AN EVALUATION STUDY OF AN EXPERIENCE-BASED CAREER EDUCATION PROGRAM

by

Marsha Ann Carey

Dissertation submitted to the Graduate Faculty of the
Virginia Polytechnic Institute and State University
in partial fulfillment of the requirements for the degree of
DOCTOR OF EDUCATION
in
Educational Supervision

APPROVED:

Larry J. Weber, Chairman

C. Dean Carter

Carl O. McDaniels

Wayne M. Worner

Ken M. Young

October, 1976

Blacksburg, Virginia

ACKNOWLEDGEMENTS

The cooperation and assistance of many individuals made this research study possible.

The researcher wishes to express sincere appreciation to those persons who served on her doctoral committee, Dr. Larry J. Weber, Dr. C. Dean Carter, Dr. Carl O. McDaniels, Dr. Wayne M. Worner, and Dr. Ken M. Young. Foremost among those is Dr. Larry J. Weber, who served as chairman of the doctoral committee and, thus, gave considerable guidance, encouragement and time.

The researcher is deeply grateful for all the assistance and cooperation given her by the following Kanawha County Schools personnel: Mr. John F. Santrock, Superintendent; Dr. Cathy Candor, Director of Research and Evaluation; Mr. William H. Anderson, EBCE Project Coordinator; Mr. Merrell S. McIlwain and Mr. James Dillinger, principals of the pilot high schools; Ms. Marilyn Crawford and Ms. Bertha Cline, counselors of the pilot high schools; and Ms. Carnetta Britton, Ms. Johanna Holm, Ms. Sarah Joseph, and Ms. Mary Ann Wilder, EBCE Learning Coordinators.

Finally, the researcher wishes to express deepest appreciation to her family and friends for their unwavering interest and support throughout this endeavor.

TABLE OF CONTENTS

LIST OF TABLES

Table | Page

Chapter 1

INTRODUCTION

It has long been recognized by educators, students and lay citizens that the traditional "classroom approach" to education is not the answer to every student's needs. It was this inadequacy of the traditional curriculum that served as the impetus for the development of alternative programs of education. Implicit in the concept of alternative education is the element of choice. By offering alternative programs of education, a school system provides a means of dealing with the diversity of student needs.

Alternative education programs span the spectrum of possibilities which range from fundamental schools, stressing a return to basic skills, to schools without walls, involving a curriculum designed around community resources. The open classroom is another alternative that has gained much support. The open classroom is characterized by individualized instruction, student input into curriculum design, and the teacher as facilitator rather than instructor. Yet another alternative is the mini-school, in which a large school

is subdivided into smaller functional units, with each unit having a distinguishing feature such as multi-cultural emphasis, artistic or creative emphasis, or basic instruction. The potential variety of alternative education programs is limited primarily by financial restrictions and human creativity.

Included in the spectrum of alternative education programs are those alternatives which are closely associated with the world of work. The most widely available of these alternatives are vocational, cooperative, and distributive education programs. The vocational school alternative offers the student training in a diversity of areas including welding, heat and refrigeration, cosmetology, auto mechanics, upholstery, and dental technology. Increasing enrollment in vocational education programs attests to its success in meeting the educational needs of a certain segment of the student population. Cooperative education provides students with a means of exploring many facets of the business world while acquiring high school credit and pay. Distributive education offers students the opportunity of working in retail sales establishments while acquiring high school credit and receiving remuneration. Although vocational schools have been invaluable in providing training in particular job skills, and cooperative and

distributive education programs have allowed students to acquire credits through work experience, none of these programs has assisted the student in experiencing a wide variety of career possibilities.

Career education, a comparatively recent educational concept, was introduced in 1971 by Sidney Marland, then U. S. Commissioner of Education. Career education is not a program or a course, but a concept to be woven into the educational fabric from grades K-12. The Bureau of Vocational, Technical and Adult Education (1974:1) stated that:

> Career education is a method of providing relevant educational experiences related to a lifelong career development process. Its basic goal is the development of an individual who can function effectively as a producing, working member of society.

By offering students a wide variety of career information and experiences, the practitioners of career education hope to promote good career choices and career preparation for each student. Career education is not a training program, but is an ongoing educational process characterized by career awareness, instituted in elementary grades; career exploration, focused upon in junior high; and career specialization, characterized by hands on experience and academic preparation in the senior high. Although career education is a concept

designed to permeate all education, there are specific career education programs structured for particular student needs.

One such specific career education program is Experience-Based Career Education (EBCE). It is with this specific program that this study deals.

EXPERIENCE-BASED CAREER EDUCATION

Developmental programs for Experience-Based Career Education (EBCE) began in 1973 through funding provided by the United States Office of Education and the National Institute of Education. Four school systems: Oakland, California; Tigard, Oregon; Philadelphia, Pennsylvania; and Charleston, West Virginia, were chosen to be hosts for the experimental EBCE programs. At each of these locations an EBCE program was designed and implemented in a special laboratory school, established only for EBCE, rather than in the local high schools. The Appalachia Educational Laboratory (AEL) was the home of the EBCE program in Charleston, West Virginia; the Far West Laboratory (FWL) in Oakland, California; the Northwest Regional Educational Laboratory (NWREL) in Tigard, Oregon; and the Research for Better Schools (RBS) in Philadelphia, Pennsylvania.

The goal of the Appalachia Educational Laboratory staff was to produce a viable alternative educational program capable of being marketed to and implemented in individual school systems. The Experience-Based Career Education program is composed of two parts: (1) career investigation, characterized by student participation at a job site four days per week, and (2) academic preparation, designed and directed by the student's learning coordinator during a one day per week "in house" day at the school. The experience based portion of the EBCE program focuses on the objective of exposing the student to as many career alternatives as feasible, rather than concentrating in one area. The actual number of career explorations attempted is discretionary, in that the student may participate for a time period ranging from one to thirteen weeks with one employer. The academic portion of the EBCE program is an individualized, interdisciplinary, inquiry approach, in which the student and learning coordinator plan and implement a course of study based on student needs and interests.

Although EBCE, as designed and implemented by the AEL staff, has received support and endorsement from students, parents, educators, and the community, it is not a program without deficiencies. One deficiency cited by the External Site Review Team (1974d) in its evaluation

of the AEL program was the lack of systematic effort by the AEL staff to imbed instructional objectives appropriate to particular career experience sites. The evaluators also noted that the EBCE program developed by the AEL staff was deficient in emphasizing and providing learning experiences in the basic skills and life skills areas. Since the student was allowed to select the topics he wanted to study, there were many instances in which basic and life skills were not selected for study. The evaluators remarked further that while the instructional system was highly sophisticated, the learning coordinators (teachers) were inexperienced and lacked the competencies necessary for using the interdisciplinary approach of the instructional system and for coordinating appropriate academic assignments with student career interests and experiences.

Even though the goal of the AEL staff was to produce a viable alternative educational program capable of being implemented in various school systems, the initial implementation of the EBCE program into the traditional high school setting was envisioned by AEL staffers to be destined for problems. They believed that one of two situations would develop and likely impede the EBCE program in the traditional high school setting. Both situations would depend on the school principal.

In the first situation, the principal might restrict the freedom deemed by the AEL staff to be essential to the EBCE program. He might, for example, restrict program freedom by requiring a greater emphasis on academics and more time spent in the classroom, thus, allowing less time for on-the-job career exploration. He might also limit the EBCE learning coordinators to specific time periods in which to make employer site visitations. This restriction would limit the time and flexibility needed for on-the-job student evaluations and development of new employer sites for future use. The second situation, on the other hand, was envisioned to occur if the principal were fully receptive to the EBCE program and believed in the program freedom espoused by its developers. This principal, realizing that established building policies would be too restrictive for effective operation of the program, would likely exempt those persons (learning coordinators and students) involved in the EBCE program from certain building regulations. Voicing concern that resentment toward the EBCE program might arise among teachers of the regular school programs, the AEL (1974d:3) wrote that:

> . . . Risks must also be faced. . . . Hostility among teachers could easily be aroused. The decision to house the program in an existing, established building may create some unusual problems, particularly since the freedom essential to the EBCE program may

be clearly in violation of the rules and regulations which the rest of the high school's program is operated.

These envisioned problems were the bases for unanimity among students and staff at the AEL that the EBCE program could not be successful if it were located in the traditional high school setting.

Educational researchers at the National Institute of Education and the Appalachia Educational Laboratory agreed, however, that the test of the validity of this experimental educational program (EBCE) is not that it works in the AEL school setting, but that it continues to work when installed in the regular high school setting. The success or failure of the EBCE program in the Kanawha County School System was seen to be a barometer capable of being used as a predictor of the applicability of the program in the traditional high school setting.

IMPLEMENTATION OF EXPERIENCE-BASED CAREER EDUCATION IN KANAWHA COUNTY SCHOOLS

In the Spring, 1975, Kanawha County Schools decided to install the EBCE program on a pilot program basis during the 1975-76 school year (having field-tested EBCE in one school during the 1974-75 school year). Knowing both some of the problems experienced by the AEL staff and some of the difficulties predicted for

the EBCE program in Kanawha County Schools, a number of steps were designed and taken to minimize, as much as possible, the aforementioned impediments to program implementation.

Taking seriously the concerns vocalized by the AEL staff about EBCE's implementation into the traditional high school program and setting, the Kanawha County School System's EBCE director made personal contact with all the county's high school principals. The program was explained in depth to the principals, with special emphasis on the freedom required for successful program management. Participation as an EBCE pilot school was purely voluntary and was decided upon by the individual principal. Upon accepting the EBCE program, each principal obligated himself to support the program and uphold the necessary freedom required for successful operation. Each principal was given full responsibility for hiring the learning coordinators for his school. He also had the responsibility of orienting the learning coordinators to his school and for orienting the students, teachers and parents to EBCE.

In seeking to remedy the criticism of competence deficiency, two learning coordinators were hired for each pilot school. One coordinator was certified in the English and social studies areas, while the other

was certified in science and mathematics. By housing the learning coordinators in adjoining offices it was hoped that a pooling of their respective specialities would result and, therefore, provide competent coverage of the EBCE student's academic programs. It was assumed that if the coordinators needed additional professional help on academic questions, they would be able to find help within the forty to sixty regular teaching staff members of their respective school.

Since the aforementioned instructional program was a sophisticated and highly complex system, the pilot school coordinators were trained in the use of this instructional system by members of the AEL staff during the first of two, special summer training programs. In order that they be better able to imbed instructional objectives appropriate to the work site into the student's instructional program, the learning coordinators were trained in a second summer program to be career experience site analysts. During the analysis of a work site, the learning coordinators had the direct opportunity to evaluate the facility and personnel. This evaluation was to be the basis for developing appropriate student learning activities.

These precautions taken by the Kanawha County School System were instituted to facilitate the smooth

transition of the EBCE program from the laboratory school setting to the traditional high school setting. It was believed that these precautions would result in an effective pilot implementation of Experience-Based Career Education.

SIGNIFICANCE OF THE STUDY

This study was conducted to obtain useful information for Kanawha County School officials about the Experience-Based Career Education Program implemented in the pilot high schools, so as to establish a basis for judgments about the feasibility and advisability of incorporating the EBCE program on a permanent status. Since the EBCE program has been adopted by other school systems in other states, and is being considered by many more, the results of this study can provide the decision-makers of these systems with additional information upon which to base their judgments.

STATEMENT OF THE PROBLEM

The problem of this study was to evaluate the effectiveness of the Experience-Based Career Education Program implemented by the Kanawha County School System. In order to facilitate the evaluation, four questions were formulated on the assumption that an effective alternative

career education program would enhance student academic achievement, perceptions of the work world, perceptions of the educational experience, and the rate of attendance.

The questions to be answered were:

1. Did students in the EBCE program achieve in the comprehensive English skill areas as well as students in the regular high school program?
2. Did students in the EBCE program exhibit attitudes toward the world of work comparable to the students in the regular high school program?
3. Did students in the EBCE program exhibit perceptions toward their educational experiences comparable to the students in the regular high school program?
4. Did students in the EBCE program exhibit attendance rates comparable to the students in the regular high school program?

LIMITATIONS OF THE STUDY

The limitations of the study were as follows:

1. Of the three pilot schools, two were used for this study. The third pilot school was not included because the principal of that school preferred not to have his students participate in this evaluation program.
2. None of the pilot schools was located in a rural area. This factor is of importance because it denied the study any information pertaining to problems associated with the limited number and variety of the rural career experience sites and the transportation problems associated with long distances to and from the career experience sites.
3. The study was further limited by the non-randomized selection of the experimental (EBCE) and the control (traditional) groups. Since EBCE is an alternative educational program, the students participating in the EBCE program were volunteers. The control group was comprised of students who matched the students in the experimental group. The criteria used for selecting the control group is described in Chapter 3.

DEFINITION OF TERMS

For the purposes of this study, the following definitions were formulated:

Appalachia Educational Laboratory (AEL). One of the four educational research laboratories funded by the National Institute of Education to develop, implement and evaluate an EBCE program. AEL is located in Charleston, West Virginia.

Alternative Education. Any program or system of education that is chosen by students and/or parents as an alternative to typical, traditionally organized public schools.

Career Experience Site. The community business, industry and service organization where EBCE students are allowed to explore their career interests.

Experience-Based Career Education (EBCE). A research program sponsored by the National Institute of Education for career education investigation. EBCE is a comprehensive, individualized, alternative plan of learning for high school students which allows them to actively participate in the community and investigate careers in real-life settings.

Learning Coordinator. The teacher in charge of integrating the student's academic activities with his career exploration experiences.

Career Education (U.S.O.E. Definition). Career education is a comprehensive educational program focused on careers, which begins in grade 1 or earlier and continues through the adult years. For elementary and secondary education, the program includes a structuring of basic subjects, grades 1-12, around the theme of career opportunities and requirements in the world of work. In elementary school, students are informed about the wide range of jobs in our society and the roles and requirements involved. In junior high school, students may explore several specific clusters of occupations through hands-on experiences and field observation, as well as classroom instruction. They will be assisted in selecting an occupational area for further specialization at the senior high level. In senior high school, students pursue their selected occupational area, exercising one of three options--intensive job preparation for entry into the world of work immediately upon leaving high school, preparation for post-secondary occupational education, or preparation for four-year college.

ORGANIZATION OF THE STUDY

In Chapter 1 the Experience-Based Career Education pilot program for Kanawha County was discussed, along with the need for evaluating such a program.

Chapter 2 contains a review of the literature and research relative to alternative education, career education and Experience-Based Career Education.

The design of the study is presented in Chapter 3. The research model and subjects are described, as are the test instruments and the data processing procedures.

Chapter 4 deals with analysis of the data and its tabular presentations.

In Chapter 5 the conclusions of the study are stated and appropriate recommendations made.

Chapter 2

REVIEW OF THE LITERATURE AND RESEARCH

The focus of this study, Experience-Based Career Education, is not only a specific program within the general concept of career education, but it also lies within the framework of alternative education. This interrelated nature of the three topics of alternative education, career education and Experience-Based Career Education required that the literature pertinent to each be reviewed.

The common factor characterizing all alternative education programs is the element of choice. Since participation in Experience-Based Career Education is optional, the criterion for alternative education is met. As an alternative program of education, EBCE shares some of the qualities, problems and goals of other alternative programs. Therefore, an overview of this area of education provides information relevant to Experience-Based Career Education.

Although career education spans a broad educational spectrum encompassing grades K-12, and includes a wide variety of career oriented activities, EBCE is a specific

career education program occupying only a portion of that spectrum. An investigation of career education would thus serve to enhance understanding of Experience-Based Career Education.

There has been much information written concerning these new educational programs; their rationale, advantages and limitations. This review of the literature is a selective attempt to present some of the pertinent research which deals with the areas of alternative education, career education and Experience-Based Career Education.

ALTERNATIVE EDUCATION

Just as society changes, so do the needs of its members, and these needs are so diverse that they cannot be met by a single approach to education. For this reason alternative education programs have been and need to be implemented. The Task Force on Secondary Schools (1975:17) noted that alternative education:

> . . . calls for more than the simple addition of a few courses. . . . As the sponsor and caretaker of the educational needs of youth, schools will necessarily develop a broader definition of education than is commonly applied today.

Traditional schools, outstanding as many have been, simply cannot provide all things for all people.

Recognizing the infinite variety of students and student needs, a strong assault was launched against routine and lock step approaches to instruction. Alternative education programs have appeared, changed, and grown. Those that did not work have faded; new ones appear on the horizon. Education's diversification is just beginning, as there appears to be no end to the changing character of life. Toffler (1970) observed that if the schools are to remain workable institutions, they must move into the future tense. The pervasiveness of the alternative education movement is attested to by Ban (1975) who stated that alternative schools are currently implemented in about two-thirds of the states and have been the topic of much discussion and some planning in the rest.

The alternative education movement was one response to the stimulus of dissatisfaction with traditional education. Allen (1974) noted that this dissatisfaction was brought to the attention of educators and the lay public by writers (Friedenberg, Goodman, Holt, Leonard, Koel, Kazol) who were deeply attuned to the needs of students. Ban (1975) agreed, that the secret of the proliferation of alternative programs of education lay in the widespread disenchantment of students, educators and parents with many aspects of

conventional school programs. Even though disenchantment will hopefully give way to satisfaction, the need for alternative forms of education will likely continue to be a part of the educational scene. The Task Force on Secondary Schools (1975) saw the present educational scene as a period of increasing options and alternatives. Resources for learning are expanding exponentially with no end in sight. Alternative education is no longer a question; for many it is already an answer.

A constantly changing world mandates a changing educational system capable of providing instruction for the present and the future. Jones (1974:94) noted that:

> Staggering changes in students and society have already made some parts of today's schools obsolete and irrelevant.

Smoker (1974:10) reiterated the failure of education by saying:

> What many people are pointing out, in different words, is that a revolution has already taken place in American society and institutions, and that the educational institutions have not kept pace.

Although there is widespread agreement that educational reform is necessary, there is also a wide variety in that reform movement. It is this variety that provides the element of choice that Watson (1972) identified as

being essential to alternative education. Fantini (1973b) observed that the established process of education is not suitable for each user; therefore, alternatives and choices must be provided.

Fantini (1973c) formulated a system for the categorization of the various alternative education forms, in which there are two broad headings: External Free School Alternatives and Alternatives Within Public Schools. Watson (1972) observed that the external free school, initiated by grassroots efforts of those persons dissatisfied with public education, is not only free to offer the schooling it chooses, but also free from bureaucratic control. The free school, beset by financial and accreditation problems, has had a short life span (nine to eighteen months). Ballantine (1974) cited the success of Cincinnati's free school, New Morning, and the struggle of Dayton's free school to make his point that the future of the free school is dependent upon the interest and financial support of the community. Although free schools are often frought with difficulties, it is quite likely that their emergence on the educational scene was partly responsible for the development of alternatives within the public sector.

The schools included in Fantini's (1973c) classification of Alternatives Within Public Schools were further categorized by him as: (1) classroom alternatives, (2) schools within schools, (3) separate alternative schools. Whereas this organization centers upon the physical setting of the school, Fantini (1973c) also utilized the following broad patterns for classifying alternative schools: (1) multiculture schools, (2) community schools, (3) structured skills training schools, and (4) schools without walls. Although Fantini's system of organization contains some overlapping of categories, it does assist in ordering the various components of the alternative school movement.

The classroom alternative often exists in a school in which one subject or grade is taught by more than one individual. Fantini (1973c) suggested that by taking advantage of natural differences in teaching style and by making teacher choice a matter of parental and/or student selection that a true alternative exists.

In the school within a school alternative, an existing school is divided into a number of smaller, mini schools each emphasizing a different pattern. Watson (1972) saw the mini school as a challenge to the idea of bigness and consolidation. As examples of schools

within schools, Fantini (1973c:19) noted:

> Haaren High School in New York City - this boys school is organized into a complex of fourteen mini-schools within a single building. Each mini-school has its own coordinator (responsible to the principal), 5 teachers, 1 street worker, and from 125 to 150 students.
>
> Walt Whitman High School in Montgomery County, Maryland, a middle class suburb, was one of the first to consider schools within schools similar to that of Haaren.

Fantini (1973c) perceived the advantages of schools within schools as: (1) convenient for parents, student and staff, (2) presenting an opportunity for the staff and community to participate in the development of alternatives, and (3) make better use of existing resources, such as the gymnasium, counselors, music and art facilities.

Separate alternative schools need not be schools at all, but rather may be a downtown office building, an unused factory, a church basement, even an abandoned missle base. Not only is this use of facilities conducive to fresh ideas about teaching and learning, but Watson (1972) observed that renting these facilities provides the school system with a way to avoid being left with an unneeded building when the school population shifts.

Many of the separate, alternative schools utilize the concept of the open school. Fantini (1973b) warned

that the use of labels may cause unwanted implications. For example, to call one system "open", implies that another system is closed. In educational poll taking Gallup (1976) found that all major segments of the American public endorse the concept of open education by a more than two to one margin. Representative of the appeal of the open curriculum was the development of Alternative High School (Cinnaminson, N.J.), the attributes of which are seen by Anderson (1973) as being: (1) administered by a board made up of parents, students and teachers, (2) characterized by freedom of students to choose their course of study, (3) independent study situations, and (4) course credit for community activity such as tutoring, ecology programs, etc.

Open schools are not without their critics who agree with Faris (1974) and Watson (1972) in noting that open schools favor the student who is outgoing, aggressive, curious, and more capable. Although some students do not perform well in an open system, many students are in desparate need of the freedom to find themselves. Faris (1974) described the Area H Alternative School in Los Angeles (K-12) as offering freedom of choice and lack of forced learning. Goodman (1973:38) supported the freedom of the open system, stating:

> . . . It seems stupid to decide a priori what the young ought to know and then to try to motivate them, instead of letting the initiative come from them and putting information and relevant equipment at their service.

In the open classroom the teacher is the facilitator of learning, offering resources, information and encouragement. For many students this is the alternative best suited to their educational needs.

