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ABSTRACT

This volume presents the reports of a series of interrelated studies which were part of a study that developed curriculum materials for teaching occupational survival skills. The first of six sections, Need for Teaching Occupational Survival Skills and Attitudes, discusses the importance of survival skills and describes twelve general topics which were identified as being essential for occupational survival. Section 2, Worker Perceptions of Skills Necessary for Survival in the World of Work, describes a study that identified twenty-seven specific skills workers need to maintain their jobs. The third section presents a study that examined the opinions of cooperative education students and parents concerning the teaching of skills necessary for survival skills in the world of work. Section 4 reports on a study that investigated the opinions of teachers, counselors, and administrators concerning the teaching of occupational survival skills. The fifth section reports on a study that identified teaching strategies which are appropriate for teaching each survival skill. The final study, Differences in Students' Attainment of Occupational Survival Skills and Career Attitude Maturity, focused on the uses of the occupational survival skills materials with three student groups: cooperative education students, special needs students, and Comprehensive Employment and Training Act students. (LRA)

Perceptions Concerning Occupational Survival Skills

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FOREWORD

This publication represents a unique contribution to the field of vocational education. This uniqueness is characterized in several ways. First, this volume presents the reports of a series of interrelated studies. In this sense, these interrelated studies have aided the understanding of a number of variables associated with a common theme or phenomenon. Secondly, the publication is unique in that the composite of the individual studies has provided a logical and empirical base for a major curriculum development activity. This project has resulted in the development, publication and initial dissemination of a 650 page guide entitled Methods and Materials for Teaching Occupational Survival Skills.

A third unique characteristic of this publication is that it is the first publication of the Office of Vocational Education Research (OVER). The OVER has seven (7) independent programs of research which include: Professional Development, Curriculum Development and Delivery Systems, Planning and Evaluation, Special Populations, Individual Development, Foundations of Vocational Education, and Research on Research. The activity reported in this document falls within the curriculum development and delivery program of research. The Office of Vocational Education Research is proud of this work and wishes to commend Robert E. Nelson for his efforts in directing all studies reported herein. Sharon Lund O'Neil, Thomas J. Scanlan, Kent D. Frison, Joyce Nies, and James A. Leach are also commended for their contribution to this publication. The Research and Development Section of the Department of Adult, Vocational and Technical Education of the Illinois Office of Education is acknowledged for providing support for this document and the included studies.

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NEED FOR TEACHING OCCUPATIONAL SURVIVAL SKILLS AND ATTITUDES

by

Robert E. Nelson

Today, individuals are faced with a variety of problems and decisions relating to their occupations. These problems and decisions are primarily due to the increasingly complex nature of the world of work. As social and technological changes continue to alter the present occupational structure, employment problems may become even more severe.

Contemporary workers may be better prepared to cope with the complexities of the total environment in which they live, however, if they understand how to cope with problems relating to various aspects of maintaining their occupations. The support given to career education at all levels of education has focused on the need for better educational preparation for individuals to make more informed decisions regarding the work they do. The term "survival skills" received attention when Sidney Marland (1971), former Commissioner of Education, noted the significance of survival skills as an important part of career education:

> Career education would provide the training students require for successful employment and it would give them the education they need to bring personal fulfillment into their lives. It would teach reading, writing and arithmetic as the fundamental skills. It would at the same time stress the ability to think, decide and judge--the "survival skills." (p. 7)

Marland implied that the educational system has the responsibility for preparing individuals to cope with the complexities of surviving in the world of work.

Our present educational system, however, does not appear to adequately prepare students for living and working in society. For example, Pratzner (1972) stated that we have a system which does not perform either of its duties well--the social maintenance role or the individual self-actualization function. Pierce (1973) estimated that sixty percent of the content of what is taught in school could profitably be discarded. The rationale for Pierce's estimate is that the school does not provide either "job" skills or "coping" skills that enable persons to lead satisfying, self-confident lives.

Vocational and technical education programs are one area of the educational system which is aimed primarily at preparing individuals with job skills. If students are unable to apply these job skills as adults in the real world, Bruner (1973, p. 22) suggests that we may possibly need to "transform our mode of education. . . to revolutionize and revivify this idea of vocation or occupation."

Finding meaningful relationships between job preparation in schools and on-the-job work activities are essential if students are to make smooth transitions from school to work. In a recent career education monograph, "Conditions Calling for Educational Reform: An Analysis," Edwin Herr (n.d.) stated:

> . . . the validity of the assertion that too many students fail to see meaningful relations between what they are being asked to learn and what they do when they leave the educational system rests upon subjective grounds . . .
>
> In the absence of hard data, there is a significant amount of impressionistic data that schools in general are irrelevant, and thus lack meaning to many students, because they do not address student needs, the personal questions with which they are

> coping, or the reasons for learning what one is exposed to. Another body of research, however, would say that this kind of experiencing, while not now present in most schools, is necessary to the attainment of vocational maturity, achievement and coming to terms with the self. As such, the schools have an obligation to provide it. (p. 16)

Educational preparation varies among occupations as well as among individuals within occupations. The worth of an occupation and the value of a worker cannot be judged only on the amount of educational preparation, but should be "more properly judged" by the occupation's contribution to society (Hoyt, Evans, Mackin and Mangum, 1974). Students should be involved in educational activities necessary to assist them in attaining their occupational goals and/or to cope in a vocational and social context (Campbell, 1968; Slocum and Bowles, 1967). Experiences may have to be provided in school for students to develop self-concepts appropriate to individual differences in relation to occupational needs (Super, 1953).

We are living in an age of accelerated change. This rate of change is not likely to remain constant, but will probably continue to increase. Educators are faced with the challenge of preparing students for the future. This involves preparing the students to live both satisfying personal and work lives.

Importance of the Problem

One of the most important decisions made by young people is the type of career they wish to pursue during their lifetime. These important career choices will affect their well-being and happiness for the remainder of their lives. To make these important decisions,

students need to learn about the world of work and the variety of occupations available.

Research relating to theories of occupational choice received a great deal of attention in the 1950's. This research provided a conceptual framework which emphasized occupational choice as a developmental process (Ginzberg, et al., 1951; Blau, et al., 1956). Psychological theories of vocational aspirations and choice have also stressed the developmental nature of career decision making. These career decision making theories appear to emphasize the role of personal factors and characteristics in the process of selecting a career (Holland, 1959; Roe, 1957; Super, 1957; Tiedeman and O'Hara, 1963).

> The decision concerning an occupational choice is, in the last analysis, a compromise whereby an individual hopes to gain the maximum degree of satisfaction out of his working life by pursuing a career in which he can make as much use as possible of his interests and capacities, in a situation which will satisfy as many of his values and goals as possible (Ginzberg, et al., 1951).

Although career decision making is highly important, research relating to the process of how career aspirations and goals are developed and implemented into educational programs has not received much attention. In our society, "the development of educational and occupational orientations by youth involves adaptation; indeed, it forms a major part of the overall process of their adapting to the culture" (Grasso, Kohen, and Ronchi, 1976).

A survey by the U.S. Department of Labor was conducted to determine the perceptions, aspirations, and expectations of young men and women who were graduating from college but had not yet entered the job market.

> A major purpose of the study was to provide data which might be useful to those who are committed to finding more humane, dignified, reliable, responsive, and honest ways of helping youth search for satisfying and productive work (U.S. Department of Labor, 1965).

A summary of the work-related data indicated that the vast majority of the students expressed favorable attitudes toward work. However, many of the respondents had serious doubts about the quality and uniqueness of their skills and many felt that they had not adequately prepared for the contemporary work market.

Curriculum Development

In explaining the role of curriculum specialists to determine future directions in vocational education, Peterson (1975) indicated that they must assist in redefining the term "skill.".

> The vocational educator can no longer assume that he has provided a lifetime gift by teaching the student to perform a specific set of skills. In fact, training in this traditional sense probably prepares students for vocational obsolescence, economic disappointment and disillusionment. Curriculum specialists must help define the common core of skills which focus on the coping behaviors that are needed to prepare the flexible, adaptive individual.

The "knowledge explosion" has raised many questions relating to the current education needs of students which will adequately prepare them for their future work roles. What skills will students use in the future to cope with the changing work environment? The problem appears to be one of identifying general occupational skills and attitudes that are critical to on-the-job success and are applicable to a variety of work situations. If these general skills and attitudes can be identified and taught in the schools, students may be better prepared to cope with the varied and diversified tasks they will

encounter in work-related activities in occupations at all levels within an organization.

A planned program for teaching these general occupational skills and attitudes must be devised and implemented into the curriculum. However, most vocational education teachers are subject matter oriented. For example, business education instructors teach subject matter content and skills necessary for success in specific business occupations. Skills such as typewriting and shorthand are considered essential for students contemplating occupations related to office careers.

Skill in the use of certain tools and equipment are essential for specific occupations in the industrial education area. The teaching of specific technical skills is an important part of any vocational education program. Although specific skill training may prepare students for entry level positions, these skills may be of short-term value when careers for many people may extend over a forty-year period of time.

Many vocational educators consider general occupational skills and attitudes such as problem solving, coping with change and communications as extremely important. However, the curriculum content in most vocational education textbooks does not reflect this major concern. Because these general occupational skills and attitudes are general in nature and not unique to a specific vocational subject area, these skills and attitudes are not likely to be systematically taught in any vocational subject area. If there are general occupational skills and attitudes which all students need, then a systematic attempt must be made by curriculum specialists to develop a basic structure for the implementation of these skills and attitudes into the curriculum content for all vocational areas.

Students need to know how to cope with, adapt to and change their occupational environment. The more informed young people are about how to survive in an occupation, the more likely they will be able to succeed in an occupation which best meets their individual aptitudes and interests. Studying the essential elements relating to maintaining an occupation will provide the additional educational experiences students need in preparing for a future occupation.

Procedures

The primary objective of the Occupational Survival Skills Project was to develop curriculum materials which would accommodate the teaching of occupational survival skills and attitudes in various parts of the high school vocational education curriculum. Teaching these skills and attitudes would be emphasized during the last two years of high school because of the following reasons:

1. During their last two years of high school, many students are involved in work situations, either paid or non-paid positions, and would be able to directly relate classroom instruction in occupational survival skills and attitudes to work situations.
2. A primary principle of learning indicates that skills should be taught closest to their actual use.
3. Teaching occupational survival skills and attitudes are an excellent way to summarize and provide practical application of students' previous academic and career preparation in school.

To identify the content for the curriculum materials, various research studies were conducted. The first study "Worker Perceptions of Skills Necessary for Survival in the World of Work" was completed in 1976 by Dr. Sharon Lund O'Neil. Information from this study gave valuable input as to the importance of twenty-seven specific skills which workers needed to maintain their jobs. No input was requested in this study of employers because the project staff believed that employers would indicate their expectations of workers rather than what skills workers actually needed to maintain their occupation.

To gather more information concerning the occupational survival skills, three additional studies were conducted. Because of some overlap, the number of skills were reduced from twenty-seven skills to twenty-one skills.

"A Study to Determine the Opinions of Students and Parents Concerning the Teaching of Skills Necessary for Survival in the World of Work" was completed by Dr. Thomas J. Scanlan in 1976. Students enrolled in cooperative education programs were included in this study to determine what they believed were the most important skills they needed for survival in work. The parents of the cooperative education students were also included in this study to get their perceptions of what they believed their sons or daughters needed to maintain a job.

Because of the impact of the school on the preparation of students for work, another study "Opinions of Teachers, Counselors, and Administrators Concerning the Teaching of Occupational Survival Skills," was completed by Dr. Kent Frison in 1976.

The last study completed during the initial phase of the project was "Instructional Strategies for Teaching Occupational Survival Skills."

This study was completed by Dr. Joyce Nies in 1977 and helped to identify those teaching strategies which would be most appropriate for teaching each of the skills.

Once the opinions of the various groups of school personnel, students and parents, and workers were identified and summarized, it was necessary to analyze this research data in relation to previous research studies and related literature concerning occupational education programs. Additional information and material was obtained from the following sources: a) current literature; b) results of surveys and research studies from educational institutions, public agencies, business and industry; and c) advisory committees composed of members from education, business and industry.

This analysis was crucial to the overall project because the skills identified during the initial phase of the project appeared to be too narrow in scope to be taught in high schools as units of instruction. A plan was implemented to identify units of instruction which would include the specific skills. Within each unit the specific skills could then be converted into topics of instruction.

Attitudes, perceptions, and motivations of people are important to their success in occupations. Rather than concentrating on specific technical skills, the emphasis of these curriculum materials would pertain to acquiring conceptual skills needed for work such as planning, communication, and problem solving.

To assist in teaching the "human" aspects of work, twelve general topics were identified by the project staff relating to major occupational skills and attitudes necessary for survival in the world of work.

These twelve general topics included:

1. Problem Solving
2. Coping with Conflict
3. Interpersonal Relations
4. Effective Communication
5. Working in Organizations
6. Using Creativity at Work
7. Leadership
8. Authority and Responsibility
9. Coping with Change
10. Motivation for Work
11. Understanding Self
12. Adapting and Planning for the Future

Specific survival skills and attitudes, which were identified during the research phase, were integrated in the materials which were developed for the aboye twelve general topics.

The following two broad curriculum development objectives were established for developing the curriculum:

1. To prepare materials and activities for teaching students the twenty-one occupational survival skills within the context of the twelve instructional modules.
2. To develop student curriculum modules which illustrate principles relating to the twelve general occupational topics and would apply to situations either on-the-job or off-the-job.

Once the twelve modules were identified, the next project objective was to develop curriculum materials for teaching occupational survival skills as a major part of an occupational education program at the secondary level. These materials were to be designed not only to help students to adapt and survive in the world of work, but also to identify procedures which would help students grow and develop in their future occupations.

In Illinois, the career orientation program assists students in grades 9-10 to explore, in-depth, occupations in the following five career education clusters:

1. Business, Marketing and Management
2. Health
3. Industrial Technology
4. Home Economics and New/Emerging Occupations
5. Agricultural and Biological Sciences

During this career orientation phase in grades 9-10, students become knowledgeable about the many occupations in each of the above five career education clusters. Although students learn a great deal about specific occupations, they also need to know how to successfully maintain and survive in these occupations.

Career preparation is emphasized in grades 11-12. The emphasis of most vocational courses is on occupational skill development. Little emphasis is placed on "human" aspects of occupational education which might be more important than the actual technical skills required in an occupation.

Occupational survival skills are concerned with the "human" aspects of working in organizations, such as human relations, problem solving and coping ability. These "human" aspects may be as important, or even more important, than the "technical" aspects of work. The curriculum materials developed by this project was for instructors who are (a) preparing young people with entry level skills, or (b) helping people in the work force improve their present work skills.

The curriculum development phase of the project resulted in the preparation of twelve curriculum modules. Each curriculum module consisted of teaching strategies, learning experiences, and related

materials designed to facilitate student achievement of selected objectives. Each module was designed to include a primary module objective, a statement of the importance of the topic, teaching-learning strategies and activities, evaluation techniques and supportive resource materials. For convenience in teaching, each module was divided into various sessions. Each session was approximately fifty minutes in length and each session had a specific objective.

A specific objective for each session was followed by a brief statement of the importance of the session topic and its relevance to "survival" on the job. The importance of the session topic was followed by instructional activities to be completed by the students either in or out of the classroom. The twelve modules were designed primarily for the classroom instructor's use as teaching guidelines. However, individual students might also be able to use some of the materials as independent study activities.

The modules have been designed so that they can be taught separately as independent units of study. Teachers may select modules to teach on the basis of the needs of the students and objectives of the course being taught. The modules have been prepared so that little time and effort are required by the teacher to implement the materials into classroom instruction. The content and style of presentation of the activities enable teachers to integrate the activities into classroom instruction in a variety of ways.

Curriculum Areas

As a result of the initial phase of the project, the following twelve general topics were identified as being essential to occupational survival:

1. Working in Organizations
2. Understanding Self
3. Motivation for Work
4. Interpersonal Relations
5. Effective Communication
6. Using Creativity at Work
7. Problem Solving
8. Authority and Responsibility
9. Coping with Conflict
10. Coping with Change
11. Leadership
12. Adapting and Planning for the Future

These twelve topics can be grouped into the following three major skill areas: 1) Human Relations Skills, 2) Organizational Skills and 3) Coping Skills. The relevance of these three areas of skills to occupational survival may be described as follows:

1) Human Relations Skills. These skills are basic to all human interactions, on and off the job. While technical skills are essential on the job, lack of interpersonal competence is one of the most frequent reasons for organizational conflict and job dissatisfaction. It is important for workers to have knowledge of human behavior and how relations between people affects job productivity as well as personal well-being. Skills in developing effective interpersonal relations through an understanding of self and others and skills in communicative processes between people at work are important for workers at all levels within the organization.

