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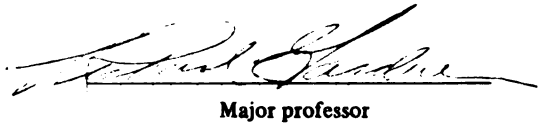

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AN ANALYSIS OF THE EFFECTS OF A MODIFIED EXPERIENCE BASED CAREER EDUCATION PROGRAM

by

Donna Jean Carter

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ABSTRACT

AN ANALYSIS OF THE EFFECTS
OF A MODIFIED EXPERIENCE BASED
CAREER EDUCATION PROGRAM

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Experience Based Career Education (EBCE) was developed and implemented by four regional educational laboratories as an optional secondary program that integrated academic learning, career experience, and life skill development. The Grand Rapids EBCE Program was patterned after the Northwest Regional Educational Laboratory EBCE model, but operated with a reduced treatment time.

This study sought to ascertain through nomothetic and ideographic methodologies the effectiveness of a one-semester, three-period per day EBCE program for secondary students. It sought to determine

1. the extent to which EBCE students demonstrated growth in basic skill areas equal to or better than the students in the regular high school program

2. the extent to which EBCE students demonstrated growth in career development skills in comparison with regular high school students

3. the extent to which EBCE students demonstrated growth in life skills

4. the extent to which growth was attributable to the students' participation in the EBCE program

5. the perceptions of employer-instructors regarding student participation and program value.

Five case studies provided additional insight into the life skills and career development of students. In addition, through descriptive narrative, the case studies provided vignettes of selected students as they progressed through the EBCE program.

Data gathering techniques consisted of paper and pencil tests, interviews, observations, questionnaires, and student record and product reviews. Students, parents, staff, and employer-instructors were all sources of data collection.

The major findings and conclusions as related to the purposes of the study were as follows.

1. No significant difference was revealed between experimental and comparison groups in either reading or arithmetic achievement gains. This finding seemed to suggest that the concern regarding maintenance of reading and math skills when reinforcement activities were substituted for a traditional instructional format was unfounded.

2. EBCE participants demonstrated more growth in career development than their counterparts in the regular high school program. This finding supported the premise that a one-semester, three-period per day EBCE program was effective in student acquisition of self and career knowledge assumed to be essential for identification and selection of the most advantageous career.

3. EBCE participants demonstrated growth in the life

skills as perceived by students, staff, and parents. Students also emphasized their achievement of survival skill competencies. It appeared that student growth in the life skills was effected by a one-semester, three-period per day EBCE program.

4. EBCE was credited with student growth in life skills, career development skills, and basic skills. Growth in the career development area was most frequently attributed to EBCE by all groups. In career development, EBCE seemed the most helpful in developing the skill of matching self to career. This finding seemed to substantiate fulfillment of the EBCE program design which was to expedite the natural maturation process.

5. Benefits were noted by most employer-instructors, prompting agreement to continue participation. They believed EBCE students were interested in both programs and community sites to which they were assigned.

The case studies highlighted the individualized approach in program design. The choices of learning activities made by those students studied revealed that when given a choice, students tended to base selections on individual need and interest. The case studies also revealed that students could take responsibility for their own learning; however, students below average academically appeared to adapt less easily to the program structure. In spite of these problems, growth did occur as substantiated in the case study.

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that dictum and for their patience in letting it happen.

CHAPTER I

THE STUDY

Introduction

Experience Based Career Education (EBCE), a secondary education program, was developed and implemented by four Regional Educational Laboratories. Structured within a school and community partnership, EBCE was designed to give students an opportunity to learn and earn credit through a variety of first-hand experiences at community learning sites coupled with an individually tailored in-school program.

EBCE provided secondary students with an optional educational program that integrated academic learning, career experiences, and life skill development through direct learning experiences in the community. It extended beyond the acquisition of basic skills to a wide range of affective outcomes and required the use of higher order thinking skills in the application of knowledge.