According to Watson (1972), alternative schools organized to cater to certain racial or ethnic groups are probably the most controversial of the alternatives. Black House and Casa de la Raza, established in Berkeley, California for blacks and Chicanos respectively, have been warned by the Department of Health, Education and Welfare that they do not meet federal discrimination guidelines. Watson (1972) noted that educators do not agree upon the quality of education possible in this type of system. Fantini (1973b:20) described a variation of this alternative in which students are accepted on the basis of diversity of race, socio-economic class, age and sex. These students spend a part of their school day working together, but:

> . . . At other times they meet in their own ethnic, social or educational groups, learning their own culture, language, customs, history and heritage. . . .

Although there is agreement on the importance of a student's racial and ethnic background, there is no single answer posed as the best way of structuring education to complement this background.

Fantini (1974) saw the second pattern of alternative schools as being the special school, designed especially for the dropout, the emotionally disturbed and the unwed mother. Watson (1972) noted that these schools for students with special problems are essential for certain students who are on the way to dropping out. For the student who has already dropped out, there needs to be a reentry route available to him. Harlem Prep, a private school in New York City, exemplifies what can be done for the dropout when attention, expertise and money are directed toward a specific goal. Watson (1972) observed that Harlem Prep's one room school approach to individual attention and integrated curriculum provides effective academic and emotional support for these special students. The Career Study Center of St. Paul, Minnesota is a similar school, providing an alternative for the dropout. For a variety of reasons the special student is normally deficient in basic skills which must be remediated. For whatever special group of students this kind of alternative is established, the cost per pupil will be higher than for the average

student. However, Watson (1972:59) stated:

> . . . the cost should not be measured against that for an average student who does not have such basic remedial needs, but against the cost to the community if that boy (or girl) is left to enter the world functionally illiterate.

Fantini (1974) saw the third pattern of alternative schools as the back-to-the-basics fundamental school, stressing mastery of basic skills, understanding of government and heritage, assessment of student accomplishment, and reinforcement of parental teaching. Shaw (1975) called the fundamental school a new kind of alternative, evolving as an option for those who prefer the more conservative end of the educational continuum. The John Marshall Fundamental School in Pasadena, California has become a showcase for those interested in observing fundamental education at work. Shaw (1975) noted that at John Marshall discipline is the first priority, with committment to achievement next in importance. The fundamental school, as all other alternatives, is not without its critics who call it little more than an armed camp. Criticized or not, the fundamental school is of growing importance on the educational scene. Shaw (1975:31) stated:

> A growing number of schools are adopting its (John Marshall's) approach. Fundamental schools are being established in such places as Charlotte, N.C., and Jefferson County, Colo., and an increasing number of school districts are weaving elements of the fundamental approach into their program.

The schools without walls alternative was begun in 1969 with Philadelphia's Parkway Program. Watson (1972) described Parkway as a utilization of the city's rich diversity of corporate offices and cultural institutions in which the student has no need to beat the system, because he is the system, helping to hire and evaluate teachers and assisting in the planning of the curriculum. Hutchins (1974) saw Parkway's special strengths as curricular flexibility, small groups characterized by more casual student-teacher relationships, and schedules arranged by the student. The success of the Parkway Program has lent impetus to other schools without walls. Jones (1974) described the Street Academy of Charlotte, North Carolina as an alternative for the junior high school student who rejects and plans to drop out of the regular school. The Shanti School of Hartford, Connecticut was characterized by Malcahy (1973) as an alternative modeled after Parkway, serving as a regional school, funded by money from interested boards of education, local businesses, and private foundations. Watson (1972) cited other schools without walls alternatives as Chicago's Metro School, Boston's Flexible Campus and New York's City as School. The limitless possibilities of the schools without walls concept virtually assures it a permanent place on the educational scene.

The voucher plan for financing education has been directly responsible for the growth in the availability of alternatives. Fantini (1973c) noted that the voucher plan, formulated by Milton Friedman at the University of Chicago and Christopher Jencks at Harvard University, is a system of redistribution of school taxes to parents in the form of vouchers which may be spent to purchase whatever education is chosen: public, private, parochial. This latter option would be a controversial funding of parochial schools according to Fantini (1973b). Roel (1974:3) pointed out that:

> . . . The underlying notion of the voucher program, then, is that by providing parents with a choice of programs, one adds an element of free market competition to the educational system--and the hoped-for result of this competition is that the schools become more responsive to the demands of students and parents.

Although vouchers serve to spur the development of both public and private alternatives, Fantini (1973b) feared that the growth in the private sector would be of dubious worth. He (1973b:20) went on to state that:

> . . . using education vouchers to make options outside the public school system is far less important, far less desirable, than creating options within the system and making these available by choice, to parents, students and teachers.

Roel (1974) observed that the voucher system has not caused a significant development of alternatives, but it

has increased socio-economic segregation. Vouchers are also opposed by teacher organizations because vouchers represent a threat to the public schools.

Although Watson (1972) cited criticisms of alternative schools as segmenting and dividing our society, a changing and diverse world requires options in education. Fantini (1973c) voiced concern that alternatives will be viewed merely as a passing fad. Passow (1975) observed that it is becoming increasingly apparent that the high school needs sweeping reform. He goes on to point out that a growing number of high school students are too mature for the strict control and routine of the traditional high school. The development of alternatives should not be seen as an indictment of the present schools. Jones (1974:92) saw:

> . . . options in schools not as a reform of something that is wrong but rather as a natural evolution toward more mature and responsible educational programs.

Finkelstein (1973) noted that the challenges presented by alternatives will likely be met by public education's utilization of newer strategies for constructive change. He sees the responsibility of education as being the preparation of young people to be social contributors rather than social liabilities. Alternative education is seen by many as an idea whose time has come.

CAREER EDUCATION

Career education is one of the newer thrusts on the American educational scene. Hoyt (1974b) suggested that career education could be viewed as one of several possible responses to the call for the reform of American education. Even though the idea of career education had been present to some degree for many years, Newsome (1975:9) noted that Marland, then U. S. Commissioner of Education:

> . . . first presented career education to public school educators in an address to the National Association of Secondary School Prinicipals in January of 1971.

Barnett (1974) attested to the impact of Marland's announcement by saying that over the past three years the topic of career education has sent a tremor through American schools with curricular implications.

Fruehling (1974) noted that it is difficult to plan for a change as pervasive as restructuring for career education without an adequate definition. However, Hoyt (1974a:1) observed that:

> . . . Dr. Marland (refused) to provide a single USOE definition of career education when he coined the term. Instead, he called for the meaning of career education to be forged in local, state and national debate and actions.

Marland (1974:84) explained his position on defining career education when he said:

> . . . From the early stages of this endeavor, I held that the concept needed much national debate, much research, much scientific analysis, much testing of assumptions in real schools and classrooms before it could be given a dependable definition. I have been both criticized and applauded for insisting that there should be no "approved definition" of career education by the federal government during the initial years of its conceptualization. But some people do like definitions.

The American Association of School Administrators (undated:3) credited Robert Worthington, former associate commissioner for the Bureau of Adult, Technical and Vocational Education, with the following United States Office of Education definition of career education.

> Career education is a comprehensive educational program focused on careers, which begins in grade 1 or earlier and continues through the adult years. For elementary and secondary education, the program includes a structuring of basic subjects, grades 1-12, around the theme of career opportunities and requirements in the world of work. In elementary school, students are informed about the wide range of jobs in our society and the roles and requirements involved. In junior high school, students may explore several specific clusters of occupations through hands-on experiences and field observation, as well as classroom instruction. They will be assisted in selecting an occupational area for further specialization at the senior high level. In senior high school, students pursue their selected occupational area, exercising one of three options--intensive job preparation for entry into the world of work immediately upon leaving high school, preparation for post-secondary occupational education, or preparation for four-year college.

There has been some confusion concerning the relationship of vocational education and career education. Marland (1971:5) said:

> . . . I suggest we dispose of the term vocational education, and adopt the term career education. Every young person in school belongs in that category at some point, whether engaged in preparing to be a surgeon, a brick layer, a mother, or a secretary.

Finch (1975) noted that Marland used the terms career education and vocational education interchangeably. However, Moullette (1972) and Smoker (1972) agree that vocational education is only a part of career education. Finch (1975:42) expanded upon this, stating:

> . . . Although vocational education is a necessary component of career education, career education is not vocational education. All vocational education is a part of career education; however, career education goes beyond vocational educational since it links learning activities with jobs along the entire range of skills. . . .

In spite of the efforts which have been made at differentiating between career education and vocational education, there are some authors who continue to use the terms interchangeably. For example, Daniels (1974) was referring to vocational education when he stated that career education has been thought of as a dumping ground for the intellectually disadvantaged. Grubb (1976:11) recognized the differnce between career education and vocational education, but asserted:

> . . . Despite its assertions to the contrary, it (career education) is primarily a renewal and expansion of vocational education. . . .

Although the definitions of career education vary, there is general agreement that one of the functions of the educational system is that of facilitating the transition of youths into adulthood, with the concomitant career implication. It was Palmer's (1974) observation that persons alienated from their life's work are hollow persons. It is a widely held supposition that career awareness and development of decision-making skills in late adolescence lead to later work satisfaction and life satisfaction. The Task Force on Secondary Schools (1975) stated that schools are not an end in themselves, but should strive to develop the potential of each individual to contribute to the general welfare of himself and society. Since an enormous percentage of an individual's adult life is spent working, this work needs to be as ideally suited to the individual as possible in order to maximize his contribution to the quality of the world around him.

The goals and purposes of career education, although expressed in a variety of ways, share the commonality of assisting the student's meaningful entry into the work world. Hoyt (1975:1) stated:

> . . . two basic goals which are: (1) to help all individuals understand and capitalize on the increasingly complex and changing relationships between education and work; and (2) to make work become a more personally meaningful part of the total lifestyle of all individuals.

The constantly changing world of work requires that societal members be educated not only for a specific job, but also in the broader area of career education skills. As Olson (1974:29) noted:

> . . . The purpose of the career education approach is to help students become more responsible individuals who are capable of making and implementing accurate career choices in an exceedingly complex and continuously changing society.

There is widespread agreement that the implementation of career education must make extensive use of community and family resources. Hoyt (1976:3) observed that:

> . . . Career education is pictured as a collaborative effort involving the formal education system, the business-labor-industry community, and the home/family structure.

Macchia (1975) and Smoker (1972) agreed that there is need for student observation of and interaction with the real world. Peterson and Park (1975) testified to the importance of eliciting community support as being beneficial to all. Macchia (1975) noted that one of the major elements of curriculum change in career education is the expanded use of community resources. It was

Freire's (1970) view that men educate each other through interaction with the world. Gibbons (1974) concurred, saying that there is a general agreement that the transition to adulthood may be facilitated by the provision of alternative environments which more closely approximate the work world. The inadequacy of classroom isolation is attested to by the Career Project Staff (1974:forward).

> Today, more than ever before, the public is demanding that the education community be held accountable for educating the youth of our society. No longer can we rely on educating our students totally within the four walls of the classroom and within the two covers of the textbook.

Schools have long been accused of "ivory towerism." Hoyt (1974c:1) attested to this estrangement of education from reality when he said:

> Our educational institutions have operated, for years, under a false assumption that the best way to prepare youth for the world of work is to lock them up in a schoolhouse and keep them away from that world.

Students having difficulty seeing the relationship between their school programs and the way they anticipate spending their adult years, become alienated from education. Passow (1975) suggested that school curricula should be revised to provide students with a wide range of activities

making work a more central component of the education of adolescents. As Macchia (1975:7) observed:

> . . . students wish to relate to reality; occupations and the training they require are real and necessary. . . . If theory and practical experiences are gained simultaneously whenever feasible, students will see purpose in what they learn and will respond in a positive manner.

Hoyt (1974c) agreed that direct participation in the world of work would increase the student's motivation for obtaining information and skills related to work.

Career education was envisioned as a pervasive concept to be woven throughout the fabric of the entire K-12 curriculum. Hoyt (1976:1) stated:

> Career education was begun, and continues to operate, as a vehicle for the total reform of American education through changing the basic, internal, professional commitments of all educators. It has come on the educational scene as a concept, not a program.

Although career education is often described as a "cradle to grave" process, there are specific career education alternatives which have been implemented to serve the needs of particular groups. Among the examples of these specific alternatives are Marland's four models of career education (described later in this chapter). Chenault (1974) suggested that career educators give priority to the development of career education alternatives.

The United States Office of Education (USOE) has not only espoused career education concepts, but also has provided funding for research and development of career education techniques and materials. Smoker (1972) noted that most visible among the research and development projects, Marland's four career education models, were awarded nearly fifty million dollars from 1971 through 1974. In addition to the four career education models, mini-models have been encouraged and funded. Smoker (1972:33) stated that:

> . . . Part D (of the Vocational Education Act Amendments of 1968) supports three-year exemplary programs in vocational education at the elementary and secondary levels. Guidelines for grants under both sections have been structured to encourage their use for development of comprehensive Career Education programs.

The National Advisory Council for Career Education (NACCE) was mandated under Section 406 (g) of Title IV of the Education Amendments of 1974 (Public Law 93-380). The NACCE (1975:21) provided the following analysis of existing career education legislation:

> Since 1971 the Office of Education has used existing legislative authorizations to fund career education programs and projects. The major pieces of legislation include titles under:
>
> 1. The Vocational Education Act of 1963, as amended
> 2. The Education Professions Development Act

3. The Higher Education Act of 1965

4. Education of the Handicapped Act of 1970

5. The Elementary and Secondary Education Act of 1965

6. Title III of the Education Amendments of 1972 which created the National Institute of Education and authorized career education programs as a responsibility of NIE

7. The Education Amendments of 1974, Section 406 which established in the Office of Education, the Office of Career Education with the authority to demonstrate the concept of career education.

Comprehensive federal education legislation which has furthered the goals and objectives of career education are: Part B, Title X of the Education Amendments of 1972 (P.L. 92-318), Occupational Education Programs (unfortunately never funded); and the Special Projects Act of the Education Amendments of 1974 (P.L. 93-380), cited in No. 7 above, with authorized funding at up to 15 million.

This legislative support has enabled not only career education research and development, but also has provided the means of implementing at least one career education project in each state and territory. Although federal legislation has provided funding for the initial career education projects, state and local funding will be necessary to insure the continuation of career education.

Although career education has been hailed by many, there are those who see serious deficiencies in such a program. Hruska (1974) expressed concern that career education would not be kept in proper perspective with the rest of education. Even though Mathieson (1973) noted that Marland himself saw career education as just a portion of the academic world, many career education programs have been notably remiss in their academic thrust. While Burdin (1973) pointed out that although career education should be integrated into the continuing education program, in some career education the academic instructional program is all but abandoned. Morris (1973) felt that by learning about specific careers, the student would not receive adequate instruction in the more general skills necessary for coping with a changing world. Career education must avoid the temptation of educating for jobs which may have limited longevity. As noted by Burdin (1973), career education will fail if it is parochial, limited in vision, and mind constricting.

There is also the danger that career education will be another educational innovation that enjoys a temporary prominence, only to fade quickly from the scene. Burdin (1973) suggested that this will depend

upon how extensively and effectively the education community is involved. Hruska (1974) agreed that there is a definite possibility that career education will be a short-lived phenomenon.

Another criticism of career education centers around the changing position of the work ethic in today's society. Burdin (1973) noted that many individuals find work unmeaningful for a variety of reasons: finding their product or service lacking in usefulness; inability to identify with large, depersonalized enterprises; constantly changing technology causing jobs to change and/or fade from the occupational scene. Hruska (1974) viewed one's job as less and less important in defining one's identity. He saw career education as a reaffirmation of the prominence of the work ethic, the lodging of identification in a career. However, this thrust he found incompatible with a society turning more and more to non-career elements for definition of self. Hruska (1974:349) went on to say:

> Even if careers continue to be our major source of self identity, there is much reason to discourage this development in the early years and in adolescence. . . . Careers selected in the developmental years, which frequently cause us to disregard certain areas of study in order to concentrate on the tenative career, are readily discarded later as our values are shaped and reshaped.

He also fears that if young people view education primarily as career preparation, they may neglect being students and critics of the larger society. Hruska (1974:351) points out that:

> . . . if that happens, both the larger society and the young people lose. Society loses because it so desperately needs the vitality and innocence of the young whose relentless pressure and condemnation work toward changing and humanizing our bureaucratized institutions. The young people would lose because the grappling with major social issues helps them come to grips with what they believe and thus who they are.

There are many threats to the future of career education. The American Association of School Administrators (undated:v) identified the largest threat as:

> . . . the possibility that career education may become the "program" of some existing specialized group.

Smoker (1972) suggested that the greatest pitfall is the possibility that educators will try to confine career education to the schoolhouse and not make use of community resources. A variety of other problems including professional jealousies and competition for funds stand in the way of career education. However, Smoker (1972:72) stated:

> . . . in spite of the pitfalls, the criticisms and the continuing dialogue about how to define the concept and implement it, the evidence all points to a strong possibility that Career Education is the major redirection of the entire educational system.

MODELS OF CAREER EDUCATION

Since career education is a relatively new term, having been introduced by Marland in 1971, it is reasonable to explore his four models of career education: Model I, School Based; Model II, Community Based; Model III, Home Based; and Model IV, Rural-residential Based. These four models were developed at various locations with funds provided by the National Institute of Education.

In Model I, School Based Career Education, researchers at the Center for Vocational Education at Ohio State University developed instructional materials which could be used by the classroom teacher in grades K thru 12. These materials would provide the means whereby the teacher could integrate career education into the regular academic program. Although the materials were no doubt well-formulated, it was not possible to locate a publisher to market them. According to Reider (1975) of the National Institute of Education, since the materials were teacher, rather than student oriented, publishers were reluctant to enter into a contract with such limited sales potential. As NIE is not a publishing and marketing agency, the project, Model I, was phased out.

Model II, the focus of this study, is Community Based Career Education. It is within this model that Experience-Based Career Education was developed. Model II will be dealt with extensively later in this chapter.

Model III, Home Based Career Education, had as its primary focus, the career-related needs of home-based adults. The authors of "Career Counseling for Adults: An Overview of the Home- and Community-Based Career Education Project" stated that although some of these adults want to be at home, many would like to be working. Some need education and training for job skills; many are not sure what they have to offer; they are not certain what they want to do or how to go about doing it. Model III, was formally called the Career Education Project. It had operated in Rhode Island from 1972 through 1975 and served over five thousand men and women, aged 16 to 70.

The Career Education Project incorporated five basic functions: (1) assessing needs and resources, such as training programs and placement agencies; (2) attracting clients, through various forms of the mass media; (3) providing counseling service by telephone utilizing paraprofessionals, trained and supervised by professionals in counseling and education; (4) developing supportive information resources containing career-related

materials for and about adults; and (5) evaluating the service to provide the project staff with feedback about the operation.

Although Model III has just completed its final year as a federally funded operation, it has developed five manuals, annotated bibliographies, and a film for people interested in adopting the project as a whole or components of the project. A survey of past clients of the project indicated that a real need had been met, and 99% of the survey sample said that this type of career counseling service should continue. Its survival depends, of course, upon the willingness of outside agencies to purchase the Model III program.

Model IV, Rural-residential Career Education, Mountain-Plains Education and Economic Development, Inc., is located at the former Air Force Base at Glasgow, Montana. According to Perryman (1975), the primary focus of Model IV was the development and testing of a program designed to rehabilitate disadvantaged rural families from a six-state region. The entire family is moved to Glasgow where programs and services include: (1) career guidance; (2) career development; (3) counseling; (4) family core curricula in the areas of home management, health, consumer education, etc.; (5) limited medical and dental services; (6) financial support of the family

for the duration of the program; (7) child care; (8) job placement; and (9) follow-up after the placement. After completion of the training (normally approximately 8.5 months) the families are relocated wherever the head-of-the-household has located employment.

The cost effectiveness of this program was assessed by a committee from the University of Utah, who found that the payback of society's investment in terms of cost per family occurred at approximately 5.6 years. Beyond that point, of course, society gains by the increased productivity and decreased welfare, unemployment compensation, and prison outlays. The future of Model IV depends upon its ability to attract funds, as the federal grant expires in September of 1976.

EXPERIENCE-BASED CAREER EDUCATION

The Experience-Based Career Education (EBCE) program, Model II, represents a specific approach to career education. As envisioned by the National Institute of Education, EBCE began as an experimental alternative program designed to bridge the gap between theory and practice, between classroom and the community. Experience-Based Career Education is, in many ways, the answer to modern education's tendency to force youth

into holding ponds surrounded by abstract, passive, synthetic experiences. Synthetic experiences are translated into real experiences by transporting part of the student's education from the classroom to the working community. This move from the classroom to the work site also serves as a link between estranged youth and adults.

In establishing experimental locations for the development of EBCE, the National Institute of Education chose four school systems, giving each the freedom to develop an EBCE program tailored to the needs and resources of the area. The four laboratories funded were: Appalachia Educational Laboratory, Charleston, West Virginia; Research for Better Schools, Philadelphia, Pennsylvania; Far West Laboratory, Oakland, California; and the Northwest Regional Educational Laboratory, Tigard, Oregon.

According to the Curriculum Report of the NASSP (1975:2-3):

> The programs at the four project centers are by no means alike in all respects. . . . However, the four are tied together by a common set of characteristics:
>
> EBCE is a comprehensive, individualized, alternate plan of full-time learning for high school youth;
>
> It relies on the active participation of the community to provide students with direct, non-paid learning experiences in real-life settings as preparation for careers and life in the broadest sense;

> It takes the subjects students customarily study along with many new ingredients--about people, jobs, self, the way communities function, to name a few--and sends students out into the community to master these through first-hand contacts rather than in the more usual in-school context; and
>
> Each of the four EBCE programs has been designed to offer something worthwhile and attractive to a wide range of students--for example,
>
> > those who have only a vague notion of available career options and want to do some exploring through direct experience,
> >
> > college-bound young people who want to test out some tentative career choices,
> >
> > others who want some entry-level skills either for moving directly into full-time employment or as a basis for specialized training.