2) Organizational skills. Another area of skills closely related to occupational success pertains to the organization. Students should be oriented to the following concepts: a) an understanding of the reasons why people work, b) the characteristics of organizations, c) reasons for forming organizations, d) why people join organizations, and e) what happens in organizations. Students

should also understand the factors which motivate people to do their best work. Skills relating to creativity, problem solving, and in basic skills of reading, writing, and arithmetic are also extremely important to job success in organizations.

3) Coping Skills. In today's world, changes are rapidly taking place in technology, communication, organization, values and education. Students should be aware of possible future trends which will affect their personal life as well as their work. More importantly, students should be prepared for future work situations where they will be required to identify, confront, and help solve problems resulting from changes within the organization as well as changes brought about by forces in the environment which affect the organization.

Instructional Modules

Each of the twelve curriculum modules may be considered important to job survival. The modules attempt to provide answers to the following questions relating to various aspects of work:

1. Working in Organizations: What is work? Where do people work? What are organizations and what are their common characteristics? How are organizations different from other types of groups? Why do people start organizations? Why do people join organizations?
2. Understanding Self: What makes people behave the way they do in their jobs? Why is work important to people? What are motives? What are interests, values and attitudes and how do they affect work behavior? Why is it important to understand

people in work situations? How can people be understood by their overt behavior at work?

3. Motivation for Work: Why do people work? What makes people try to do their best at work? How can jobs be made "motivational"? What are "motivational" needs and "maintenance" needs? Why are "motivational needs" important in work situations? How can workers achieve "job satisfaction"?
4. Interpersonal Relations: What are good interpersonal relationships? Why is it important to have good relationships on the job? What is the role of feelings, values, attitudes, human needs, prejudice, self-concept and perception in interpersonal relations?
5. Effective Communication: What is involved in the communication process? Why is effective communication important on the job? What are some major barriers to communication? Why is it important to write, read and speak well on the job? What is the importance of feedback to effective job performance?
6. Creativity: What is creativity? Why is creativity important to job success? What are specific ways of being creative on the job? How can a creative worker be helpful to the organization?
7. Authority and Responsibility: What is authority? How is authority different from power and influence? Why do certain people in work situations have authority? Why do people accept authority at work? How can an individual influence people wihtout having authority over them? What does job responsibility mean? What does an employer expect of a worker when he hires him? How can a person be a responsible worker?

8. Problem Solving: What are the steps in problem solving? How can problems at work be identified and solved? How can workers use the problem solving approach in their jobs?

9. Coping with Conflict: What is conflict and how do conflicts arise at work? What are the basic sources of conflict? What are the conflicts arising out of worker roles? What conflicts arise out of organizational positions? What kinds of conflicts arise due to technology? How can conflicts be avoided or minimized? How can conflict be turned into competition?

10. Coping with Change: Is change inevitable? Why do organizations have to change? What kinds of changes happen most frequently at work? How do changes in work affect the life styles of employees? How can some changes be anticipated? Are some workers able to accept changes more easily than others? How can workers cope with changes at work?

11. Leadership: What are the types of leadership? How do different styles of leadership affect productivity? Can people develop specific leadership style? What makes a supervisor a leader? How can leadership qualities be developed?

12. Adapting and Planning for the Future: What major changes are likely to happen in working patterns in the future? How can changes in work be anticipated? How will a worker be affected by these changing patterns in work? How can a worker plan his own life in terms of possible changes?

Once the twelve modules were written, they were pilot tested on a limited basis during the 1976-77 school year. Based on feedback from

classroom teachers, the materials were revised and were field tested during the 1977-78 school year. As part of the field testing, a research study "Differences in Students' Attainment of Occupational Survival Skills and Career Attitude Maturity" was conducted by Dr. James A. Leach during the 1977-78 school year. The focus of this study was on the use of the occupational survival skills materials with three student groups: cooperative education students, special needs students and CETA students.

Summary

The twelve occupational survival skills topics have not been recently discovered. A considerable body of knowledge concerning these twelve topics has been developed in the fields of economics, psychology, sociology, business administration, applied behavioral science and others. However, information relating to these skills exists in widely dispersed sources--books, articles, research reports, films, tapes, etc. Many of these sources may be unavailable to classroom teachers and high school students. One of the primary objectives of the occupational survival skills project was to identify and obtain as many materials as possible that are appropriate to the teaching of these skills.

Because occupational survival skills derive from different fields of knowledge, the teaching materials have to be highly eclectic and at the same time must be directly related to "survival" on the job.

Occupational Survival Skills relate primarily to the non-technical aspects of work organizations. In some business organizations, these skills are generally taught only to management personnel. Much of the inservice training programs for most workers pertain to upgrading

"technical" skills and have very little to do with "human" skills.

In most vocational education programs, the schools do a good job of preparing students for the technical side of their jobs. However, teachers may neglect teaching humanistic aspects of work which are important to "surviving" in an occupation. If topics such as interpersonal relations are taught in vocational programs, they are usually very elementary and are taught out of context from the real world of work. Consequently, young workers may spend much time early in their careers becoming knowledgeable about these "human" skills through trial and error. This results in a waste of valuable time on the job and may lead to inefficiency on the part of individual employees.

The teaching of occupational survival skills to vocational high school students before they enter the work force will orient them to the "human" aspects of work which they are likely to encounter in their jobs. These "human" aspects of work may be as valuable as the "technical" skill aspects of their work.

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WORKER PERCEPTIONS OF SKILLS NECESSARY FOR SURVIVAL IN THE WORLD OF WORK

by

Sharon Lund O'Neil

Today, more than ever before, business and industry are confronted with the rapidly increasing costs of producing goods and services. The rise in production costs appears to be the result of a variety of factors, not just one single element. It is quite possible, however, that the continuous changes in our technology have contributed to rising costs of goods and services.

Recent advancements in American technology also have created a variety of complexities for the contemporary worker. The transition from an agrarian, to an industrial, to a technological society has a great impact on methods of production as well as methods of doing work. Although work is still considered a major part of our daily lives, some people are becoming more concerned about how work is fulfilling their life goals.

The increased emphasis by workers on achieving life goals presents a multitude of challenges which have to be accomplished before personal success is attained. Making various job changes appears to be one important component of accomplishing personal and work goals during a worker's life. Since occupational mobility is more evident today than it was ten years ago, it may be necessary that individuals possess more than just technical skills to permit career changes. The necessity for workers to make the transition from one job to another becomes more

important as occupational mobility increases. Consequently, survival in the world of work may be contingent upon possessing a common core of skills to permit career changes without pursuing extensive retraining between occupations. If these skills can be identified and infused into occupational preparation programs, problems pertaining to survival in a constantly changing work environment may be reduced.

This research study was conducted to identify and compare occupational survival skills--the basic knowledges, traits and competencies most appropriate for workers to successfully maintain their chosen occupations. Occupational survival skills may permit workers not only to successfully maintain their chosen occupations, but also to move from occupation to occupation with less retraining. Consequently, by developing materials for teaching the common skills necessary to maintain an occupation, students may be better prepared for the world of work.

Procedures

A tentative listing of over 500 occupational survival skills was identified through the following procedures: an extensive review of related literature; interviews with a variety of workers; consultations with manpower personnel, research authorities, vocational and technical research and development personnel at the state level, vocational educators and others; and, input from numerous students, university faculty and staff and other workers.

Reduction of the list of occupational survival skill items began by combining and grouping similar descriptors. The resulting list and subsequent lists were submitted to more than 300 workers representing a wide diversity of occupations. Each person was asked to rate the items

they considered to be important for workers to possess for successful job maintenance. The 75 most frequently checked items were then submitted to each of eight members of a selected panel of education experts. The 27 most frequently checked occupational survival skill statements remaining after eight successive ratings by the panel were included in the survey instrument. These statements appeared to be representative of the following areas: (a) interpersonal relations and communications, (b) personal characteristics, (c) decision making and problem solving, and (d) job characteristics, health and safety.

As a measure of test-retest reliability, a phi-coefficient was calculated from the panel's first and second ratings of the items. The phi coefficients ranged between .41 and .63.

A telephone survey instrument was developed with 41 items--27 occupational survival skill statements to be rated by respondents as to importance in keeping their jobs, 3 open-ended questions concerning respondents' attitudes toward their jobs and 11 questions relating to demographic data.

Using random procedures, 20 of the 102 counties in Illinois were identified for survey purposes. Survey participants were then randomly selected from telephone directories from these 20 counties. A pilot test was conducted to (a) refine the survey instrument, (b) estimate the percentage of response and (c) identify objectives for interviewer training sessions.

Fifteen persons were trained as telephone interviewers to conduct the survey. Within a two-week period, a total of 589 telephone interviews were successfully completed. The persons interviewed were grouped

according to the nine occupational classifications used by the State of Illinois, Bureau of the Budget*--an adaptation of the system of the U. S. Government, Department of Commerce, Bureau of the Census.

Frequencies and standard scores were obtained. Discriminant analysis was utilized to determine differences of the variables within and among the nine occupational classifications as well as to support data obtained from means and frequencies concerning occupational survival skills similarities.

Discussion of Results

Characteristics of Respondents. As indicated in Table 1, the percentage of respondents in the survey from each of the nine occupational classifications was quite similar to the percentage from each of the nine classifications in the actual work force in Illinois.

Of the 589 respondents, 295 were female and 294 were male. About 93 percent of the sample were employed at the time of the survey. Thirteen percent of the working respondents were self-employed. Approximately 40 percent of the respondents who were employed indicated that they worked more than 40 hours a week.

The majority of respondents (74 percent) had worked for the same organization for two or more years, and 44 percent of the organizations where the respondents were employed had a work force of 101 or more persons. Fifty-three percent of the respondents were responsible for six or more persons.

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*Professional, Technical, Kindred; Managers, Officials, Proprietors; Sales Workers; Clerical Workers; Craftsmen, Foremen, Kindred; Operatives; Service Workers; Laborers, except Farm; and Farmers and Farm Workers.

Table 1

Responses by Occupational Classification and the Total Work Force in Illinois*

	Occupational Classification	Number of Respondents	Percent of Total Sample	Percent in Work Force
Gr 1	Professional, Technical, Kindred	108	18.34	14.53
Gr 2	Managers, Officials, Proprietors	64	10.87	8.23
Gr 3	Sales Workers	46	7.81	7.71
Gr 4	Clerical Workers	148	25.13	20.09
Gr 5	Craftsmen, Foremen, Kindred	74	12.56	13.84
Gr 6	Operatives	70	11.88	16.79
Gr 7	Service Workers	52	8.83	12.90
Gr 8	Laborers, except Farm	17	2.88	3.86
Gr 9	Farmers and Farm Workers	10	1.70	2.05
	Total	589	100.00	100.00

*1970 Census (State of Illinois, Bureau of the Budget, 1974).

Over half of the sample population were between the ages of 26 and 50. Ninety percent of the respondents had at least a high school education. Twenty-eight percent of the sample had a Bachelor's degree or had completed a minimum of 16 years of schooling.

Occupational Survival Skill Ranking. The 589 survey participants rated each of the 27 occupational survival skill items according to (a) VERY IMPORTANT (4), (b) IMPORTANT (3), (c) SOMEWHAT IMPORTANT (2), (d) NOT IMPORTANT (1), and (e) DOES NOT APPLY (0). After frequencies were obtained, the last two categories were combined for statistical analysis and scored as (1).

A rank ordering of means for skills in each of the nine occupational classifications is presented in Table 2. The skills are arranged so that a skill ranking higher than another skill must receive a higher mean in every occupational group than the lowest mean for another skill in any occupational group. For example, the skill of being dependable (X_2) has as its lowest mean for any one occupational group, 3.59 (Group 8, Laborers, except Farm). This mean is higher than the lowest mean for any other skill in any one occupational group.

Similarities in Survival Skills. When the data were analyzed with the use of frequency distribution and standard scores programs, it appeared that many similarities existed in the types of occupational survival skills needed by workers in the various occupational classifications. Table 3 indicates that in terms of over-all means, only five skills were considered less than IMPORTANT (means of less than 3.00) by the total sample. In terms of frequencies, 11 of these skills were rated as being VERY IMPORTANT for job maintenance by at least 50 percent of the total respondents and are indicated by an asterisk (*) in Table 3.

Rank Ordering of Means for the Nine Occupational Groups

Occupational Survival Skill	Occupational Group*								
	1	2	3	4	5	6	7	8	9
Means Above 3.50 for Every Occupational Group									
X_2 be dependable	3.79	3.72	3.83	3.84	3.78	3.76	3.73	3.59	3.90
Means Above 3.00 for Every Occupational Group									
X_{12} give an honest day's work	3.33	3.42	3.54	3.52	3.46	3.50	3.29	3.35	3.80
X_{16} know what is expected of you	3.27	3.44	3.41	3.49	3.39	3.39	3.44	3.24	3.10
X_{10} maintain good health	3.13	3.31	3.33	3.36	3.24	3.41	3.65	3.06	3.60
X_{26} manage time and materials efficiently	3.31	3.59	3.33	3.39	3.32	3.40	3.10	3.06	3.70
X_1 be punctual	3.00	3.05	3.07	3.25	3.55	3.34	3.42	3.41	3.40
Means Above 2.50 for Every Occupational Group									
X_{22} follow instructions	3.05	2.98	3.52	3.72	3.53	3.56	3.38	3.41	3.30
X_{23} work without close supervision	3.37	3.31	3.13	3.27	3.30	3.10	2.92	3.06	3.20
X_4 work as a team member	3.14	3.23	2.93	3.09	3.22	3.09	3.06	2.94	2.90
X_{25} adjust to various work situations	3.23	3.55	3.02	3.18	3.42	3.11	3.13	2.82	3.90
X_{11} know your own abilities, strengths, and weaknesses	3.37	3.38	3.28	3.35	3.39	3.27	3.25	2.82	3.60
X_{13} be loyal to the organization for which you work	2.81	3.39	3.33	3.34	3.07	3.20	2.96	3.12	3.40
X_3 get along with people with a variety of personalities	3.32	3.72	3.65	3.37	3.16	3.00	3.35	2.76	2.90
X_{19} locate information, materials or equipment	3.38	3.02	2.93	3.16	3.53	2.83	2.87	2.53	3.50
X_{14} make independent decisions	3.31	3.47	3.22	2.86	3.16	2.53	2.92	2.59	3.70
Means Above 2.00 for Every Occupational Group									
X_{21} have a basic knowledge of your organization's operating procedures	2.85	3.34	3.30	3.05	2.93	2.87	2.73	2.41	3.50
X_6 understand written information	3.62	3.53	3.33	3.56	3.58	2.91	2.98	2.35	3.70
X_{24} work under tension or pressure	3.19	3.34	2.96	3.22	2.92	2.74	3.12	2.35	3.20
X_{15} use initiative and imagination	3.34	3.48	3.30	2.88	3.14	2.59	2.83	2.29	3.50
X_{27} follow safety regulations	2.81	2.75	2.28	2.66	3.64	3.63	3.42	3.59	3.50
X_{18} know how to use job materials, machines or tools	2.84	2.52	2.24	3.07	3.55	3.47	2.87	3.41	3.70
X_8 have basic speaking skills	3.37	3.31	3.46	3.16	2.55	2.21	2.96	2.24	3.20
X_{17} have basic arithmetic skills	2.94	3.02	3.26	2.92	3.12	2.67	2.33	2.18	3.40
X_7 have basic writing skills	3.19	3.06	2.89	3.01	2.55	2.17	2.48	2.24	2.80
Means Above 1.50 for Every Occupational Group									
X_5 organize work activities of other people	2.77	3.38	2.28	1.97	2.65	1.83	2.25	2.00	3.40
X_9 be neat and clean in appearance	2.97	3.30	3.61	3.39	2.26	2.56	3.44	2.06	1.80
X_{20} have some type of specialized training	3.58	2.97	2.43	2.70	3.35	2.37	2.87	1.59	3.10
Total Number of Respondents	108	64	46	148	74	70	52	17	10

*1 Professional, Technical, Kindred
2 Managers, Officials, Proprietors
3 Sales Workers
4 Clerical Workers
5 Craftsmen, Foreman, Kindred
6 Operatives
7 Service Worker
8 Laborers, except Farm
9 Farmers and Farm Workers

Conclusions concerning the skills needed by all workers were based on information obtained from means or frequencies. Discriminant analysis was utilized to substantiate similarities of occupational survival skills among the occupational groups.

When the 27 occupational survival skills were statistically tested by discriminant analysis for determining differences among the nine occupational classifications, 17 skills did not contribute appreciably to any significant differences. That is, of the 27 occupational survival skills, 17 skills, did not appear to discriminate between or among groups. Consequently, in terms of statistical significance testing, there were 17 skills which appeared to be important for occupational survival regardless of occupational classification. These skills are indicated by a plus (+) in Table 3.

