you with interpretation of results.

Support for this research and development effort has been provided by VEA funds made available through the Office of

Occupational Education of the New York State Education Department. We are pleased to make this product available for a nominal cost covering reproduction and handling.

Professor John Wilcox
Director
Cornell Institute for
Occupational Education

INTRODUCTION

The concern of this project focused on the awareness role of the elementary school within career education. Career awareness is one of eight elements that comprise the Comprehensive Career Education School-Based Model. A theoretical basis for this element was defined. The existence of career awareness and the differences within this element were determined by an original instrument designed and validated for use at these age levels. Implications for educators and for curricular implementation were suggested by the research findings.

The instrument is intended as a tool for classroom teachers and other educators interested in assessing the career awareness element as demonstrated by their students. An administration manual and sample instrument are included within this monograph.

A THEORETICAL RATIONALE FOR CAREER AWARENESS

Career development is an aspect of the total socialization development of the individual. Any comprehensive theoretical rationale for career education should be integrated not only with career development theory, but also with child development theories of socialization and cognitive growth.

A Socialization Frame of Reference

The elementary school child learns about himself as a child and his immediate environment. Interests, aptitudes, self-appraisal and decision-making factors have their beginnings at this level.

The elementary school child is functioning within his own world of work and people. Each day he has experiences that are basic and vital throughout his life. He makes decisions, embarks on new tasks, encounters obstacles and experiences success. He learns from these immediate challenges to understand more of himself and others. This aids in building his attitudes.

Although needs and thereby readiness vary with the individual's socialization development, developmental theory offers an outline or guide of the stages expected for the elementary child in his social, cognitive and career development. Erikson's (1963) psycho-sociological theory of life stages approximates the socialization development basic to career awareness and the elementary school child, roughly ages 7 - 11.

During this period, the "industry vs. inferiority" life stage, the child develops a sense of industry, thereby becoming involved in productive situations. The child learns to handle the tools of his society during this period. He is producing things and developing an ability to handle the "utensils, tools, weapons" used by adults. The child is seeking an opportunity to be productive, thereby building an identity.

At this stage, the child seems to ask of himself "What can I do?" He is essentially a "doer". He becomes industrious and learns valuable

work lessons which help him grow as a person. He develops skills that are necessary for, among other things, the tasks for which he assumes responsibility, for self-discipline, for a sense of accomplishment, and for a sense of personal will and effort.

Tuckman (1972) notes a "danger." A sense of inferiority or inadequacy may develop that has to be overcome. Erikson (1963) expresses the polarity of this as a sense of industry versus a sense of inferiority. On one hand, there is the "pull" to invest energy in the effort of producing. On the other hand, there is the "pull" for less production, coupled with the fact that the child is "still a child" at this level. This situation tends to create feelings of inferiority which the child tries to overcome by doing. Thus the child of this age who meets success in "doing" tends to develop a sense of industry. In contrast, the unsuccessful "doer" may develop a sense of inferiority. Directly relevant to career education is the observation made by Erikson (1963) that many of the individual's later attitudes toward work, and work habits can be traced to the degree of success of "doing" during this industry vs. inferiority phase.

A Cognitive Frame of Reference

A stage of cognitive development for upper elementary school children is described by Piaget (1964). He identifies the phase as concrete operations wherein the child achieves operational thought. That is, he has the mental capacity to relate and order experiences to an organized whole. Operational thought is divided into phases of concrete and formal operations.

At the concrete operations stage, mental experimentation is dependent on perception. Inner logic of mental operations must be concretely perceived. Piaget (1964) notes that during the phase of concrete operations the child "operates on objects" and not on "verbally expressed hypothesis." Reasoning on hypothesis develops within the formal operations phase. Thus, for the elementary school child concrete experiences aid in his cognitive activities and development.

A Career Development Frame of Reference

Super (1957) has identified a series of vocational developmental tasks occurring at different life stages. During the growth stage, occurring from birth to about age 14, the self-concept develops through identification with role models within the family and educational setting. Early in the stage, needs and fantasy are dominant. However, through increased "social participation" and "reality testing," interests and capacity or aptitude increase in importance.

Super has divided this rather broad growth stage into three substages: the fantasy stage (age 4 - 10), the interest stage (age 11 - 12), and the capacity stage (age 13 and 14). During the fantasy stage, the child is concerned with needs and role playing in fantasy. Likes and dislikes become the major determinents of aspirations and activities during the interest stage. During the capacity stage, abilities and occupational requirements and training become a concern.