Table 1 provides selected demographic information for the four Experience-Based Career Education pilot sites. The information found in this table, shows that the student population at the four sites spans the spectrum of ethnic and economic characteristics. It should be noted that the number of graduates at the AEL site was greater than the number of students originally enrolled. This apparent contradiction was not satisfactorily explained in the NIE (1975b:4) publication from which the chart was taken.

Although the four EBCE programs have many features in common, there are certain differentiating characteristics among the four laboratories. The Tigard, Oregon Laboratory, $(CE)_2$, Community Experiences for Career

Table 1

DEMOGRAPHIC INFORMATION OF THE FOUR EBCE PROGRAMS

	*FWL	*RBS	*AEL	*NWREL
Number of Students	110	275	120	60
Grade Level of Students	10-12	9-12	11-12	11-12
Student Ethnic Characteristics	ethnically mixed	majority black	predominantly white	all white
Geographic Location Description	Oakland, California (urban)	Philadelphia, Pennsylvania (inner city)	Charleston, West Virginia (urban/rural)	Tigard (Portland), Ore. (suburban/rural)
Approximate Number of Employer Sites	140	100	100	125
Number of EBCE graduates (74-75)	32	72	130	24

* FWL = Far West Laboratory for Educational Research and Development

RBS = Research for Better Schools

AEL = Appalachia Educational Laboratory, Inc.

NWREL = Northwest Regional Educational Laboratories

Education has an accountability system different from the other laboratories. Survival competencies, e.g. balancing a checkbook, must be demonstrated by the student to an examiner who is an individual outside of the educational community. A student in the $(CE)_2$ program must also be certified as competent in certain basic skill areas before he is allowed to pursue more difficult "life skills." In contrast, the AEL student may select any concept for study without any emphasis upon basic skills.

The Oakland based EBCE program is administered and adjusted by a governing board composed of community business leaders, educators and students. It is the only one of the EBCE laboratories that utilizes student and business input in this direct, policy making manner.

The EBCE program designed by Research for Better Schools (RBS) is characterized by a threefold approach: career exploration, career specialization and use of the Learning Resource Center. Careers are organized into twenty groups, called clusters. In the career exploration phase of the EBCE curriculum, the students choose one cluster one day per week. They spend a variable amount of time ranging from weeks to months specializing in one career. In addition to the career aspects of the RBS curriculum, the academic sector is dealt with by scheduling the student for six hours per week at the Learning Resources Center.

In contrast, the EBCE program in Charleston places the student at one job site for four days per week for a period of one to thirteen weeks. For the most part the EBCE students do not have to spend more than three hours per week (in many cases less), at their Learning Resources Center. For all of the variability among EBCE laboratories, the common thread that runs through all of them is program flexibility designed to provide individualized instruction for all students.

The EBCE variety of career education strives not to teach the student the skills of a particular job, but rather seeks to expose that student to the real aspects of many careers in which the student has interest and aptitude. Palmer (1975) criticizes some types of career education, saying that schooled vocational experiences bear little or no resemblance to the real world of work. He goes on to observe that the environment outside the schools can provide a wider diversity of experience than that which is available within four walls. It is this rich environment that is tapped by the EBCE program, whose slogan is "The Community Is The School." This is surely what Palmer (1975) envisioned when he said that he favored strategically planned and executed experiences that would expose school aged children to a host of occupational options. Gibbons (1974:36) characterized

EBCE as:

> . . . a research and development effort designed to determine how comprehensive educational experiences for young people can be derived from direct contact with adults in everyday life settings. The community becomes the classroom, and career interest and exploration become the vehicles by which students make educational and vocational decisions.

The Appalachia Educational Laboratory's (AEL) career education program, the EBCE program in Charleston, West Virginia, operates in such a way as to produce a program for each student that is individualized with respect both to work experiences and academic needs and interests. This rationale harmonizes with Hopkins' (1973) philosophy that an individual needs freedom in order to develop an integrated personal self while confronting a disintegrated environment. The EBCE student is given some freedom in the design of his curriculum, predicated upon the belief that this involvement in planning will serve to make the student more involved in learning.

The first step in planning an individualized learning program is analysis of the student. Through the use of instruments which help to analyze a student's interests and abilities, several worker traits are grouped and identified for each student. These worker trait groups are matched with appropriate job sites to provide the basis for the student's work placement. This procedure fits Palmer's (1974:430) vision of:

> . . . manager teachers (who) would find themselves making phone calls, setting up field experiences. . . . the teacher's domain would shift from a 40 by 60 foot rectangle to new dimensions measured in terms of miles.

Experience-Based Career Education is not a fragmentation of career education into work and school segments. Rather it is an integration of academic discipline with work experience. This integration is achieved by the cooperative effort of the student, his learning coordinator (teacher) and the resource person (work site individual having closest contact with the student). As explained in the AEL (1975:2) report:

> The program's other major commitment is to the belief that 'courses' do not have to be separate sets of events. The content of social studies, English, science, and career education and development are inexcapably different, yet within the program they are combined into single sets of activities. An EBCE student, for example, may conduct biological research and experimentation (for science credit) while he is exploring a particular career in ecology (for career development credit). He may write reports on both these activities, and have them evaluated for English credit.

This interdisciplinary approach is surely more in keeping with the real world where skills and expertise in many areas must be brought to bear on any given question or problem.

The seven basic ingredients of the EBCE program were identified in the same AEL (1975:3) report as:

Community experience sites which agree to participate in the program are thoroughly, yet economically, analyzed to find out what kinds of things students might learn there, and under what conditions (hours, people, dress codes, etc.).

Students' needs, interests, and abilities are individually probed, both initially and throughout the year, to find out the kinds of learning experiences that are most appropriate for the student.

Standard course-work has been re-worked into a vast series of concepts and objectives, which a student can tackle in many different ways, depending on overall program needs and choices.

Information on sites, assessments of student needs, and the concept-oriented curriculum have been systematically cross-referenced so that the ingredients can be mixed and matched to meet the unique needs and desires of each student.

Each student's specific learning activities are carefully described, followed, and evaluated so that the student doesn't "get lost" as he learns out in the community.

A systematic, multi-leveled process is used to guide the student as he uses the community to investigate who he is, what the adult community offers him, and how to deal with the life-long series of vocational, avocational, and personal choices which constitutes a "career."

Finally, the traditional "teacher" has been replaced by a "Learning Coordinator," who has full responsibility for coordinating, guiding, and evaluating all aspects of a student's program.

The varied aspects of the EBCE program are tied together by the statement of the Task Force on Secondary Schools (1975) in their observation that self-realization, the development of personal talent and interest, have become the overriding forces of this educational program.

By designing a student's program around his career investigations, EBCE affirms the observation of the Task Force on Secondary Schools (1975) that the community as well as the school affords splendid opportunities to learn. As stated in the AEL (1975:2) report:

> One of the two major priorities is to create a set of learning experiences which is uniquely appropriate to each individual. . . . AEL's Experience-Based Career Education Program is an attempt to provide high school students with learning opportunities which are both as realistic and as relevant as possible. . . . The entire community, with all its richness, confusion, and reality, becomes the school for students enrolled in EBCE. Their goal is not to train for one pre-selected job, but to discover by direct experience what career(s) they find most potentially rewarding.

EVALUATION STUDIES OF EBCE PROGRAMS

Existing research and evaluation studies of Experience-Based Career Education were reviewed. These studies were described and organized as follows: an internal evaluation of EBCE as implemented by AEL; a National Institute of Education evaluation of all four laboratory implementations of EBCE; and an external evaluation of the EBCE program as it existed at AEL.

AEL's Internal Evaluation of EBCE

An internal evaluation of the EBCE program, as implemented by AEL, was conducted by the AEL staff during the 1973-74 school year. The sample population for the

evaluation was a control group of randomly selected seniors from ten Kanawha County high schools and an experimental group randomly selected from seniors participating in the EBCE program. The evaluation program was designed to provide comparisons between EBCE students and those in the traditional curriculum. The comparisons focused primarily on the cognitive areas of language and mathematics; knowledge about the world of work; and attitudes about the world of work. While other comparisons were reported in the Final Evaluation Report (1974), they were not germane to this study and were, thus, not included.

To assess growth in the cognitive area, selected subtests of the Educational Development Series (EDS) were administered to the control and the experimental groups. Each student, however, was not given the same subtests, but a matrix test sampling scheme was used so that no student had more than one hour of testing (one or two subtests). This testing was conducted in October, 1973 and again in April, 1974.

An analysis of the pretest data showed that the experimental and the control groups differed significantly on the EDS scores, with the control group higher than the experimental. When the posttest data were discussed, the authors of the report avoided making any comment as to the

presence of any significant difference between the groups. The only conclusion reported by the AEL study was that there was significant growth of both groups combined in the reading and English subtests of the EDS.

To assess student knowledge about the world of work, the experimental and control groups were pretested and posttested using the Competency Section of the Career Maturity Inventory (CMI). Analysis of the data revealed no significant difference between the CMI Competency Section scores for the experimental and control groups. This lack of significant difference between pretest and posttest scores was explained by observing that since the pretest mean scores were high for each group, there was insufficient room for improvement. The lack of sensitivity of the test precluded a definitive assessment of knowledge about the world of work. The Competency Section of the CMI was not used in this study because of this deficiency.

The growth in attitude about the world of work was measured by the Attitude Section of the CMI. Although the AEL report correctly stated that the EBCE students showed more growth in this area than did control students, the posttest scores of the EBCE students were not as high as the pretest scores of the control group. In spite of the low posttest scores for the EBCE students, the AEL

evaluators interpreted these results as being supportive of the EBCE program.

This treatment of the EDS and CMI data was typical of the conclusions drawn by the authors of the AEL Final Evaluation Report (1974). While the authors purported to investigate the pertinent areas of cognitive development and growth in career maturity, the data were treated so as to make comparisons between EBCE and the traditional curriculum vague. Although the collection of the test data was obtained in a statistically acceptable manner, the conclusions drawn from these data seemed to be distorted in favor of the EBCE program.

NIE Evaluation Report of EBCE

An evaluation report summarizing the EBCE programs at the four developmental laboratories was compiled by Bucknam of the National Institute of Education. Bucknam (1976) revealed that this study was not an external evaluation in that it relied strictly on the data supplied by the staffs of the respective laboratories. This evaluation report was divided into the three areas of community support, academic quality, and programmatic effects. In the area of community support, a large majority of parents and participating employers (96% and 81%, respectively) supported continuation of the EBCE program.

The academic quality of the EBCE program was evaluated by the use of the Comprehensive Test of Basic Skills (CTBS). Analysis of these test data indicated that there was no significant difference between the academic achievement of EBCE students and control group students. In the third area of evaluation, programmatic effects, EBCE students evinced a significantly more positive attitude toward education than did the control group.

The NIE report was limited in scope not only because it relied on the results of the internal evaluations of the four EBCE developmental laboratories, but, also because it failed to report pertinent statistical data. These limitations resulted in a report that was more an overview than an evaluation.

AEL External Evaluation

An external evaluation of the Experience-Based Career Education program as implemented by the Appalachia Educational Laboratory for the 1974-75 school year was undertaken by the Educational Testing Service of Princeton, New Jersey. The results of this evaluation, however, had not been published at the time of this study. Although the Educational Testing Service evaluation is expected to be very comprehensive, composed of nine volumes, the testing phase of the evaluation relies upon

test data furnished by AEL; therefore, not truly external in nature.

There have been no published evaluations of Experience-Based Career Education as implemented in the public school setting, as EBCE has only recently been implemented outside of the laboratory setting.

SUMMARY

The traditional approach to education is not sufficiently flexible and varied to provide the optimum educational opportunities for each student. However, the Task Force on Secondary Schools (1975:24) believed that:

> Schools are the appropriate agency for diagnosing the learning needs of the students, for locating and managing the total resource pool available to serve those needs, and for initiating, organizing, supervising and evaluating all appropriate educational experiences for students on campus and in the community. Using a mix of school and community resources, the school should orchestrate this broader educational enterprise of design, delivery and evaluation.

Although some alternative forms of education may be passing fads, some alternatives are a much needed response to society's changing needs. Experience-Based Career Education, one of these alternatives, which has grown out of the general career education movement, has the potential of offering a curriculum that is needed by a broad spectrum of the student body. Whatever the alternative, the course is clear; education will never

again be without a variety of programs to meet a multitude of needs. An AEL report (1974d) stated that this is a rare opportunity in the history of public education in the United States.

Chapter 3

DESIGN OF THE STUDY

The Kanawha County School System adopted Experience-Based Career Education as an alternative curriculum for incorporation into the educational program of three pilot high schools during the 1975-76 school year. The purpose of this study was to test the assumption of the school system that EBCE would provide a viable program for inclusion in the high school curriculum and to make any appropriate recommendations concerning the further development and implementation of Experience-Based Career Education programs in the school system.

QUESTIONS TO BE ANSWERED

In order to provide data to evaluate the effectiveness of the pilot implementation of the Experience-Based Career Education program in the regular high school setting, several questions were formulated. These questions were designed to permit a comparison of student achievement and perceptions under the two treatments: one, the experimental EBCE treatment, described in Chapter 1; and two, the control traditional

high school curriculum treatment, in which students were enrolled in required and elective courses, with no emphasis on career education.

Specific questions to be answered were:

1. Did students in the EBCE program achieve in the comprehensive English skill areas as well as students in the regular high school program?
2. Did students in the EBCE program exhibit attitudes toward the world of work comparable to the students in the regular high school program?
3. Did students in the EBCE program exhibit perceptions toward their educational experiences comparable to the students in the regular high school program?
4. Did students in the EBCE program exhibit attendance rates comparable to the students in the regular high school program?

DESCRIPTION OF THE RESEARCH DESIGN AND SUBJECTS

An Evaluation Design

The research design chosen for this study was the pretest-posttest design, utilizing a control group. According to Campbell (1968), this design is one of those

most frequently used in educational research. The pretest-posttest portion of the design provides for a measure of the abilities or attitudes of the individuals being tested. The use of the control group provides a means of differentiating between the results of a specified treatment on the experimental group and the absence of that specified treatment on the control group. An additional element in the selection of a research design involves the distinction between an experimental design and an evaluation (quasi-experimental) design.

An experimental design is characterized by randomization in the selection of individuals in both the experimental and the control groups. This random sampling maximizes the inferential nature of the research study, allowing the results of the study to be generally applicable to the population from which the sample was chosen. Random assignment of subjects to the experimental and control groups is essential to the experimental design that seeks to attribute the results of the specified experimental treatment. Although an experimental research design provides for the maximum control of extraneous varibles by random assignment, there are occasions for which the requirements of an experimental design cannot be met. For these occasions the less rigorous, but not necessarily less meaningful, quasi-experimental design

may be utilized. The data gathered with such a design may be interpreted by the process of evaluation.

Evaluation is defined by Stufflebeam (1971) as a means of acquiring and providing information useful in making judgments about decision alternatives. In evaluation, the lack of opportunity for random sampling is not an insurmountable obstacle. Although the lack of random sampling prohibits generalization of research findings, Stufflebeam (1971:22) observed that:

> Evaluations are designed not to establish universal laws but to make possible judgments about some phenomenon.

Stufflebeam (1971) also noted that an evaluation design is further characterized by the use of appropriate questions to be answered, rather than null hypotheses to be tested. Although an evaluation study is composed of the same basic elements (e.g. pretest, posttest, control group) as an experimental design, the difference between the two designs lies primarily in the greater flexibility of evaluation design. Evaluation design provides a means of coping with deviations from the ideal experimental situations inherent in much of educational research.

In determining a design to be used in this study it was necessary to consider the EBCE program as it was implemented in the pilot Kanawha County High Schools. Since EBCE was designated as an alternative education

program, the student participants were free to choose the EBCE program and, thus, could not be randomly assigned to the program. This lack of randomization precluded the use of an experimental design. An evaluation (quasi-experimental) design, therefore, was appropriate for this study. This design permitted probing of the research in a more subjective, but not necessarily less meaningful manner.

Subjects

In order to gain permission to use Kanawha County school students as subjects, the proposal for this study was presented to the Kanawha County Schools Superintendent and members of his administrative staff in July, 1975. Written approval was obtained in August, 1975 from both the Kanawha County Superintendent and the Assistant Superintendent in charge of the Department of Pupil Personnel Support (see Appendix A).

Once approval was obtained from the central office administrators of Kanawha County Schools for the study to be conducted at the EBCE pilot schools, the principals of the pilot schools were contacted. The principals of South Charleston and Stonewall Jackson High Schools granted permission for their students to participate in the study. The principal of the third EBCE pilot school, however, chose not to have his

students participate in the study.

The subjects of the experimental group consisted of thirty (30) twelth grade students who scheduled to participate in the EBCE program during the 1975-76 school year at South Charleston and Stonewall Jackson High Schools. These subjects were not randomly selected to participate in the EBCE program, but rather chose on their own accord to participate in the program.

The control group was chosen so as to make it as similar as possible to the experimental group. This matching was done due to the lack of random sampling with the experimental group. For every individual in the experimental group, an individual was selected for the control group so that these pairs of students were matched with respect to sex, grade level, grade point average, and high school attended (see Appendix B). Van Dalen (1966) noted that although this matching does not insure similarity between experimental and control groups, it promotes that similarity. Any remaining statistically significant dissimilarity between control and experimental subjects with respect to the matching varibles can be minimized by the application of the statistical tools of analysis of covariance and multivariate analysis of covariance.

INSTRUMENTATION AND ATTENDANCE DATA

There were three instruments used in this study: (1) the Comprehensive Test of Basic Skills (CTBS), selected to measure achievement in the English skill areas; (2) the Attitude Scale of the Career Maturity Inventory (CMI), chosen to assess attitudes pertinent to the world of work; and (3) a Semantic Differential, used to measure student perceptions toward their educational experiences. Instruments used in this study may be found in Appendix C. Attendance data for each student were obtained from the permanent records maintained by the school system.

Comprehensive Test of Basic Skills (CTBS)

The CTBS is a series of ten subtests developed to measure skills in the areas of language, arithmetic and study techniques. For the purpose of this study, the testing was confined to subtests one through five, which were designed to measure achievement in the language areas of: (1) vocabulary, (2) reading comprehension, (3) mechanics, (4) expression and (5) spelling. English language skills were selected as the foci for testing of cognitive achievement, as English was the only academic course required of all experimental and control students.

In investigating the literature concerning the validity and reliability data for the CTBS, the Seventh

Mental Measurements Yearbook (edited by Buros, 1972) was reviewed. While this source did not include the needed validity and reliability data for the CTBS, the evaluator, Ahmann of Colorado State University, stated that this instrument should be seriouly considered by those school systems planning to adopt a basic achievement battery. Further investigation for validity and reliability data for the CTBS failed to reveal any reports by independent evaluators. Reliability data was given, however, in the CTBS Technical Bulletin. The McGraw-Hill publishers (1974) reported that the reliability of the CTBS was established by the Kuder-Richardson formula 20 (KR20). Based on a national sample of 10,000 high school students the KR20 reliability coefficients for the CTBS were as follows: subtest 1, vocabulary, $r = .92$; subtest 2, reading comprehension, $r = .91$; subtest 3, mechanics, $r = .78$; subtest 4, expression, $r = .85$; and subtest 5, spelling, $r = .88$.

Validity data was completely omitted from the CTBS Technical Bulletin. In an attempt to explain this omission of validity information from their technical bulletin, the McGraw-Hill publishers (1974:25) stated:

> The final evaluation of the test's validity for a particular school district must be based on that district's own objectives and curriculum.

This lack of validity information was not seen to be a deterrent to the usefulness of the CTBS, because of

the acceptable reliability of the test and its good standing in the educational community. Bucknam (1976) reported that the educational designers and program evaluators at the four educational laboratories funded by NIE to develop EBCE programs, agreed that the CTBS was the best instrument for use in their evaluation programs. This instrument has also been adopted by the West Virginia State Department of Education as the official achievement battery for use in the yearly state-wide testing program. Since the CTBS was adopted by both the EBCE program and the educational program evaluators for the West Virginia State Department of Education, it seemed reasonable to select the CTBS for use in this study.

Career Maturity Inventory (CMI)

The use of the Attitude Scale of the Career Maturity Inventory (CMI) was included in the testing program for the evaluation of the EBCE program in order to measure attitudes pertinent to the world of work. The Attitude Scale of the CMI was determined by Crites (1973) to be applicable to students having at least a sixth grade reading level. The upper limit of the Attitude Scale was determined to be college sophomores and juniors. This range of applicability rendered it suitable for use by the twelth grade subjects in this

study. The CMI was also shown to be equally applicable to males and females.

In their Final Evaluation Report (1974), utilizing EBCE students in the eleventh and twelth grades, the Appalachia Educational Laboratory (1974b) reported that the reliability coefficient of the Attitude Scale of the CMI was r = .67. Although the authors of the AEL report did not describe their procedures for establishing validity, they concluded that the CMI Attitude Scale provided valid data on career maturity. The use of this instrument was, therefore, determined to be useful for assessing the attitudes of the experimental and control groups toward the world of work. Although additional reliability and validity information was sought, none could be found in the latest editions of the Mental Measurements Yearbooks edited by Buros.

Semantic Differential

Osgood (1967) developed a highly sophisticated, but uncomplicated graphic rating technique called the Semantic Differential. This instrument is not a specific test, but rather it is a general technique of measurement. A Semantic Differential consists of a set of concepts, selected by the experimenter, such that each concept is accompanied by a graphic, seven-step scale with bi-polar adjectives at each end. In the process of differentiating

a concept, the subject judges the concept, e.g. instruction in mathematics, against a series of scales. By assigning numbers from one to seven to each of the scale units, it is possible to determine a quantitative value for each concept. This technique, the Semantic Differential, was used to evaluate student attitudes about school experiences.