Occupational Differences in Survival Skills. The statistical technique of discriminant analysis was utilized to identify occupational survival skills which were important to one or more of the occupational classifications but were not common to all nine occupational classifications. Of the 27 occupational survival skills identified and compared in the present study, 10 skills contributed to the maximal separation between two or more of the nine occupational groups. The following ten occupational survival skills can be considered as those job knowledges, traits or competencies which are most important for job maintenance in certain types of occupations than for other types of occupations:

X_1 be punctual

X_5 organize work activities of other people

X_8 have basic speaking skills

X_9 be neat and clean in appearance

TABLE 3

Means and Standard Deviations
of the 27 Occupational Survival Skills
for the Total Sample Population

	Occupational Survival Skill	Mean	Standard Deviation
+*X_2	be dependable	3.78	.53
+*X_{12}	give an honest day's work	3.45	.75
*X_{22}	follow instructions	3.41	.84
+*X_{16}	know what is expected of you	3.40	.72
+*X_6	understand written information	3.39	.92
+*X_{26}	manage time and materials efficiently	3.35	.84
+*X_{11}	know your own abilities, strengths & weaknesses	3.33	.81
+*X_3	get along with people with a variety of personalities	3.32	.93
+*X_{10}	maintain good health	3.32	.81
*X_1	be punctual	3.24	.97
+*X_{25}	adjust to various work situations	3.24	.91
+*X_{23}	work without close supervision	3.23	1.00
+ X_{13}	be loyal to the organization for which you work	3.16	.99
+ X_{19}	locate information, materials or equipment	3.13	1.01
+ X_4	work as a team member	3.11	1.08
+ X_{24}	work under tension or pressure	3.08	1.10
+ X_{15}	use initiative and imagination	3.05	1.03
+ X_{14}	make independent decisions	3.05	1.03
X_9	be neat and clean in appearance	3.02	1.09
X_{27}	follow safety regulations	3.01	1.15
X_{18}	know how to use job materials, machines or tools.	3.01	1.14
X_8	have basic speaking skills	3.01	1.07
X_{21}	have a basic knowledge of your organization's operating procedures	2.99	1.05
*X_{20}	have some type of specialized training	2.90	1.15
X_{17}	have basic arithmetic skills	2.89	1.16
+ X_7	have basic writing skills	2.81	1.14
X_5	organize work activities of other people	2.41	1.26

*Skills rated as VERY IMPORTANT for job maintenance by at least 50 percent of the total respondents.

+Skills which did not appear to significantly discriminate between or among occupational groups.

X_{17} have basic arithmetic skills

X_{18} know how to use job materials, machines or tools

X_{20} have some type of specialized training

X_{21} have a basic knowledge of your organization's operating procedures

X_{22} follow instructions

X_{27} follow safety regulations

For the first significant discriminant function, nearly 40 percent of the total discriminability among groups was attributable to the occupational survival skills which separated white collar workers and blue collar workers. This result tends to imply that there are, indeed, differences in the occupational survival skills that are considered important for occupational survival between white collar workers and blue collar workers.

For the purposes of this study, white collar workers were referred to as workers in the following areas: Professional, Technical, Kindred (Gr 1); Managers, Officials, Proprietors (Gr 2); Sales Workers (Gr 3); Clerical Workers (Gr 4); and Service Workers (Gr 7). The skills which these workers considered extremely important for their job maintenance included:

a) being neat and clean in appearance (X_9) and

b) having basic speaking skills (X_8).

Of lesser importance to this cluster of workers were the skills of:

a) following safety regulations (X_{27}),

b) knowing how to use job materials, machines or tools (X_{18}) and

c) being punctual (X_1).

Blue collar workers were comprised of the following four occupational groups: Craftsmen, Foremen, Kindred (Gr 5); Operatives (Gr 6); Laborers, except Farm (Gr 8); and Farmers and Farm Workers (Gr 9). Of extreme importance to this cluster of workers were the skills of:

a) following safety regulations (X_{27}),

b) knowing how to use job materials, machines or tools (X_{18}) and

c) being punctual (X_1).

Noting that these three skills were those which were of lesser importance to white collar workers, it follows that the two skills they considered extremely important were of lesser importance to blue collar workers:

a) being neat and clean in appearance (X_9) and

b) having basic speaking skills (X_8).

Results from discriminant analysis indicated that a second function also was significant. This function accounted for an additional 29 percent of the total discriminability among groups which was attributable to the occupational survival skills separating two clusters of workers. One cluster of workers included the following four groups: Professional, Technical, Kindred (Gr 1); Managers, Officials, Proprietors (Gr 2); Craftsmen, Foremen, Kindred (Gr.5); and Farmers and Farm Workers (Gr 9). Since many of the Farmers and Farm Workers were proprietors, managers, supervisors and foremen, this cluster of four occupational groups were mainly managerial-type workers.

For purposes of this study, the following cluster was considered to be comprised of subordinate groups: Sales Workers (Gr 3); Clerical Workers (Gr 4); Operatives (Gr 6); Service Workers (Gr 7); and

Laborers, except Farm (Gr 8). Three skills contributed to the maximal separation of managerial-type workers and subordinates. Of vital importance to managerial-type workers but of lesser importance to subordinates were the skills of:

a) having some type of specialized training (X_{20}) and

b) organizing work activities of other people (X_5).

Alternatively, of lesser importance to managerial-type personnel but of more importance to subordinates was the skill of:

a) following instructions (X_{22}).

A third function also was found significant from the use of discriminant analysis. Eleven percent of the total discriminability was attributable to the skills separating the groups. Two groups of workers emerged as being significantly different from each other. Five occupational survival skills contributed to their maximal separation. Whereas Service Workers (Gr 7) indicated that occupational survival was very dependent upon possessing the skills of:

a) being neat and clean in appearance (X_9),

b) having some type of specialized training (X_{20}) and

c) following safety regulations (X_{27}).

Farmers and Farm Workers (Gr 9) found these skills to be of lesser importance in comparison to the 27 occupational survival skills. Conversely, Farmers and Farm Workers considered the following two skills as being of vital importance to their maintenance of an occupation:

a) having basic arithmetic skills (X_{17}) and

b) having a basic knowledge of your organization's operating procedures (X_{21}).

Service workers indicated that of the 27 occupational survival skills, the above two skills were the least important skills for occupational survival.

It may be or great interest to note, that Professional, Technical Kindred (Gr 1) and Managers, Officials, Proprietors (Gr 2) are clustered together for each of the three significant discriminant functions. Since the 27 variables of this study do not differentiate between these two groups, the occupational survival skills which are necessary for workers in the Professional, Technical, Kindred occupational classification appear to be of equal importance to the workers in the Managers, Officials, Proprietors occupational group. The same would hold true concerning the occupational survival skills of lesser importance. That is, the occupational survival skills which are of lesser importance to workers in the Professional, Technical, Kindred group also appear to be of lesser importance to the workers in the group of Managers, Officials, Proprietors.

Two other occupational groups, Operatives (Gr 6) and Laborers, except Farm (Gr 8), also are clustered together for each of the three significant discriminant functions. Similarly, the occupational survival skills in this study which are important to workers in the Operatives group appear to be equally important to the workers in the Laborers, except Farm group. The skills of lesser importance to one group also appear to be of lesser importance to the other group.

Approximately 40, 29 and 11 percent of the total discriminability among groups is attributable to the first, second and third discriminant functions, respectively. Consequently, approximately 80 percent of the

total discriminating power of the battery as a whole is apportioned to these functions--all of which were significant at the .001 level. Since differences were found in the 27 occupational survival skills among the 9 occupational groups, occupational survival appears to depend to a large extent upon skills which are specific to the clusters of groups heretofore described. It also substantiates information obtained from frequencies and means that other skills (17 in this case) do not contribute appreciably to the separation of groups. These 17 skills appear to be those which are needed by all types of workers regardless of occupational classification and are as follows:

X_2 be dependable

X_3 get along with people with a variety of personalities

X_4 work as a team member

X_6 understand written information

X_7 have basic writing skills

X_{10} maintain good health

X_{11} know your own abilities, strengths and weaknesses

X_{12} give an honest day's work

X_{13} be loyal to the organization for which you work

X_{14} make independent decisions

X_{15} use initiative and imagination

X_{16} know what is expected of you

X_{19} locate information, materials or equipment

X_{23} work without class supervision

X_{24} work under tension or pressure

X_{25} adjust to various work situations

X_{26} manage time and materials efficiently

Attitudes Toward Work. It was not the intent of this study to deal directly with attitudes of workers toward satisfaction or dissatisfaction with their jobs. However, the topic of work satisfaction is difficult to ignore when job information is desired. One of three questions concerning respondents' attitudes toward their work concerned the main reason why they remain in their jobs. The responses of the 489 workers interviewed are reflected in the six categories which are presented in Table 4.

Discriminant analysis was utilized to determine whether or not there were differences in occupational survival skills among persons who varied in the reasons why they keep their jobs. Significant differences were found between persons who indicated they keep their jobs because of work satisfaction and persons who said they keep their jobs because of salary, financial security and other reasons.

The skills considered to be of vital importance for job maintenance by persons who keep their jobs because of work satisfaction were:

a) making independent decisions (X_{14}),

b) being neat and clean in appearance (X_9),

c) using initiative and imagination (X_{15}),

d) having some type of specialized training (X_{20}),

e) having basic writing skills (X_7) and

f) managing time and materials efficiently (X_{26}).

Persons who said they keep their jobs because of salary, financial security or other reasons considered occupational survival to be extremely dependent upon the skills of:

a) following instructions (X_{22}) and

b) knowing how to use job materials, machines or tools (X_{18}).

TABLE 4

Reasons Given By Workers
as to Why They Keep Their Jobs

Category Number	Category	Number of Respondents	Percent of Total Sample
1	Salary, Financial Security and Job Security	266	45.1
2	Work Satisfaction	249	42.2
3	Experience and Good Achievement Opportunities	26	4.4
4	Better Position Unavailable	22	3.7
5	Important Personal Reasons	13	2.2
6	Other	13	2.2
	Total	589	100.0

A second free-response question concerning work satisfaction asked of the study population was, "What is the one thing you dislike most about your job?" Responses from the 589 workers interviewed are summarized in the 12 categories presented in Table 5.

From the information presented in Table 5, there does not appear to be one primary reason why persons in this study disliked their jobs. For instance, 28 percent of the respondents indicated that there was nothing they disliked about their jobs. Nearly 22 percent of the respondents, however, indicated that interpersonal relations--either with management or supervisor (15.28), co-workers (2.55), clientele (3.74) or a combination of these--was the primary reason why they disliked their occupations.

Significant differences in occupational survival skills were again determined by the use of discriminant analysis with the question regarding the primary reason why workers disliked their jobs. Of the persons who said they could not give a reason or who found no aspect of their job they disliked, they said the most important skill they needed for occupational survival was:

a) to be loyal to the organization for which you work (X_{13}).

Persons who gave some reason as to why they disliked their job considered their most important occupational survival skill as:

a) working under tension or pressure (X_{24}).

A third free-response question asked of interviewees was, "What was the main reason for leaving your last job?" Eleven categories were generated by combining similar responses and are summarized in Table 6.

For 19 percent of the respondents, this question was not relevant because the interview was based on their first job. Twenty-two percent of the respondents gave important personal reasons as the primary

TABLE 5

Reasons Given by Workers
as to Why They Dislike Their Jobs

Category Number	Category	Number of Respondents	Percent of Total Sample
1	Salary and Benefits	31	5.2
2	Working Hours	66	11.2
3	Working Conditions	80	13.5
4	Routine Work and Boredom	24	4.0
5	Pressure and Tension	34	5.7
6	Lack of Authority, Responsibility and Initiative	16	2.7
7	Supervision and Management	90	15.2
8	Co-workers	15	2.5
9	Clientele	22	3.7
10	Important Personal Reasons	23	3.9
11	None; None, Like Everything; and Cannot Answer	167	28.3
12	Other	21	3.5
Total		589	100.0

TABLE 6

Reasons Given by Workers
as to Why They Left Their Last Job

Category Number	Category	Number of Respondents	Percent of Total Sample
1	Salary and Benefits	68	11.5
2	Working Hours	16	2.7
3	Working Conditions	10	1.7
4	Dislike Job, Change Needed and Boring	46	7.8
5	Promotion and Little Opportunity for Advancement	70	11.8
6	Job Termination	84	14.2
7	People--Supervisor, Management, Co-workers and Customers	24	4.0
8	Important Personal Reasons	131	22.2
9	Military Service	20	3.4
10	None; and None, This is First Job	110	18.6
11	Other	10	1.7
	Total	589	100.0

reason they left their last position. Respondents who indicated the following two reasons as key factors for changing jobs: a) salary and benefits and b) promotion or little opportunity for advancement represented approximately 24 percent.

The categories of a) working conditions and b) working hours, combined, represented only four percent of the responses as to why persons left their last jobs. However, these same two categories represented a total of 24 percent of the persons who responded to the previous question relating to why they disliked their jobs. Only four percent of the respondents indicated that they left their last job because of people with whom they worked, whereas a relatively larger percentage (approximately 22 percent of the sample), indicated that this was the primary reason for disliking their jobs.

Implications. This study indicates that there are some basic knowledges, traits and competencies that are common to all types of occupations. It appears that persons must possess many of these knowledges, traits and competencies for successful maintenance of an occupation.

Each of the 27 occupational survival skills rated by respondents in each of the 9 occupational groups might be considered as having some degree of importance for occupational survival--especially when one considers that the 27 occupational survival skills were selected from a preliminary list of over 500 items. Occupational survival also appears to depend upon skills and attitudes which are much broader than technical knowledge and competencies. Skills requiring general knowledge and a variety of traits appear to rank high for successful job maintenance to many persons.

Even though each of the 27 occupational survival skills in this study appears to be of some importance to the majority of respondents, certain differences were found in the types of survival skills needed by persons in specific occupational groups. White collar workers, for example, indicated that neatness and speaking ability were the skills most important to them. Since many of these persons are in managerial or supervisory positions, it is feasible that having a neat, clean appearance and possessing speaking ability would be very important to them for job maintenance.

Personal traits appear to be just as important to blue collar workers as to white collar workers. Blue collar workers indicated that punctuality is an important skill for their job survival. Technical skills and knowledges, however, appear to be more important to them than to some of the other groups.

Respondents engaged in managerial work indicated that having specialized training was important to them for occupational survival. The increased emphasis today on management development programs may be supported by this finding. Possibly, one important aspect of these programs should be leadership training, since managerial groups in the study population indicated that organizing the work activities of other persons was another important occupational survival skill.

Subordinate groups, such as sales and clerical workers, operatives and laborers, indicated that it was essential for them to follow instructions. Following instructions, as an occupational survival skill, could involve a number of other basic skills such as reading, listening and decision-making. Although these skills may be of secondary importance it appears reasonable that such skills might be included under the broad

classification of following instructions.

Because neatness was a skill rated very high for service workers, there may be a direct relationship between occupational survival and the requirement for many service workers to wear some type of uniform while performing the duties related to their jobs. It may also follow that having some type of specialized training and following safety regulations are very important for them, since there are a certain amount of job hazards connected with many types of service occupations.

Even though farmers and farm workers represented a small percentage of the total sample, many of the respondents in this occupational group were farm owners or managers. Having knowledge of mathematics and the operations of a business were skills they considered important for occupational survival. This finding appears tenable for persons managing a business, although a larger sample representing more diversified occupations within the farmers and farm workers' group may have produced different results.

It may be impractical to draw any specific conclusions from the responses to the three open-ended questions concerning work satisfaction in the present survey. However, as a descriptive characteristic of the sample, it appears that people work because of a) money and security (financial or other) and b) work satisfaction. Work satisfaction not only appears to be an important reason why people work, but why people pursue various types of occupations. Because occupational mobility is important to many workers, factors concerning job mobility also may be an important aspect of work satisfaction.

A multi-media approach should be developed to teach more of the non-vocational and non-technical elements of occupational survival. The teaching of these materials should not be confined to the high school and post-secondary levels, but should be integrated into the entire educational system. From the time children enter school, they should be encouraged to develop a variety of occupational survival skills. Not only will young people need such skills for work survival, but many of these skills appear to be valuable for survival in society.

Since many facets of occupational survival depend upon a variety of job specifications, experiences for developing skills in the following areas might be provided for every individual: a) interpersonal relations and communications, b) personal characteristics, c) decision making and problem solving and d) job characteristics, health and safety. Students should be encouraged to explore broad areas of career opportunities in which they will be provided with a variety of experiences to make "informed" career choices. Experiences might include activities representing the above areas but not be limited to just the educational setting. Business and industry may also play an active part in developing the skills of students and workers in these areas.

It should be determined which occupational survival skills can be learned most effectively in the school setting and which skills can be developed most proficiently in a work setting. It also is quite possible that other settings would emerge from an assessment of facilities and personnel to direct occupational survival skill development of individuals. Persons engaged in the teaching of occupational survival skills should possess the exemplary characteristics they desire their students to acquire.

Business and industry need to have more contact with the educational systems so that the goals and objectives of the schools will be more compatible with the needs and requirements of business. The needs of business and the needs of individuals must be considered in a corresponding relationship. It is by meeting common goals that society will be benefited. Through work, individuals within a society gain recognition, status and satisfaction.