It was this gestalt approach of the EBCE program that led to its selection as a pilot project in the secondary level of the Grand Rapids Public Schools. As such, the Grand Rapids EBCE Program was a third generation effort modeled after Community Experiences for Career Education $(CE)_2$ operating in Waterford and Wayne-Westland, Michigan.

The Waterford and Wayne-Westland programs were patterned after EBCE as developed by the Northwest Regional Educational Laboratory (NWREL) in Portland, Oregon and implemented in Tigard, Oregon. The Grand Rapids EBCE Program differed from the preceding models in that students participated for only one semester.

Rationale

$(CE)_2$, the parent project for the Grand Rapids Public Schools' pilot, was originated in September 1972. It was funded by the National Institute of Education, Office of Career Education and operated by the NWREL in an effort to reduce the widening gap between school and life. At an age when previous generations of Americans were learning responsibility and self reliance in the real world, young people in comtemporary secondary schools remained in a state of childlike dependence. EBCE was created to bridge the gap between youthful study and adult experience while putting the onus for learning back on the student. The design of this instructional system incorporated many features of several innovations already in use, e.g. co-op, work study, competency based certification. It differed from the regular high school program in that it enabled a cross section of the local student population to experience a broad range of occupations and to develop within a strict accountability system academic, personal-social, and career development skills based on an individual, personally devised learning

plan.

EBCE exploited the fact that human experience did not divide itself conveniently into compartments called "courses" or "subjects." The student's choices and sequence of learning activities were geared to their own interests and abilities, but were planned and structured carefully to yield specified learning outcomes and competencies. The professionals who worked with students had titles which exemplified their roles as assistants in the learning process rather than as teachers with full responsibility for student learning. Community volunteers assumed major roles on the educational support team by helping students to synthesize their experiences and to see the real life, interrelationships between school, personal-social development, and the world of work. (NIE, DHEW, 1975)

Since the inception of EBCE, intensive evaluation efforts supported by sizeable federal funds had been carried out, the results of which generally supported the merit of this unique educational approach. However, there was still a paucity of empirical data investigating the effectiveness of reduced treatment on EBCE programs. In addition, the extent of the modifications made in program operation and content, treatment time, and financial support in the Grand Rapids Public Schools' EBCE pilot were significant enough to warrant an examination of the program's educational value to its participants. The specific differences between the original project and the Grand Rapids Public Schools' pilot

are delineated in Chapter II of this document. As a result of those differences, a modification in the evaluation design was also warranted.

More specifically, an analysis of data collected might not have revealed statistically significant differences. However, because the case study approach was an intensive analysis of an individual unit stressing developmental factors in relation to environment or treatment, it appeared to be useful in determining if other significant educational outcomes occurred.

In the conventional group statistical approach, data on a few variables were generally summarized across many or all program participants. In the case study approach, however, data on a large number of variables were organized and presented for only a few program participants. Narratives describing both what and how a few students learned and their interaction with others in that process were presented.

The EBCE program was highly individualized. The case study approach was in keeping with the philosophy and practice of the EBCE program.

Additionally, the EBCE program helped students learn how to learn using an experiential learning methodology. The case study approach zeroed in on that learning process, focusing primarily on the student in the act of learning.

The description of a student case study approach to program evaluation given by Fehrenbacher, Owens, and Haenn

(1979) substantiated the value of the case study approach. In their description, they emphasized the following four characteristics of the student case study approach:

1. the individual as the unit of analysis
2. use of a variety of information about the individual
3. the systematic approach of a case study
4. the importance of the objectivity of the case study

Because it was recognized that both nomothetic (group statistical) and ideographic (clinical case study) methodologies were useful in finding solutions to educational problems, the case study approach was included in this research design. Use of the case study approach also provided an opportunity to examine it as a method of measuring the career development of students since the systems approach to learning employed in the design and operation of EBCE was highly compatible with the holistic nature of this approach (Glaser & Backer, 1972).

Purpose of the Study

Union High School, located in the metropolitan city of Grand Rapids, Michigan, initiated an EBCE pilot in the fall of 1979. The initiation of the project followed comprehensive investigation, several visitations to other program sites, and staff training.