Attendance Data

In addition to the data derived from the CTBS, CMI, and the Semantic Differential, attendance data for the experimental and control groups were obtained for the first three nine week periods for the 1975-76 academic year and for the same period for the 1974-75 school year. These data were analyzed to determine any correlation between course of study (EBCE or traditional) and attendance, keeping in mind Van Dalen's (1966) warning that correlation between two variables does not imply a cause and effect relationship. It would, however, seem reasonable to assume that a student's interest in his curriculum should be reflected in his rate of attendance.

CONDITIONS OF TESTING

The pretest phase of the testing program was administered to both the control and the experimental groups during the first week of the 1975-76 school year. The testing sessions were held in the respective high

schools and covered a time period of two and one-half hours. These pretesting sessions were conducted prior to student participation in either the EBCE program or the traditional program for the current academic year. Although the groups of students were not tested on the same day, it was assumed that the slight difference in the test date would not be sufficient to cause significant difference in the test scores.

The posttest phase of the testing program was administered during the second week of March 1976. Approximately 125 school days separated the pretest and posttest dates. The relatively early date for post-testing was chosen in order to: (1) minimize the effects of graduation pressures and declining student interest in school during the second semester and (2) avoid conflict with the third nine weeks testing schedules set by the individual schools. Once again the assumption was made that a variation of testing dates would not cause a significant difference in posttesting scores. Although a later posttest date would have permitted longer exposure to both the experimental and the control treatments, it was assumed that the advantage such postponement of the test date might have accomplished would be negated by the aforementioned graduation pressures and declining student interest.

STATISTICAL TREATMENT

The questions described earlier in this chapter were evaluated in the following manner. The posttest mean scores on the five subtests of the CTBS were compared using multivariate analysis of covariance (MANCOVA) with the pretest mean scores of subtests one and two used as the covariates. The univariate analysis of covariance was used to compare the posttest CMI scores for the experimental and control groups with the pretest score as the covariate. Posttest mean scores on the Semantic Differential were compared for the experimental and the control groups using multivariate analysis of covariance with five of the pretest mean scores used as the covariates. Finally, the attendance data for the experimental and control groups were compared by the use of the chi square statistic.

SUMMARY

The evaluation design of this study was utilized in order to obtain the most information possible from the data gathered. Although the non-randomized experimental group prevented experimental control, univariate analysis of covariance and multivariate analysis of covariance techniques facilitated comparison of the experimental (EBCE) group with the control (traditional) group. The subjects from two pilot schools were pretested and

posttested in the cognitive and affective domains by using the Comprehensive Test of Basic Skills, the Attitude Scale of the Career Maturity Inventory, and the Semantic Differential. The attendance data for the first three nine week periods of the 1975-76 school year were compared with the attendance data for the first three nine week periods of the 1974-75 school year for both the control and experimental groups. The comparison of EBCE students and traditional curriculum students was undertaken as an examination of the decision by Kanawha County Schools to include Experience-Based Career Education as an alternative curriculum and as a means of providing information useful to decision-makers considering the EBCE program for incorporation into their school systems.

Chapter 4

ANALYSIS OF DATA

After making the selection of the design for the study and the choice of the data collection techniques, as described in Chapter 3, the data were collected. The data which resulted were analyzed and the findings are reported in this chapter.

STATISTICAL ANALYSES

Upon completion of the pretesting (September, 1975) and posttesting (March, 1976) procedures, as described in Chapter 3, the data were organized and subjected to statistical analyses. The analysis of covariance (ANCOVA) and multivariate analysis of covariance (MANCOVA) were used to evaluate the test data. These covariance procedures were used to control for initial differences on the covariates between the experimental and the control groups. The chi square statistic was used to analyze the attendance data.

PRESENTATION OF THE DATA

The data collected in this study were separated into the following categories corresponding to the

separate analysis used.

1. Achievement in the English skill areas, measured by the five subtests of the Comprehensive Test of Basic Skills (CTBS).
2. Growth in career maturity, indicated by the Attitude Scale of the Career Maturity Inventory (CMI).
3. Perception of educational experience, assessed by the Semantic Differential.
4. Attendance, measured by data gathered from student records maintained by the schools.

Achievement in English Skill Areas

In the analysis of the CTBS data, a preliminary test of the within groups regression coefficients indicated that the regression of the posttest mean scores on only two of the five CTBS subtest pretest mean scores could be considered statistically equal. Therefore, only those two subtests (vocabulary and comprehension) were used as covariates for performing multivariate tests of significance. The test of equality of regression yielded an F value of 1.436 ($p > .05$), indicating that the regression coefficients were not significantly different for the two covariates.

The pretest mean scores, posttest mean scores, adjusted posttest mean scores, univariate F tests, and probabilities are presented in Table 2. There were

Table 2

Pretest and Posttest Means Scores for the Comprehensive Test of Basic Skills (CTBS) and Results of the Univariate F Test

Subtests	Pretest		Posttest		Adjusted Posttest		F	P
	Con.	Exp.	Con.	Exp.	Con.	Exp.		
1. Vocabulary	24.533	27.933	26.000	27.100	27.462	25.638	1.487	0.228
2. Comprehension	28.000	30.867	30.000	31.733	31.615	30.119	1.174	0.283
3. Mechanics	14.766	16.266	17.400	14.033	18.160	13.274	20.970	0.001
4. Expression	17.466	20.266	19.867	19.133	20.771	18.229	4.420	0.040
5. Spelling	18.200	19.766	18.900	18.267	19.720	17.447	2.573	0.114

thirty subjects in both the experimental and control groups.

The multivariate F of 4.923 was significant at the .01 probability level, indicating a difference between the experimental and control (a difference favoring the control) on the five CTBS posttest mean scores when the means were considered simultaneously. Data in Table 2 suggested that two of the CTBS subtests, mechanics and expression, might be responsible for the overall significance found when the multivariate test was conducted. Simultaneous confidence interval tests for the control and experimental mean differences for each of the five subtests were then conducted. These tests indicated that the mechanics and expression subtests were, indeed, responsible for the overall significance of the multivariate test.

Growth in Career Maturity

The potential usefulness of the pretest CMI mean scores as covariates was established by the test of equality of regression, which showed that the slopes were not significantly different. Subsequent analysis of variance produced a p value less than .001 (see Table 3), indicating a significant correlation of posttest scores with pretest scores, justifying the analysis of covariance.

The pretest and posttest data from the Attitude Scale of the Career Maturity Inventory for the thirty

Table 3

Analysis of Covariance on CMI Attitude Scores

	Sum of Squares	df	Mean Square	F	P Less Than
Within cells	904.735	57	15.873	------	-----
Regression	601.698	1	601.698	37.908	0.001
Treatment	42.900	1	42.900	2.703	0.106

Table 4

Pretest and Posttest Mean Scores for the Career Maturity Inventory (CMI) Attitude Scale

Group	CMI Mean Scores		
	Pretest	Posttest	Adjusted Posttest
Experimental	34.867	35.457	35.064
Control	33.467	36.367	36.769

experimental and thirty control subjects were analyzed with univariate analysis of covariance. Using the pretest mean scores as the covariates, the F associated with the adjusted posttest scores was 2.703, which was not significant at the .05 level. The analysis of covariance summary is presented in Table 3.

The experimental and control group pretest, post-test and adjusted posttest mean scores have been presented in Table 4. The $p > .05$, from Table 3, indicated that a comparison of the adjusted posttest mean scores showed there to be no significant difference between the control and experimental groups on growth in career maturity as measured by the Attitude Scale of the CMI.

Perceptions Toward Education

In the analysis of the Semantic Differential data, a preliminary test of the within groups regression coefficients indicated that the regression of the posttest mean scores on only four of the pretest Semantic Differential statement mean scores could be considered statistically equal. Therefore, Semantic Differential statements three, four, eight and ten were used as covariates for performing multivariate tests of significance. The test of equality of regression yielded an F value of 1.381 ($p > .05$), indicating that the regression coefficients were not significantly different

Table 5

Pretest and Posttest Means Scores for the Semantic Differential and Results of the Univariate F Test

Statements Relating to:	Pretest		Posttest		Adjusted Posttest		F	P
	Con.	Exp.	Con.	Exp.	Con.	Exp.		
1. Total School Experience	5.984	5.400	5.667	5.361	5.694	5.335	3.042	.087
2. Student-Teacher Relations	5.822	5.745	5.522	5.834	5.518	5.838	1.683	.200
3. Student-Principal Relations	4.911	4.739	4.600	4.722	4.520	4.802	0.505	.480
4. Required Courses for Students	5.511	5.250	5.101	5.139	5.080	5.159	0.071	.791
5. Elective Courses for Students	5.733	5.823	5.777	5.428	5.770	5.435	1.410	.240
6. Placebo Statement	-----	-----	-----	-----	-----	-----	-----	----

Table 5 (continued)

Statements Relating to:	Pretest		Posttest		Adjusted Posttest		F	P
	Con.	Exp.	Con.	Exp.	Con.	Exp.		
7. Peer Group Relations	6.617	6.122	6.577	6.167	6.561	6.183	3.967	.051
8. Extra-curricular Activities	5.606	5.388	5.645	5.473	5.585	5.532	0.053	.818
9. Guidance Department	5.288	5.739	5.310	5.394	5.292	5.401	0.078	.781
10. Cooperative Decision-Making	5.006	5.494	5.350	5.473	5.383	5.439	0.027	.871

significantly different for the four covariates.

The pretest mean scores, posttest mean scores, adjusted mean scores, univariate F tests and probabilities have been presented in Table 5. The multivariate F of 1.915 was not significant at the .05 level of probability. This indicated that a significant difference between the experimental and the control groups did not exist on any of the Semantic Differential statement posttest scores when considered simultaneously.

Attendance

Attendance data for the thirty experimental group students and the thirty control group students were collected for the first through third nine week periods of the 1975-76 school year. These data were arranged in a frequency table to facilitate calculation of the chi square statistic. The resulting chi square value of .87 indicated that at the .05 level of significance attendance did not depend on the program in which the student enrolled. That is, the attendance of the experimental group was not significantly different from the attendance of the matched control group. Attendance data relevant to the chi square test have been presented in Table 6.

Table 6

Relation Between Attendance and Curriculum (EBCE and Traditional)

	Total Days Absent				
	0-10	11-20	21-30	31-40	Total
EBCE (experimental)	13	10	5	2	30
Traditional (control)	15	7	5	3	30
Total	28	17	10	5	60

SUMMARY

The data collected in this study were analyzed and the results were presented in Chapter 4. The presentation and discussion of the results were facilitated by organizing the data into four categories: (1) achievement in the English skill areas, measured by the five subtests of the CTBS; (2) growth in career maturity, indicated by the Attitude Scale of the CMI; (3) perceptions of educational experiences, assessed by the Semantic Differential; and (4) attendance, measured by data gathered from student records.

Multivariate analysis of covariance tests indicated a significant difference between experimental and control groups on the five CTBS subtest posttest scores when considered simultaneously. Subsequent analysis, using simultaneous confidence interval tests, revealed that the difference was attributable to posttest differences on the mechanics and expression subtests. The differences were in favor of the control group.

The results of the analysis of CMI data revealed there to be no significant difference between the control and experimental groups with respect to growth in career maturity. There was also no significant difference between the control and experimental groups on any of the statements of the Semantic Differential. Analysis of attendance data similarly yielded no significant difference between the experimental and the control groups. Tables were included in the text to present the pertinent statistical information.

Chapter 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The data collected for this study and the subsequent analysis of that data provided the basis for (1) formulating conclusions regarding the questions posed by the study and (2) making recommendations relative to the Experience-Based Career Education Program.

SUMMARY

The purpose of this study was to evaluate the effectiveness of the pilot implementation of the Experience-Based Career Education Program in the traditional high school setting in Kanawha County, West Virginia. Questions to be answered were designed to cover four areas of interest: (1) achievement in basic English skills, (2) growth in career maturity, (3) student attitudes concerning educational experience, and (4) student attendance. The study was conducted to obtain useful information for Kanawha County School officials about the implementation of the EBCE program in the pilot high schools, so as to establish a basis for judgments about the feasibility and advisability of

incorporating the EBCE program on a permanent status.

The literature reviewed was categorized into three classifications: alternative education, career education and Experience-Based Career Education. There is wide diversity among alternative education programs, with the element of choice being the common denominator. Career education, an emerging concept in education, has spawned some alternative programs designed to facilitate student entry into the world of work. Experience-Based Career Education is an alternative career education program designed to permit the student to participate in a variety of careers four days a week, while satisfying academic requirements one day a week at school.

The lack of opportunity for random sampling for the experimental group led to the use of an evaluation design rather than an experimental design. In an evaluation design, the experimenter is freed from the constraint of the "go or no-go" null hypothesis, and can probe his research in a more subjective, but not necessarily less meaningful, manner. The subjects, comprising the experimental and control groups, were tested in three areas: achievement in English skills, growth in career maturity, and perceptions about the educational experience. Attendance data were also

collected for the experimental and the control groups. The test data were evaluated by the statistical techniques of analysis of covariance (ANCOVA) and multivariate analysis of covariance (MANCOVA). The attendance data were analyzed by the use of the chi square statistic.

The data relevant to the study were collected and analyzed. On the Comprehensive Test of Basic Skills (CTBS), a significant difference was found to exist between the control and experimental groups on two (mechanics and expression) of the subtests. The difference was in favor of the control group. Analysis of test data, revealed no significant difference between the experimental and the control groups on the Attitude Scale of the Career Maturity Inventory (CMI). There was also no significant difference between the experimental and the control groups on any of the Semantic Differential statements. Analysis of attendance data yielded no significant difference between the experimental and the control groups.

CONCLUSIONS

The following conclusions were drawn, based on the analysis of the data pertinent to this study:

(1) Students in the EBCE program did not achieve in the comprehensive English skill

areas as well as students in the regular high school program, as measured by the Comprehensive Test of Basic Skills.

(2) Students in the EBCE program exhibited attitudes toward the world of work comparable to the students in the regular high school program, as measured by the Attitude Scale of the Career Maturity Inventory.

(3) Students in the EBCE program exhibited perceptions toward their educational experiences comparable to the students in the regular high school program, as measured by the Semantic Differential.

(4) Students in the EBCE program exhibited an attendance rate comparable to students in the regular high school program, as measured by data reported on student permanent records.

These conclusions would be incomplete without an observation by the researcher concerning the findings of the study. The conclusions presented in this study were based on the Experience-Based Career Education program as it existed in its first year of operation in the two pilot high schools utilized. The EBCE staff's lack of

experience with the program could have had a deleterious effect upon the implementation and effectiveness of the Experience-Based Career Education Program. Although possibly hindered by inexperience, the pilot implementation of the EBCE program did negate the concerns of the Appalachia Educational Laboratory about the feasibility of housing such an alternative program in a traditional high school setting.

Even though this study was designed to utilized test instruments of recognized predictive value, there are many subjective qualities inherent in program evaluation which cannot be measured quantitatively. There is the possibility that it is these subjective qualities which provide far-reaching, if unmeasurable, benefits for the EBCE student.

Aside from these considerations of newness of the EBCE program and the inexperience in program implementation, the evidence provided by this study indicates a lack of program impact upon the EBCE students. Although the EBCE program of alternative education was chosen by the participants, they were not positively affected by program participation. Whether this lack of program impact was an indictment of student, program or program implementation, is a question neither posed nor answered by this study.

RECOMMENDATIONS

The following recommendations have been formulated as a result of this study.

(1) That the Department of Research and Evaluation of the Kanawha County School System create instrumentation suitable for evaluating the impact of the EBCE program upon the student's career maturity.

(2) That a longitudinal study of EBCE graduates be implemented by the Kanawha County School System in order to evaluate the long term, subjective effects of EBCE upon career choice and satisfaction.

(3) That an in-depth program be designed to be implemented by the learning coordinators to foster the student's development in career education. As the program is presently implemented, the student's growth in career maturity is essentially derived from his experiences at the career site alone.

(4) That a well developed method for maintaining attendance records at the job site be designed and implemented, in order to better document student participation. The present

once-weekly visit by the learning coordinator and the often nonexistent records kept by the career site supervisor are inadeguate for this purpose.

(5) That growth in career maturity be enhanced by requiring the EBCE students to select at least three separate careers for exploration. As the program is currently implemented, the student is permitted to restrict himself to only one type of career exploration, thereby reducing his chances for gaining a diversity of career information.

(6) That the academic portion of the EBCE program be strengthened by (1) reducing the career exploration segment of the program to one half day, with the other half day spent in academic work within the traditional high setting and program, or (2) scheduling the student for a specified number of weeks of career exploration with an equal number of weeks of academic work in school, under the direction of the learning coordinator or the regular school staff.

REFERENCES

REFERENCES

Allen, Harvey A. 1974. Alternatives in education: A bibliography. Clearing House. 48, April, 491-496.

American Association of School Administrators. Undated. Career education: A guide for school administrators. Arlington, Virginia.

Anderson, B. Robert. 1973. Where the responsibility is on the kids. School management. 17:6, November/December, 27-29, 32.

Appalachia Educational Laboratory, Inc. 1975. The community is the school. Charleston, West Virginia.

_____. 1973. Final report by the Appalachia Educational Laboratory to the Career Education Program Staff National Institute of Education. Contract #OEC-3-7-062909-3070, Amendment 15, October.

_____. 1974a. EBCE director or operations manual. Charleston, West Virginia.

_____. 1974b. Interim evaluation report (EBCE). Charleston, West Virginia.

_____. 1974c. Operational plan: Fiscal year 1975. Charleston, West Virginia.

_____. 1974d. The report of the External Site Review Team on the Appalachia Educational Laboratory School. Charleston, West Virginia.

Ballantine, Harden. 1974. Free schools - Threatened by success? Educational leardership. 32:2, November, 95-98.

Ban, John R. 1975. A semi-alternative program as an avenue of change. School and community. 61, January 16.

Barnette, Lawrence J. 1972. Employer-based career education: A new alternative. Urban review. March, 36-41.

_____. 1974. Career education: Program on a white horse. Education digest. 40:1, September, 21-24.

Bell, James W. 1974. Open education: Are high schools buying it? The clearing house: A journal for modern junior and senior high schools. 48:6, February, 332-337.

Benet, James. 1974. Alum Rock, Calif. - In the beginning. The journal of the institute for responsive education. 1:2, Spring, 5.

Bremer, John and Michael von Moschzisker. 1971. The school without walls: Philadelphia's Parkway Program. New York: Holt, Rinehart, and Winston.

Bucknam, Ronald B. 1976. The impact of EBCE - An evaluator's viewpoint. Illinois career journal. (scheduled for Summer publication).

Burdin, Joel L. 1973. Career education: Another illusion or opportunity? Journal of teacher education. 24:2, Summer, 82-83.

Bureau of Vocational, Technical and Adult Education. 1974. A guide for the development of career education. 2d. ed. Chas.,W.Va.: W. Va. State Depart. of Ed., June.

Buros, Oscar K. 1972. The seventh mental measurements yearbook. 7th ed. Highland Park, N.J.: Gryphon Press.

California Test Bureau. 1974. Comprehensive Test of Basic Skills - Technical Bulletin No. 1. expanded ed. Monterey, California: McGraw-Hill, Inc.

Campbell, Donald T. and Julian C. Stanley. 1968. Experimental and quasi-experimental designs for research. Chicago: Rand McNally and Company.

Career Project Staff. 1974. Raleigh County research and development project in career education. Beckley, W.Va.: Raleigh County Board of Education, March.

Chenault, Joann. 1974. Monographs on career education: Career education and human services. Washington: U.S. Department of Health, Education, and Welfare.

Crites, John O. 1973. Career maturity inventory. Monterey, California: McGraw-Hill, Inc.

Daniels, Harvey A. 1974. Is the new C.E. the answer? Education digest. 39:7, March, 24-25.

Dolce, Carl J. 1975. A critical analysis of career education. The journal of career education. Summer, 4-16.

Duplisea, Eric A. 1974. America's success syndrome. American vocational journal. 49:9, December, 22-24.

Fantini, Mario D. 1973 a. Education by choice. NASSP bulletin. 57, September, 10-19.

_____. 1973b. Public schools of choice. New York: Simon and Schuster.

_____. 1973c. The what, why, and where of the alternatives movement. The national elementary principal. 52:6, April, 14-27.

_____. 1974. Alternative educational programs: Promise or problems? Educational leadership. 32:2, November, 83-87.

Faris, Gerald. 1974. Alternative schools: Looking for teeth in L.A. The journal of the institute for responsive education. 1:2, Spring, 8-9.

Finch, Curtis R. and N. Allan Sheppard. 1975. Career education is not vocational education. The journal of career education. 2:1, Summer, 37-46.

Finkelstein, Leonard B. 1973a. Implementation: Essentials for success. NASSP bulletin. 57, September, 39-41.

_____. 1973b. The Philadelphia story. The national elementary principal. 52:6, April, 99-101.

Foster, Lillian. 1972. The outside world is in. Saturday review. June 24, 40-45.

Freire, Paulo. 1970. Pedagogy of the oppressed. Translated by Myra Bergman Ramos. New York: Herder and Herder.

Fruehling, Donald L. 1974. A call for leadership in career education. Business education forum. 28:8, May, 29-30.

Gallup, George H. 1976. Public attitudes toward education. The education digest. 41:7, March, 2-6.

Gibbons, Anne R. 1974. Facilitating the transition to adulthood. American education. 9, June, 35-36.

_____, and Abigail Antuna. 1974. NIE pilots in career education. American education. 9, October, 34-35.

Glatthorn, Allan. 1973. Decision-making in alternative schools. NASSP bulletin. 57, September, 110-119.

Goldhammer, Keith. 1974. Extending career education beyond the schoolhouse walls. Columbus: Center for Vocational and Technical Education.

Goodman, Paul. 1973. Freedom and learning: The need for choice. The national elementary principal. 52:6, April, 38-42.

_____. 1964. Compulsory mis-education. New York: Horizon Press.

Grimes, Richard. 1975. Vo-Ed business booming. Charleston daily mail. Charleston, W.Va., July 16, 1B, Col. 1-2.