Work satisfaction not only appears to be an important reason why people work, but why people pursue various types of jobs. Since increasing occupational mobility is becoming more evident, factors concerning job changing also may be important aspects relating to work satisfaction. Many needs and desires of individuals are met through work. Knowing how to successfully survive in an occupation as a member of a mobile work force certainly gives additional meaning to preparing oneself with occupational survival skills--the knowledges, traits and competencies for successful maintenance of a job.

Based on the results of the present study, curriculum materials should be developed which will assist in preparing workers for successful job maintenance. The implications of job survival skill training may provide workers with more freedom of occupational mobility whereby they may obtain greater satisfaction and a higher sense of achievement from their jobs.

OPINIONS OF COOPERATIVE EDUCATION STUDENTS AND PARENTS CONCERNING THE TEACHING OF SKILLS NECESSARY FOR SURVIVAL IN THE WORLD OF WORK

by

Thomas Scanlan

One function of education is to prepare students for the world of work. In the past, it was generally possible for young people to acquire the formal education they needed for a lifetime during the first 15 to 20 years of their lives. This education adequately prepared young people for both a (life) occupation and for mature membership in society.

Modern technology has posed many problems for the schools. One problem is related to the knowledge explosion. Various predictions and forecasts indicate that about half of what students learned will be obsolete within a decade, and about half of what they will need to know ten years from now is not available today. Chamberlain (1964) suggested that this prediction appears to be true for professional people as well as for the rank and file manual workers.

A second problem resulting from modern technology is related to changing occupational patterns. Many occupations, like knowledge, will become obsolete in a comparatively short period of time. Adams and Reagan (1972, p. 160) pointed out that the accelerated rate of change in our society has resulted in fewer workers being able to look forward "to a lifetime career in which the knowledge and skills, which qualify them for a specific occupation in their youth, will serve throughout their working life."

In 1974, the U.S. Department of Labor estimated that sixty million new job openings would be created by 1985. Many of these openings would be created by new types of jobs.

The success of good planning to prepare people for these new occupations depends upon the ability of educational programs to be responsive to two major constituencies: students and employers. Mileen, et al. (1976, p. 1) concurred with this view when they wrote: "While student needs and labor market/occupational trends are fluid and dynamic, the elements of a vocational education system are necessarily more stable and less susceptible to change."

To emphasize the need for educational reforms, Kenneth Hoyt (1974), Associate Commissioner of career education, stated that:

> American education has not kept pace with the rapidity of change in the post-industrial occupational society. As a result, when worker qualifications are compared with job requirements, we find overeducated and undereducated workers are present in large numbers. Both the boredom of the over-educated worker and the frustration of the undereducated worker have contributed to the growing presence of worker alienation in the total occupational society.

Developing meaningful relationships between job preparation in schools and on-the-job work activities is essential if students are to make a smooth transition from school to work. Educators are faced with the challenge of preparing students for the future. This educational preparation must provide students with the necessary skills to live satisfying personal and work lives.

Recent attention and support for career education has focused on the need for better educational preparation so that young people are able to make more informed decisions regarding the work they will do in the future.

Students could be an excellent resource in curriculum planning for career education because they may have the insight to explain some of the deficiencies of the present curriculum. Hass (1974) viewed their ideas and reactions as being very important to curriculum planners. School systems need to invent innovative techniques to bring about a sharing of thinking about the curriculum among the students, parents, community representatives and educational staff members. Parent participation can be viewed as a means of (a) obtaining public acceptance of the curriculum and (b) educating the public about curriculum. Hass (1974) stated that:

> In the long run, we can only build the curriculum and use the teaching methods which the active school public will accept. People need to be involved in the process of planning and curriculum in order to change their beliefs, attitudes and their behaviors regarding it. (p. 250)

One example of obtaining input of students and parents in the curriculum planning process was described in a study conducted by Baker (1972) and supported by the UCLA Center for the Study of Education in 1972. Teachers, parents and students were involved in a needs assessment to determine the use of measurable objectives in mathematics. These three groups were first asked to rate the situation. In addition to rating the importance of each objective: (a) parents were asked to indicate whether they felt their child could currently master each objective; (b) students were asked to predict their own performance on the objectives; and (c) teachers indicated if objectives were among those they ordinarily taught and were asked to estimate levels of student performance on the objectives. Students were then tested on the objectives to determine their actual performance levels.

Results of the investigation prompted the school which was involved to seek help in areas of deficiency in student performance.

The project staff were encouraged, not only by willingness of the parents, teachers and pupils to participate, but more generally with the potential utility of the procedure. The procedure was subsequently applied to the American History course and the Black Studies course.

For parents, participation in curriculum development may be viewed as their right as taxpayers and as parents, per se. For students, participation in curriculum development may provide an opportunity for growth in moral development and responsibility: The inclusion of both groups in planning curriculum will help to assure acceptance of programs.

Methodology for the Survival Skills Study

Purpose. The primary purpose of this study was to ascertain the opinions of high school cooperative education students and their parents regarding the teaching of "Occupational Survival Skills" in existing educational programs. These survival skills may be defined as the basic knowledges, traits and competencies which are necessary for workers to successfully maintain their occupations.

Instrumentation. After extensive reviewing by various committees and advisory groups, the original list of 27 skills was reduced to 21 basic skill items which were considered essential for occupational survival. The format of the opinionnaire containing the 21 skill items was based on the "Occupational Characteristics Index", which is based on an interlocking design developed by Simpson, Slater & Stake (1965)

and is illustrated in Figure 1. The occupational survival skill items were arranged in 21 groups; each group contained five skill items. The following is an example of one of the 21 groups of skills on the opinionnaire and how a person might rank the importance of each skill.

	MOST IMPORTANT	2ND MOST IMPORTANT	3RD MOST IMPORTANT	4TH MOST IMPORTANT	LEAST IMPORTANT
Get along with a variety of people	1	2	3	4	5
Work as a team member	1	2	3	4	5
Maintain good health	1	2	3	4	5
Use initiative and imagination	1	2	3	4	5
Be punctual	1	2	3	4	5

The above example illustrates that the respondent indicated that of the five occupational survival skill items, Use of initiative and imagination was rated MOST IMPORTANT, whereas Be punctual was rated LEAST IMPORTANT to on-the-job survival.

Each of the 21 skills, such as Use of initiative and imagination appeared a total of five times on the opinionnaire and the skill was ranked against each of the twenty other skill items. The overall ranking of each skill was determined by dividing the sum of the five rankings by the number of responses to obtain a mean score.

Sample Selection. The study sample consisted of 316 cooperative education students and 137 of their parents in Illinois. The urban sample consisted of 200 students and 92 parent responses from secondary schools in the cities of Champaign and Joliet. The rural sample consisted of 116 students and 45 parent responses from Illinois secondary schools in Cumberland, Hoopston and Watseka.

FIGURE 1

INTERLOCKING DESIGN FOR COMPETITIVE RANKING OF THE 21 OCCUPATIONAL SURVIVAL SKILLS

Group	Individuals or Products to be Ranked				
A	1	2	7	9	19
B	2	3	8	10	20
C	3	4	9	11	21
D	4	5	10	12	1
E	5	6	11	13	2
F	6	7	12	14	3
G	7	8	13	15	4
H	8	9	14	16	5
I	9	10	15	17	6
J	10	11	16	18	7
K	11	12	17	19	8
L	12	13	18	20	9
M	13	14	19	21	10
N	14	15	20	1	11
O	15	16	21	2	12
P	16	17	1	3	13
Q	17	18	2	4	14
R	18	19	3	5	15
S	19	20	4	6	16
T	20	21	5	7	17
U	21	1	6	8	18

Rating Patterns

Figure 1 illustrates a pattern to be used when: (a) there are 21 skills to be ranked from highest to lowest; (b) there are to be 21 groups (A through U); (c) each individual or product is to compete with as many other individuals or products as possible; and (d) no judge is to be asked to rank more than five individuals or products. The time involved in the job of ranking, reading, or observing necessitates this last requirement . . . . The technique and patterns suggested here have wide applicability. A few of the additional areas where use would be feasible would be the following: ranking personnel such as in an industrial, military or educational situation; rating short stories; and ranking art forms for esthetic qualities. (Simpson, 1953, pp. 290-292).

Most of the students participating in the study had previous work-experience or were currently employed in a cooperative education program. Fifty-three percent of the students were male and 47% were female. Their ages ranged from 17 to 19 years. Slightly more than half of the parents were in the 40-51 age bracket.

The occupations of students and their fathers* were coded according to the nine classifications used by the U.S. Census Bureau. For the purpose of analysis, the following five categories of occupations were regarded as white collar occupations:

100 Professional, technical, kindred
200 Managers, officials, proprietors
300 Sales workers
400 Clerical workers
700 Service workers

The remaining categories were classified as blue collar occupations:

500 Craftsmen, foremen, kindred
600 Operatives
800 Laborers, except farm workers
900 Farmers and farm laborers

Based on the above classification, Table 1 indicates that the student occupations were evenly divided between white collar work and blue collar work. However, the occupations of the fathers were primarily blue collar (78.2%) and may have affected the responses of parents to the questionnaire on the assumption that the blue collar fathers would have blue collar values.

* Data on mothers' occupations were not analyzed because 59.1% were either not recorded or were recorded as homemakers.

TABLE 1

CLASSIFICATION OF OCCUPATIONS OF STUDENTS AND PARENTS

	White Collar Work	Blue Collar Work
Students' Occupations	50.8%	49.2%
Fathers' Occupations	21.8%	78.2%

Findings. To compare the opinions of students and parents in rural and urban areas, Table 2 indicates the Spearman Rank Correlation between various groups.

TABLE 2

CORRELATIONS BETWEEN SURVEY GROUPS

Spearman Rank Correlation	Comparison of Groups
.818	Urban students and urban parents
.946	Rural students and rural parents
.945	Urban students and rural students
.961	Urban parents and rural parents
.898	Total students and total parents

The correlations were uniformly very high between the various groups.

An overall ranking of total parents and students is illustrated on the left side of Table 3. The right side of Table 3 illustrates the rankings by each of the four groups of respondents, i.e., urban students, urban parents, rural students and rural parents. These rankings indicate the relative importance of teaching each of the 21 occupational survival skills at the high school level.

Conclusions. Table 3 indicates that there is a high level of congruence in the opinions of the four groups of respondents concerning the importance of teaching the first six occupational survival skills. These six skills appear to reflect the values of our society. People learn from society what is important for themselves and what their employers expect of them in work situations.

There was also general agreement by the respondents as to the seven least important skills. It is important to remember that the respondents were asked to make judgments on the relative importance rather than on the absolute importance of teaching the skills. The respondents are not saying that the teaching of those skills is unimportant. The findings merely indicate that it is the opinion of parents and students in both urban and rural communities that it is less important to teach certain skills at the high school level than to teach other skills.

The seven least important skills appear to reflect the values of blue collar workers. Seventy-eight percent of the urban fathers and 79% of the rural fathers were employed in occupations which could be considered blue collar work. The survey findings indicated that it was not necessarily important for blue collar workers to be neat and clean on the job; nor were they usually called upon to make decisions on their own. Blue collar workers usually worked under close supervision. In view of the high incidence of industrial unrest in this country at the present time, blue collar workers would not be expected to agree that Be loyal to employer would be an important skill. Follow safety regulations was also ranked low by

TABLE 3

OVERALL RANKING COMPARED TO INDIVIDUAL GROUP RANKINGS OF 21 "OCCUPATIONAL SURVIVAL SKILLS"

Overall Ranking		Individual Group Ranking			
		Urban		Rural	
		Students	Parents	Students	Parents
1	Have basic speaking skills	1	1	1	1
2	Have basic arithmetic skills	2	3	3	2
3	Use initiative and imagination	4	2	2	3
4	Know what an employer expects	3	5	4	5
5	Get along with a variety of people	5	7	5	9
6	Be dependable	10	6	6	6
7	Maintain good health	6	14	7	7
8	Have basic writing skills	11	4	9	4
9	Be punctual	9	10	8	8
10	Manage time and materials efficiently	7	13	11	12
11	Work as a team member	8	11	13	11
12	Work under tension or pressure	13	9	10	13
13	Adapt to varying work situations	12	15	12	10
14	Organize work activities of others	14	8	15	14
15	Use information, materials, equipment	15	12	14	15
16	Follow instructions	16	16	17	17
17	Follow safety regulations	18	18	18	16
18	Be loyal to employer	17	19	16	19
19	Work without close supervision	19	20	19	20
20	Make decisions on your own	21	17	20	18
21	Be neat and clean in appearance	20	21	21	21

the respondents; this is borne out by the literature and the legislative concern for the high incidence of accidents in the work environment.

A high degree of importance was indicated by the total number of respondents to the skill Use initiative and imagination. This response may be related to possible feelings of frustration and job dissatisfaction experienced by workers in business and industry. Both parents and students may see the importance of developing the skills of initiative and imagination to enable workers to obtain more psychologically rewarding occupations.

Several skills in the "middle range" of the rankings were not relatively congruent between the individual groups. Maintain good health was ranked fourteenth by urban parents, but was ranked as seventh by rural parents. A significant proportion of the rural parents sampled (11 out of 45) were self-employed persons. This finding appears to reflect the necessity for persons in entrepreneurial type occupations to maintain good health to ensure regular remuneration. Perhaps the urban parents, who were mainly employees, belong to group health plans and are able to maintain a regular income during periods of illness. The maintenance of good health appears not to be as critical for maintaining an income for urban parents.

Have basic writing skills is ranked fourth by both urban and rural parents and ranked eleventh and ninth by urban and rural students. Writing skills, with the allied skill of reading, were traditional modes of communication and main channels for passing

information and ideas from one generation to the next generation. Today's technology has put increasing emphasis on other-forms of communication. This is the age of the telephone, TV and tape recorder. Audio-visual approaches to instruction are becoming more widespread. Today, greater emphasis than ever before is placed on graphic representation of information. It appears that the rankings of this skill Have basic writing skills, may reflect a generation gap in the transmission of values by society.

Manage time and materials efficiently and Work as a team member were both ranked higher by urban students than by the other three groups. Economic and career education may receive greater emphasis in urban schools than in rural schools. This may have the effect of stressing the importance of these two skills in the minds of urban students.

Another skill which shows relative differences in the rankings is Organize the work activities of others. This occupational survival skill was ranked eighth by urban parents and ranked fourteenth and fifteenth by urban students and rural parents and students. Urban parents may generally be expected to have employment in large organizations and have more opportunities to be employed in supervisory positions. This finding might reflect a greater awareness by urban parents of the necessity for organizing the work activities of others. It may also reflect a desire by urban parents for upward mobility.

Summary

In preparing future educational programs, especially in areas relating to vocational education and career education, curriculum

developers might consider the inclusion of various "Occupational Survival Skills" identified in Table 3 when designing new educational programs or revising current educational programs. This study provides evidence that many of these "Occupational Survival Skills" would receive wide acceptance by both students and parents. Educational programs should not ignore the more traditional skills--speaking, writing, arithmetic, etc.; it appears that these will be necessary to some degree for all occupations. Particular emphasis, however, should also be placed on psychological skills, such as the Development of initiative and imagination.

Programs need to be developed whereby workers and students enrolled in educational programs have more contact and input into curriculum planning. This interaction between workers, students and curriculum developers will assist the schools in identifying goals and objectives which are more compatible with the (a) needs of workers and (b) requirements of business and industry.

The needs of business and the needs of individuals must be considered in a corresponding relationship. It is by meeting common goals that society will be benefited. Through work, individuals within a society gain recognition, status and satisfaction. The better people are prepared for work, the better they will be able to survive in the highly complex, business-oriented society which exists in the United States.

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OPINIONS OF TEACHERS, COUNSELORS AND ADMINISTRATORS CONCERNING THE TEACHING OF OCCUPATIONAL SURVIVAL SKILLS

by

Kent D. Frison

Today, an important decision made by most young people concerns the type of career they wish to pursue in the future. These career decisions concerning work will affect their well-being and happiness throughout their lives. Career decisions become more complicated because of the complex nature of work in our highly developed and highly specialized society. Social and technological changes in the United States make occupational choices even more difficult for young people.

There is a need to assist young people in planning their occupational futures. Vocational education may be considered as planned educational experiences which are "designed to prepare the learner to enter the world of work successfully or to maintain himself as a productive worker throughout an everchanging occupational life" (Leighbody, 1965, p. 79). The traditional trade analysis approach to specific occupations no longer reflects the nature of many of the occupations available. In the future, research relating to curriculum development will seek to identify "common elements in a family of occupations rather than in-depth skills and knowledge in a single occupation" (Leighbody, 1965, p. 79).

A survey conducted in Chicago indicated that businessmen believed that workers lacked skills in writing, reading, arithmetic and work attitudes such as: responsibility, discipline, promptness, respect for task. The results of the survey also indicated that while education

enables people to work within their intellectual and social limits, 'survival skills' are more important than intellectual ability for coping with our society with its complexities (Walberg and Sigler, 1975).