Super's theory emphasizes interdependence between personality and vocational development. The self-concept, a function of one's developmental history, is the primary construct. Educational and occupational alternatives are chosen consistent with the self-concept. The self-concept, and therefore preference, changes and develops with time and experience. This comprehensive theory underscores development as a continuous and on-going process, and infers, rather strongly, the need for career exploration in the early years.

Thus career education as a whole, has as its base the developmental nature of growth and maturity. The socialization theory of Erikson, the cognitive theory of Piaget and the vocational theory of Super contribute to the perspective and rationale for career awareness at the elementary school level.

Career Education Concept in the Elementary School Curriculum

Career education has appeared repeatedly under different labels throughout the history of American education. Traditional statements

of educational purpose, previous legislation and research contain antecedents of today's emphasis of career education.

The overall goals of career education have been summarized by Wykle (1972) as 1) insuring that all youth leave school as better citizens and with skills that are sufficient to obtain employment, pursue additional career training, or further their academic education, and 2) as developing a more flexible educational system to promote career opportunities for those out of school. To accomplish these goals, a comprehensive emphasis on career education is suggested within the elementary school program.

The role of the elementary school is often viewed within career development as one of exploration and acquaintance. Typical of this orientation is Hoyt (1972) who identifies occupational awareness programs in elementary school as emphasizing work values and occupational knowledge. Miller (1972) and Bottoms and O'Kelly (1972) also describe career education at the elementary levels as career awareness infused into existing developmental curriculum. Basic skills, social involvement, environment and interests are identified as components of elementary school career awareness programs by Goldhammer (1972). Gysbers and Moore (1972) suggest that students at all levels are capable of a career consciousness.

Several sources apply the term "career awareness" to the elementary school component of career education. Keller (1972) defines career awareness as an awareness of the inter-relationships of self and education, as positive work attitudes, as role identification, as exploration of career clusters, and as decision-making skills. Gibson (1972) further suggests that attitudes evolving from experiences, associations, education, and understandings of self, human behavior, the world of work and adjustment techniques are characteristic of career awareness. Therefore, career awareness appears to be composed of knowledge, attitude and the self. The role of education within career development at the elementary level is regarded as one of building an awareness of the working world and of the self in relation to that world.

CAREER EDUCATION CURRICULA AT THE ELEMENTARY SCHOOL LEVEL

There are many factors that contribute to career development during the elementary school years. Needs, interests, values, programs, status, self-concept and aspirations are representative of the factors often isolated for research. Studies based on occupational information, such as Nelson (1963), Bank (1970), Biggers (1971), Wellington and Olechowski (1968), usually note positive trends with the implementation of career instructional activities with elementary school children. Research, such as Hales (1972), Gunn (1968), Simmons (1968) and Davis (1968) further indicate that elementary children are beginning to develop values and an awareness of status and prestige relative to the working world.

Concepts and principles of programs and models designed for elementary school career education usually reflect the need for an experiential curriculum, the importance of the influences of home and school, the comprehensive influence of attitudes generally, and the need to provide more than information. Too, they emphasize the congruency of all education to an eventual vocation, and that beginnings of the process leading to a career exist in elementary school. The programs of Pontiac, Michigan (1972) and Cobb County, Georgia (1972), and programs from the state departments of Florida (1972), New Jersey (1970), North Carolina (1969), Wisconsin (1972), Maine (1972), and Oklahoma (1971) are representative of these programs.

In most cases evaluation is limited to selected aspects of specific programs or to subjective reactions by observers and participants. Needless to point out, these are necessary. But evaluation within career education remains a concern. It may be the most difficult aspect of any program, but it is during and not after the implementation phase that evaluatory procedures should be incorporated (Strohmenger & Henderson, 1972). Instruments that are available for evaluation have usually been developed for specific programs, studies or research. In addition, these tests have been

inappropriate generally for elementary school children due to the emphasis of either grade or age or geographical basis.

Several programs present paradigms as part of their content. Taylor (1972) offers a broad model to be used as a guide in translating career education into workable curricula. This paradigm appears comprehensive in scope and flexible in adaptability to a variety of situations within career education. Therefore it was selected as a basis for the instrument that comprises a part of this monograph.