Grubb, W. Norton and Marvin Lazerson. 1976. Continuities and fallacies in career education. The education digest. 41:7, March, 7-11.

Hilderbrand, John A. and others. 1974. Final evaluation report (EBCE). Edited by Debbie Evans. Charleston, W.Va.: Appalachia Educational Laboratory, Inc., September.

Hopkins, Richard. 1974. Security and freedom for children. Intellect. 103, October, 32-33.

Hoyt, Kenneth B. 1974a. Career education: A crusade for change. Address presented to the Nebraska School Boards Association, Lincoln, Nebraska, November 14.

_____. 1974b. An introduction to career education: A policy paper of the U.S. Office of Education. DHEW Publication No. (OE) 75-00504, U.S. Department of Health, Education, and Welfare.

_____. 1974c. The linkage of education with the world of work and career development. Address presented to the Governor's Conference on Human Resources Development, Austin, Texas, November 19.

_____. 1975. Career education: What's doable now? Address presented to the Sacramento (California) Career Education Conference, August 29.

_____. 1976. Career education and work experience education: Can we join together? Address presented to the Western Association of Cooperative and Work Experience Educators, Las Vegas, Nevada, February 7.

Hruska, Jack. 1974. The spillover effects of career education. Clearing house. 48:6, February, 347-351.

Hutchins, Robert C. 1974. School options in Philadelphia: Their present and future. Educational leadership. 32:2, November, 88-91.

Illich, Ivan. 1972. Deschooling society. New York: Harper and Row.

Irwin, Martha and Wilma Russell. 1971. The community is the classroom. Michigan: Pendall Publishing Company.

Isaac, Stephen. 1971. Handbook in research and evaluation. San Diego: Robert R. Knapp

Jones, Rolland W. 1974. We move toward options in schooling. Educational leadership. 32:2, November, 92-94.

Kerlinger, Fred N. 1973. Foundations of behavioral research for better schools career education program. Philadelphis, Penn.: Career Education Program Research for Better Schools Inc.

Lindley, Patricia F. 1976. How much do you know about vocational education? The Delta Kappa Gamma bulletin.

Macchia, Marilyn F. 1975. Career education-focal point for change. Education digest. 40:8, April, 7-9.

Marland, Sidney P. 1971. Career education now. NASSP bulletin. 55, May, 1-11, cited from a speech given at the 1971 Convention of the National Association of Secondary School Principals, Sam Huston Coliseum, Huston, Texas, Saturday, January 23, 1971, 10:00 a.m.

_____. 1974. Career education: A proposal for reform. New York: McGraw-Hill Book Company.

_____, and others. 1975. Career education Texas style: The Skyline Center in Dallas. Phi Delta Kappan. 56:9, May, 616-620.

Mathieson, Moira B. 1973. Can career education save America? Journal of teacher education. 24:2, Summer, 156-159.

McClure, Larry and Carolyn Buan. (Eds.). 1973. Essays on career education. Portland, Oregon: Northwest Regional Educational Laboratory.

Morris, John E. 1973. Issues in career education. The clearing house: A journal for modern junior and senior high schools. 48:1, September, 32-36.

Moullette, John B. 1972. New philosophies, renewed efforts, and improved strategies for career education. Journal of career education. 1:1, Fall, 11-19.

Mouly, George J. 1970. The science of educational research. New York: Van Nostrand Reinhold Company.

Mulcahy, Gene. 1973. Shanti - the formation of a public alternative school. The new schools exchange newsletter. No. 105, November, 4-5.

NASSP Curriculum Report. 1975. EBCE: A design for career education. 4:3, February.

National Advisory Council For Career Education. 1975. Interim report with recommendations for legislation. Washington: U.S. Government Printing Office, November.

National Institute of Education. 1974. Career education program - Plan for fiscal year 1975. Washington: U.S. Department of Health, Education, and Welfare.

_____. 1975a. Career counseling for adults: An overview of home- and community-based career education project. Washington: U.S. Department of Health, Education, and Welfare.

_____. 1975b. The community is the teacher. Washington: U.S. Department of Health, Education, and Welfare.

Newsome, George L. 1975. Career education: It's meaning and rationale. Journal of career education. 1:3, Winter, 9-13.

Olson, LeVene A. 1974. A study of elementary and secondary career education in Lincoln County. Huntington, W. Va.: Marshall University, January.

Osgood, Charles E. and others. 1957. The measurement of meaning. Urbana, Chicago: University of Illinois Press.

Palmer, Ronald. 1974. VOC ED: Passed over by time. Clearing house. 48, March, 427-431.

Passow, A. Harry. 1975. Reforming America's high schools. The education digest. 41:2, October, 2-5.

Perryman, Bruce C. 1975. Testimony before the Appropriations Subcommittee, State, Justice, Commerce, and Judiciary, House of Representatives, John M. Slack, Chairman, May 20.

Peterson, James A. and Dick Park. 1975. Values in career education: Some pitfalls. Phi Delta Kappan. 56:9, May, 621-623.

Pinkney, Irving. 1971. Work-study for potential drop-outs. NASSP bulletin. 55, April, 46-54.

Public Law 93-380, 93rd Congress, U.S.C. 1865, Sec. 406, August 21, 1974. 69-71.

Pugh, Nathaniel Jr. 1972. The human element of alternative education. NASSP bulletin. 56, May, 111-115.

Reider, Corrine H. 1974. Education and work: A NIE priority. Journal of research and development in education. 7, Spring, 110-118.

_____. 1975. Telephone conversation. November 20.

Roel, Ronald. 1974. Vouchers in New Hampshire: A state puts its people to the test. The journal of the institute for responsive education. 1:2, Spring, 3-4, 15.

Ryan, Charles W. 1973. Career development: Cooperation is catching on. American vocational journal, 48:8, November, 36-38.

Shaw, Jane S. 1975. The new conservative alternative. Nation's schools and colleges. 2:2, February, 31-39.

Smith, Vernon H. 1975. Alternative public schools. Education digest. 41, December, 2-4.

Smoker, David S. 1974. Career education: Current trends in school policies and programs. Arlington, Virginia. National School Public Relations Association.

Stufflebeam, Daniel L., and others. 1971. Phi Delta Kappa National Study Committee on Evaluation. Educational evaluation and decision making. Itasca, Illinois: F. E. Peacock Publishers, Inc.

Task Force on Secondary Schools. 1975. This we believe. National Association of Secondary School Principals, Reston, Virginia.

Toffler, Alvin. 1970. Future Shock. New York: Random House.

U. S. Congress. 1974a. Conference report on education ammendments of 1974. Hearing, 93rd Congress. Washington: Government Printing Office, July 22, 175.

_____. 1974b. Report of the Committee on Labor and Public Welfare on S. 1539. Hearing, 93rd Congress. Washington: Government Printing Office, March 28, 74-76.

U. S. Department of Health, Education, and Welfare. 1972. Career education. No. HE 5.280:80075. Washington: Government Printing Office.

U. S. Office of Career Education. 1974. Career education: The state of the scene. Washington: U.S. Office of Education.

Van Dalen, Deobold B. 1966. Understanding educational research. New York: McGraw-Hill Book Company.

Watson, Douglas. 1972. Alternative schools: Pioneering districts create options for students. Arlington, Va. National School Public Relations Association.

Weldy, Gilbert R. 1975. Just imagine! The high school of 1980. The clearing house: A journal for modern junior and senior high schools. 49:3, November, 118-121.

West Virginia Department of Education. Undated. Career education: A policy paper of the Department of Education. Charleston, W.Va.: West Virginia Department of Education.

APPENDIX A

LETTERS OF STUDY APPROVAL FROM KANAWHA COUNTY SCHOOLS

KANAWHA
COUNTY
SCHOOLS

200 Elizabeth Street, Charleston, West Virginia 25311
Telephone 304 348-7770
John F. Santrock, Superintendent

August 8, 1975

Miss Marsha Carey
Post Office Box 9068
South Charleston, West Virginia

Dear Miss Carey:

As an administrator of Kanawha County Schools, it has been my privilege to work with you in your many experiences as a teacher, supervising teacher, Clinical Professor, and Vice Principal. It is particularly pleasing to me that you have continued to pursue higher educational goals.

As Superintendent of the Kanawha County School System, I strongly support your efforts as you work to complete your requirements for your doctorate degree at Virginia Polytechnic Institute and State University. The subject you have chosen for your dissertation, "A Comparison of Certain Characteristics of Experience Based Career Education Students and Students in a Traditional High School Academic Program," is most appropriate and should be most meaningful, not only to the Kanawha County School System, but nationwide.

I am sure members of the Kanawha County staff will be most cooperative in this important endeavor you are undertaking. Congratulations on your achievements, and we all extend our best wishes for your success as you obtain your doctorate.

If I or any member of my staff may be of assistance to you, please do not hesitate to communicate with us.

Sincerely yours,

John F. Santrock
Superintendent of Schools

JFS/bje

KANAWHA
COUNTY
SCHOOLS

200 Elizabeth Street, Charleston, West Virginia 25311 Telephone 304 348-7770
John F. Santrock Superintendent

August 27, 1975

Miss Marsha Carey, Vice Principal
St. Albans High School
Kanawha Terrace & Hudson Street
St. Albans, West Virginia

Dear Marsha:

Permission has been granted for you to provide evaluation and research data for the EBCE Programs at South Charleston and Stonewall. This is of course contingent on the approval of the principals of the respective schools. The committee has reviewed the instruments and consider it an "internal" evaluation. May I further suggest that you stress with the participants in the "controlled" group that this is a voluntary effort on their part and that parents be notified of their participation.

If I can be of further assistance, please let me know.

Sincerely yours,

Fred

Fred Radabaugh
Assistant Superintendent
Department of Pupil
Personnel Support

FR:bbd

APPENDIX B

TABLES SUMMARIZING STUDENT DEMOGRAPHIC INFORMATION AND TEST DATA

Table 7

Summary of Student Demographic Data for the Experimental Group

Subject	Sex	Grade Level	GPA	School Attended
1	M	12	2.8	So. Chas.
2	M	12	2.8	So. Chas.
3	F	12	2.0	So. Chas.
4	F	12	1.9	So. Chas.
5	M	12	1.0	So. Chas.
6	F	12	2.3	So. Chas.
7	F	12	1.8	So. Chas.
8	F	12	1.7	So. Chas.
9	M	12	1.4	So. Chas.
10	M	12	1.0	So. Chas.
11	M	12	1.5	So. Chas.
12	M	12	1.5	So. Chas.
13	M	12	2.2	So. Chas.
14	M	12	3.2	So. Chas.
15	F	12	2.0	Stonewall
16	M	12	3.0	Stonewall
17	M	12	1.8	Stonewall
18	F	12	1.8	Stonewall
19	F	12	2.6	Stonewall
20	M	12	2.6	Stonewall
21	F	12	1.7	Stonewall
22	F	12	1.5	Stonewall
23	F	12	1.8	Stonewall
24	M	12	2.5	Stonewall
25	M	12	1.7	Stonewall
26	M	12	1.7	Stonewall
27	M	12	1.6	Stonewall
28	M	12	1.7	Stonewall
29	F	12	2.3	Stonewall
30	F	12	1.3	Stonewall

Table 8

Summary of Student Demographic Data for the Control Group

Subject	Sex	Grade Level	GPA	School Attended
1	M	12	2.7	So. Chas.
2	M	12	2.8	So. Chas.
3	F	12	2.0	So. Chas.
4	F	12	1.9	So. Chas.
5	M	12	1.0	So. Chas.
6	F	12	2.3	So. Chas.
7	F	12	1.8	So. Chas.
8	F	12	1.7	So. Chas.
9	M	12	1.5	So. Chas.
10	M	12	1.0	So. Chas.
11	M	12	1.5	So. Chas.
12	M	12	1.5	So. Chas.
13	M	12	2.2	So. Chas.
14	M	12	3.2	So. Chas.
15	F	12	1.9	Stonewall
16	M	12	3.0	Stonewall
17	M	12	1.9	Stonewall
18	F	12	1.8	Stonewall
19	F	12	2.7	Stonewall
20	M	12	2.6	Stonewall
21	F	12	1.7	Stonewall
22	F	12	1.5	Stonewall
23	F	12	1.7	Stonewall
24	M	12	2.4	Stonewall
25	M	12	1.7	Stonewall
26	M	12	1.7	Stonewall
27	M	12	1.5	Stonewall
28	M	12	1.8	Stonewall
29	F	12	2.3	Stonewall
30	F	12	1.5	Stonewall

Table 9

Summary of the Raw Scores Achieved by Experimental Subjects on the CTBS: Pretest and Posttest

	SUBTESTS									
	CTBS-1*		CTBS-2**		CTBS-3***		CTBS-4****		CTBS-5*****	
Subject	Pre Test	Post Test	Pre Test	Post Test	Pre Test	Post Test	Pre Test	Post Test	Pre Test	Post Test
1	33	33	38	44	21	21	26	26	25	26
2	35	36	38	42	22	21	26	28	26	25
3	28	28	37	41	20	22	21	25	25	23
4	34	38	28	32	13	10	26	25	17	22
5	29	30	34	36	14	15	22	25	11	11
6	30	36	39	39	22	23	26	29	26	27
7	17	13	25	22	12	08	14	11	21	20
8	32	31	32	37	16	19	21	23	24	28
9	28	33	22	30	16	16	22	17	19	25
10	38	30	25	40	14	18	18	20	15	20
11	35	23	20	28	13	10	17	16	19	14
12	14	14	18	12	07	04	15	07	15	12
13	34	32	32	31	16	20	19	19	21	19
14	35	37	42	43	25	21	25	25	27	27
15	25	26	30	29	13	06	16	06	05	08

*CTBS1--Reading Vocabulary
**CTBS2--Reading Comprehension
***CTBS3--Mechanics of Language
****CTBS4--Language Expression
*****CTBS5--Language Spelling

Table 9 (continued)

	SUBTESTS									
	CTBS-1*		CTBS-2**		CTBS-3***		CTBS-4****		CTBS-5*****	
Subject	Pre Test	Post Test	Pre Test	Post Test	Pre Test	Post Test	Pre Test	Post Test	Pre Test	Post Test
16	34	31	40	37	15	08	25	07	17	07
17	32	28	40	41	17	16	24	26	21	22
18	27	23	19	24	10	10	16	22	23	23
19	28	29	29	35	19	16	20	18	23	20
20	27	25	32	32	19	16	23	22	20	21
21	38	39	40	41	19	20	28	24	23	23
22	14	06	29	10	18	01	21	10	24	04
23	23	21	32	36	13	12	23	21	27	17
24	09	09	15	10	16	06	07	09	09	05
25	32	31	33	37	14	18	24	24	17	23
26	28	30	32	30	12	17	17	21	16	15
27	27	29	34	40	20	15	16	21	19	23
28	31	34	36	34	21	17	17	17	13	16
29	15	28	26	25	17	07	17	19	22	14
30	26	10	29	14	14	08	16	11	23	08

*CTBS1--Reading Vocabulary
**CTBS2--Reading Comprehension
***CTBS3--Mechanics of Language
****CTBS4--Language Expression
*****CTBS5--Language Spelling

Table 10

Summary of the Raw Scores Achieved by Control Subjects on the CTBS: Pretest and Posttest

	SUBTESTS									
	CTBS-1*		CTBS-2**		CTBS-3***		CTBS-4****		CTBS-5*****	
Subject	Pre Test	Post Test	Pre Test	Post Test	Pre Test	Post Test	Pre Test	Post Test	Pre Test	Post Test
1	35	37	41	40	20	21	25	24	25	20
2	36	37	41	40	20	21	23	27	25	27
3	36	35	41	35	24	21	27	26	26	25
4	20	18	18	15	16	19	17	21	19	19
5	12	14	14	15	14	05	10	08	05	08
6	25	34	31	32	12	18	16	26	17	22
7	10	09	18	15	08	11	14	10	09	10
8	26	30	31	38	15	19	20	22	23	28
9	34	23	31	30	14	15	18	17	13	18
10	35	13	39	33	22	15	11	22	13	15
11	29	31	29	35	19	20	11	23	24	22
12	16	15	20	18	17	18	19	16	17	21
13	28	34	40	38	20	23	24	26	26	25
14	36	37	41	39	23	24	27	26	29	27
15	12	15	20	09	14	07	10	04	12	07

*CTBS1--Reading Vocabulary
**CTBS2--Reading Comprehension
***CTBS3--Mechanics of Language
****CTBS4--Language Expression
*****CTBS5--Language Spelling

Table 10 (continued)

	SUBTESTS									
	CTBS-1*		CTBS-2**		CTBS-3***		CTBS-4****		CTBS-5*****	
Subject	Pre Test	Post Test	Pre Test	Post Test	Pre Test	Post Test	Pre Test	Post Test	Pre Test	Post Test
16	29	34	35	38	17	18	17	23	24	22
17	35	35	32	36	15	22	21	25	23	21
18	35	37	41	41	21	22	23	25	22	21
19	33	38	38	43	22	22	25	25	28	25
20	28	32	25	34	05	19	06	21	13	22
21	20	17	22	22	07	15	17	16	15	09
22	17	25	26	33	10	17	17	21	15	17
23	17	20	29	34	10	21	17	18	19	19
24	36	39	34	38	10	20	25	26	29	28
25	12	14	12	19	14	20	10	13	13	14
26	20	22	15	23	05	12	10	12	04	11
27	08	23	15	21	08	10	07	17	10	20
28	23	26	12	29	15	19	09	23	07	20
29	16	15	27	32	17	18	15	18	17	17
30	17	21	22	25	09	10	11	15	10	07

*CTBS1--Reading Vocabulary
**CTBS2--Reading Comprehension
***CTBS3--Mechanics of Language
****CTBS4--Language Expression
*****CTBS5--Language Spelling

Table 11

Summary of Raw Scores Achieved by the Control and Experimental Subjects on the CMI Attitude Scale: Pretest and Posttest

Experimental Group			Control Group		
Subject	Pre Test	Post Test	Subject	Pre Test	Post Test
1	35	37	1	34	38
2	33	38	2	40	40
3	37	35	3	40	36
4	34	43	4	39	38
5	27	28	5	31	36
6	37	40	6	36	39
7	39	42	7	23	26
8	38	36	8	35	39
9	30	35	9	36	39
10	32	31	10	33	38
11	30	40	11	36	37
12	38	40	12	37	41
13	36	38	13	40	41
14	44	42	14	39	41
15	38	31	15	25	34
16	35	35	16	40	43
17	36	39	17	37	35
18	31	35	18	43	40
19	37	36	19	41	38
20	33	28	20	24	31
21	37	36	21	34	31
22	34	36	22	32	38
23	34	32	23	34	30
24	33	29	24	27	36
25	33	39	25	18	22
26	32	40	26	25	30
27	43	44	27	15	32
28	34	25	28	36	41
29	35	27	29	37	42
30	31	27	30	37	39

Table 12

Summary of the Raw Scores Achieved by Experimental Subjects on the Semantic Differential: Pretest

	CONCEPTS*								
Subj.	1	2	3	4	5	7	8	9	10
1	6.50	7.00	6.50	6.00	6.67	7.00	6.00	7.00	7.00
2	3.50	5.67	4.00	5.00	6.00	2.17	6.00	7.00	6.00
3	6.17	5.17	3.83	4.50	5.67	7.00	4.83	5.17	4.00
4	5.00	5.67	4.17	5.00	6.00	7.00	6.00	5.00	4.50
5	4.00	4.67	3.00	3.50	4.17	5.33	4.33	5.33	5.00
6	5.83	5.17	4.33	5.33	5.67	7.00	6.67	7.00	5.50
7	5.83	7.00	2.83	7.00	6.67	7.00	7.00	7.00	3.83
8	4.67	4.83	4.33	4.67	5.17	5.17	5.00	5.00	5.17
9	3.83	3.83	3.67	3.67	3.83	4.33	4.00	4.00	3.33
10	4.67	5.00	2.83	5.33	6.17	7.00	3.00	2.33	5.17
11	4.33	4.00	3.50	3.50	2.83	4.17	4.33	4.33	3.67
12	5.17	5.83	5.00	6.17	5.67	6.83	5.83	4.67	5.17
13	3.67	5.50	3.00	2.67	6.17	4.67	4.17	1.83	4.50
14	6.00	6.83	5.00	4.83	5.83	5.17	6.67	7.00	4.83
15	5.83	6.17	6.17	5.33	4.67	7.00	4.00	6.83	7.00
16	5.00	7.00	4.17	3.83	5.83	6.67	4.00	4.17	5.83
17	6.67	7.00	7.00	5.83	7.00	6.67	7.00	7.00	6.33
18	6.00	7.00	4.00	6.00	7.00	7.00	7.00	7.00	7.00
19	6.83	7.00	4.83	6.50	6.83	6.33	6.00	7.00	7.00
20	5.17	5.67	6.00	3.50	5.17	6.17	6.17	5.83	2.33
21	6.00	3.67	2.50	6.33	6.83	7.00	6.33	6.33	5.33
22	4.67	5.33	4.33	4.67	4.83	6.33	5.33	5.00	5.17
23	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
24	5.17	4.83	5.00	5.50	5.33	6.50	5.00	6.00	6.00
25	5.50	5.33	4.17	5.17	5.83	5.83	4.83	5.00	5.17
26	5.83	7.00	7.00	6.33	6.50	7.00	6.83	7.00	7.00
27	7.00	6.83	6.50	7.00	6.50	7.00	6.00	6.83	7.00
28	5.83	6.67	4.00	6.50	6.67	6.83	5.00	5.67	5.67
29	5.00	4.17	7.00	4.50	6.50	4.17	1.00	6.17	7.00
30	5.33	5.50	6.50	6.33	5.67	6.33	6.33	6.67	6.33

*CONCEPTS:

1--total school relations
2--student-teacher relations
3--student-principal relations
4--required courses
5--elective courses
6--placebo; omitted
7--peer group relations
8--extra-curricular programs
9--guidance department
10--cooperative decision-making

Table 13

Summary of the Raw Scores Achieved by Experimental Subjects on the Semantic Differential: Posttest