Draper Kaufmann (1976), author of Teaching the Future, stated that:

> Our society is changing very rapidly, and it is impossible to predict what it will be like in 50 years; we only know for certain that it will be very different from today. It therefore makes little sense to base education either on the past or on one particular version of the future. What we can and must do instead is give students an understanding of the most important issues, problems, and opportunities they may face; teach them the skills they will need to continue to look ahead on their own; and prepare them to cope successfully with the dislocations and stresses of rapid change.

Because of the constantly changing nature of work, many young people who are now entering the labor force can be expected to change occupations more than six or seven times during an estimated forty-year career. Consequently, there is a need for young people to develop skills which (a) are essential to many occupations, (b) can be readily adapted to new work situations, and (c) facilitate retraining for new and emerging occupations. If contemporary workers are able to adjust to changes relating to present and future occupations they will be better prepared to cope with the complexities of their present and future work environment.

In 1974, the U.S. Department of Labor estimated that sixty million new job openings would be created by 1985. Many of these openings would be created because of new types of jobs. It has also been estimated that approximately two-thirds of all jobs existing in the year 2000 will not be similar to those existing today. Educa-

tors are presently faced with the challenge of preparing students for an uncertain future. Educational preparation for the future must provide students with necessary skills to allow satisfying involvement in work, as well as satisfying personal lives.

Purpose of the Study

The purpose of this study was to determine the opinions of secondary school personnel regarding the possibility of teaching "Occupational Survival Skills" in existing educational programs. "Occupational Survival Skills" may be defined as the common skills (basic knowledges, traits and competencies) which are necessary for workers to successfully maintain their occupation.

Specifically, the research study was conducted to determine answers to the following research questions:

1. Are there differences in the rankings of the 21 "Occupational Survival Skills" among teachers, counselors and administrators?
2. Are there differences in the rankings of the 21 "Occupational Survival Skills" between rural teachers, counselors and administrators and urban teachers, counselors and administrators in secondary schools?
3. What is the most appropriate grade level for teaching each of the "Occupational Survival Skills"?
4. What subject within high school departments would be most appropriate for teaching each of the "Occupational Survival Skills"?

Background of the Study

The success of good planning to prepare young people for work

depends upon the ability of educational programs to be responsive to two major constituencies: students and employers. "While student needs and labor market/occupational trends are fluid and dynamic, the elements of a vocational education system are necessarily more stable and less susceptible to change" (Mileen, et al., 1976, p. 1).

There appears to be general agreement concerning the admistrator's role in curriculum planning. Key people involved in local curriculum planning for schools are the superintendents, principals, and department chairpersons. An important concept of curriculum development is that effective curriculum planning is a cooperative process and that competent administrators will make use of and seek to develop the potential of their staff (Anderson, 1963).

Dumas (1968) concluded that two of the most important tasks of the principal are improving classroom instruction and developing and improving the curriculum. Yet, Dumas indicated that secondary principals devote less than ten percent of their time to tasks pertaining to instruction and curriculum development.

Teachers and counselors also play an important role in curriculum development and implementation. Saylor and Alexander (1966) recommended teacher participation because it will insure implementation of curricular change. Only by including teachers in the planning and implementation may the best results be obtained in the classroom. The American School Counselor Association identifies the role of the counselor as one who helps to plan and develop the guidance program and the curriculum in relation to the needs of pupils (Bentley, 1968).

In education there is no real choice as to whether or not to plan.

The primary concern is who shall do the planning and to what end. "The right to plan is his who has labored to acquire the knowledge, expertness, the courage to look ahead and outwit the times" (Metcalf, 1966, p. 451).

Methodology

Instrumentation. The opinionnaire prepared for this study was designed to gather information on teachers', counselors', and administrators' opinions concerning "Occupational Survival Skills." A tentative list of over 500 occupational survival skills was identified from a variety of sources. After extensive reviewing by various committees and advisory groups, the list was reduced to 21 basic skill items which were considered essential for occupational survival. The format of the opinionnaire used to rank the 21 skill items was based on the "Occupational Characteristics Index," which uses an interlocking design (Simpson, Slater, Stake, 1965). The occupational survival skill items were arranged in 21 groups; each group contained five skill items. The following is an example of one of the 21 groups of skills on the opinionnaire and how a person might rank the importance of each skill.

	MOST IMPORTANT	2ND MOST IMPORTANT	3RD MOST IMPORTANT	4TH MOST IMPORTANT	LEAST IMPORTANT
Get along with a variety of people	1	2	3	4	5
Work as a team member	1	2	3	4	5
Maintain good health	1	2	3	4	5
Use initiative and imagination	1	2	3	4	5
Be punctual	1	2	3	4	5

The above example illustrates that the respondent indicated that of the five occupational survival skill items, Use of initiative and imagination was rated MOST IMPORTANT, whereas Be punctual was rated

LEAST IMPORTANT to on-the-job survival.

Each of the 21 skills, such as Use of initiative and imagination, appeared a total of five times on the opinionnaire so that this skill was ranked against each of the twenty other skill items. The overall ranking of each skill was determined by dividing the numerical sum of the five rankings by the number of responses to obtain a mean score.

Identification and Selection of Sample. The sample to be considered for use in the study consisted of school personnel in 21 secondary schools in the state of Illinois. Included in the sample were 16 rural high schools and five urban high schools. In addition, 47 high school cooperative education teachers from various Chicago Public Schools were part of the urban sample. A total of 450 completed the survey instrument and provided the basis for the findings of the study.

Findings and Conclusions

A computer was used to analyze the data resulting from the "Occupational Survival Skills" opinionnaires completed by the 450 secondary school personnel in the sample. Mean scores were computed and the lowest mean score represented the most important skill and the highest mean score represented the least important skill for teaching high school students in order for them to maintain an occupation. Table 1 indicates the ranking for the total sample.

The overall ranking of the 21 "Occupational Survival Skills" by the total sample of secondary school personnel appears to reflect educational values rather than work-related values. The seven highest ranked skill items may be interpreted as general goals of educational institutions.

TABLE 1

RANKING OF OCCUPATIONAL SURVIVAL SKILLS
BY SECONDARY SCHOOL PERSONNEL: TOTAL SAMPLE

Ranking	Occupational Survival Skills	Mean Score
1	Have basic speaking skills	1.8
2	Have basic arithmetic skills	2.1
3	Use initiative and imagination	2.2
4	Get along with a variety of people	2.4
5	Be dependable	2.4
6	Be punctual	2.5
7	Have basic writing skills	2.7
8	Adapt to varying work situations	2.7
9	Work as a team member	2.8
10	Use information, materials, equipment	3.0
11	Maintain good health	3.0
12	Know what an employer expects	3.2
13	Follow safety regulations	3.2
14	Follow instructions	3.3
15	Be loyal to employer	3.3
16	Work under tension and pressure	3.4
17	Organize the work activities of others	3.5
18	Work without close supervision	3.6
19	Manage time and materials efficiently	3.7
20	Make decisions on your own	3.7
21	Be neat and clean in appearance	4.3

Because educators are familiar with educational goals, their responses tend to be in terms of what educational institutions can do to facilitate basic skills which are needed by all workers. The remaining 14 skills are generally more specific to work situations. Because many educators are not involved in work settings outside the schools, they may be unaware of the importance of other basic skills necessary for workers to maintain their occupations.

Ranking Among Groups. To gain more specific information concerning the ranking of skills, the total sample was divided into the following six groups: a) urban and rural teachers, b) urban and rural counselors, and c) urban and rural administrators. Table 2 indicates that of the twelve highest ranked skills, seven of the skills appear to be common to the rankings of all six groups. It appears that there was general agreement among the groups as to their opinions concerning the appropriateness of the following seven skills for teaching to high school students:

1. Have basic speaking skills
2. Have basic arithmetic skills
3. Use initiative and imagination
4. Get along with a variety of people
5. Be dependable
6. Be punctual
7. Have basic writing skills

The Spearman rank-correlation formula was applied to the data in Table 2 and a correlation of .84 was obtained between the teachers and counselors, .90 between the teachers and administrators, and .87 between

TABLE 2

RANKING OF OCCUPATIONAL SURVIVAL SKILLS

OVERALL RANKING	OCCUPATIONAL SURVIVAL SKILLS	Teachers		Counselors		Administrators	
		Rural	Urban	Rural	Urban	Rural	Urban
(n=450)		n=169	n=213	n=13	n=23	n=22	n=10
1	Have basic speaking skills	1	1	1	1	1	1
2	Have basic arithmetic skills	2	2	4	2	4	2
3	Use initiative and imagination	3	3	3	7	3	4
4	Get along with a variety of people	6	4	2	4	2	5
5	Be dependable	4	6	6	3	10	7
6	Be punctual	5	5	5	5	6	3
7	Have basic writing skills	8	7	10	9	8	12
8	Adapt to varying work situations	7	20	7	10	9	8
9	Work as a team member	11	8	8	6	5	9
10	Use information, materials, equipment	10	9	13	8	14	11
11	Maintain good health	9	12	14	12	11	6
12	Know what an employer expects	15	10	11	13	7	13
13	Follow safety regulations	14	11	12	11	17	14
14	Follow instructions	13	16	18	17	12	10
15	Be loyal to employer	12	14	15	19	13	17
16	Work under tension and pressure	18	13	9	14	16	19
17	Organize the work activities of others	16	15	17	18	15	18
18	Work without close supervision	17	17	16	15	21	15
19	Manage time and materials efficiently	19	19	20	20	18	21
20	Make decisions on your own	20	18	19	16	20	16
21	Be neat and clean in your appearance	21	21	21	21	19	20

the counselors and administrators. The values of the Spearman rank-correlation coefficients for the data in Table 2 appear to indicate a fairly high positive relationship and general agreement among the priority rankings for the three respondent groups.

Table 2 also illustrates the differences in rankings among the 204 teachers, counselors, and administrators from the rural high schools. The Spearman rank-correlation formula was applied to the three groups in the rural sample and a correlation of .86 was obtained between the teachers and counselors, .86 between the teachers and administrators, and .86 between the counselors and administrators. The values of the Spearman rank-correlation coefficients for the data in Table 2 appear to indicate that there is a fairly high positive relationship and general agreement among the priority rankings for the three rural groups.

Table 2 also indicates the rankings for the 246 teachers, counselors, and administrators from the urban high schools. The Spearman rank-correlation formula was applied to the three groups in the urban sample and a correlation of .88 was obtained between the teachers and counselors, .78 between the teachers and administrators, and .88 between the counselors and admnistrators. The values of the Spearman rank-correlation coefficients for the data in Table 2 appear to indicate that there is a fairly high positive relationship and general agreement among the priority rankings for the three urban groups.

Levels for Teaching the "Occupational Survival Skills". Data was also obtained through the opinionnaire concerning the appropriate grade levels for teaching the "Occupational Survival Skills" and is

presented in Table 3. This table shows that four patterns emerged as being appropriate for teaching the "skills." These patterns include:

1. Selection of 9th grade only as most appropriate
2. Selection of 9th and 10th grades as most appropriate
3. Selection of all grades (9-12) as most appropriate
4. Selection of 11th and 12th grades as most appropriate

Apparently, the skills indicated to be taught at ninth grade level may require only limited instruction. This may indicate that students have already had sufficient instruction, practiced these skills and have sufficiently developed them.

The other patterns appear to indicate that some skills may be developmental in nature and that instruction over a longer period of time (2-4 years) is necessary. Apparently, these skills require more reinforcement of instruction to develop the necessary competencies.

Subjects Appropriate for Teaching the "Occupational Survival Skills". Data was also collected concerning the question of most appropriate subjects within high school departments for teaching the "Occupational Survival Skills." The findings appear to indicate that in most of the subject matter areas there was a preference for one of two alternatives for teaching the majority of 21 "Occupational Survival Skills." It appears that in some cases a basic introductory course (e.g., Basic Agriculture) was chosen as a preference to teach the majority of the 21 "Occupational Survival Skills." The other alternative was an apparent lack of consensus by the sample population concerning which subject is most appropriate. In the case of

TABLE 3

GRADE LEVELS MOST APPROPRIATE FOR TEACHING OCCUPATIONAL SURVIVAL SKILLS *

Skills	Grade Level			
	9	10	11	12
Have basic arithmetic skills	X			
Be dependable	X			
Be punctual	X			
Have basic writing skills	X			
Maintain good health	X			
Follow safety regulations	X			
Follow instructions	X			
Be neat and clean in appearance	X			
Have basic speaking skills	X	X		
Get along with a variety of people	X	X		
Work as a team member	X	X		
Use information, materials, equipment	X	X		
Manage time and materials efficiently	X	X		
Use initiative and imagination	X	X	X	X
Adapt to varying work situations	X	X	X	X
Know what an employer expects	X	X	X	X
Be loyal to employer	X	X	X	X
Work under tension or pressure	X	X	X	X
Work without close supervision	X	X	X	X
Make decisions on your own	X	X	X	X
Organize the work activities of others			X	X

* The X indicates the grade level on grade levels most appropriate for teaching the occupational survival skills.

lack of general consensus, no subject received a majority vote as being most appropriate.

Summary

The purpose of this study was to determine the opinions of secondary school personnel regarding the possibility of teaching "Occupational Survival Skills." Specifically, information was collected concerning the ranking of the "Occupational Survival Skills" in terms of their importance for teaching high school students in order for them to maintain an occupation. Information was obtained concerning the appropriate grade level for teaching each of the skills, and information was collected about particular subjects within high school departments which are most appropriate for teaching the "Occupational Survival Skills." The survey sample included 450 teachers, counselors, and administrators in both rural and urban settings.

Rankings of the "Occupational Survival Skills". The overall ranking of the "Occupational Survival Skills" by the total sample appeared to reflect a priority in terms of educational values. The top seven rated skills are more traditional "educationally" oriented as opposed to work related skills. The analysis of data according to the three sub-groups of teachers, counselors, and administrators indicated that there was fairly high agreement concerning the ranking of the skills. Of the eleven highest ranked skills, eight of the skills appeared to be common to the rankings of all three groups. In addition, the Spearman rank-correlation coefficients obtained indicated a fairly high positive relationship among the ranking of the three groups.

The rural teachers, counselors and administrators showed a commonality concerning the ranking of the "Occupational Survival Skills." Of the 11 highest ranked skills, nine appeared to be common to all three groups. In addition, fairly high positive correlation coefficients were also obtained indicating agreement concerning the ranking.

The urban group also showed commonality concerning the rankings for the teachers, counselors, and administrators. Of the 11 highest ranked skills, eight appeared to be common to all three groups. Correlation coefficients for the rankings were also fairly high and positive for the groups.

Correlation coefficients were also obtained for rural vs. urban teachers, rural vs. urban counselors, and rural vs. urban administrators. Again, fairly high positive coefficients were obtained and indicated general agreement concerning the rankings. In general, there appeared to be agreement across all groups concerning the ranking of the 21 "Occupational Survival Skills."

Grade Levels for Teaching the "Occupational Survival Skills".

Concerning the grade levels selected as most appropriate for teaching the 21 "Occupational Survival Skills," four patterns were determined from the data analysis:

1. Selection of 9th grade only as most appropriate
2. Selection of 9th and 10th grades as most appropriate
3. Selection of all grades (9-12) as most appropriate
4. Selection of 11th and 12th grades as most appropriate

It appeared that some skills required only limited instruction due to previous learning, while other skills were developmental in nature and required longer periods of instruction.

Subjects for Teaching the "Occupational Survival Skills". Subjects were selected by the survey participants as being most appropriate for teaching each of the 21 "Occupational Survival Skills." The results generally indicated a preference for teaching the skills in basic introductory courses or in a variety of courses. The lack of consensus for a single course appears to have indicated little agreement as to the appropriate subject for teaching a particular skill and may indicate that the skill is, or can be, taught in various courses or that a separate course is needed in order to teach these skills. There may be a need to develop a course which might be a basic introductory course, which could contain instruction relating to the various "Occupational Survival Skills."

In subject matter areas where particular courses were designated as most appropriate for one or two skills, the majority of the selections appear to be logical. For example, in Business Education, Typewriting was selected as most appropriate to teach Follow instructions and Work under tension or pressure. Have basic arithmetic skills was designated to be taught in Business Mathematics. Shorthand was selected as most appropriate to teach Have basic writing skills.

The results of this study provide evidence that rural and urban high school teachers, counselors, and administrators are generally in agreement as to types of "Occupational Survival Skills" which might be taught in secondary schools.

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INSTRUCTIONAL TECHNIQUES FOR TEACHING OCCUPATIONAL SURVIVAL SKILLS

by

Joyce Nies

There is a need to assist young people in school to plan their occupational futures. Education for employment may be considered as planned experiences which Leighbody (1965) indicated are "designed to prepare the learner to enter the world of work successfully or to maintain himself as a productive worker throughout an everchanging occupational life."