Description of Taylor's Model

Occupational clusters are designated as the vehicle to provide the instructional functions of 1) providing students with information about the world of work, 2) helping students choose a career congruent with interests and abilities, and 3) providing models to shape objectives and learning experiences. The clusters are: public service, communication and media, recreation, arts and humanities, health and welfare, education and research, transportation, manufacturing, natural resources, commerce, and construction.

There are two dimensions to this model. One deals with the functions and contents of occupations in 12 broad institutional areas. The other dimension deals with seven status or socioeconomic levels of occupations into which are incorporated the variables of choice such as job requirements, mobility, life-style and experiences. A matrix is provided for early levels and one for later years.

For the curricular process in the elementary school years, the institutional and status levels are two wide groupings within each dimension. Within the awareness level for K-6, the institutional areas are simply dichotomized into "goods" or "services" based on the involvement with the production of goods or services. Under "goods" the institutional areas of transportation, manufacturing, natural resources, commerce, finance and distribution, and construction are grouped. Under "services" the institutional areas of public service, communication and media, recreation, arts and humanities, health and welfare, and education and research are listed.

Career levels or status are dichotomized into "lower" and "higher" based on responsibility, income and status. The "higher" career levels include the professional, advanced professional and executives. The "lower" levels include the semi-professional, skilled, unskilled and semi-skilled. Local options and socioeconomic contexts determine the number, choice and time of introduction of specific careers during K-6.

THE INSTRUMENT: FACTS AND FINDINGS

The rationale and procedures implemented during the development of the career awareness instrument that reflects Taylor's model are discussed elsewhere within this monograph. Suffice to indicate here that the characteristics of the test were established and verified in light of acceptable principles of test construction. Data obtained from utilization of the instrument reveals interesting and useful information for educators involved with career education.

Results

Children in the upper levels of elementary school do evidence career awareness within the areas of identification and relationship of workers, job function, occupational prestige and importance. Areas of least awareness include role models, future aspirations, job training, occupational advantages and disadvantages. These areas are also the areas of career awareness that are least realistic.

When an opportunity was provided for students to suggest career choices other than those within the test, 35% made additional choices. Of these, 26% suggested one additional occupation, and the remaining 9% suggested two additional possible vocations. This indicates a limited knowledge of potential vocations by students in elementary school. A significant correlation between the number of role models and the number of future choices further suggests a relationship between the opportunity to "know" workers and the breadth of career aspirations held by elementary students.

The percentage of accurate responses within the occupational

clusters offers further definition of career awareness. Elementary school children are more aware of those occupations that offer the greatest opportunities for experiences and familiarity. It is predictable that elementary school children are apt to be familiar with workers in specific areas such as medicine, education, public service, natural resources, recreation, arts and transportation---all of which showed a 50% or above accuracy. Also predictable was the less than 50% accuracy within the clusters of manufacturing, construction, communication, finance and commerce. These workers are less visible and less accessible to the elementary age child than those revealing over 50% accuracy.

Within this determined degree of career awareness, differences were revealed by the data. Boys tended to display greater awareness than girls within the areas of identification and relationship of workers, role models and future aspirations. Older children tended to score higher than younger children with areas of identification and relationships of workers, and job function. Similarly sixth graders demonstrated greater knowledge of identification and relationships of workers, vocational prestige and occupational advantages than did fourth graders. Children with parents in the upper occupational levels also tended to display a high degree of career awareness especially relative to identification and relationships of workers, occupational prestige and job advantages. These results emphasize the role that factors outside the domain of the formal learning situations play in the career awareness of young children, in addition to reflecting the socialization and vocational theoretical rationale.

Implications

A basic objective of education in general is to provide whatever is needed to live satisfying useful lives, and to understand and know the self. A fundamental purpose of career education is frequently stated in similar terms---consequently the implication that career education is in reality part of "good education." The view that all

education leads eventually to an occupation is related to this implication. Information, attitude development and self-understanding are usually considered as components of education in general, and similarly as an integral part of the career developmental process.

The outcomes of this project underscore the continual need for educators to assess how the curricula can be modified or implemented to optimally contribute to accomplishing this basic objective of education---that of preparing for satisfying lives. The accumulation of empirical evidence through controlled evaluatory procedures is vital to the success of education generally, and similarly to specific aspects such as career education. Evaluation is the process to avoid duplications and remedy voids within school programs and curricula.

The instrument designed within this project provides a means for this type of assessment. The test is available for utilization to determine career awareness, and has proven to be a valid and reliable tool that can be used to obtain base information necessary for effective career programs. Rather than sweeping curricular changes encouraged by extensive funding, the instrument offers an opportunity for career coordinators to construct programs based on measured career awareness.