	CONCEPTS*								
Subj.	1	2	3	4	5	7	8	9	10
1	6.17	6.83	6.83	6.00	6.00	7.00	6.00	6.33	6.00
2	5.17	5.00	4.00	5.00	5.17	4.83	5.00	4.00	4.00
3	5.83	6.00	4.00	6.00	6.33	7.00	5.00	5.17	5.17
4	4.83	4.67	4.00	4.50	4.00	5.00	4.50	4.33	4.00
5	5.33	5.50	1.33	5.50	4.50	7.00	4.67	5.50	5.33
6	6.17	6.33	4.00	4.50	4.33	7.00	5.83	7.00	5.50
7	4.33	7.00	7.00	7.00	6.00	7.00	7.00	7.00	7.00
8	5.83	5.67	7.00	5.83	6.17	5.50	5.33	5.83	6.17
9	5.67	5.67	5.83	4.67	5.00	5.50	4.67	6.67	4.67
10	5.00	6.50	3.83	4.17	5.17	6.50	5.00	5.50	5.17
11	4.33	4.83	4.00	4.33	6.00	6.17	5.17	4.00	4.00
12	6.00	6.17	4.00	5.83	6.17	6.67	6.00	6.00	6.00
13	4.50	5.17	3.17	4.00	6.00	6.00	6.17	3.33	4.83
14	6.17	7.00	6.83	5.83	6.00	5.83	6.83	6.00	6.00
15	4.50	4.50	4.00	4.17	4.83	5.00	4.67	4.50	4.17
16	4.33	5.00	4.00	3.50	5.83	5.67	6.17	4.33	4.00
17	5.83	6.83	6.00	6.67	7.00	6.83	6.50	7.00	7.00
18	4.67	5.67	3.83	4.83	2.33	5.50	4.83	1.83	1.83
19	6.50	7.00	5.00	7.00	7.00	7.00	7.00	7.00	7.00
20	5.33	5.83	7.00	2.83	3.00	7.00	7.00	7.00	6.67
21	3.50	3.17	2.33	4.33	6.00	6.00	6.00	5.00	5.00
22	5.67	5.83	5.17	5.67	5.83	7.00	6.50	6.83	6.67
23	5.17	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00
24	5.00	6.00	6.00	6.00	6.00	5.50	6.00	6.00	6.00
25	6.00	6.17	5.00	5.67	6.00	6.50	3.00	6.00	6.00
26	6.83	7.00	7.00	6.67	7.00	7.00	6.17	7.00	7.00
27	5.67	5.67	6.00	5.50	6.00	7.00	5.50	5.00	6.00
28	5.17	5.17	1.33	5.33	5.67	7.00	5.67	6.33	6.33
29	5.67	6.33	3.17	2.83	2.00	4.00	2.50	1.83	6.67
30	5.67	6.50	4.00	4.00	5.50	5.00	4.50	4.50	4.50

*CONCEPTS:

1--total school relations
2--student-teacher relations
3--student-principal relations
4--required courses
5--elective courses
6--placebo; omitted
7--peer group relations
8--extra-curricular programs
9--guidance department
10--cooperative decision-making

Table 14

Summary of the Raw Scores Achieved by Control Subjects on the Semantic Differential: Pretest

	CONCEPTS*								
Subj.	1	2	3	4	5	7	8	9	10
1	6.17	6.50	5.17	5.50	4.67	6.33	6.33	7.00	6.33
2	5.50	5.17	5.17	5.50	6.50	6.50	6.17	5.33	6.00
3	6.33	5.33	5.33	5.33	6.83	6.67	5.00	2.00	1.17
4	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
5	6.00	5.00	6.00	4.00	7.00	6.00	5.00	5.00	4.00
6	5.50	4.00	4.17	4.00	6.67	7.00	5.33	5.83	6.17
7	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
8	7.00	7.00	7.00	7.00	2.00	7.00	7.00	7.00	7.00
9	4.83	4.33	3.17	4.00	3.33	5.17	5.50	3.17	3.33
10	2.67	4.67	4.00	4.00	5.83	7.00	3.50	5.50	4.50
11	4.67	4.17	4.00	3.83	5.00	7.00	4.33	4.00	4.00
12	7.00	7.00	4.00	6.00	7.00	6.00	6.00	1.00	1.00
13	5.00	4.83	6.50	5.50	4.83	5.50	1.00	1.83	1.67
14	6.00	5.17	4.00	5.17	5.33	6.33	5.50	4.00	4.00
15	6.00	6.00	4.67	6.17	6.00	6.50	5.00	6.00	6.00
16	5.83	5.83	4.00	4.83	5.17	6.50	4.17	5.00	3.50
17	5.17	5.83	4.00	5.33	4.00	6.67	6.00	6.83	4.00
18	6.33	6.00	1.00	6.00	6.00	7.00	4.00	4.00	4.00
19	5.83	4.67	1.83	5.33	4.83	6.50	7.00	7.00	5.67
20	6.33	6.00	6.33	7.00	7.00	5.67	7.00	6.00	6.67
21	6.67	7.00	7.00	6.33	6.83	7.00	7.00	7.00	7.00
22	6.67	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
23	6.17	6.17	6.00	6.67	6.83	7.00	7.00	7.00	7.00
24	7.00	6.33	6.00	6.00	4.50	6.83	5.83	4.33	4.17
25	7.00	7.00	4.17	5.17	4.00	7.00	5.67	4.00	5.00
26	4.67	5.17	3.50	4.33	6.67	7.00	5.00	4.50	4.00
27	6.83	7.00	4.83	7.00	5.83	7.00	4.00	4.00	4.00
28	7.00	6.00	5.00	4.00	6.00	7.00	6.17	6.83	6.00
29	6.67	7.00	6.17	7.00	7.00	6.50	7.00	7.00	7.00
30	4.67	4.50	3.33	3.33	5.33	6.83	5.67	6.50	6.00

*CONCEPT:

1--total school relations
2--student-teacher relations
3--student-principal relations
4--required courses
5--elective courses
6--placebo; omitted
7--peer group relations
8--extra-curricular programs
9--guidance department
10--cooperative decision-making

Table 15

Summary of the Raw Scores Achieved by Control Subjects on the Semantic Differential: Posttest

	CONCEPTS*								
Subj.	1	2	3	4	5	7	8	9	10
1	5.83	5.17	4.50	6.33	5.33	6.83	6.00	6.83	5.00
2	5.50	5.50	5.33	5.17	6.33	6.33	6.00	5.33	5.67
3	5.17	6.17	2.17	4.33	7.00	6.50	6.67	1.00	1.00
4	6.50	6.50	3.33	6.17	6.33	7.00	6.00	5.83	5.83
5	5.17	5.50	4.17	4.50	4.00	7.00	5.50	4.83	4.83
6	6.33	5.00	3.00	4.17	6.00	6.50	6.33	5.17	4.17
7	5.83	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
8	7.00	6.00	6.00	5.00	6.00	7.00	5.00	6.00	6.00
9	6.67	4.83	5.83	4.50	4.83	7.00	7.00	6.00	5.17
10	6.17	5.83	1.00	6.33	6.67	7.00	4.67	3.67	6.33
11	4.17	4.00	3.17	3.67	4.50	6.00	4.67	4.50	4.00
12	4.83	3.67	3.83	5.00	4.33	5.50	4.50	2.67	4.67
13	4.17	3.67	4.17	3.67	5.33	4.33	4.00	5.83	4.00
14	6.00	6.00	4.67	6.00	6.00	6.33	5.83	4.83	5.00
15	7.00	6.33	6.67	7.00	5.50	6.83	5.00	5.00	6.50
16	6.00	5.50	5.00	5.17	5.50	5.83	4.50	3.83	4.33
17	5.50	5.50	3.83	5.83	5.50	7.00	6.33	6.50	5.00
18	6.00	6.00	6.00	4.33	5.83	7.00	6.17	7.00	7.00
19	6.33	6.33	6.50	5.83	6.00	6.83	5.67	7.00	2.83
20	4.50	5.00	3.67	4.67	6.17	5.67	7.00	5.50	7.00
21	5.17	3.33	6.17	2.17	6.17	6.83	5.50	2.00	6.00
22	5.17	4.50	4.00	5.00	6.00	7.00	4.00	5.00	7.00
23	6.00	6.00	6.17	6.33	6.83	7.00	6.17	7.00	7.00
24	4.67	6.50	3.67	2.00	3.83	7.00	5.83	4.67	3.00
25	5.83	5.50	5.50	5.17	4.83	7.00	5.67	5.33	5.17
26	6.33	6.67	6.17	6.67	7.00	7.00	7.00	6.67	6.83
27	6.17	5.83	3.33	6.17	6.33	7.00	5.33	6.83	6.17
28	4.50	5.33	4.00	3.50	6.00	7.00	6.00	6.00	7.00
29	5.83	6.83	5.83	6.17	6.00	5.67	5.00	5.17	6.00
30	5.67	5.67	3.33	5.17	6.17	6.33	5.00	6.00	5.00

*CONCEPTS

1--total school relations
2--student-teacher relations
3--student-principal relations
4--required courses
5--elective courses
6--placebo; omitted
7--peer group relations
8--extra-curricular programs
9--guidance department
10--cooperative decision-making

Table 16

Attendance Data for Experimental and Control Subjects for the First Through Third Nine Week Periods for the Year 1974-75 and Year 1975-76

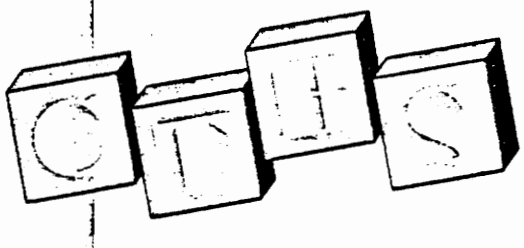
Experimental Group			Control Group		
Subject	Year 1974-75	Year 1975-76	Subject	Year 1974-75	Year 1975-76
1	9	4	1	1	2
2	4	--	2	5	2
3	23	13	3	20	22
4	23	16	4	14	5
5	19	16	5	14	10
6	33	12	6	9	9
7	27	13	7	4	16
8	6	3	8	7	8
9	2	17	9	11	8
10	21	42	10	21	9
11	18	18	11	--	1
12	4	11	12	11	29
13	20	30	13	3	1
14	--	1	14	1	1
15	11	6	15	20	23
16	5	--	16	6	21
17	9	7	17	1	39
18	14	7	18	33	22
19	26	3	19	7	8
20	6	22	20	3	15
21	43	26	21	13	10
22	20	13	22	37	18
23	20	21	23	--	31
24	4	2	24	10	15
25	16	6	25	21	18
26	30	6	26	9	5
27	6	3	27	11	36
28	25	16	28	8	2
29	51	27	29	35	14
30	34	31	30	16	17

APPENDIX C

INSTRUMENTS USED IN THE STUDY

Q4

Form Q · Level 4



COMPREHENSIVE TESTS OF BASIC SKILLS

COMPLETE BATTERY

CTB

PUBLISHED BY **CALIFORNIA TEST BUREAU** A DIVISION OF McGRAW-HILL BOOK COMPANY

TO THE STUDENT:

This booklet contains tests that will show how well you can use basic skills that are important to you in many things you do every day. The paragraphs below give you some points to remember while you take these tests.

- Make sure you understand all the directions before you begin to do each test. You may ask questions about any directions you do not understand. Do not begin any test until you are told to do so.
- Work as fast as you can. There may be items you cannot do because they test things you have not yet been taught. If an item is too difficult, do not spend too much time on it. Make the most careful choice you can, and go on to the next item.
- If you come to the word "Stop" at the bottom of a page before time is called, do not turn the page. Go back over your work in the test you just completed.
- Mark all of your answers on your answer sheet. Answer marks should be neat and clear. Be sure you mark only one answer for each item. If you make a mistake or want to change an answer, erase your first answer completely.

ACKNOWLEDGMENTS

California Test Bureau, a Division of McGraw-Hill Book Company, is indebted to the copyright owners and publishers for permission to use the following material which appears in this test booklet.

Page 9. Article adapted with permission of Farrar, Straus & Giroux, Inc. from *Lives Around Us*, by Alan DeVoe. Copyright 1942 by Alan DeVoe.

Page 12. Poem "Stars," by Sara Teasdale, reprinted with permission of The Macmillan Company from *Collected Poems of Sara Teasdale*. Copyright 1920 by The Macmillan Company, renewed 1948 by Mamie T. Wheless.

Page 13. Article adapted from *This Fascinating Animal World*, by Alan DeVoe, with the permission of McGraw-Hill Book Company. Copyright 1961 by Alan DeVoe.

Page 14. Story from *The Iliad of Homer* retold by Barbara Leonie Picard. © 1960 by Oxford University Press. Used by permission of Henry Z. Walck, Inc.

Page 17. Story adapted from Chapter One: "The World of the Movies," by John K. Sherman from *English for Today, Book Five, Life in English-Speaking Countries*, by The National Council of Teachers of English, with the permission of McGraw-Hill Book Company. Copyright © 1967 by McGraw-Hill, Inc.

Page 18. Story adapted from Chapter Four: "The Art of the Skyscraper," by Peter Buttenhuis from *English for Today, Book Five, Life in English-Speaking Countries*, by The National Council of Teachers of English, with the permission of McGraw-Hill Book Company. Copyright © 1967 by McGraw-Hill, Inc.

Page 23. Poem adapted from "The City and the Trucks," by Dorothy Brown Thompson as it appeared in *The Instructor*, August-September 1966. F. A. Owen Publishing Company. Used by permission of Dorothy Brown Thompson.

Page 43. Section reprinted from the *Reader's Guide to Periodical Literature*, March 1963-February 1965, Volume 24, by permission of the H. W. Wilson Company.

Page 43. Definition of the word "scallop" reprinted by permission from the *Thorndike-Barnhart Advanced Junior Dictionary*, by E. L. Thorndike and Clarence L. Barnhart. Copyright © 1965 by Scott, Foresman and Company.

Page 44. Map from *Our World and Its People*, by Edward R. Kolevson and John A. Heine, with the permission of Allyn and Bacon, Inc. Copyright © 1966 by Allyn and Bacon, Inc.

Page 45. Map from *Row-Peterson Arithmetic*, by Wheat, Kauffman and Douglass, with the permission of Harper & Row, Publishing Company, Inc. Copyright © 1958 by Row, Peterson & Company.

Page 46. Map adapted by permission from American Education Publications, a Xerox Company: MY WEEKLY READER Practice Book, *Map Skills for Today*, Book 5: Education Center, Columbus, Ohio, 43216: © 1965, 1967 Printing, Xerox Corporation.

Page 48. Graph adapted from "Spending Overseas Holds to Rapid Pace," *Business Week*, August 5, 1967. Used by permission of *Business Week*, published by McGraw-Hill, Inc. © Copyright 1967 by McGraw-Hill, Inc.

Page 48. Table adapted from "Putting a Brake on Runaway Birth Rates," *Business Week*, September 23, 1967. Used by permission of *Business Week*, published by McGraw-Hill, Inc. © Copyright 1967 by McGraw-Hill, Inc.

2 3 4 5 6 7 8 9 10 11 12 13 14 15 72 71 70 69 68

TEST 1 • READING Vocabulary

This test will show how well you know the meaning of words.

DIRECTIONS: For each item on the next two pages, choose the word in dark print that has the *best* meaning for the underlined word. Mark on your answer sheet the space that goes with the letter of the meaning you choose.

SAMPLE ITEMS: Read the first Sample Item below and see how the right answer is marked on your answer sheet.

allow him

A **give**
B **let**
C **follow**
D **leave**

Now do the next Sample Item and mark the answer on your answer sheet.

start the game

F **win**
G **forget**
H **begin**
J **stop**

TEST 1

► Do these items the same way you did the Sample Items. Choose the best meaning.

1 active organization
- A opposition
- B group
- C mob
- D morale

2 accept the plan
- F except
- G appraise
- H approve
- J reject

3 condemn him
- A clear
- B blame
- C honor
- D try

4 economical shopper
- F extravagant
- G thorough
- H thrifty
- J miserly

5 assorted accumulation
- A association
- B collection
- C accusation
- D accommodation

6 administer the test
- F give
- G arrange
- H write
- J take

7 strange predicament
- A presentation
- B ambition
- C attitude
- D situation

8 menacing letter
- F pitying
- G pleasant
- H calculating
- J threatening

9 gravitate toward
- A agitate
- B drag
- C move
- D rotate

10 special process
- F operation
- G advancement
- H possession
- J procession

11 effect a change
- A affect
- B require
- C make
- D rate

12 densely populated
- F sparsely
- G diffusely
- H recently
- J thickly

13 prolong the class
- A continue
- B shorten
- C enjoy
- D flunk

14 legitimate entry
- F denied
- G illicit
- H exciting
- J legal

15 proficiency with words
- A deficiency
- B skill
- C tricky
- D inability

16 excluded the press
- F barred
- G eluded
- H nudged
- J escaped

17 unwelcome intrusion
- A appearance
- B collusion
- C interference
- D solution

18 laborious job
- F difficult
- G scientific
- H fascinating
- J union

19 suppressed laughter
- A repeated
- B restrained
- C raucous
- D random

20 complete solitude
- F pacification
- G seclusion
- H confusion
- J classification

21 aquatic plants
- A exotic
- B organic
- C snow
- D marine

GO on to the next page

TEST 2 • READING Comprehension

This test will show how well you understand what you read.

DIRECTIONS: Read each selection and do the items following it. Be sure you choose only the *best* answer for each item. Mark on your answer sheet the space that goes with the letter of the answer you choose.

SAMPLE ITEMS: Read the first Sample Item below and see how the right answer is marked on your answer sheet.

Following directions means the same as

A **following instructions**
B **doing it your own way**
C **listening to the teacher**
D **asking questions**

Now do the next Sample Item and mark the answer on your answer sheet.

Be sure you mark

F **a good answer**
G **many answers**
H **all the answers**
J **the best answer**

WAIT

TEST 2

► Read the story below and do Items 1–6. Mark the best answer. Then read the article on the next page and do Items 7–14 the same way.

He looked down at the study hall group. His eyes were cold and there was no joy in his expression. There was little doubt what he intended to convey by his manner.

Our silence was noticeably strange. Mr. Jack would never have believed it. Though we tried to appear disinterested, our eyes caught Mr. Pollard's every move. When he finished taking roll, he sat down, half turned in his swivel chair, and opened his book. Gradually we students opened ours.

The hour wore on. Only the snap of a notebook and a few genuine coughs—certainly no play for attention—broke the silence. Themes were completed and algebra assignments finished. It was hard to believe. Never before had we been so—so *good*. The silence was noisier than all of yesterday's nonsense.

The bell rang. Thirty of us closed our books, gathered up our papers, and walked out to classes. Mr. Pollard rose and walked out of the door and down the hall toward his first class. I watched as, outside the history room door, he met the principal.

"Nice kids," he said with a smile.

"Sure are," responded the principal. "They all are. I think you'll like them."

As I went down the hall, I wondered what Mr. Jack had found to do.

1 Mr. Pollard brought about the change in the students' behavior by his

A **threats**
B **smile**
C **stare**
D **manner**

2 Mr. Pollard is

F **the superintendent**
G **a new teacher**
H **a math teacher**
J **the English teacher**

3 In the third paragraph, the writer introduces the word "*good*" to indicate

A **surprise**
B **pleasure**
C **disgust**
D **disappointment**

4 Mr. Jack was apparently

F **ineffective**
G **forceful**
H **unfair**
J **humorous**

5 The conversation between Mr. Pollard and the principal indicates Mr. Pollard's

A **pride in the school**
B **good will toward the students**
C **distrust of the students**
D **respect for the principal**

6 The last paragraph indicates that

F **the writer thinks Mr. Jack is bored**
G **Mr. Jack has left the school**
H **the writer saw Mr. Jack in the hall**
J **Mr. Jack is being made fun of**

GO on to the next page

The shrew haunts mostly moist, thick-growing places, the banks of streams, and the undergrowth of damp woods. It hunts most actively at night. Scuttling on its pattery little feet among the fallen leaves, scrabbling in the leaf mold in a frantic search, it looks ceaselessly for food. Not a rodent like a mouse, but an insectivore, it seizes chiefly on such creatures as crickets, grasshoppers, moths, and ants. Devouring each victim with nervous eagerness, it rushes on with quivering speed, tiny muzzle twitching, to look for further food.

Frequently the insects the shrew discovers in these quick scampering little trips through the darkness are inadequate to feed it, so quick is its digestion and so intense the nervous energy it must maintain. When this is the case, the shrew widens its diet range to include seeds or berries or earthworms or any other food that it can stuff with its little shivering forepaws into its tiny muzzle. It widens its diet to include meat; it becomes a furious and desperate meat eater. It patters through the grass runways of the meadow mice, sniffing and quivering; it darts to the nest of a deermouse. And presently, finding deermouse or meadow mouse, it plunges into a wild attack on this "prey" that is twice its size. The shrew fights with a kind of mad recklessness; it becomes a leaping, twisting, chittering, squeaking speck of hungering fury. Quite generally, when the battle is over, the shrew has won.

For a little while, after victory, the shrew's relentless body needs are appeased. That is the pattern of shrew life: a hunting and hungering that never stops. As the price of unusual tininess, it engages in a restless, never ending search for something to eat.

7 In this article, the shrew is
- A a deermouse
- B an earthworm
- C an insectivore
- D an insect

8 The first paragraph describes the shrew's
- F ability to fight
- G usual hunting grounds
- H similarity to rodents
- J odd appearance

9 The second paragraph concerns chiefly
- A which insects the shrew likes
- B what the shrew looks like
- C how the shrew reacts to hunger
- D where insects are found

10 In line 17, the phrase following the comma gives
- F an example of the shrew's diet
- G the result of the shrew's hunger
- H an illustration of the shrew's hunger
- J the cause of the shrew's hunger

11 The main diet of the shrew is
- A insects
- B berries
- C seeds
- D meat

12 In line 34, the expression "quite generally" means
- F in all cases
- G occasionally
- H most of the time
- J rarely

13 "Diet range" is the
- A distance traveled while feeding
- B territory covered in search of food
- C effect of a varied diet
- D variety of foods eaten

14 The last paragraph tells us that the main activity of the shrew is
- F sleeping in the woods
- G playing with its prey
- H searching for food
- J killing animals

GO on to the next page

► Read the letter below and do Items 15–20. Mark the best answer.