This study was an attempt to ascertain the effectiveness

of a one-semester, three-period per day EBCE program for secondary students. More specifically this study sought to determine

1. the extent to which students in EBCE demonstrated growth in basic skill areas equal to or better than students in the regular high school program

2. the extent to which EBCE students demonstrated growth in career development skills in comparison with regular high school students

3. the extent to which EBCE students demonstrated growth in life skills

4. the extent to which growth was attributable to the students' participation in the EBCE program

5. the perceptions of employer-instructors regarding student participation and program value

This study also presented the case study as a method of gaining additional insight into the life skills and career development of students and provided, through descriptive narrative, vignettes of selected students as they progressed through the EBCE program.

Description of the Grand Rapids EBCE Program

Grand Rapids, Michigan, with a population of approximately 200,000, was the second largest city in the State. The minority population was 15% and composed primarily of black, Hispanic, and Asian ethnic groups.

Students in Grand Rapids came from a variety of cultural

backgrounds and were educated in programs extending from pre-kindergarten through junior college. Educational units in Grand Rapids included one (1) junior college, four (4) high schools, one (1) educational park for vocational and other single site offerings, six (6) middle schools, forty-eight (48) elementary schools, seven (7) special education operations, and a wide variety of alternative schools and programs which spanned all grade levels.

In the secondary schools, increased emphasis was placed on individualized instruction within a departmentalized context. In an effort to accommodate the learning styles of individual youth, the Grand Rapids Public School system operated a variety of enrichment or supplemental programs. While the regular K-12 program met the educational needs of most students, a significant number of young people benefited from additional learning experiences which addressed their special needs. Designed to stimulate academic growth, some of these programs accommodated high achievers; others served the alienated student; while still other programs were developed to meet the individual needs of a wide variety of young people. EBCE was one such alternative program.

Initiated in the fall of 1979, the Grand Rapids Public Schools EBCE Program was a pilot for selected Union High School 11th and 12th grade students. The project was funded through a $5,000 Career Education State Adoption Grant. Supplemental support was provided by State and District

Career Education Funds

The Board of Education supported two (2) project staff persons. This included one (1) learning manager and one (1) community relations specialist. Staff received specific program training in a two-week implementation workshop provided by Michigan State University in the summer preceding start-up. The goal of that training was to equip the participants with the knowledge and skills necessary to implement an EBCE program.

The major components of the training centered on program planning, governance, curriculum, community participation, and evaluation. The major time allocation focused on the instructional dimensions of the program which encompassed the areas of

1. Basic Skills
2. Career Development
3. Life Skills (including competencies)

The training was directed toward the implementation of $(CE)_2$, the NWREL EBCE program. However, the Grand Rapids Public Schools' participants were responsible for the adaptation of the project to fit local constraints. This adaptation resulted in the implementation of a part-time, one-semester program as an alternative to the regular secondary school curriculum. EBCE, as the Union High School project was called, integrated real life experiences on a variety of employer and community sites with individualized educational outcomes. The GR/EBCE curriculum path appears in Appendix A.

EBCE took the subject matter that students studied and added many new elements about people, jobs, self, and the way communities work. It let high school students learn about the community through direct experience with adults in many walks of life. The nature of the program capitalized on individual needs, interests, and abilities with close supervision of students maintained in both classrooms and community settings.

EBCE taught the application of basic skills (reading, communication, and math) and life skills (personal-social development, functional citizenship, critical thinking, creative development, science, and competencies). It also used exposure to and experience with the world of work as the organizing focus. People from business and industry were providers of learning experiences.

In this program, students committed the 4th, 5th, and 6th hours of their school day and earned 15 academic credits (1.5 Carnegie units). They explored the real dimensions of many careers, learned more about what they wanted to become and mastered some of the skills they needed to negotiate successfully in the adult world.

The aim of EBCE was not to replace required subject matter, but to supplement it--to extend it into other areas in order to bring learning, living, and working much closer together.