Utilization of this instrument has revealed that career awareness does exist at the elementary school level. Children's interest in jobs and careers has also been apparent during the project. There was no difficulty in obtaining the cooperation of students. The concern for careers and jobs shown by these youngsters supports the effort for infusion of career-oriented instruction into curriculum.

On the basis of what this project has revealed, career awareness appears developmental. Sixth graders evidence more awareness than fourth graders. Older children evidence more awareness than younger children. This developmental aspect suggests that instructional procedures can be assumed to have an effect on career awareness. The opportunity exists in the schools for curricular innovations that will contribute to this development. Selected findings of this project have specific implications for instructional programs:

a) The significant correlation between role models and future

aspirations suggest the need to provide opportunities for children to "know" a variety of workers. These workers should represent a broad cross-section of occupations. Utilization of field-trips in the community and invited guests from all levels of business, industry and government in the community are but two approaches that increase experiences with role models, thereby broadening potential future aspirations.

b) The importance of a college education to society is implied by a large percentage of responses designating "college" as necessary training for work. An aim of career education is realistic portrayal of job preparation. Therefore instructional programs should be designed to clarify alternate routes of preparation for a job.

c) This project did not attempt to establish a basis for an experiential emphasis within career education curricula. However, inferences may be drawn from the interaction and process that suggest an experiential base for elementary school career curricula---touching, smelling, hearing, seeing and interacting. Every child has a concern as to the type of work he or she will do in the future. The role of curriculum builders is to design career education programs that are congruent with these interests and needs of youngsters. Because discrete units of occupational information may prove unsatisfactory, there are types of experiential activities that offer possibilities for adaption to career awareness programs. These include simulation, gaming, multi-media, role-playing or "try-on" roles. The community offers an opportunity to be used much like a "laboratory" and a source for "hands-on" vocational experiences for students.

d) As evidenced by the results, the students themselves offer an information or knowledge resource. Implementation of group processes to encourage sharing and exchange of information and attitudes may provide a feasible starting point for career awareness. In addition, a survey or evaluation of curriculum materials would isolate areas lacking information or emphasis, and help determine the needs for supplementary materials and knowledge. Realistically, career-oriented programs in the elementary school appear to lend themselves

to reorganization rather than over-all change.

Objectives and goals of programs should be formulated in light of the developmental nature of career awareness. Basic considerations should be needs, interests and capabilities of the target group for any definition of goals and objectives of career education programs.

The outcomes of this project indicate that occupational clusters are a feasible approach to career awareness programs. Youngsters demonstrate an awareness for those vocations that represent clusters that offer the opportunity for personal experiences. For example, visible workers---doctor and nurse---within the health and welfare cluster were easily identified. Those more apt to be foreign to the child's experience---such as physical therapist---were not as easily identified. This feedback provides reference points from which programs and criteria may be designed to broaden awareness of all clusters and to emphasize designated aspects as needed within the clusters.

Based on the results of the project, differences of career awareness exist that may be cultural or social in origin. Boys demonstrate more career awareness than girls. Children from upper socioeconomic levels demonstrate more career awareness than those from the lower socioeconomic level. These results suggest that socialization tends to depress or perhaps stereotype career awareness within certain groups of our culture. The career education concept provides an opportunity for educators to implement programs to broaden the awareness base of all children---boys, girls, inner-city, rural, disadvantaged, gifted, exceptional, handicapped and ethnic, by way of example.

Career awareness can be incorporated with traditional skills and attitude development within the elementary school curriculum. Specifically, career-oriented programs usually tend to encourage the beginnings of information levels for 1) occupational requirements, 2) avenues to occupations, 3) decision-making process, 4) economic and social values of work, and 5) psychological and sociological meaning of work and characteristics of the self. Success of such programs

rest ultimately with the teacher. It is the teacher that implements the information gained from assessment of career awareness. The teacher, once aware of "what is" in terms of career awareness, subsequently warrants guidance for the infusion and teaching of needed career oriented programs. Although beyond the scope of this project, teacher education, pre-service or in-service, is inferred in terms of community relations, evaluation, instructional management, techniques to foster self-knowledge, and other considerations relevant to a career education emphasis.