The more informed young people are about needed skills to maintain themselves in an occupation, the more likely they will be able to succeed in an occupation which best meets their individual aptitudes and interests. Studying skills which are essential to maintaining an occupation will provide students with the additional educational experiences they need to prepare for their future occupations.

There appears to be a problem of identifying instructional techniques for integrating into the curriculum topics relating to occupational survival skills which are critical to on-the-job success. If these techniques for teaching occupational survival skills can be identified and used by classroom teachers, students will be better prepared to cope with the varied and diversified tasks they will encounter in occupations at all levels within the organization.

Many vocational educators consider the following skills as being extremely essential: problem solving, interpersonal relations,

personal work attitudes, job-related expectations, and communications. However, curriculum content in many vocational education programs does not reflect this major concern. Because these skills are general in nature and not unique to a specific subject area, these skills are not likely to be systematically taught in any subject area. If there are occupational survival skills which all students should possess, then a systematic attempt must be made by curriculum specialists to develop instructional techniques for the implementation of these skills into the curriculum.

Purpose of Study

The primary focus of this study was to determine the preferences of secondary school teachers regarding the instructional techniques they would use to teach the 21 occupational survival skills. The increased emphasis in schools on career education emphasizes the need for educators to identify instructional techniques which would facilitate the teaching of these skills. The identification and classification of these instructional techniques would enable all secondary teachers to more adequately prepare students for the world of work. Both vocational and non-vocational teachers were included in the study population, since teaching career education concepts and occupational survival skills need not be limited to vocational teachers. Preparing students for the world of work is dependent to a great extent on the successful implementation of career education programs by all teachers.

The major purpose of this study was to identify preferences of urban and rural secondary teachers regarding instructional techniques they would use to teach essential work skills. Occupational survival

skills may be defined as the basic knowledges, traits, and competencies which are necessary for workers to successfully maintain their occupations. Since the community affects the school climate and curriculum, another purpose of this study was to determine to what extent urban and rural teachers agreed on instructional techniques to teach the survival skills.

Specifically, the study was conducted to determine answers to the following research questions:

1. What instructional techniques are perceived as being most appropriate by secondary teachers for teaching occupational survival skills?
2. What differences, if any are there between the opinions of urban teachers and rural teachers regarding techniques for teaching occupational survival skills?

Instrumentation. The occupational survival skills were classified into the following five content areas: (a) Interpersonal Relations, (b) Problem Solving, (c) Communication, (d) Job-Related Expectations, and (e) Personal Work Attitudes. The skills were classified according to content areas because content is a primary factor affecting a teacher's decision concerning the appropriateness of a specific instructional strategy (Seifman, 1970). Because teaching is affected by the content, the survey instrument used in the study was constructed so that teachers could respond in terms of a particular content area. Each content area represented various specific occupational survival skills which are necessary for the success in work. Examples of specific skills are presented in Table 1.

A tentative list of instructional techniques was identified after an extensive review of the literature. Eighteen instructional techniques were selected by the project staff and advisory committee as being representative of the total listing.

The format of the opinionnaire containing the eighteen instructional strategies was based on the Occupational Characteristics Index (Simpson, Slater, & Stake, 1965). The instructional techniques were arranged in 18 groups, each containing four instructional strategies. The following is an example of one of the eighteen groups of instructional strategies on the opinionnaire and indicates how a teacher might rank the importance of the general skill of problem solving.

PROBLEM SOLVING	FIRST CHOICE	SECOND CHOICE	THIRD CHOICE	FOURTH CHOICE
Group discussion	1	2	3	4
Lecture	1	2	3	4
Interviews	1	2	3	4
Simulation	1	2	3	4

Of the four instructional techniques, Simulation was the first choice, while Group Discussion was the fourth choice for teaching problem solving. Each of the eighteen instructional techniques, such as Simulation, appeared a total of four times on the opinionnaire. Each instructional technique was ranked against each of the other seventeen instructional techniques. The overall ranking of each technique was determined by dividing the sum of the four rankings by the number of responses to obtain a mean score.

The teachers who participated in the survey were randomly divided

TABLE 1

CLASSIFICATION OF ESSENTIAL WORK SKILLS
BY CONTENT AREAS

Content Areas	Examples of Specific Skills
Interpersonal Relations	-Get along with a variety of people -Work as a team member -Organize work activities of others
Personal Work Attitudes	-Be loyal to employer -Be neat and clean in appearance -Maintain good health -Be punctual -Be dependable
Problem Solving	-Make decisions on your own -Use initiative and imagination -Manage time and materials efficiently
Communication	-Have basic writing skills -Have basic speaking skills -Know what an employer expects
Job-Related Expectations	-Use information, materials, equipment -Follow instructions -Follow safety regulations -Work without close supervision -Work under tension or pressure -Adapt to varying work situations -Have basic arithmetic skills

into five groups. Each group of secondary school teachers responded to the instructional techniques for one of the work skill areas: Interpersonal Relations; Job-Related Expectations; Problem Solving; Communication; and Personal Work Attitudes.

Sample Selection. The study sample consisted of 384 secondary teachers in Illinois. The urban sample consisted of 212 teachers from six schools in the cities of Champaign, Joliet, and Chicago. The rural sample consisted of 172 secondary teachers from sixteen schools in the counties of Champaign, Vermilion, and Cumberland in Illinois.

Results

The Spearman rank-correlation coefficient was used to compare the opinions concerning instructional strategies for teaching occupational survival skills between urban and rural teachers. The extent of agreement between rural teachers and urban teachers is indicated in Table 2.

TABLE 2

CORRELATION OF TOTAL URBAN (N=212) and Rural (N=172) SECONDARY TEACHER RANKINGS REGARDING INSTRUCTIONAL TECHNIQUES

Content Areas	Correlation
Problem-Solving	.88
Interpersonal Relations	.85
Communication	.86
Personal Work Attitudes	.91
Job-Related Expectations	.80

The correlations in Table 2 indicate that there is a strong relationship between the instructional technique priority rankings

of the rural and urban teachers in all five content areas. The highest correlation indicating the greatest degree of agreement between rural teachers and urban teachers was in the content area regarding the teaching of Personal Work Attitudes. The lowest correlation was in the content area for Job Related Expectations.

Teachers may be least familiar with job requirements because of lack of work experience and exposure to work settings other than teaching. The relative high agreement of rural and urban teachers on which instructional techniques to use when teaching in the other four content areas may be related to the fact that teachers may already be using these techniques. Table 3 illustrates the combined rankings of the 18 instructional techniques for the urban and rural teachers, for each of five occupational survival skill areas.

Of the 18 instructional techniques ranked by both rural and urban teachers, the following techniques appeared to be most appropriate to use when teaching all five occupational survival skill areas:

1. Group Discussion
2. Problem Solving
3. Demonstrations
4. Supervised Work Experience
5. Individualized Projects

The respondents were asked to give their personal opinions concerning the use of the 18 instructional techniques when teaching the five occupational survival skill areas. In general, the above five instructional techniques appear to reflect a positive attitude by teachers toward student-centered instruction.

In many educational settings, teachers are giving students more freedom to be involved in the learning process. When the above instructional techniques are used, students become more responsible for "how" and "what" is being learned. The above instructional techniques appear to be very appropriate, especially when one realizes that a major purpose of education is to prepare students for their future roles in the world of work.

The instructional techniques which were not highly ranked appear to be more teacher-centered and reflect more traditional types of instruction at the high school level. Instructional techniques such as Lecture, Recitation, Resource Persons, Reading Assignments, Interviews, and Drill-Practice do not appear to be very appropriate for teaching concepts relating to the five occupational survival skill areas.

Urban Teachers. Table 3 illustrates the responses of the urban and rural teachers. The urban teacher sample rankings indicate general agreement on the instructional technique, Group Discussion, as the most likely to be used in the following four content areas: (a) Problem-Solving, (b) Interpersonal Relations, (c) Communication, and (d) Personal Work Attitudes. Problem Solving ranked number one in the fifth content area, Job-Related Expectations.

Supervised Work Experience was ranked in the top five for all content areas except Communication. Urban teachers ranked Demonstration in the top five for teaching Problem-Solving, Communication and Job-Related Expectations. Roleplay-Skits were ranked in the top five teaching strategies for teaching Interpersonal Relations and Communication. Individualized Projects was ranked in the top five for teaching only one content area, Personal Work Attitudes.

TABLE 3

INSTRUCTIONAL TECHNIQUES FOR EACH
OCCUPATIONAL SURVIVAL SKILL AREA FOR RURAL AND URBAN TEACHERS
(n=384)

Teaching Strategies	Problem Solving Skills	Inter-personal Skills	Communi-cation Skills	Personal Values	Job-Related Skills
Group Discussion	1	1	1	1	4
Problem-Solving	2.5	6	3	2	2
Demonstrations	2.5	5	2	6	3
Supervised Work Experience	4	2	8	5	1
Individualized Projects	5	12	5	5	1
Lab-Expertmentation	6	9	10	9	11
Case Situations	7	7	9	7	6
Simulations	8	3	6	8	7
Roleplay-Skits	9	4	7	11	10
Self-Evaluation	10	10	13	4	9
Field Trips	11	8	12	12	8
Programmed Instruction	12	16	15	15	13
Drill-Practice	13	14	14	16	15
Interviews	14	11	8	10	14
Reading Assignments	15	18	16	14	16
Resource Persons	16	13	17	18	12
Lecture	17	17	18	15	18
Recitation	18	15	11	17	17

Rural Teachers. The rankings of instructional techniques in Table 4 indicates that Supervised Work Experience was ranked number one by rural teachers in the content areas of Problem-Solving, Interpersonal Relations, and Job-Related Expectations.

For the rural teachers only one teaching strategy, Demonstrations, was ranked in the top five for all content areas. Two teaching strategies, Individualized Projects and Problem-Solving, were ranked in the top five for all content areas except Interpersonal Relations. Supervised Work Experience was ranked in the top five for all content areas except Personal Work Attitudes. Group Discussion was ranked in the top five to teach Interpersonal Relations, Communication, and Personal Work Attitudes.

Summary

The 21 occupational survival skills were grouped into five content areas to determine which instructional techniques teachers would be most likely to use to teach that content area. The five work skill content areas were: Problem-Solving, Interpersonal Relations, Communication, Job-Related Expectations, and Personal Work Attitudes. The different rankings indicate that the content area did have an effect on which instructional techniques were selected. For example, the instructional technique (Field Trip) was ranked high by rural teachers in only one content area (Job-Related Experiences).

In general, rural and urban teachers ranked student-oriented instructional techniques high and teacher-oriented instructional techniques low. Although rankings of techniques were different for each occupational survival skill area, certain techniques such as Group

TABLE 4

RANK ORDER OF INSTRUCTIONAL TECHNIQUES FOR EACH OCCUPATIONAL SURVIVAL SKILL AREA FOR URBAN AND RURAL TEACHERS

Instructional Technique	Problem Solving (n = 69)		Interpersonal Relations (n = 74)		Communication (n = 79)		Personal Work Attitudes (n = 81)		Job Related Expectations (n = 81)	
	Urban (n=44)	Rural (n=25)	Urban (n=38)	Rural (n=36)	Urban (n=37)	Rural (n=42)	Urban (n=45)	Rural (n=36)	Urban (n=48)	Rural (n=33)
Group Discussion	1	6	1	2	1	1	1	1	2	6
Problem Solving	2	5	3	9	5	4	2	4	1	4
Demonstrations	3	3	6	5	4	2	7	5	3	5
Supervised Work Experience	4	1	2	1	7	5	4	6	4	1
Lab Experiences	5	8	12	6	10	9	11	8	11	9
Simulations	6	7	5	7	3	6	9	10	5	8
Individualized Projects	7	2	11	11	8	3	3	2	6	2
Roleplay, Skits	8	11	4	4	2	10	10	11	10	11
Case Situations	9	4	9	3	9	7	5	7	9	7
Programmed Instruction	10	13	14	16	13	16	14	17	14	13
Field Trips	11	10	7	9	12	11	12	9	8	3
Self Evaluation	12	9	8	12	14	12	6	3	7	14
Drill-Practice	13	12	16	13	15	14	16	18	16	10
Interviews	14	16	10	10	6	8	8	12	12	15
Reading Assignments	15	14	17	18	17	15	15	13	15	16
Resource Persons	16	15	13	14	16	17	13	14	13	12
Recitation	17	18	15	15	11	13	18	16	18	18
Lecture	18	17	18	17	18	18	17	15	17	17

Discussion, Problem-Solving and Supervised Work Experience were ranked most frequently in the top five categories, while Lecture and Recitation were most frequently ranked low. These two instructional techniques allow for very little, if any, group interaction. Both urban and rural teachers favored instructional techniques which allowed for, and encouraged, student participation and interaction.

Supervised Work Experience was ranked in the top five teaching strategies by all teachers. The rural teachers ranked Supervised Work Experience first for teaching Problem-Solving, Interpersonal Relations and Job-Related Skills. All teachers appeared to recognize the importance of student work experience. Cooperative work experience programs at the high school level should be expanded to provide more students with the opportunity to work.

Teachers responded to the opinionnaire in terms of the instructional techniques they would be most likely to use. The findings do not indicate which techniques teachers are actually using. If teachers are in fact using the high-ranked techniques, curriculum implementation problems will not be as great.

The findings of this study have implications for pre-service and inservice teacher education programs. Because group discussion was most frequently selected as a technique teachers would use, it is important that teachers be able to lead effective group discussions. To initiate discussion teachers should be able to use materials such as films, filmstrips, case situations and related readings.

The problem-solving techniques was also ranked high by teachers. Again, audio-visual materials as well as case situations, games and

simulations can be used effectively to help students develop their problem solving abilities.

It is recommended that the developers of curriculum materials for teaching topics relating to occupational survival skills assemble and develop materials which will utilize instructional techniques which actively involve the students. Instructional techniques which were ranked high by the teachers actively involved the students in the learning process while those ranked low tended to be instructional techniques where students are allowed to be passive and uninvolved.

In most schools, vocational education programs do an adequate job of preparing students for the technical aspects of specific occupations. However, teachers may neglect teaching essential work skills which are important to "surviving" in an occupation. If topics such as interpersonal relations are taught in a vocational education program, they are usually very elementary and are taught out of context from the real world of work. Consequently, young workers may spend much time early in their careers becoming knowledgeable about these occupational survival skills.

The teaching of occupational survival skills to high school students before they enter the work force will orient them to basic aspects of work which they will encounter in their occupations. These aspects of work may be as important, or even more important, than the technical aspects of work.

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DIFFERENCES IN STUDENTS' ATTAINMENT OF OCCUPATIONAL SURVIVAL SKILLS AND CAREER ATTITUDE MATURITY

by

James A. Leach

Work is a fundamental effort of life for individuals in our society. For most people, this effort results in paid employment. Work will remain a very significant factor in the lives of individuals despite changing worker attitudes, changing economic and societal demands, and efforts designed to humanize and redesign it. People not only have to work, in most cases, for economic survival, but also pursue work as the vehicle for their own fulfillment.

In a study designed to examine what has happened to work in America during the present century, Levitan (1973) concluded that although there have been far reaching changes occurring in work and its meaning for individuals, there is no foreseeable end to work, no crisis of discontented workers, or no sweeping humanization of jobs on the horizon. The need for individuals to prepare themselves for work will continue to manifest itself into the future.

Part of the responsibility for preparing individuals for work rests with the school. Many writers have recognized the interdependence that exists between the school and society. Changes in the social and economic structures lead to concomitant changes in the educational structure. Feinberg and Rosemont (1975) suggested that education involves the transmission of cultural norms and values and the training of students to take their place in society. In this way, the school reinforces the images that are dominant in society,

Students learn habits that are essential for the maintenance of industrial society. Characteristics such as punctuality, dependability, and loyalty are emphasized either directly or indirectly by the schools. In many respects, the school serves to bridge the gap which exists between the private life of the family and the public work of the society.

In recent years, concern has been expressed that the educational system may not be preparing students adequately for working in society. Pierce (1973) maintained that the school does not provide either job skills or coping skills that enable persons to lead satisfying, self-confident lives. Data from a study designed to determine the key variables associated with students obtaining and maintaining a job after training (Associates for Research in Behavior, Inc., 1973) indicated that beyond adequate skill levels and placement opportunities, students need to develop certain attitudes, perceptions, and motivations regarding employment.

Contemporary emphases upon career education and career development suggest that individuals formulate and develop attitudes toward work during their early years in the home and school which are critical to later successful performance on the job. Kazanas (1974) summarized the career education movement as being based upon the idea that students must be given the opportunity to develop positive attitudes toward work within a chosen career. The same point of view was taken by Calhoun and Finch (1976) when they wrote "career education focuses on broad self-realization, social responsibility, and affective value components" (p. 5).