The Super Sweeper Corporation
"We Sweep You Off Your Feet!"
2253 Madison Street
Detroit, Michigan
Dec. 20, 19—

Mr. Jeremiah P. Crump
1102 Prairie Street
Falls View, Iowa

Dear Mr. Crump:

The letter which you addressed to the president of our corporation has been referred to me for attention.

I find your experience with our Super Sweeper difficult to believe. If you were here in Detroit, I could show you literally thousands of letters from satisfied customers. After all, we have been making vacuum cleaners for thirty years, and if we turned out inferior products, we would have gone out of business long ago.

The rug-sweeping head, which you complain about in particular, is the result of continuous improvement, and is the finest head on the market. It is as efficient as those with power-driven rotary brushes and much less hard on the rugs.

While it is true that the carton in which the Super Sweeper comes is designed for storage, we actually recommend a wall bracket with several hooks (retail price $12.50) from which you can hang not only the hose but the machine itself.

In case it should happen, although highly unlikely, that you have a defective sweeping head, I am writing to your local dealer to call on you and check your machine.

Very sincerely yours,

Percival C. Perkins
General Sales Manager

15 One can describe this letter as

- A **a letter of complaint**
- B **a personal letter**
- C **an invitation**
- D **an adjustment letter**

16 The tone of this letter is

- F **defensive**
- G **conciliatory**
- H **neutral**
- J **belligerent**

17 Mr. Perkins' main purpose in writing this letter was to

- A **admit that the customer is right**
- B **sell more of the company's products**
- C **enclose a refund check**
- D **suggest that the customer is wrong**

18 When Mr. Crump received this letter, he was probably

- F **annoyed**
- G **indifferent**
- H **pleased**
- J **violent**

19 Mr. Perkins is going to send out

- A **a new sweeping head**
- B **the local representative**
- C **the wall bracket**
- D **special rotary brushes**

20 Mr. Perkins' reaction to Mr. Crump's letter was

- F **vengeance**
- G **appreciation**
- H **indignation**
- J **satisfaction**

GO on to the next page

► Read the sentences below and do Items 21–23. Mark the best answer.

21 "He sets a good table."

The best interpretation of this saying is

A **He picks out attractive furniture.**
B **He reclines on the good furniture.**
C **He builds nice tables.**
D **He serves excellent dinners.**

22 "Good words relieve worries and soften the heart."

This saying means

F **Pleasant talk is comforting.**
G **Talking a lot is good medicine.**
H **Lots of talk makes a weak heart.**
J **It's a relief to hear a good speech.**

23 "He is on the horns of a dilemma."

The above sentence means

A **He is in a confusing situation.**
B **He is riding on a rare animal.**
C **He has a hat of questionable taste.**
D **He embarrasses easily.**

► Read the following paragraph and use the key below it to decide in which way the words in Items 24–27 are neologisms.

A neologism is a new word or a new meaning for an established word. It may be coined from a trade name, a proper name, a combination, or a word clipping.

Thermos is an example of a neologism from a trade name. A word coined from a proper name is *sandwich*, named after the Earl of Sandwich.

The combination of two words into one results in a word which keeps some of both original meanings. *Smog* is a word combination coined from the words *smoke* and *fog*.

A word is clipped by dropping parts of a word. *Coed* is formed by clipping the end of the word *coeducational*.

Mark on your answer sheet:

A or F — for a trade name
B or G — for a proper name
C or H — for a combination
D or J — for a word clipping

24 **telecast**

25 **exam**

26 **mackintosh**

27 **frigidaire**

GO on to the next page

► Read the poem below and do Items 28–33. Mark the best answer.

Alone in the night
On a dark hill
With pines around me
Spicy and still,

And a heaven full of stars
Over my head,
White and topaz
And misty red;

Myriads with beating
Hearts of fire
That aeons
Cannot vex or tire;

Up the dome of heaven
Like a great hill,
I watch them marching
Stately and still,

And I know that I
Am honored to be
Witness
Of so much majesty.

28 The main feeling expressed in this poem is

F **boredom from so many stars**
G **awe at the beauty of the stars**
H **enjoyment of the pine trees**
J **fear of being among the pine trees**

29 The poet describes the stars as "marching" because

A **their colors are like soldiers' uniforms**
B **they seem to be in formation**
C **they look like fireworks**
D **they seem to be soldiers' bayonets**

30 The phrase "beating hearts of fire" refers to

F **the poet's heartbeat**
G **a forest fire**
H **the twinkle of stars**
J **the color of stars**

31 The phrase "dome of heaven" refers to

A **a cloud bank**
B **the moon**
C **a church steeple**
D **the sky**

32 All of the following phrases refer to the stars except:

F **white and topaz**
G **stately and still**
H **spicy and still**
J **topaz and misty red**

33 "Aeons" are

A **ancient wise men**
B **stately trees**
C **weighty problems**
D **millions of years**

GO on to the next page

► Read the article below and do Items 34–40. Mark the best answer.

Conversationally and informally, we use the word "animal" for creatures that we mean to distinguish from, say, birds or fish. We use it to mean warm-blooded beasts that suckle their young. The term we ought to use in that connection is "mammal." The mammals are but one part of animaldom. Rightly speaking, an animal is any one of our fellow beings that appears to possess an "*anima*." *Anima* is soul, breath of life, the indwelling self at the core of being. Our sense of our own *anima* is what Coleridge called a primary intuition. It does not come naturally to most of us to think of a rosebush as a "self," an animated being of this sort. We don't go into a garden as into a gathering of companions. (Some of us may indeed do just that, of course. There is nothing in the least absurd about it. The thing is the very heart of primitive poetry. But it is not a kind of sensitive sympathy developed in us all.) We do spontaneously take it, however, that a robin, a coyote, or even the cricket on the hearth, is at least in some degree, after its fashion, akin to us. It looks out on the world, as we do; it moves and seeks; it experiences. Its life is not exactly our life, of course; we are to beware of anthropomorphism, which means reading the human into the non-human. But even a cricket, we take it, in its crickety little way, is a being, a life, a self. *Anima* glimmers here; and our own responds in a brotherhood.

34 The author holds that "*anima*" is
- F **a property of any self**
- G **not present in any animal**
- H **often in animals**
- J **in humans only**

35 According to the article, the formal term for "cow" would be
- A **mammal**
- B **animal**
- C **anima**
- D **self**

36 A cricket is somehow akin to man because it
- F **is unable to have experiences**
- G **moves only when in danger**
- H **is a self**
- J **is so small**

37 The author defines "anthropomorphism" as a tendency to
- A **look upon all things as created for the use of man**
- B **define everything in naturalistic terms**
- C **attribute human qualities to non-human beings**
- D **use animal qualities to describe all living things**

38 The author introduces a rosebush into this article to show
- F **how flowers behave in their environment**
- G **how absurd it is to think of it as an animal**
- H **that it is as much an animal as a cricket**
- J **that it shares some of the qualities of animals**

39 The expression in which the author has introduced a touch of humor is
- A **an animal is any one of our fellow beings**
- B **the very heart of primitive poetry**
- C **in its crickety little way**
- D **anima glimmers here**

40 The author's purpose in this paragraph is to
- F **define the essential quality of animalness**
- G **show in what ways a rosebush is not an animal**
- H **describe an animal**
- J **define a mammal as specifically as possible**

GO on to the next page

► Read the story below and do Items 41–45. Mark the best answer.

When all who could were keeping as far from the Greek Diomedes as they might, so much were all the Trojans dreading him that day, Glaucus came forth and challenged him. "Who are you, brave stranger, who come so willingly to die at my hands?" asked Diomedes.

"Diomedes, son of Tydeus, why do you ask my name? What matters who I am? Even as leaves upon the trees of the forest are the generations of men. The leaves fall in the autumn and the wind blows them away; and in the spring the trees put forth new leaves. Even so perishes one generation of men, and is forgotten; but another comes to take its place. Yet, since you ask, my father was Hippolochus and his father was Bellerophon, and I am Glaucus, who rules in Lycia with King Sarpedon."

Immediately Diomedes thrust his spear into the ground, and leaving it standing so fixed, went towards Glaucus with a smile, saying, "Then should we be friends, for Oeneus, my father's father, once entertained Bellerophon in his house, and they exchanged gifts. My father Tydeus I do not remember for he died when I was very young, but Oeneus has often told me of Bellerophon and shown me the golden cup he gave him. So we, too, should be friends, even as they were; and if ever, in happier days, you chance to come to Tiryns, you shall be my guest, and I yours, if ever I am in Lycia. Let us exchange gifts, as our grandsires did, and keep from each other in the fighting. For surely there are Trojans and their allies enough for me to kill, and Greeks enough for you to slay, without our taking each other's lives."

So they clasped hands in friendship and pledged faith with each other and exchanged their armour as a gift. And though the armour of Glaucus was all of gold, while Diomedes' was only bronze, and a poor exchange, yet were both well satisfied, and gladdened by their encounter.

41 Regarding the fighting earlier in the day, it seems evident that

- A **Diomedes dominated the fighting**
- B **the two sides fought evenly**
- C **the Trojans abandoned the field**
- D **the Greeks abandoned the field**

42 Instead of fighting, Diomedes stops to talk because

- F **he thinks he recognizes an old friend**
- G **he wants to know who is brave enough to challenge him**
- H **he wants to pretend he's a friend to get Glaucus off guard**
- J **Glaucus looks like a better fighter**

43 Glaucus is the son of

- A **a Greek**
- B **a Trojan**
- C **Oeneus**
- D **Tydeus**

44 A comparison which can be made between Diomedes and Glaucus is that

- F **Diomedes is a better fighter**
- G **Glaucus is a better fighter**
- H **Glaucus is richer than Diomedes**
- J **Diomedes is kinder than Glaucus**

45 The best title for this selection would be

- A **The Trojan-Greek War**
- B **Duel to Death**
- C **Brevity of Life**
- D **Exchange of Friendship**

STOP

TEST 3 • LANGUAGE Mechanics
TEST 4 • LANGUAGE Expression

These tests will show how well you can punctuate, use capital letters, and choose words and phrases.

DIRECTIONS: Some phrases in the letter and story on the next two pages are underlined and numbered. The underlined phrases might contain a mistake in punctuation. For each underlined phrase, three other possible ways of punctuating it are listed at the bottom of the page. Choose the answer that uses the best punctuation and mark the space that goes with its letter on your answer sheet. If the punctuation in the underlined phrase is best as it is, mark the space that goes with the letter for "Best as it is."

SAMPLE ITEMS: Read the first Sample Item below and see how the correct answer is marked on your answer sheet.

He likes [I] cake—ice cream, and candy.

I
- [A] **cake. Ice**
- [B] **cake, ice**
- [C] **cake ice**
- [D] **Best as it is**

Now do the next Sample Item and mark the answer on your answer sheet.

Do you like to play [II] ball;

II
- [A] **ball**
- [B] **ball.**
- [C] **ball?**
- [D] **Best as it is**

TEST 3

► Do Items 1-13 the same way you did the Sample Items.

1100 E Street
Tampa, Florida
April 28, 19--

Mr. C. L. Kramer
Water Sports Magazine
659 8th Avenue
New York, New York

Dear Mr. [1] Kramer:

As sports reporter for the [2] Weekly Blab the local high school [3] newspaper I would like some information concerning an article I read in your magazine. It was written by Steve Anderson and was called [4] 'Water-Skiing Tips.' It appeared in the June issue last year.

I would like to know how I may get in touch with the author. Do you think he would consider giving a lecture on water-skiing at our [5] school. We are all quite interested in this sport.

Sincerely yours,
Charles [6] Stanton. Reporter

1 [A] Kramer,
[B] Kramer.
[C] Kramer;
[D] Best as it is

2 [A] Weekly Blab; the
[B] Weekly Blab, the
[C] Weekly Blab: the
[D] Best as it is

3 [A] newspaper, I
[B] newspaper. I
[C] newspaper—I
[D] Best as it is

4 [A] Water-Skiing Tips.
[B] "Water-Skiing Tips."
[C] Water-Skiing Tips.
[D] Best as it is

5 [A] school we
[B] school—we
[C] school? We
[D] Best as it is

6 [A] Stanton,
[B] Stanton
[C] Stanton—
[D] Best as it is

GO on to the next page

In front of us, on the moving picture [7] screen: we see men and women, love and [8] hate, cowboys and galloping horses, and many other interesting things. Motion pictures [9] 'or movies, as we now call them' are not very old. In the early 1900's, Thomas A. Edison made the first movie, which he called an [10] (animated picture.) In the beginning, movies were very crude. Since then there have been many technical advances which have [11] helped motion pictures to "grow up" in the field of entertainment. As we watch [12] them; we forget our own troubles. We laugh; we [13] cry we live other people's lives awhile.

7 A screen. We
B screen, we
C screen we
D Best as it is

8 A hate—cowboys
B hate; cowboys
C hate cowboys
D Best as it is

9 A (or movies . . . call them)
B "or movies . . . call them"
C or movies . . . call them
D Best as it is

10 A 'animated picture'
B —animated picture.
C "animated picture."
D Best as it is

11 A helped. Motion
B helped, motion
C helped" motion
D Best as it is

12 A them, we
B them. We
C them—we
D Best as it is

13 A cry—we
B cry: we
C cry; we
D Best as it is

GO on to the next page

► Each sentence of the stories below is divided into four underlined parts. If there is a mistake in capitalization in one of these parts, mark the space on your answer sheet that goes with the letter of that part. If there is *no* mistake in capitalization, mark the space on your answer sheet that goes with "None."

In the Sample Item below, the name "carol" should begin with a capital letter, so the correct answer is D.

A My three B friends are C named Ann, D carol, and Sue. E None

Now do Items 14-25 the same way.

14 F The stately skyscraper is G the single most important innovation
H in american architectural design J in the modern era. K None

15 A A man named Sullivan B in Chicago in the late 1800's
C was one of the pioneers in D the architecture of the skyscraper. E None

16 F It was impossible to meet G the demands of modernity by designing
H a tall building and simply adding J Roman, greek, and medieval ornaments. K None

17 A An entirely new B conception of architecture C in the form of steel frame
D construction was needed. E None

18 F Sullivan coined the phrase, G "form follows function,"
H to describe what he felt J the skyscraper should look like. K None

19 A The McClurg building B in Chicago provides C an excellent illustration
D of his motto. E None

GO on to the next page

20 [F] One of the biggest [G] stars of the Green Bay [H] Packers was called [J] touchdown Tommy O'Rourke. [K] None

21 [A] His twinkling blue eyes and [B] his record of touchdowns made him [C] the idol of the irish [D] fans in the East. [E] None

22 [F] When football magazine [G] featured him on its cover, [H] his fame became [J] truly nationwide. [K] None

23 [A] Then, on a cold [B] Saturday in October, [C] tragedy struck down [D] this paragon. [E] None

24 [F] He breakfasted on bagels, [G] chesapeake Bay terrapin, plum pudding [H] à la the Duke of Edinburgh, [J] and twelve bottles of Klassi Soda. [K] None

25 [A] The ambulance arrived [B] from White Memorial [C] hospital shortly after [D] the last Klassi Soda. [E] None

STOP

TEST 4

► In the next two stories, each numbered blank shows that one or more words are missing. Find the number of the item below the story that matches the number in the blank. Choose the word or words in the item that fit correctly in the blank. Then mark on your answer sheet the space that goes with the letter of the answer you choose. Read this Sample Item.

We ___III___ now going to the circus.

III A is
B am
C are
D was

C is the correct answer because "are" fits correctly in the sentence.

Now do Items 26–35 the same way.

The most important part of writing an effective research paper is the preliminary preparation. Selecting and defining the subject, finding the facts, and ___26___ facts are ___27___ which involve the most work. Great care should be taken in preparing the first steps, because on them ___28___ the success of the whole paper. Once this is finished, the paper almost ___29___ itself. Don't try to hurry it. He ___30___ rushes will probably not turn out a superior paper.

26 F to organize
G organizing the
H organize the
J organized

27 A some steps
B a step
C the steps
D step

28 F to rest
G rests
H rest
J rested

29 A write
B have written
C has written
D writes

30 F whom
G what
H which
J who

Some people, ___31___ I do not number myself, seem to be immune to the tortures of seasickness. Just the other day, Claude Durham, my cousin, and ___32___ rode across the river on ___33___ of boat that is constantly tossed by wind and water. I became quite seasick and Claude told me that ___34___ down and trying to avoid stuffy areas ___35___ to try.

31 A among whom
B among who
C between who
D between whom

32 F me myself
G myself
H I
J me

33 A this kind
B the kind
C those kind
D that kind

34 F to lay
G lying
H a person should lie
J laying

35 A are both good things
B is well things
C are well
D is something good

GO on to the next page

► In Items 36–45, choose the word or words which fit best in each sentence.

36 The battle ended when our opposition ____ .

F **surrendered**
G **resigned**
H **relinquished**
J **yielded**

37 The swimmer who was close to drowning was ____ by artificial respiration.

A **renewed**
B **reanimated**
C **revived**
D **regenerated**

38 Carl laughed to see the fat lady ____ around the circus tent.

F **whisk**
G **walk**
H **wander**
J **waddle**

39 Dick was ____ by the blow he received when the baseball hit him on the head.

A **insensitized**
B **dulled**
C **stupefied**
D **dazed**

40 The photography column in last week's newspaper featured ____ shots of the basketball team in action.

F **candid**
G **impromptu**
H **unrehearsed**
J **posed**

41 The angry man ____ out of the office.

A **ambled**
B **moved**
C **strolled**
D **stalked**

42 The detective ____ through the alley in pursuit of the fleeing bank robber.

F **ran**
G **galloped**
H **dashed**
J **hurried**

43 The painting that the artist had done of the colorful landscape was very ____ .

A **colorful**
B **vivid**
C **faint**
D **drab**

44 To a man marooned in the desert, water is the ____ of the gods.

F **sap**
G **nectar**
H **broth**
J **juice**

45 When all of the electricity went off, we ____ through the house looking for candles.

A **looked**
B **went**
C **groped**
D **groveled**

GO on to the next page

► In the next story and poem, some phrases are underlined and numbered. These numbered phrases can be stated in different ways without changing the meaning. For each underlined phrase, three possible ways of stating it are listed at the bottom of the page. Choose the one which expresses the idea in the *clearest* way and which fits *best* with the rest of the selection. Mark the space that goes with the letter of this phrase on your answer sheet. If you think that the idea is stated best in the selection, mark the letter for "Best as it is." Try to avoid over-formal, inappropriate, or involved expressions.

Reporter: Mr. Vice-President, has the Ambassador from Tangentia [46] cut out?

Vice-President: [47] He has, from this hall, left some two hours past.

Reporter: [48] Did he say anything important before he left?

Vice-President: [49] Nope, nothing.

Reporter: We never get anything [50] news-wise from the Tangentian Ambassador.

46 F **left?**
G **exited?**
H **shoved off?**
J **Best as it is**

47 A **He blew the scene a good two hours ago.**
B **He went away some time ago.**
C **He left the hall two hours ago.**
D **Best as it is**

48 F **What deathless words said he before he took such a course?**
G **Did he utter anything quotable before departure?**
H **Did he like say anything of serious consequence?**
J **Best as it is**

49 A **Negative.**
B **No, he didn't.**
C **That his words were important, I could not actually assert with any certainty.**
D **Best as it is**

50 F **big**
G **of front-page caliber**
H **newsworthy**
J **Best as it is**

GO on to the next page

The city sleeps in its unconcern, but the highways are awake
With searching flashes, grinding gears, and the hiss of air in a brake;
When darkness comes, like a roll of drums three million engines roar
Under throbbing hoods, and the nation's goods [51] have started once more.
The city wakens to meet old needs and perhaps some new desires,
And [52] discovers that fulfillment of them all is brought in on rubber tires:
There is coal and milk, there is rope and silk, there is shelter and food and dress
That [53] lumbered in when the dawn was thin on the night highway express.
The city takes, and it goes its way, and the [54] great dark hulks reload,
While mechanics grease, and test, and check, to [55] safen them for the road;
Then the crates are stacked and the boxes packed and the padding placed—and then
The tailboards slam, and the trailers ram—and the great trucks roll again!

51 [A] are out on the roads
[B] are on their way to their destination
[C] have begun their respective journeys homeward bound
[D] Best as it is

52 [F] has all of them
[G] finds that all the stuff they ask for has been
[H] finds the answer to all it asks
[J] Best as it is

53 [A] were slowly brought
[B] were hauled into the city
[C] got in
[D] Best as it is

54 [F] big black vehicles are ready for goods to be stowed,
[G] trucks loaded,
[H] trucks that with heavy loads are loaded are dirty and big as a toad,
[J] Best as it is

55 [A] make them safe
[B] assure the safety of the trucks and the drivers
[C] see that they are safe enough
[D] Best as it is

STOP

TEST 5 • LANGUAGE Spelling

This test will show how well you can recognize words which are incorrectly spelled.

DIRECTIONS: In each item on the next page, there are four spelling words and the word "None." In some items, one word is not correctly spelled. In others, all of the words are correctly spelled. If there is a word that is misspelled, mark on your answer sheet the space for the letter that is in front of that word. If all the words are correctly spelled, mark on your answer sheet the letter that is in front of the word "None."

SAMPLE ITEMS: Read the first Sample Item below and see how the correct answer is marked on your answer sheet.

A **horse**
B **slow**
C **pound**
D **speling**
E **None**

Now do the next Sample Item and mark the answer on your answer sheet.

F **heavy**
G **kwick**
H **cloud**
J **maybe**
K **None**

WAIT

TEST 5

► Do these items the same way you did the Sample Items.