In conclusion, this project has provided a valid, reliable instrument to determine career awareness of elementary school children. Utilization of this test has provided data that indicates the presence of career awareness with elementary school children. Differences of awareness do exist. The need remains for extensive research and evaluation within career education programs, objectives and measurements if the concept is to develop and not be relegated as another fad.

For the reader's convenience, the Career Awareness Inventory Administration Manual constitutes the remainder of the monograph. The Student Booklet is published separately.

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ADMINISTRATION
MANUAL

CAREER AWARENESS INVENTORY

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CONTENTS

RATIONALE FOR CAREER AWARENESS

A new thrust in education was initiated by Sydney P. Marland in 1970---career education. Marland described career education as creating a new climate within all schools and influencing every student. Career oriented programs were conceived as comprehensive, beginning in the first grade or kindergarten.

This career education concept is not necessarily a new idea. It has emerged with different labels throughout the history of American education. The role of the elementary school within the career developmental process is usually viewed as one of exploration and acquaintance. Within this exploration or awareness stage, several aspects are emphasized. These usually include among others: occupational knowledge, positive work attitudes, basic skills, social involvement, interests, interrelationship of self and education, role identification, decision-making skills and attitudinal development evolving from experiences, education, associations, understanding of self and human behavior.

The role of the elementary school was outlined by Marland to be that of expanding career awareness within suggested clusters of occupations, which encompass known vocations. In addition, the elementary school was to develop positive attitudes toward the significance of work, and to develop self-awareness.

Career awareness therefore is generally viewed as the component of career education appropriate to the elementary school. This awareness is composed of knowledge, attitude, and the self. Development of career awareness is aided by the inherent interest of elementary school children in "what I'm going to be when I grow up." To determine career awareness the concern should be the knowledge, social attitudes, personal experiences and contemplations elementary school children demonstrate about careers and occupations.

DEVELOPMENT OF THE INVENTORY

This Career Awareness Inventory is based on Taylor's* model for implementation of career education into school curricula. Specifically, this instrument is concerned with those aspects of the model dealing with career awareness and elementary school programs.

The Career Awareness Inventory is an outgrowth of approximately two years of research and field testing in elementary schools. At each stage, test characteristics and item analysis were carefully studied and appropriate refinements incorporated. Approximately 250 elementary children from urban and rural areas have participated in the field testing of this inventory. Grades 3-6, ages 8-13, are represented within the population.

Reliability

Reliability for the test was estimated by internal consistency procedures. The obtained coefficients from the subtests of the schedule ranged from approximately .64 through .83 thereby indicating satisfactory reliability for measurement of a generalized trait. The reliability characteristics for the instrument as a group test reflect these findings with a total test reliability of .795 as estimated by utilization of the Spearman-Brown formula.

Standard Error of Measurement

The standard error of measurement for the subtests of the group awareness test and the total group test are reported in Table 1.

*Taylor, J. E., et.al. An Occupational Clustering System and Curriculum Implications for the Comprehensive Career Education Model. Alexandria: Human Resources Research Organization, 1972.

Table 1
Standard Error of Measurement for Group Awareness Test

Subtest	Standard Error
Identity	1.60
Training	.27
Role Models	--*
Function	.32
Prestige	.71
Clusters	.61
Characteristics	.50
Total test	2.70

*Standard error not determined.

Validity

The Dictionary of Occupational Titles and Manpower Requirements served as validating sources for item writing. Careful attention was given to not only the domain of career awareness but also to reading level, difficulty level and social appropriateness.

Content validity was established by interrelationships of agreement as to the content and domain of the instrument by a panel of three experts in elementary education, counseling and career education. The high correlation of agreement is shown in Table 2.

Table 2
Judges' Rating--Interrelationship of Agreement

Items	Multiple Correlation Coefficients
Questions and activities	.98
Visual graphics	.88

Basic to external construct validity is the relationship of the inventory to external criteria. If an instrument is measuring a discrete factor, correlations to external criteria should be low or non-significant. In research interview schedule format, correlations between career awareness scores and intelligence/reading achievement scores accounted for not more than 10% of the variance. As expected, this increased when the career awareness instrument was administered as a group test. The variance between reading achievement scores and career awareness scores increased to approximately 22%. The variance between intelligence scores and career awareness scores stands at approximately 38%. The inventory does measure a discrete factor, career awareness, although it does so more efficiently in an interview format. The convenience of a group test is a "trade-off" for a degree of external construct validity.