Despite the apparent concern for teaching affective responses toward work, a limited amount of curriculum material is available to teachers and students which offers students an opportunity to develop positive attitudes, perceptions, and motivations toward work. For the most part, educational and training efforts have been directed toward the measurement and improvement of skill development. To attempt to ensure that educational programs concerning work are fulfilling individual student needs and preparing successful and satisfied workers, educators must be concerned about the attitudes, perceptions, and motivations of students toward work. These attributes appear to be important factors in the student's orientation to work, job satisfaction, and job production. The extent to which curriculum materials influence and affect students' attitudes, perceptions, and motivations toward employment needs to be investigated.

Problem of the Study

The essence of occupational survival for the individual is the attainment of skills necessary to maintain an occupation which may lead to a meaningful, satisfying, and productive working career. The development of attitudes, perceptions, and motivations toward various aspects of work may be the initial step which students need to take in order for them to achieve occupational competence. Pilot testing and initial field testing of the Occupational Survival Skills curriculum materials in selected Illinois high schools during 1975-76 indicated a favorable acceptance by both teachers and students. However, no attempt was made to determine the influences of the curriculum

materials on students' attainment of occupational survival skills or on their attitudes, perceptions, and motivations toward work.

Curriculum materials and teaching methods that purport to help prepare students for work need to be evaluated regarding their effectiveness and usefulness for particular groups of students. It is unlikely that all curriculum materials will have the same appropriateness for all types of students.

To provide useful and practical information, evaluation of work-oriented curriculum materials must be broader than the narrow concept of measurement of progress toward specified objectives. Characteristics of the learning environment, characteristics of the learners, and the interaction of students and teachers within that learning environment need to be described. Measurement and prediction are useful in the evaluation of curriculum materials, but description and interpretation should also be primary concerns. To be of practical value, an evaluation of curriculum materials must describe where and how the materials are utilized; advantages and disadvantages of the materials as seen by those involved directly; and how students' knowledge of the content of the curriculum materials and their attitudes toward employment are affected.

The curriculum materials, Methods and Materials for Teaching Occupational Survival Skills (OSS), were designed to offer high school students an opportunity to develop skills applicable to a wide range of jobs in the work world and to develop attitudes, perceptions, and motivations toward work.

The primary purpose of this study was to explore, to describe,

and to interpret the influences of the Occupational Survival Skills Modules, after a fifteen week period, on selected Cooperative Office Occupations (COO), Special Needs (Secondary Work Experience Program - SWEP), and Comprehensive Employment and Training Act (CETA) students' attainment of occupational survival skills and attitudes toward employment. Additional purposes were to assess: 1) the effects of amount of exposure to the OSS Modules on students' attainment of occupational survival skills and their attitudes toward employment, 2) the relationships between attainment of occupational survival skills and attitudes toward employment, 3) the relationships between the variables of sex, amount of work experience, socioeconomic status, work plans, and educational plans, and students' attainment of occupational survival skills and their attitudes toward employment, and 4) the differences in students' and teachers' opinions of the usefulness and effectiveness of the OSS Modules.

Method

Sample. Students from Cooperative Office Occupations (COO), minimally mentally impaired students enrolled in a Secondary Work Experience Program (SWEP), and Comprehensive Employment and Training Act (CETA) trainees were selected for the study. These student groups appeared to partially represent the broad spectrum of students who are enrolled in the multitude of educational programs that include a formal work experience component. That is, students were selected from the Special Needs population, economically disadvantaged students were selected, and students from a regular cooperative vocational education program were selected.

One hundred and thirteen students in grades eleven and twelve from high schools in the State of Illinois were subjects for this study (54 COO, 22 SWEP, and 37 CETA). Students were selected as participants in this study as intact classroom groups in a non-random manner. The classes were selected on the basis of an expressed desire to participate in the study by the teachers. Generalizability is limited to student populations with similar characteristics.

Instrumentation. The Occupational Survival Skills Information Test (OSSIT) was developed as part of this study to obtain a measure of the students' attainment of occupational survival skills (Leach, 1978). The Career Maturity Inventory-Attitude Scale (CMIAS) was used to measure student attitudes toward employment (Crites, 1973).

Test items in the OSSIT, designed to assess the students' attainment of occupational survival skills, were formulated at the knowledge, comprehension, application, and analysis levels of the cognitive domain of the Taxonomy of Educational Objectives (Bloom, 1956). An excess number of items was developed at each of the four levels of cognitive learning for each of the Occupational Survival Skills topics. A panel of judges (vocational education curriculum developers) then selected the four items per cell they judged to be most applicable. This procedure was used to help ensure content validity.

Prior to the pilot test of the OSSIT, the reading level of the instrument was adjusted downward to approximately the sixth grade reading level. The Dale-Chall formula for predicting readability (1948) was used to establish a reading level for the instrument.

Kuder-Richardson Formula 21 internal consistency estimates were

calculated from test data to establish reliability of the instrument. Test data were collected from the three program groups in the study separately and jointly. Results are shown in Table 1.

TABLE 1

INTERNAL CONSISTENCY ESTIMATES ON THE OCCUPATIONAL SURVIVAL SKILLS INFORMATION TEST

Program Group	n	Internal Consistency Estimates
Cooperative Office Occupations	54	.84
Special Needs	22	.72
CETA	37	.86
All groups combined	113	.87

Pilot test data were used to perform an item analysis on the OSSIT to determine the fifty-four items to be included in the reduced version of the instrument used in the study. A matrix of student responses to each item by fifths was utilized to determine the frequency of status within each fifth who answered each alternative and who omitted the item. This information was helpful in pointing out what distractors, or incorrect alternatives, were not successful because: a) they were not plausible answers and few or no students chose the alternative, or b) too many students especially students in the top fifths of the distribution, chose the incorrect alternative instead of the correct response. For the most part, items were selected that resulted in students in the top fifths answering the correct response more frequently than students in the lower fifths and students in the lower fifths answering the

incorrect alternative more frequently than students in the top fifths. A few items that performed poorly statistically were revised and retained in the instrument because the items were considered to add to the validity of the instrument. The maximum score for the OSSIT was 54.

The Career Maturity Inventory-Attitude Scale (CMIAS) (Crites, 1973) was used to assess students' vocational attitude maturity. The attitude scale is comprised of fifty descriptive items including the following concepts: involvement in the choice process, orientation toward work, independence in decision making, preference for career choice factors, and conceptions of the choice process. Students indicate their agreement or disagreement by answering true or false to each statement. A vocational attitude maturity score is derived for each student by totaling the number of responses made which are in agreement with those responses made by the criterion group from which the scoring key was developed.

Content validity is evidenced by the selection of items which embody all of the concepts listed above. These items and the concepts on which they were based were deduced explicitly from the central concepts in career development theory.

The CMIAS is useful in evaluating the outcomes of career education and other didactic programs and interventive experiences (Crites, 1973). According to Crites (1973), individuals who are mature in their attitudes also tend to be more successful on the job ($r = .19$, $p < .05$) (Cox, 1968) where the latter was a composite criterion of: 1) extent to which the job was related to previous training, 2) job satisfaction, 3) a worker's certainty that his job was best for him, 4) job earnings,

and 5) job stability. As predicted in career development theory, then, the CMIAS as a measure of one aspect of career maturity is related to the outcomes of coping with the problems of preparing for and progressing in the world of work (Crites, 1973). The maximum score for the CMIAS was 50.

Qualitative data were collected throughout the study by observation of and interviews with participants. These data were used to supplement, verify, or further explain quantitative data collected. Two opinionnaires were developed to gather information concerning the opinions of teachers and students regarding the usefulness and effectiveness of the OSS modules.

Analysis of Data. After completion of the testing, data were collected and analyzed to determine the differences in attainment of occupational survival skills and differences in career attitude maturity among program groups and among subgroups varying in sex, socioeconomic status, amount of work experience, work plans, and educational plans. These variables were selected for analysis because they appear to impact on success in the work world.

Mean scores and standard deviations on the OSSIT and CMIAS were computed for groups of students enrolled in COO, SWEP, AND CETA programs and for subgroups varying in sex, socioeconomic status, amounts of work experience, work plans, and educational plans as well as subgroups varying in amount of exposure to the OSS Modules. A series of one-way analyses of variances followed by the Duncan (1955) multiple comparison test were conducted to determine the effects of

program group membership, amount of exposure to the OSS Modules, and the variables of sex, socioeconomic status, amount of work experience, work plans, and educational plans.

Findings. Table 1 shows the mean scores on the OSSIT and the CMIAS by program group and instructional method. Regarding the effect of program group membership on the attainment of occupational survival skills, significant differences ($p < .01$) in mean scores on the OSSIT were obtained among the program groups. The CETA students obtained the highest mean score, followed by the COO students. The SWEP students obtained the lowest mean score on the OSSIT.

Regarding the effect of program group membership on attitudes toward employment, the SWEP students obtained a significantly lower mean score ($p < .05$) on the CMIAS than both the COO and CETA students. However, the difference between mean scores for COO and CETA students was not significant.

An analysis of the effect of exposure to the OSS Modules on the attainment of occupational survival skills indicated that students from all three program groups who were exposed to the OSS Modules (were taught all or any of the sessions within the OSS Modules) obtained significantly higher mean scores ($P < .05$) on the OSSIT than did those students who were not exposed to the OSS Modules. However, the amount of exposure to the OSS Modules, whether taught all of the sessions from the OSS Modules or taught only those sessions selected by their teachers, did not have a significant effect on the mean scores obtained on the OSSIT by any of the three program groups.

Table 1. Mean Scores on OSSIT and CMIAS by Program Group and Instructional Method.

Program Group	Instructional Method							
	taught all the OSS Modules		taught only those sessions from the OSS Modules selected by their teachers		not taught any of the OSS Modules		Total Program Group	
	OSSIT	CMIAS	OSSIT	CMIAS	OSSIT	CMIAS	OSSIT	CMIAS
Cooperative Office Occupations	25.17	36.78	26.47	36.00	19.76	36.82	23.93	36.52
Special Needs	19.40	22.80	20.17	27.50	16.83	22.83	18.91	24.09
CETA	35.42	36.67	27.20	35.10	31.27	35.67	31.51	35.84
Total Instructional Method	26.80	33.25	25.60	34.20	23.84	34.16		
Grand Mean OSSIT	25.43							
Grand Mean CMIAS	33.88							

The effect of exposure to the OSS Modules on students' attitudes toward employment as measured by scores on the CMIAS was not significant for any of the program groups. An analysis of the relationship between scores obtained on the OSSIT and on the CMIAS by all students participating in the study resulted in a correlation coefficient of .506 ($p < .05$). Positive correlation coefficients ($P < .02$) were obtained for scores by program group (.335 for COO, .617 for SWEP, and .595 for CETA) and exposure to the OSS Modules (.632 for those taught all of the OSS Modules, .478 for those taught only sessions selected by their teachers, and .395 for students not taught any of the OSS Modules).

Significant differences in mean scores on the OSSIT were found between students with different amounts of work experience ($P < .01$), different work plans ($p < .01$), and different educational plans ($p < .05$). However, significant differences were not found between males and females or between students from different socioeconomic levels.

Table 2 shows mean scores and standard deviations on the OSSIT and CMIAS for students by amount of work experience.

Table 2. Mean Score and Standard Deviation on OSSIT and CMIAS by Work Experience.

Work Experience	n	%	OSSIT $\bar{X}$	OSSIT S	CMIAS $\bar{X}$	CMIAS S
Never been employed	4	03.54	21.75	11.44	27.25	8.66
employed part-time only	54	47.79	23.85	8.57	33.19	7.29
employed part-time during the school year but full-time during the summer	27	23.89	22.26	8.64	33.96	6.93
employed full-time for more than a summer	27	23.89	32.63	9:52	36.04	5.69
no response	1	00.88	--	--	--	--
Total	113	100.00	25.43	9.69	33.88	6.99

Only four students participating in the study had never been employed. These students obtained the lowest mean scores on both the OSSIT and the CMIAS. Approximately 72% of the students responding indicated that they had been employed part-time only or part-time during the school year but full time during the summer. The differences in mean scores obtained on the OSSIT (1.59) and on the CMIAS (00.77) for these students were very small. However, mean scores obtained by those students indicating that they have been employed full-time for more than a summer were considerably higher than those obtained by any other group. These students obtained a mean score on the OSSIT that was 8.78 points higher than any other group and a mean score on the CMIAS that was 2.08 points higher than any other group.

Mean scores and standard deviations on the OSSIT AND CMIAS by students' work plans are presented in Table 3.

Although there were only three students who indicated they do not plan to work for pay, these students obtained a mean score on the OSSIT that was 14.51 points higher than any of the groups who plan to work for pay and a mean score on the CMIAS that was 4.82 points higher than any of the groups who plan to work for pay.

Table 3. Mean Score and Standard Deviation on OSSIT and CMIAS by Work Plans.

Work Plans	n	%	OSSIT $\bar{X}$	OSSIT S	CMIAS $\bar{X}$	CMIAS S
do not plan to work for pay	3	02.65	41.00	9.54	40.33	1.19
plan to work at any job available	17	15.04	20.82	6.56	27.12	7.7
plan to work at a job for which trained	76	67.26	26.49	9.63	35.51	5.8
plan to work at a job different from that for which trained	12	10.62	24.67	10.05	32.92	6.2
no response	5	04.42	--	--	--	--
Total	113	100.00	25.43	9.69	33.88	6.99

Those students who plan to work at a job for which trained obtained a mean score on the OSSIT that was 1.82 points greater than that obtained by students indicating they plan to work at a job different from that for which trained and 5.67 points greater than that obtained by students who plan to work at any job available. Those students who plan to work at a job for which trained also obtained a mean score on the CMIAS that was 2.50 points greater than that obtained by students indicating they plan to work at a job different from that for which trained and 8.39 points greater than that obtained by students who plan to work at any job available.

Mean scores and standard deviations on the OSSIT and the CMIAS by educational plans of students participating in the study are shown in Table 4.

Table 4. Mean Score and Standard Deviation on OSSIT and CMIAS By Educational Plans.

Educational Plans	n	%	OSSIT $\bar{X}$	OSSIT S	CMIAS $\bar{X}$	CMIAS S
no plans for further education	29	25.66	23.69	8.73	31.21	6.13
plan to attend a community college or technical school for one or two years	55	48.67	27.87	9.92	36.22	6.16
plan to attend a four year college or university	18	15.93	25.75	10.33	35.39	6.08
plan to join the military for training	6	05.31	18.67	2.73	28.00	6.32
other plans for further education	3	02.65	15.33	4.16	24.67	10.97
no response	2	01.77	--	--	--	--
Total	113	100.00	25.43	9.69	33.88	6.99

Approximately two-thirds of the students (65%) plan to continue their formal education. Of these students, those who plan to attend a community college or technical school for one or two years obtained the highest mean scores on both the OSSIT and the CMIAS of any of the groups. Those students who plan to attend a four college or university also obtained mean scores on the OSSIT and CMIAS that were higher than those obtained by students who have no plans for further education. Approximately one-fourth of the students have no plans for further education. These students obtained mean scores on the OSSIT and the CMIAS that were higher than those students planning to join the

military for training or who had other plans for further education.

Table 5 shows the mean score and standard deviation on the OSSIT and the CMIAS by sex.

Table 5. Mean Score and Standard Deviation on OSSIT and CMIAS by Sex.

Sex	n	%	OSSIT X	OSSIT S	CMIAS X	CMIAS S
male	31	27.43	23.52	8.57	29.16	6.58
female	82	72.57	26.16	10.03	35.66	6.31
Total	113	100.00	25.43	9.69	33.88	6.99

Approximately 73% of the students participating in the study were female. The mean score obtained by females on the OSSIT was 2.64 points higher than that for males. Females obtained a mean score on the CMIAS that was 6.50 points higher than that for males.

Table 6 presents means and standard deviations on the OSSIT and the CMIAS by socioeconomic status.

In this study, only slight differences in mean scores were obtained on both the OSSIT and the CMIAS between students grouped by socioeconomic status as measured by occupation of head of household. Those students whose heads of households are semi-skilled workers obtained the highest mean score on the OSSIT (28.44). The lowest mean score on the OSSIT (22.41) was obtained by those students whose heads of households are sales workers. The highest mean score on the CMIAS (36.43) was obtained by students whose heads of households are clerical workers. Those students whose heads of households are laborers or unskilled workers obtained the lowest mean score (31.88) on the CMIAS.

Table 6. Mean Score and Standard Deviation on OSSIT and CMIAS by Socioeconomic Status as Measured by Occupation of Head of Household.

Socioeconomic Status (Occupation of Head of Household)	n	%	OSSIT X̄	OSSIT S	CMIAS X̄	CMIAS S
professional or technical worker	11	09.73	24.73	10.44	35.45	5.87
manager	16	14.16	24.00	8.59	33.38	7.92
sales worker	9	07.96	22.44	6.82	34.22	6.12
clerical worker	7	06.19	26.57	9.62	36.43	8.28
craftsman or foreman	15	13.29	24.60	11.17	35.40	6.64
semi-skilled worker	18	15.93	28.44	13.05	33.17	8.39
service worker	13	11.50	25.46	4.70	35.00	5.20
laborer or unskilled worker	17	15.04	26.94	10.00	31.88	6.94
no response	7	06.19	--	--	--	--
Total	113	100.00	25.43	9.69	33.88	6.99

Differences of opinions regarding the usefulness and effectiveness of the OSS Modules were found to exist among the three program groups. As evidenced by both written and verbal responses, the CETA students and teacher reacted most favorably of the three program groups to the usefulness and effectiveness of the OSS Modules.