In order to participate in the program, students were required to provide their own transportation to their

selected community sites and to have demonstrated consistent school attendance.

In-school facilities included a classroom designated as the "Learning Center" and the school's Media Center in which the Michigan Occupational Information System computer terminal and other instructional resources were located.

Sixteen (16) students were enrolled in EBCE. All of the students were 11th or 12th graders from Union High School. They did not get paid for their efforts but did earn regular high school credit towards graduation. The students represented a cross section of their school population in terms of ability, sex, and race. Students were college bound or employment seeking upon graduation from high school. Each student had to take at least one class in the regular high school program.

The EBCE curriculum was broken down into three sections: (1) Career Development, (2) Basic Skills, and (3) Life Skills. Career Development focused on topics, trends, and issues that were important to people in the working world. The content areas were (1) information about self and the world of work, (2) general and specific career skills, and (3) life time career development. Basic Skills were skills used to perform tasks, solve problems, and learn new ideas. Basic Skills included the following content areas: (1) Reading, (2) Communication, and (3) Mathematics. Life Skills were skills and attitudes necessary to integrate the multiple roles of adult daily life. This portion of the

curriculum built awareness and skills in (1) creative development, (2) critical thinking, (3) functional citizenship, (4) personal-social development, and (5) science.

In addition, eight (8) competencies or adult survival skills were identified. Proficiency in these competencies was certified by community professionals. The EBCE program competency areas and student requirements were

1. Budgeting Time and Money: understand the importance of values and goals in determining the use of time and money; formulate a budget and time schedule

2. Securing a Job: prepare resumes and applications; understand the Social Security System and its benefits

3. Insurance: understand and become competent in automobile insurance including No-fault insurance, comprehensive, and collision insurance; become familiar with life, medical, and surgical insurance

4. Housing: know the advantages and disadvantages of housing options; know methods of financing real estate purchases

5. Checking and Credit: understand information on signature card, checking account deposit slips, savings withdrawal slips, savings deposit slips, bankcard and other charge applications, and instaloan forms; know the meaning of Federal Reserve System, and also purpose of FDIC; learn to reconcile checking account statements

6. Taxes: be familiar with income tax returns, forms 1040 and 1040A, schedule A and B, State of Michigan

Homestead Property Tax, credit claims, and various tax terms

7. Auto Maintenance and Buying: perform various maintenance checks; know advantages and disadvantages of buying a new car versus a used car; know the popular options on new and used cars

8. Future Educational Options: research post-secondary education possibilities such as college, apprenticeship, and continuing education

The student activities used to achieve the above noted curriculum objectives included completion of pre-designed and individual projects, career explorations, learning levels, and/or special placements. Maintenance of a journal and attendance at prescribed seminars was also required. Students individually negotiated the specific content/ topics of their assignments with the learning manager.

Minimum EBCE requirements consisted of three (3) projects (one of which must have been in the critical thinking area), five (5) competencies (the first being "Budgeting Time and Money"), four (4) explorations, eighteen (18) journal entries, eighteen (18) weekly record sheets, and attendance at eighteen (18) student/staff meetings.

Definition of Terms

Basic Skills: reading, communication, and math skills used to perform tasks, solve problems, and learn new ideas

Career Development: the curriculum component that focused

on student examination of careers at specific sites, and the comparison of site experiences with personal attitudes, values, and aspirations, as well as the acquisition of knowledge about problems and issues in the contemporary working world

Career Exploration: a strategy for student examination of employer sites to compare interests, abilities, and career goals with specific job environments and requirements

Certification: declaration by a community resource person or EBCE staff member that the student had completed a specific portion of an identified competency

Cluster: groups of occupations that were similar in nature

Community Experiences for Career Education $(CE)_2$: the experimental model of EBCE in Tigard, Oregon, designed to test the idea that young people could receive a comprehensive education by learning directly from adults in the community; also the name of Wayne-Westland project

Community Instructor: person (owner, employee or manager) at the community site to whom the students of the EBCE project were responsible; also known as employer-instructor

Community Relations Specialist: person who recruited and developed community learning sites and scheduled student placements