Internal construct validity was established throughout the instrument formulation and is reflected by subtest inter-correlations within the group instrument. The low correlations among the subtests indicate scale or subtest independence. The correlation matrix for the group test subscales is reported in Table 3.

Table 3
Subtest Correlation Matrix

	Training	Models	Function	Prestige	Clusters	Characteristics
Identity	-.06	-.08	.42***	.11	.13	.38***
Training		-.07	.18*	.16*	-.11	-.01
Models			-.11	-.14	-.02	-.14
Function				.03	-.10	.23***
Prestige					.01	.20*
Clusters						.12

*Significant at .05
**Significant at .01
***Significant at .001

GENERAL DIRECTIONS FOR ADMINISTERING

The readability of the Inventory is geared toward the upper elementary levels and above. This is due to the utilization of appropriate occupational titles. If readability is a concern within certain subtests for your grade level, it is suggested that the inventory be administered orally. That is, the multiple-choices may be read by the administrator as the students fill in their choices. The administrator should take care in matching the oral reading to the working speed of the group. The directions for administration would not change other than the oral reading aspect.

There is also available the Career Awareness Interview Schedule which is applicable to elementary school levels. The interview schedule offers the opportunity for use on a one-to-one basis, or utilized as a small group survey technique. The interview schedule is especially applicable for a small group estimate of awareness, or if it is a research endeavor.

The Career Awareness Inventory is designed to be used with standardized answer sheets with spaces for at least 130 responses. Please note that the multiple choice answers are preceded by letters. Should you be using an answer sheet that marks answer spaces numerically, it will be necessary to emphasize the substitution of 1, 2, 3, 4, 5 for A, B, C, D, E. This can be done within the specific directions of each subtest.

The actual administration of the Inventory does not require any special qualifications on the part of the examiner apart from the necessary implementation of standard procedures.

The Inventory may be administered in a regular classroom or any other suitable location. It may be given to a regular classroom group or to groups fewer in number. Additional proctors or administrators may be necessary if the group exceeds normal classroom group numbers.

Required Materials

Each administrator or proctor will need a copy of the manual, a student booklet of the Inventory, a standardized answer sheet, a number of soft (No. 2) sharpened pencils, a clock and a "Do Not Disturb" sign.

Each student will need a standardized answer sheet, a student booklet, 2 or 3 soft lead (No. 2) pencils with erasers.

Time Schedule

The Career Awareness Inventory is not a timed instrument. It is important that each student have an opportunity for the Inventory administration. The following time limits are guidelines only as wide differences exist both among and within groups. The actual time needed by any group will be dependent on these differences and the administration.

Preliminary distribution of materials, directions, filling in names and other information	10 minutes
Subtest I	30-45 minutes
Subtest II	5-8 minutes
Subtest III	10-15 minutes
Subtest IV	3-5 minutes
Subtest V	3-5 minutes
Subtest VI	3-5 minutes
Subtest VII	3-5 minutes
Total Required Time	60-90 minutes

SPECIFIC DIRECTIONS FOR ADMINISTERING

The portions of the directions that are to be read aloud to the students are enclosed in boxes and preceded by Say:

Post a "Do Not Disturb" sign.

Distribute answer sheets and fill in name and other information.

Distribute a student booklet to each student.

Say:

> We are going to answer some questions about careers, workers, jobs and occupations. No marks are to be made in the student booklet. All answers are to be indicated on the answer sheet. Let us turn to Test I.

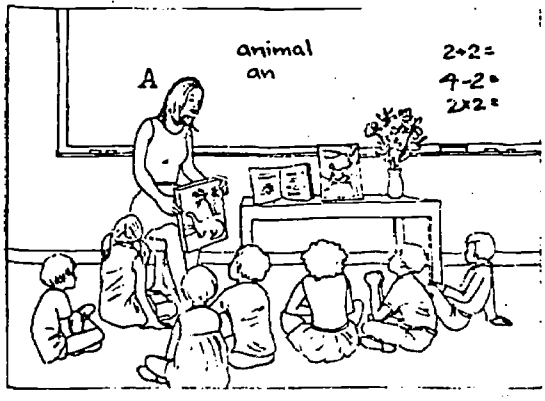
Test I asks the student to identify workers from a series of pictures and to choose related occupations. Show Test I. Check to be sure all are at the right page. Remember to match numbers or letters to the answer sheet being used.

Say:

> Read the directions silently while I read them aloud.