In general, the Special Needs students (SWEP) and teacher reacted less favorably to the OSS Modules than did the CETA students and teacher. The Special Needs teacher expressed concern that the OSS Modules, in their present form are too difficult for Special Needs students. Difficulties with the reading level and with transfer of concepts to practical usage were the two most apparent problems for Special Needs students.

The Cooperative Office Occupations (COO) students and teacher offered the least favorable reaction of the three program groups to the usefulness and effectiveness of the OSS Modules. In general, the teacher and students agreed during discussions with the investigator that learning occupational survival skills is important. However, the major reaction of the COO students and teacher centered on the concern of inadequate time to learn both occupational survival skills and necessary technical office skills as the Office Occupations program is conducted currently.

Discussion and Conclusions

Results of this study indicated significant differences in attainment of occupational survival skills and maturity of attitudes toward employment among the three program groups.

Conclusions made from this study are based on the use of the OSS Modules with selected high school students. Generalizability is limited to student populations with similar characteristics.

Performance on OSSIT by Program Group. On the basis of their previous academic record, it was predicted that the CETA students would score significantly lower than both the SWEP and COO students on the OSSIT and that the COO students would score significantly higher on the OSSIT than the other two program groups. In fact, CETA students scores significantly ($p < .05$) higher than the other program groups, and the SWEP students scored significantly ($p < .05$) lower.

1. CETA--Two explanations for the performance of the CETA students are suggested. First, the assumption made by the investigator at the outset of the study that the CETA students were not as academically able as either the COO or SWEP students appears to have been erroneous. Based on classroom observations, discussions with students, and responses to questions on the student opinionnaire, the CETA students who participated in this study seemed to be the most motivated to learn occupational survival skills of the three program groups. Motivation for learning occupational survival skills may require more of a job orientation than an academic orientation. Much of this apparent motivation may have

resulted from the perceived relevance of the content included in the OSS Modules to the CETA students as evidenced by their responses to questions on the student opinionnaire and by statements made to the investigator during interviews.

Second, the relationship between the CETA students who were exposed to the OSS Modules and their teacher was an extraordinary one. During classroom observations, it was apparent to the investigator that the teacher had developed a rapport with the students which helped enable him to capitalize on the student motivation to learn occupational survival skills.

The performance of the CETA program group on the OSSIT and the perceived relevance of learning occupational survival skills suggest that the OSS Modules can be both useful to, and effective for, CETA students.

2. Cooperative Office Occupations--A discrepancy existed between the responses to questions on the student opinionnaire and much of the information collected through discussions between the investigator and students. Data from the student opinionnaire indicated the COO students did not perceive the OSS Modules as being relevant and indicated an apparent lack of motivation to learn occupational survival skills. However, statements made to the investigator during interviews and discussions with students indicated a perceived relevance and motivation for learning occupational survival skills.

The factor that might explain the performance of the COO students on the OSSIT, and may help to explain the discrepancy between the quantitative and qualitative data, was a lack of adequate time to

learn occupational survival skills. Unlike the formal classroom experiences of the CETA and SWEP students, which were designed to include the teaching of topics like occupational survival skills, the COO class time was designed to be directed toward the development of specific, technical office skills. As evidenced by both written and verbal responses, the COO students tended to view the learning of occupational survival skills as being accomplished at the expense of learning necessary technical office skills.

Overall, these students tended to place secondary importance on learning occupational survival skills. During discussions with COO students, the notion that employment would result from the attainment of office skills, not occupational survival skills, was prominent. To a lesser degree, these feelings were expressed by the teacher in response to questions on the teacher opinionnaire. This notion of secondary importance may have contributed to the apparent lack of motivation by the COO students to learn occupational survival skills.

Given a limited amount of time, both the teacher and students were forced to place primary emphasis on either learning specific office skills or learning occupational survival skills. The findings suggest that learning occupational survival skills was perceived as having secondary relevance and may have resulted in less motivation by both the teacher and students.

In order for the OSS Modules to be used effectively by COO students and teachers, it appears that a feeling of acceptance and enthusiasm for learning occupational survival skills must <u>first</u> be generated. From

this study, it seems apparent that acceptance and enthusiasm for the OSS Modules cannot be expected if adequate time is not available to teach both office skills and occupational survival skills. These findings suggest that to be accepted by teachers and students in any vocational program, occupational survival skills must not be viewed as a set of skills that can be learned only at the expense of not learning technical skills.

3. Special Needs (SWEP)--Prior to the study, the investigator did not have clear expectations regarding how the SWEP students would react to learning occupational survival skills, or how they would perform on the OSSIT. Results indicated that the SWEP program group obtained a significantly lower ($p < .05$) mean score on the OSSIT than both the CETA and COO students.

Responses to questions on the student opinionnaire tended to indicate a lack of perceived relevance and motivation to learn occupational survival skills. However, the perception of the relevance of learning occupational survival skills was made apparent to the investigator by both the students and teacher during classroom observations and discussions. These observations and discussions suggest that the poor performance on the OSSIT by the SWEP program group did not result from a lack of motivation to learn occupational survival skills. This conclusion is supported by the fact that the student opinionnaire data indicated that the SWEP students were more highly motivated to learn occupational survival skills than the COO students but scored significantly lower ($p < .05$) on the OSSIT.

These findings suggest that one possible explanation for the

performance of the SWEP students on the OSSIT lies with the difficulty of the OSS Modules. Although certain students made it clear that they felt that the Modules were not too difficult for them, it became apparent to the investigator and to the teacher that these students were having difficulty with the reading level of the Modules and with transferring concepts included in the Modules to their work world. Responding to written questions on the OSSIT regarding occupational survival skills was also a difficult task for these students to perform. A verbal test regarding occupational survival skills might be more appropriate for some SWEP students.

From this study, it may be concluded that the OSS Modules, in their present format, may not be appropriate for a majority of SWEP students of the type represented in this study (Minimally Mentally Impaired). Teaching occupational survival skills to SWEP students of this type appears to be relevant to their needs and aspirations for success at work. However, The SWEP teachers may be able to adapt the OSS Modules, taking into consideration the special characteristics of their students, to achieve greater results from occupational survival skills materials.

Performance on OSSIT by Amount of Exposure to the OSS Modules. Prior to conducting the study, the prediction was made that attainment of occupational survival skills as measured by scores on the OSSIT, would be greater for groups who had more exposure to the OSS Modules. Students who were taught all or some sessions of the OSS Modules did obtain significantly higher ($p < .05$) mean scores on the OSSIT than students who were not taught the OSS Modules. However, of those taught the OSS Modules, the results indicated that amount of exposure to the

OSS Modules (number of sessions taught) did not have a significant effect on scores on the OSSIT.

An absolute and clear-cut distinction between teaching all or some of the OSS Modules was not apparent to the investigator or the teachers participating in the study. The only common distinctions made were that those students who were taught some sessions of the OSS Modules were taught at least one session from each of the nine OSS Modules, and that those students taught all of the OSS Modules were taught all of the sessions from each of the OSS Modules. Discussions with the teachers indicated that those sessions perceived by teachers as being well-received by students, as having "worked well," as being most important, or as fitting in well with other classroom activities were used with both groups of students.

The findings of this study seem to support the conclusion that attainment of occupational survival skills is greater for students who are taught the OSS Modules. For the most part, however, the attainment of occupational survival skills is accomplished equally as well by students who are taught all of the OSS Modules and students who are taught teacher selected sessions from the OSS Modules in a supplementary manner with other curriculum materials and classroom activities.

Given a choice, teachers selected sessions from the OSS Modules that they thought students would enjoy. Those sessions selected for use dealt with topics that were not covered adequately by other curriculum materials. Curriculum materials that are perceived as being relevant, enjoyable to students, and deal with topics not covered

adequately by other curriculum materials would seemingly be selected for use by most teachers.

Apparent Benefit to Program Group. In this study an attempt was made to determine which program group derived the most benefit from being taught occupational survival skills. For this study, benefit was defined as differences in mean scores on the OSSIT between like program groups who were taught all or some of the sessions and who were not taught any of the OSS Modules.

The results indicated that the COO students derived a significant ($p < .05$) benefit from being taught occupational survival skills. The SWEP students benefited slightly, and the CETA students derived virtually no benefit.

Performance on the CMIAS. Maturity of attitudes toward employment were predicted to bear a significant relationship to attainment of occupational survival skills. A positive correlation (.506) was obtained between scores on the OSSIT and CMIAS. However, significant differences in mean scores on the CMIAS were not found between groups who had experienced different amounts of exposure to the OSS Modules.

In this study, the relative stability of maturity of attitudes toward employment was not altered significantly by exposing students to curriculum materials that are highly cognitive in nature. To be effective in helping students develop mature attitudes toward employment, it appears that the information contained in the OSS Modules may need to be combined with positive work experiences. It appears that the fifteen week time period utilized in this study may not have been sufficient time for changes in, or development of, attitudes toward employment to be manifested on the CMIAS.

Effects of Amount of Work Experience. Results indicated that students who had been employed full-time or for more than a summer had a significantly greater ($p < .05$) attainment of occupational survival skills, as measured by the OSSIT, than did students who had lesser amounts of work experience. This result may indicate that occupational survival skills are attained to a greater extent when students have previous work experience. The result might also indicate that students with greater amounts of work experience perceived a greater relevance of the OSS Modules, and may have, therefore, been more motivated to learn occupational survival skills than were students with lesser amounts of work experience. This result may suggest that the OSS Modules may be used more effectively with students as they gain increasing amounts of work experience.

Amount of work experience did not affect significantly maturity of attitudes toward employment, as measured by the CMIAS. The result adds support to the concept of maturity being a function of age to a greater extent than of other variables including amount of work experience.

Effects of Work Plans. At the conclusion of the fifteen week period, the students participating in this study indicated their work plans to the investigator. Those students who indicated that they plan to work at a job for which trained were also the ones who had significantly ($p < .05$) greater attainment of occupational survival skills, as measured by the OSSIT and were significantly ($p < .05$) more mature in their attitudes toward employment as measured by the CMIAS, than those students who plan to work at any job available.

These results may imply (as was the case with amount of work experience) that perceived relevance of the OSS Modules by the students may be a criterion for determining with which groups of students the OSS Modules can best be utilized. Students who plan to work at a job for which trained may be better able to envision a direct utility from learning occupational survival skills.

Another explanation for this result might be that the OSS Modules affected the work plans of the students. The conclusion might be made that learning occupational survival skills affected the students' perception of the relevance and utility of their current classroom experiences and/or vocational training.

Effects of Educational Plans. At the conclusion of the fifteen week period, students were also asked to indicate their educational plans. Those students who indicated that they plan to attend a community college or technical school were also the ones who showed significantly ($p < .05$) greater attainment of occupational survival skills, as measured by scores on the OSSIT, than those students who have no plans for further education. One explanation for this result may be that the students who have plans for further education may have a higher degree of academic ability or motivation which was reflected on their performance on the OSSIT. A higher general level of maturity of students who plan to continue their formal education may be reflected in their significantly more mature attitudes toward employment.

Recommendations

The teaching of occupational survival skills seems to be relevant to the current occupational needs and future career aspirations of a

wide range of high school students. The OSS Modules may be introduced as part of the overall career education emphasis into academic and/or vocational and technical education programs. Three possible methods of utilizing the OSS Modules appear to be available. First, different aspects of the OSS Modules can be integrated into a number of ongoing courses. Second, a special course might be designed to teach only occupational survival skills. Third, the occupational survival skills can be taught as part of a specific course being offered currently in various educational programs.

In order for the OSS Modules to be used more effectively and to be more useful to both teachers and students, it appears that certain conditions should be met. First, the complexity and difficulty of the OSS Modules should be compatible with the learning abilities of the students who are being taught the occupational survival skills. Second, the structure of any program where the OSS Modules are utilized should be such that adequate time is allowed for teaching both the technical skills germane to the program and occupational survival skills. Time should be allocated to integrate teaching of topics such as occupational survival skills into programs designed to develop technical skills. Third, teacher enthusiasm for teaching occupational survival skills and a rapport between students and teacher will encourage more effective use of the OSS Modules.

The following recommendations are based on the findings relating to use of the OSS Modules with different student populations. These recommendations are presented as guidelines for further research and for implementation of the results of the study.

The OSS Modules appear to be appropriate for the majority of high school students enrolled in a program that includes a formal work experience program. However, it is recommended that the OSS Modules be adapted to be more compatible with the abilities of a majority of SWEP students. Particular attention should be given to reducing the reading level of the OSS Modules. Learning activities should be developed to help SWEP students transfer relevant information and concepts from the OSS Modules to situations they may encounter on the job. Since the range of abilities and handicaps is particularly great among Special Needs students, allowances for individualized pacing of learning occupational survival skills should be incorporated into the OSS Modules. For some Special Needs students activities which entail reading and writing might be eliminated. In addition, topics such as leadership and using creativity on the job may create feelings of inadequacy for many Special Needs students since they may not be able to compete successfully with other workers in these specific areas. These topics might be replaced with topics related more directly toward applying for a job, personal finance and keeping a job.

Methods need to be developed to incorporate the teaching of occupational survival skills into the structure of specialized vocational and technical education programs. Cooperative education programs with related classroom instruction time allocations is one method available currently. Studies should be conducted to determine what is being taught currently in related classroom time. It appears that related classroom instruction is too often utilized in cooperative education

programs to teach specific skills needed by students to perform particular vocational or technical tasks. For example, in this study the COO students did not have a related class. Instead, the class time was utilized to teach specific office skills. As a result, there was not adequate time to teach occupational survival skills. It is recommended that related classroom instruction time be made available to teachers and students in cooperative education programs to teach topics such as occupational survival skills. General related classroom instruction time should not be utilized to teach specific vocational skills needed to perform a particular job or task.

Studies should be conducted to determine the attitudes of vocational and technical education teachers toward teaching topics such as occupational survival skills. In-service activities should be arranged to inform teachers and administrators of the relevance and importance of teaching topics such as occupational survival skills to aid them in determining the content for related classroom instruction. In addition, in-service activities should be conducted to prepare teachers to teach occupational survival skills.

The teaching of occupational survival skills might be introduced into selected academic programs as part of the overall career education programs conducted in many school districts. Based on student and teacher interviews conducted by this investigator, learning occupational survival skills appears to be relevant to the needs of most students, not just to those engaged in vocational and technical education programs.

The extent to which occupational survival skills might be learned eventually by most workers after an extended period of time on the job

should be investigated. Cross-sectional research studies should be conducted to determine the differences in attainment of occupational survival skills by individuals who are at different stages of their adult working lives.

Longitudinal studies should be conducted with students who have and have not been taught topics such as occupatonal survival skills in high school programs to determine differences in meaningfulness, satisfaction, and productivity between these workers. The results of these studies might form a rationale for teaching occupational survival skills to adult workers. Findings of these studies might determine whether adult workers can benefit from being taught the same set of occupational survival skills as high school students or if different occupational survival skills are needed by adult workers at various stages of their working lives. Adult education programs in schools and business organizations should broaden their curricula and training programs to encourage the development of a wider spectrum of human abilities than those represented traditionally in standard programs.

CETA students participating in the study who had previously dropped out of high school for one reason or another indicated that learning the occupational survival skills while in high school might have encouraged them to finish high school. It is recommended that occupational survival skills be taught to students at various grade levels in high school, regardless of their educational program, who have been identified as potential dropouts.

Students who have indicated that they plan to participate in a cooperative education program during their junior and/or senior

year in high school might be taught the occupational survival skills prior to their actual enrollment in the cooperative education programs to help ensure a successful cooperative experience. Studies should be conducted to determine the effects of learning occupational survival skills on work performance at cooperative education students' job training stations.

Studies should be conducted on a continuing basis to identify additional topics to be included within the occupational survival skills materials. The purpose of these studies should be to promote relevant work training programs based on current assessments of skills needed for successful work experiences. Further research utilizing the OSS Modules with students from various educational programs, should be conducted to shed additional light on many of the issues addressed in this study.

The literature seems to indicate that the accelerating changes in technology and the post-industrial shift to a service economy are affecting skill requirements in unpredicted ways. Discussions with employers by the investigator over time suggest an increasing concern among employers that attention needs to be given in school to skills such as planning, coping and problem solving which are applicable to broad organizational concerns. Orienting people to the use of skills such as occupational survival skills which they need on the job may be as important, or even more important, than teaching the technical aspects of their work. There may be a long term benefit to both employee and employer from learning skills such as those included in the OSS Modules.

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