Competencies: the survival skills which employers and other adults in the community considered essential for a person to master in order to function successfully as a

citizen, wage earner, consumer, and learner

Competency Certifier: volunteer from the community with expertise in a speciality area who verified student mastery of materials, skills, and understanding for a competency

Employability: possession of skills necessary for getting a job

Employer-Instructor: person or designee at the community work place who helped students follow through on learning activities and provided guidance support and evaluated student performance of onsite learning tasks; also known as community instructor

Experience Based Career Education (EBCE): educational innovation based on the idea that the community could serve as an alternative classroom for comprehensive secondary education by providing "reality experiences" in addition to more traditional in-school academic activities; also name of the Grand Rapids pilot

Journal: informal, confidential written record of personal experiences, feelings, activities, and ideas that students shared weekly with a staff member

Learning Center: home base where EBCE students worked on projects, attended group meetings, studied individually, met with staff, interacted with other students

Learning Level: strategy whereby students followed through on explorations of particular sites by returning for in-depth, "hands-on" activities in order to complete

projects and acquired initial job skill familiarity

Learning Manager: EBCE staff member primarily responsible for negotiating learning activities with individual students and coordinating student learning plans

Learning Plan: individualized program of study negotiated between each student and the learning manager to incorporate a blend of learning activities in Basic Skills, Life Skills, and Career Development

Life Skills: curriculum component that included the content areas of critical thinking, functional citizenship, personal-social development, science, creative development, and the eight (8) competencies identified by the EBCE staff

Michigan Occupational Information System (MOIS): method for disseminating current and accurate, occupational and educational information from a series of central files accessed through the use of both MOIS microfiche and computers

Negotiation: process through which students and staff worked together to design and personalize individual learning activities

Limitations of the Study

Because the case study approach did not lend itself to traditional data validation techniques, heavy reliance was placed on the judgment of the researcher to select pertinent data for inclusion in the report. The chance for evaluator bias was recognized and steps were taken to minimize it.

Researcher observations were compared to those of employers, parents, staff, and students as the case study data were collected and assembled to determine the reliability and validity of the information. The narrative draft for each case was also reviewed by the student being studied for accuracy of fact.

The case study narratives were also reviewed by a district evaluator not involved in the EBCE project to challenge the writer's bias and any unwarranted conclusions. Those conclusions not supported by empirical evidence were dropped. The completed case study reports were reviewed by a non-educator to insure readability by a general audience.

Because of possible impact of the Hawthorne effect, the uniqueness of the Grand Rapids' site implementation, and the research methodology, caution should be given to avoid wide generalizations of the results of this study. It should be duly noted that one of the functions of this study was to raise questions, as well as to answer questions, i.e. Do paper and pencil tests really measure actual growth that has occurred?; What are other ways that this growth can be measured?; Is there a better way of predicting which students will experience success with this instructional approach and which will not?

Organization of the Study

In Chapter II a review of pertinent literature is provided. Research related to the conceptualization of Career

Education, EBCE, a description of the Northwest Regional Educational Laboratory (NWREL) approach to EBCE, and significant deviations from the NWREL program in the Grand Rapids EBCE approach are included.

The design for the research is presented in Chapter III.

The data gathered in support of the research questions is presented in Chapter IV.

In Chapter V a narrative for each of the individual students studied is presented. These case studies address the research questions presented earlier and include the related learning activities undertaken, findings, and other information considered viable.

CHAPTER II

A REVIEW OF SELECTED LITERATURE

In the review of the literature an overview of the various conceptualizations of career education including the historical development of career education and a comparison of some common interpretations is presented.

In addition, the development of Experience Based Career Education (EBCE) as a programmatic method of delivering career education is discussed. Unique variations among the four Regional Educational Laboratory Experience Based Career Education Programs are described with particular emphasis on the Northwest Regional Educational Laboratory (NWREL) program approach. Significant deviations in the Grand Rapids Experience Based Career Education Program from the parent project at the NWREL are explained.