Say:

> DIRECTIONS: We are going to look at some pictures that show people working and doing various jobs. As we look at the picture we are going to "identify" the worker or occupation labelled with a capital letter such as "A", "B", or "C". There are 5 choices given. You are to mark the letter of the answer that best identifies the worker. Let us do the sample together.
>
> SAMPLE: Which of the following best names worker A in the sample picture?



Picture 1

1. A) artist
   B) home economist
   C) teacher
   D) nurse
   E) principal

Continued

The best answer is letter C "teacher". On your answer sheet mark the lines under teacher in the first answer.

* * * * * * * * * * *

We look at the same picture to choose a worker that is most closely related to a teacher. There are 5 choices. You are to mark the letter of the answer that is most related to the worker in the picture. Let us do the sample together.

SAMPLE: Which worker is most related to the occupation shown in the picture?

2. A) truck driver
   B) chemist
   C) doctor
   D) principal
   E) farmer

Say:

The best answer is letter D "principal". On your answer sheet after the second answer mark the lines under letter D.

You will mark your answers in this way for each picture. Are there any questions? We begin marking at the third answer and will finish this section, and stop at number 63.

Test II:

Test II asks the student to demonstrate awareness of educational requirements.

Say:

Let us turn to Test II.

Show Test II. Check to be sure all are at the right page.

Say:

DIRECTIONS: In each group of workers, there is one occupation that needs a college education. That is, in order to prepare for this job, one must attend a school that gives a degree to its graduates. Mark the letter of the worker that has to go to college. Let us look at the sample together:

SAMPLE: Which occupation needs a college education?

A) computer operator

B) teacher

C) carpenter

D) guard

E) file clerk

If you have chosen letter B, teacher, as the occupation that needs a college education you are correct. Remember you are to mark the letter of the worker that has to go to college. Are there any questions?

Begin with number 64 and respond in this way through number 69. Stop at number 69.

Test III:

Check to be sure all are at Test III.

Say:

Read the directions silently for Test III while I read them aloud.
DIRECTIONS: You may personally know workers. These workers may be members of your family. These workers may be your friends. These workers may be acquaintances. If you are familiar or know a worker, mark letter A, "am familiar". If you don't know a worker, mark letter B, "don't know." Are there any questions? Stop at number 101.

Test IV:

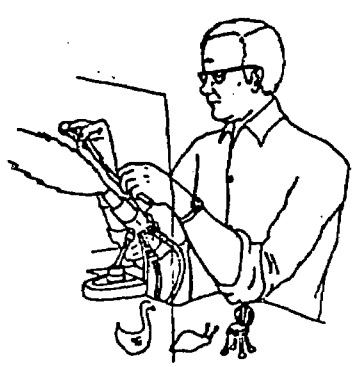
Check to be sure all are at Test IV.

Say:

Read the directions for Test IV silently while I read them aloud.
DIRECTIONS: When we use the word "product" we mean things that we can feel, wear or touch, for example. Some workers are basically concerned with making products. Other workers are more concerned with "doing things" or "performing a service", for example, cutting our hair. Therefore, some jobs are usually considered "service occupations". In this question there are pairs of workers. You are to mark the letter of the worker in each pair that you feel is basically a product occupation, that is, they make things for people. Let us do the sample together. Which picture shows a product occupation?

SAMPLE:

102.



A. glassblower

B. lawyer

Say:

The worker, letter A, glassblower, shows a product occupation. Therefore on your answer sheets mark an A after answer number 102. Are there any questions? Stop at number 106.

Test V:

Check to be sure all are at Test V.

Say:

Read the directions for Test V silently while I read them aloud.
DIRECTIONS: Sometimes different jobs are thought of by people as having a better standing or higher prestige and status than others. For example, the occupation of President of the United States can be thought of as having more prestige than the mayor of your town. High prestige jobs are those that you especially respect or admire. In this question, pairs of occupations are presented in pictures. You are to mark the letter of the worker in each pair that you feel has higher prestige or status. Are there any questions? Stop at number 111.

Test VI:

Check to be sure all are at Test VI.

Say:

Read the directions for Test VI silently while I read them aloud.
DIRECTIONS: Jobs can be thought of as being in "clusters" or grouped as to the field of the work. For each cluster, 5 occupations are listed. One does not belong with the cluster. Mark the letter of the occupation that does not belong. Let us do the sample together. Which of the occupations is least related to the cluster of jobs with natural resources?