1	A uncertain B recognition C muzeum D malice E None	9	A reflect B comedys C attempt D tiresome E None	17	A obedient B fasilitate C mortal D postscript E None	25	A voyage B interfear C routine D ultimate E None
2	F prinsiples G tract H ambassador J rheumatic K None	10	F summary G apartments H politician J fatiegue K None	18	F carrier G sophomore H phenomenon J inevitable K None	26	F proffesion G eligible H amiable J heavily K None
3	A grateful B mathematics C practically D consequence E None	11	A efficiency B vicinity C stomach D postpone E None	19	A apperatus B originate C campus D parlor E None	27	A immediately B prominent C benefited D rythym E None
4	F hatchet G century H effishent J legislature K None	12	F apricot G messenger H sensus J wobbly K None	20	F constantly G interpret H benefit J explenation K None	28	F italic G resignasion H substitution J luncheon K None
5	A badge B erosion C livlihood D mysterious E None	13	A cinnimon B illustrate C orchard D gallop E None	21	A embarass B through C succeed D loneliness E None	29	A aggressive B prestige C synonymous D emphasize E None
6	F noisy G initeate H delinquent J reckon K None	14	F probably G maintane H regretting J traffic K None	22	F releif G opponent H aerial J profit K None	30	F category G contraversy H exaggerate J beginning K None
7	A cooperate B literature C variety D thoroghly E None	15	A hasten B forfeit C originally D asociate E None	23	A disappoint B significance C aggravate D laboriously E None		
8	F performance G immediate H envierment J receiving K None	16	F league G convenient H perpendicular J equiptment K None	24	F revised G arrangements H extrordinary J unanimous K None		

STOP

22 mechanical aptitude
- F work
- G training
- H capability
- J appreciation

23 consistent answers
- A changing
- B correct
- C untrue
- D unvarying

24 conform to rules
- F add
- G compare
- H object
- J adapt

25 horizontal position
- A vertical
- B sloping
- C reclining
- D angular

26 transact business
- F conduct
- G dramatize
- H transfer
- J translate

27 impassioned speech
- A logical
- B lovely
- C dignified
- D emotional

28 depressed man
- F exhilarated
- G hurried
- H despondent
- J spirited

29 long-range projection
- A overhang
- B forecast
- C protest
- D attachment

30 theme was amplified
- F broadened
- G stereotyped
- H initialed
- J amortized

31 esteem him highly
- A regard
- B pay
- C pressure
- D disdain

32 improbable story
- F improper
- G incredible
- H inevitable
- J indiscreet

33 advocate peace
- A recommend
- B avoid
- C analyze
- D oppose

34 preceding the program
- F following
- G succeeding
- H proceed
- J before

35 disclose the truth
- A conceal
- B propose
- C expose
- D resist

36 devious route
- F roundabout
- G scenic
- H shortest
- J redundant

37 preliminary part
- A major
- B preventive
- C introductory
- D supplementary

38 brusque reply
- F involved
- G curt
- H tactful
- J slow

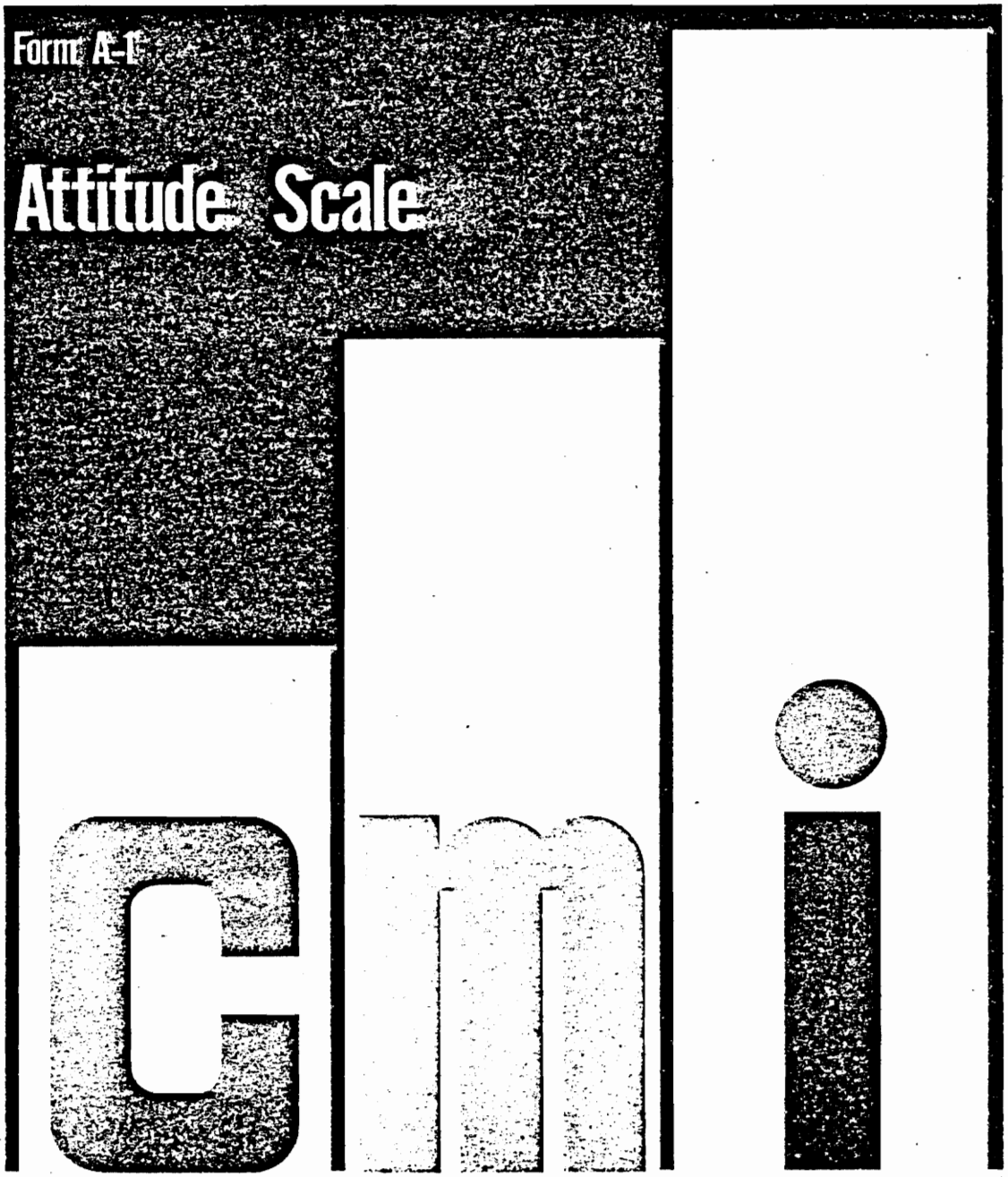
39 facilitate the matter
- A discourage
- B disturb
- C copy
- D expedite

40 submissive attitude
- F elastic
- G docile
- H competitive
- J contrary

STOP

Form A-1

Attitude Scale



CAREER MATURITY INVENTORY

John O. Crites, Ph.D.

Published by CTB/McGraw-Hill, Del Monte Research Park, Monterey, California 93940.

About This Inventory

The *Career Maturity Inventory* has been constructed to survey the various attitudes and competencies which are important in making decisions about your career; it is not a personality inventory, an interest inventory, an achievement test, or an aptitude test.

This inventory consists of an *Attitude Scale* and a *Competence Test*. The *Attitude Scale*, which you are about to take, asks you about your attitudes and feelings toward making a career choice and entering the world of work. The *Competence Test* is more concerned with knowledge about occupations and the decisions involved in choosing a career.

The information you get from taking the *Career Maturity Inventory* can be used in choosing and planning for your career and can contribute to your career maturity. Complete this inventory carefully and thoughtfully; it may help you choose a more satisfying and successful career.

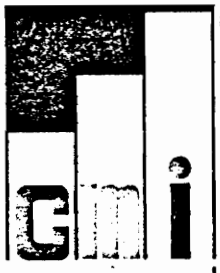
0 4 5 6 7 8 9 82 81 80 79 78 77 76 75 74 73

Career Maturity Inventory | ATTITUDE SCALE

Directions

There are a number of statements about career choice in this booklet. Career choice means the kind of job or work which you think you will probably be doing when you have finished all of your schooling.

Read the statements and mark your answers in the section marked ATTITUDE SCALE on the separate Answer Sheet. If you agree or mostly agree with the statement, use your pencil to blacken the space marked with a T. If you disagree or mostly disagree with the statement, blacken the space marked with an F. Be sure that your marks are heavy and black and that they completely fill the spaces. Erase completely any answer you wish to change. Do not make any stray pencil marks on the Answer Sheet.



Career Maturity Inventory | ATTITUDE SCALE

1 Once you choose a job, you can't choose another one.

2 In order to choose a job, you need to know what kind of person you are.

3 I plan to follow the line of work my parents suggest.

4 I guess everybody has to go to work sooner or later, but I don't look forward to it.

5 A person can do any kind of work he wants as long as he tries hard.

6 I'm not going to worry about choosing an occupation until I'm out of school.

7 Your job is important because it determines how much you can earn.

8 Work is worthwhile mainly because it lets you buy the things you want.

9 The greatest appeal of a job to me is the opportunity it provides for getting ahead.

10 I often daydream about what I want to be, but I really haven't chosen a line of work yet.

11 Knowing what you are good at is more important than knowing what you like in choosing an occupation.

12 Your parents probably know better than anybody else which occupation you should enter.

Career Maturity Inventory | ATTITUDE SCALE

13 If I can just help others in my work, I'll be happy.

14 Work is dull and unpleasant.

15 Everyone seems to tell me something different; as a result I don't know which kind of work to choose.

16 I don't know how to go about getting into the kind of work I want to do.

17 There is no point deciding on a job when the future is so uncertain.

18 I spend a lot of time wishing I could do work I know I can never do.

19 I don't know what courses I should take in school.

20 It's probably just as easy to be successful in one occupation as it is in another.

21 By the time you are 15, you should have your mind pretty well made up about the occupation you intend to enter.

22 There are so many things to consider in choosing an occupation, it is hard to make a decision.

23 I seldom think about the job I want to enter.

24 It doesn't matter which job you choose as long as it pays well.

25 You can't go very far wrong by following your parents' advice about which job to choose.

Career Maturity Inventory | ATTITUDE SCALE

26 Working is much like going to school.

27 I am having difficulty in preparing myself for the work I want to do.

28 I know very little about the requirements of jobs.

29 The job I choose has to give me plenty of freedom to do what I want.

30 The best thing to do is to try out several jobs, and then choose the one you like best.

31 There is only one occupation for each person.

32 Whether you are interested in a particular kind of work is not as important as whether you can do it.

33 I can't understand how some people can be so certain about what they want to do.

34 As long as I can remember, I've known what kind of work I want to do.

35 I want to really accomplish something in my work — to make a great discovery or earn a lot of money or help a great number of people.

36 You get into an occupation mostly by chance.

37 It's who you know, not what you know, that's important in a job.

38 When it comes to choosing a job, I'll make up my own mind.

Career Maturity Inventory | ATTITUDE SCALE

39 You should choose an occupation which gives you a chance to help others.

40 When I am trying to study, I often find myself daydreaming about what it will be like when I start working.

41 I have little or no idea of what working will be like.

42 You should choose an occupation, then plan how to enter it.

43 I really can't find any work that has much appeal to me.

44 You should choose a job in which you can someday become famous.

45 If you have some doubts about what you want to do, ask your parents or friends for advice and suggestions.

46 You should choose a job which allows you to do what you believe in.

47 The most important part of work is the pleasure which comes from doing it.

48 I keep changing my occupational choice.

49 As far as choosing an occupation is concerned, something will come along sooner or later.

50 I am not going to worry about choosing a job since you don't have anything to say about it anyway.

STOP

SEMANTIC DIFFERENTIAL

The purpose of this semantic differential is to measure the impact certain statements have on individuals by having them react to the statements against a series of adjective scales. In taking this test, please make your judgment on the basis of what the statement means to you.

If you feel that the statement is very closely related to one end of the scale, you should place your checkmark as follows:

Friendly __X__ : ____ : ____ : ____ : ____ : ____ : ____ Unfriendly

or

Friendly ____ : ____ : ____ : ____ : ____ : ____ : __X__ Unfriendly

If you feel that the statement is quite closely related to one or the other end of the scale (but not at the very end), you should place your checkmark as follows:

Bad ____ : __X__ : ____ : ____ : ____ : ____ : ____ Good

or

Bad ____ : ____ : ____ : ____ : ____ : __X__ : ____ Good

If the statement seems only slightly related to one side or the other, then you should check as follows:

Nice ____ : ____ : __X__ : ____ : ____ : ____ : ____ Awful

or

Nice ____ : ____ : ____ : ____ : __X__ : ____ : ____ Awful

The direction toward which you check, of course, depends upon which of the two ends of the scale seems most like the statement you are judging.

If you feel the statement is not like either end of the scale or is equally like both ends of the scale, then you should place your checkmark in the middle space:

DIRTY ____ : ____ : ____ : __X__ : ____ : ____ : ____ Clean

Important

(1) Place your check marks in the middle of spaces, not on the boundaries:

		This				Not This
____	: ____	: X	: ____	: ____	: ____	X ____

(2) Be sure every scale for every statement has a checkmark--- do not omit any.

(3) Never put more than one checkmark on a single scale.

Sometimes you may feel as though you've been asked to react to the same statement before on the test. This will not be the case, so do not look back at what you have checked before. Do not try to remember how you checked similar statements earlier in the test. Make each statement a separate judgment. Work quickly and do not puzzle over any one statement. What we want is your first feeling about the statements. On the other hand, please do not be careless for we want your true feelings.

Indicate your feelings regarding your experience in and/or your experience relative to:

1. TOTAL SCHOOL EXPERIENCE IN PAST ELEVEN YEARS

Friendly	____	____	____	____	____	____	____ Unfriendly
Good	____	____	____	____	____	____	____ Bad
Kind	____	____	____	____	____	____	____ Cruel
Pleasant	____	____	____	____	____	____	____ Unpleasant
Valuable	____	____	____	____	____	____	____ Worthless
Happy	____	____	____	____	____	____	____ Sad

2. RELATIONSHIP TO YOUR TEACHERS

Friendly	_____	:	_____	:	_____	:	_____	Unfriendly
Good	_____	:	_____	:	_____	:	_____	Bad
Kind	_____	:	_____	:	_____	:	_____	Cruel
Pleasant	_____	:	_____	:	_____	:	_____	Unpleasant
Valuable	_____	:	_____	:	_____	:	_____	Worthless
Happy	_____	:	_____	:	_____	:	_____	Sad

3. RELATIONSHIP TO YOUR PRINCIPAL

Friendly	_____	:	_____	:	_____	:	_____	Unfriendly
Good	_____	:	_____	:	_____	:	_____	Bad
Kind	_____	:	_____	:	_____	:	_____	Cruel
Pleasant	_____	:	_____	:	_____	:	_____	Unpleasant
Valuable	_____	:	_____	:	_____	:	_____	Worthless
Happy	_____	:	_____	:	_____	:	_____	Sad

4. COURSES REQUIRED TO MEET GRADUATION REQUIREMENTS

Friendly	_____	:	_____	:	_____	:	_____	Unfriendly
Good	_____	:	_____	:	_____	:	_____	Bad
Kind	_____	:	_____	:	_____	:	_____	Cruel
Pleasant	_____	:	_____	:	_____	:	_____	Unpleasant
Valuable	_____	:	_____	:	_____	:	_____	Worthless
Happy	_____	:	_____	:	_____	:	_____	Sad

5. ELECTIVE COURSES OFFERED TO STUDENTS

Friendly	_____:_____:_____:_____:_____:_____:_____	Unfriendly
Good	_____:_____:_____:_____:_____:_____:_____	Bad
Kind	_____:_____:_____:_____:_____:_____:_____	Cruel
Pleasant	_____:_____:_____:_____:_____:_____:_____	Unpleasant
Valuable	_____:_____:_____:_____:_____:_____:_____	Worthless
Happy	_____:_____:_____:_____:_____:_____:_____	Sad

6. FAVORITE DESSERT

Friendly	_____:_____:_____:_____:_____:_____:_____	Unfriendly
Good	_____:_____:_____:_____:_____:_____:_____	Bad
Kind	_____:_____:_____:_____:_____:_____:_____	Cruel
Pleasant	_____:_____:_____:_____:_____:_____:_____	Unpleasant
Valuable	_____:_____:_____:_____:_____:_____:_____	Worthless
Happy	_____:_____:_____:_____:_____:_____:_____	Sad

7. RELATIONSHIP WITH CLASSMATES

Friendly	_____:_____:_____:_____:_____:_____:_____	Unfriendly
Good	_____:_____:_____:_____:_____:_____:_____	Bad
Kind	_____:_____:_____:_____:_____:_____:_____	Cruel
Pleasant	_____:_____:_____:_____:_____:_____:_____	Unpleasant
Valuable	_____:_____:_____:_____:_____:_____:_____	Worthless
Happy	_____:_____:_____:_____:_____:_____:_____	Sad

8. AVAILABILITY OF EXTRA-CURRICULAR ACTIVITIES

Friendly	_____:_____:_____:_____:_____:_____:_____	Unfriendly
Good	_____:_____:_____:_____:_____:_____:_____	Bad
Kind	_____:_____:_____:_____:_____:_____:_____	Cruel
Pleasant	_____:_____:_____:_____:_____:_____:_____	Unpleasant
Valuable	_____:_____:_____:_____:_____:_____:_____	Worthless
Happy	_____:_____:_____:_____:_____:_____:_____	Sad

9. SERVICES OFFERED BY THE SCHOOL GUIDANCE DEPARTMENT

Friendly	_____:_____:_____:_____:_____:_____:_____	Unfriendly
Good	_____:_____:_____:_____:_____:_____:_____	Bad
Kind	_____:_____:_____:_____:_____:_____:_____	Cruel
Pleasant	_____:_____:_____:_____:_____:_____:_____	Unpleasant
Valuable	_____:_____:_____:_____:_____:_____:_____	Worthless
Happy	_____:_____:_____:_____:_____:_____:_____	Sad

10. COOPERATIVE DECISION-MAKING BY YOU AND SCHOOL PERSONNEL

Friendly	_____:_____:_____:_____:_____:_____:_____	Unfriendly
Good	_____:_____:_____:_____:_____:_____:_____	Bad
Kind	_____:_____:_____:_____:_____:_____:_____	Cruel
Pleasant	_____:_____:_____:_____:_____:_____:_____	Unpleasant
Valuable	_____:_____:_____:_____:_____:_____:_____	Worthless
Happy	_____:_____:_____:_____:_____:_____:_____	Sad

VITA

VITA

Name: Marsha Ann Carey

Date of Birth: October 26, 1945

Place of Birth: Dayton, Ohio

Educational Background

Institution	Graduation	Degree
VPI and State University	(October, 1976)	Ed.D.
VPI and State University	1975	CAGS
West Virginia University	1971	M.A.
Marshall University	1968	B.A.
Morris Harvey College	----	----
Dunbar High School (Dunbar, W.Va.)	1963	Graduate

Professional Positions

Title	Institution	Dates
Project Assistant	Multi-State Teacher Education Project, State Department of Education, Charleston, West Virginia	1968
Classroom Teacher	Kanawha County School System, Charleston, West Virginia	1968-71
Clinical Professor	Marshall University and Kanawha County School System, Charleston, West Virginia	1971-74
Vice Principal	Kanawha County School System, St. Albans High School, St. Albans, West Virginia	1974-76

Organizations

Alpha Delta Kappa (Women's Education Honorary)
Association of Teacher Educators
National Association of Secondary School Principals
West Virginia Secondary School Principals Commission

Marsha A. Carey

Marsha A. Carey

AN EVALUATION STUDY OF AN EXPERIENCE-BASED CAREER EDUCATION PROGRAM

by

Marsha Ann Carey

(ABSTRACT)

The purpose of this study was to evaluate the effectiveness of the pilot implementation of the Experience-Based Career Education (EBCE) program in the traditional high school setting in Kanawha County, West Virginia. Four questions were formulated to serve as guides in ascertaining whether students who participated in the EBCE program exhibited cognitive abilities and affective characteristics comparable to students in the regular high school curriculum. These questions included: (1) student achievement in the comprehensive English skill areas, as measured by subtests one through five of the Comprehensive Test of Basic Skills (CTBS); (2) attitudes toward the world of work, as indicated by the Attitude Scale of the Career Maturity Inventory (CMI); (3) attitudes toward the educational experience, as determined by the Semantic Differential; and (4) attendance, as recorded on student records. The effectiveness of the

pilot EBCE program was to be determined by whether the EBCE students of the experimental group scored as well as the control students on the three selected instruments used to assess achievement and attitudes. Attendance data were also utilized as a measure of the effectiveness of the EBCE program.

The absence of opportunity for random sampling led to the choice of an evaluation, rather than an experimental, design. The evaluation design freed the experimenter from the constraint of the "go or no-go" null hypothesis, and permitted probing of the data in a more subjective, but not necessarily less meaningful manner. The test data were analyzed by the statistical tools of analysis of covariance (ANCOVA) and multivariate analysis of covariance (MANCOVA). Attendance data were analyzed by the use of the chi square statistic.

Multivariate analysis of covariance tests indicated a significant difference between experimental and control groups on the five CTBS subtest posttest scores when considered simultaneously. Subsequent analysis, using simultaneous confidence interval tests, revealed that the difference was attributable to posttest differences on the mechanics and expression subtests. The differences were in favor of the control group.

Analysis of the data relevant to growth in the area of career maturity, showed no significant difference

between the experimental and control groups. The statistically similar growth of both groups suggested the influence of a maturation factor.

Evaluation of the data obtained from the Semantic Differential, also showed there to be no significant difference between the perceptions of the EBCE students toward their educational experience and those of the control group. Analysis of the attendance data, similarly failed to show significant difference between the experimental and control groups.