Historical Development of Career Education

On January 23, 1971, Dr. Sidney P. Marland, United States Commissioner of Education, addressed the Convention of the National Association of Secondary School Principals in Houston, Texas, and career education was officially born. In his speech, "Career Education, Now", Dr. Marland criticized the tendency to separate education into parts and isolate those parts. He specifically spoke of the false

dichotomy between academic and vocational education, calling it "academic snobbery." He suggested disposing of the term "vocational education" and adopting the term "career education." Marland challenged the content of the high school program as being "educational pap" for over half of the students, and stressed the importance of teaching each youngster the skills needed to live his/her life as a fulfilled human being (Goldhammer, 1972).

The ideas presented by Marland were not foreign and, in fact, served to resurrect earlier efforts to relate academic and vocational learning activities. Ben Franklin, for example, established the Public Academy in 1759 and urged a strong vocational motive infused into the curriculum. He felt the curriculum should prepare the children for multiple skills and that the test of a true education was its usefulness to man. Horace Mann (1796-1859) attempted to organize the curriculum around civic, social, and character needs of all pupils (Ryan, Brown, Johnson, Miller & DeYoung, 1974).

Heinrich Pestalozzi (1746-1827), in his day one of the most widely acclaimed teachers of the young, seemed to anticipate the modern day school and, indeed, the aims of career education at the elementary level. He contended that we develop meanings and understandings in life situations and he urged the use of special methods to provide each child with an active experiential education (Ryan et al, 1974). Pestalozzi maintained that "not art, not books, but life itself is the true basis of teaching and education" (1951, p. 35).

He was also quoted as saying, "a man learns by action and is cheered by action--have done with words!" (Pestalozzi, 1951, p. 35).

Frank Parsons, director of the first vocational guidance center in the United States during the early 1900's, was an early supporter of self awareness and career awareness in conjunction with career decision making in vocational counseling. He advocated study and understanding of self, study of the requirements of occupations, and realistic conclusions for matching self and career based on the facts obtained (Bailey, 1973).

In 1918, the NEA formulated the "Seven Cardinal Principles of Secondary Education" emphasizing many of today's career education goals. Included were attention to worthy home membership, health, command of fundamental processes, worthy use of leisure time, vocation, citizenship, and ethical character (Knezevich, 1969).

Also during this period, John Dewey provided a rationale for making vocational preparation the core of a general education program by looking beyond societal needs to the learning characteristics of children. Dewey reasoned that the child's knowledge began with the child's doing and that vocational education provided the potential to satisfy the child's innate tendency to explore, to manipulate tools and materials, and to construct and create, while at the same time providing the child with job skills (Taylor, Williams, Haley, Schwartz, Hedstrom & Turner, 1977).

In 1938, the NEA Educational Policies Commission redefined the purposes of education. The four groups of objectives established were almost identical to the four life roles of career education--family, citizenship, leisure, and occupation. The NEA objectives were self-realization, economic efficiency, civic responsibility, and human relations.

While the terminology was changing, the goals of education were not. In the early 1950's, family life, health, use of leisure, occupational skills, and civic understanding were still listed among the "Ten Imperative Needs" in education for all American youth (NEA, 1954).

In 1960, these same goals were relabeled the productive, personal, intellectual, and social dimensions of public education (Downey, 1960). In 1966, these goals were reaffirmed as "Imperatives in Education" by a commission of the American Association of Educational Administrators.

In each case, occupational preparation was given importance, but without legislation would never have been incorporated into the school curriculum. Early legislative efforts toward preparation for the occupational role included the Morrill Act of 1862 which established the land grant colleges. The Hatch Act of 1887 provided funds for agricultural research and provided significant impetus for initiation of secondary agricultural programs. These programs were followed closely by applied science and engineering programs.

The Smith-Lever Bill of 1914 provided federal aid for

extension training of farm people in agriculture and for industrial, agricultural, and home economics education in secondary schools. When it became law as the Smith-Hughes Act in 1917, vocational education in public secondary schools was born.