Say:

SAMPLE: 112. Working with natural resources:

A) forest ranger

B) game warden

C) policeman

D) farmer

E) fisherman

If you chose letter C, policeman, as being least related, you are correct. Fill in letter C after item 112. Mark your answers to items 113 through 122 in this way.

Test VII:

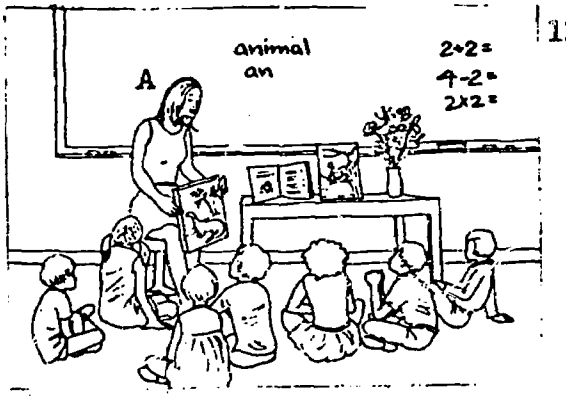
Check to be sure all are at Test VII.

Say:

Read the directions for Test VII silently as I read them aloud.

DIRECTIONS: This activity asks you to decide what workers in certain jobs do, like to do, or have the ability to do, as well as things about the job itself. You are to mark the letter of the phrase that best completes the sentence. Let us do the sample together.

SAMPLE: Because she is a teacher the worker in picture 1 probably most likes to:



Picture 1

123. A) travel as part of her work

B) work outdoors

C) work with tools

D) work with and help other people

E) become a worker where there are many job openings

Say:

> If you chose letter D), "work with and help other people", you are correct. After item 123, mark under letter D). Do numbers 124 through 130 in the same way. Are there any questions?

Collect answer sheets and test booklets:

SCORING AND REPORTING

Answer sheets may be machine scored, scanned or hand scored. The results of the Inventory indicate the knowledge, social attitude and familiarity with careers. Responses are scored in terms of correct answers for subtests 1, 2, 4, 5, 6, 7. Subtest 3 is scored in terms of total "familiarity" responses. Refer to the answer key.

The total possible score is 125. For the user's convenience and for comparison purposes, total test characteristics of the sample are presented in table 4.

Table 4
Total Test Characteristics

Mean	69.63
Median	71.50
Standard Error of Measurement	2.70
Total Possible Score	125

Stanines for the total test are presented in Table 5. An individual student report sheet and a group summary report are provided for the recording of scores.

Table 5
Stanines for the Total Awareness Test

Raw Score	Stanine
125	
	9
90	
89	
	8
85	
84	
	7
80	
79	
	6
75	
74	
	5
67	
66	
	4
60	
59	
	3
55	
54	
	2
45	
44	
	1
0	

ANSWER KEY

Test I:

1. sample
2. sample
3. C
4. D
5. A
6. B
7. E
8. E
9. D
10. B
11. E
12. C
13. B
14. A
15. C
16. B
17. D
18. C
19. E
20. A
21. D
22. A
23. B
24. E
25. A
26. A
27. B
28. C
29. D
30. C
31. C
32. D
33. C
34. B
35. A
36. C
37. B
38. C
39. C
40. D
41. A
42. B
43. E
44. A
45. D
46. C
47. A
48. A
49. B
50. D
51. A
52. C
53. B
54. C
55. A
56. C
57. B
58. B
59. C
60. B
61. B
62. D
63. E

Test II:

64. E
65. C
66. A
67. D
68. C
69. B

Test III:

Total the number of A responses. Total possible is 32. Items 70-101.

Test IV:

102. sample
103. A
104. A
105. B
106. B

Test V:

107. A
108. A
109. A
110. A
111. B

Test VI:

112. sample
113. B
114. A
115. E
116. B
117. C
118. E
119. E
120. D
121. C
122. E

Test VII:

123. sample
124. B
125. A
126. D
127. C
128. D
129. A
130. C

STUDENT REPORT

Name_____

Subtest	Raw Score	Stanine
1. Identity		
2. Training		
3. Model		
4. Function		
5. Prestige		
6. Cluster		
7. Character		
Total Test		

SUMMARY REPORT

Subtest	Group Mean Raw Score	Stanine
1. Identity		
2. Training		
3. Model		
4. Function		
5. Prestige		
6. Cluster		
7. Character		
Total Test		

Group identification_____