As the nation passed through the Industrial Revolution, the definition of valued work changed and the emphasis on agriculture was traded for one on technology and industrial related occupations. School curriculum supported this shift in emphasis. The National Defense Education Act of 1958 provided funds to support this change of direction. It provided for the training of highly skilled technicians for the five year period from 1958 to 1962. The act also made the first mention of using guidance funds to maximize retention. It also required that state plans show that background general education was available to students and that students would be selected on the basis of previous educational and work experiences, aptitudes, and interests.

Still, many students did not take advantage of vocational/technical education opportunities in secondary school and from 1961 to 1965 effort was made to legislate programming for students who graduated or dropped out of school ill-equipped to get and keep a job. The Area Redevelopment and the Manpower Development and Training Acts were designed to provide vocational training and retraining of the unemployed and underemployed. The Vocational Education Act of 1963 and its 1968 amendments

were the final attempt to legislate work training for the total high school aged population.

This act extended the provision of vocational training to persons who wished to continue vocational education beyond secondary school, persons in the labor market wishing to upgrade their skills, and the handicapped and disadvantaged populations. In addition to maintaining, extending, and improving existing programs of vocational education and allowing the development of new programs as labor demands shifted, the act provided part-time employment of youth-in-need. Business education and health occupations were recognized for funding. The act was intended to blend cognitive or academic learning with psychomotor or practical learning to develop marketable skills.

Today, the Department of Labor Job Corps Program, the Comprehensive Education and Training Act (CETA), and their many modifications have attempted to merge vocational training efforts with on-the-job experience, at least for economically disadvantaged youth.

Although early career education practices suggested that preparation for a successful working life was as essential as preparation for an appreciation of the cultural arts, educational practices in the period prior to 1970 were limited to either classical subjects or vocational courses. Students were permitted little opportunity to merge the best elements of each into a program to meet their unique needs. The "Progressive Era" and the project method

of the 1930's and 1940's permitted the students to acquire a limited number of "hands-on" experiences, but rarely were these work experiences carefully articulated or reflected upon in a consistent manner. A majority of our early schools, colleges, and technical institutes were single track institutions with little opportunity for experiencing a wide variety of learning-earning tasks (Ryan et al, 1974).

In Grand Rapids, Michigan, although written rules did not preclude students' participation in either or both tracks, there seemed little encouragement to select options from both. As late as 1970, the vestiges of isolated classical learning and isolated practical education continued to exist. Nationwide, the relevancy of the educational curriculum to its application in life was rarely illustrated except perhaps in vocational courses. Schools tended to not address many of those competencies which would improve a student's ability to navigate rather than to float through adulthood. Seemingly time and again, total life preparation was touted as an educational goal, but in fact addressed only through sporadic and fragmented efforts. This lack of responsiveness on the part of the educational system provided the impetus for Marland's 1971 directive for American education--the mandate for career education.

On August 21, 1974, career education became an official mandate of the United States Congress when President Gerald R. Ford signed into law PL93-380, the Education Amendments of 1974. Kenneth Hoyt (1975) interpreted the career

education mandate as preparation for all meaningful and productive activity at work or at leisure, whether paid or volunteer, as employee or employer, in private business or in the public sector or in the family. Hoyt's statement not only expanded the meaning of work and provided an alternative measurement of self worth, but also provided the framework for defining career education and gave rise to the life roles concept of career education.

Interpretations of Career Education

A review of the literature on career education revealed a thread of commonality with varying emphasis on work. Most definitions were characterized by an emphasis on the development of the individual, identification of several developmental phases, the possibility of lifelong growth in each phase, and a goal of preparation for more than just the occupational life role. The need for some form of community involvement in the career development process and for an integrated educational approach including guidance, general education, and vocational education also appeared consistently.

Career education in Michigan was defined as a system for the delivery of skills to all students, providing them with the ability to explore, understand, and perform in their life roles while learning, working, and living (MI Dept. of Education, 1973). The Michigan Career Education Consortium (1976) added knowledge and attitudes to the delivery of skills and further stated that career education

embraced all the elements of education and required the cooperative participation of both the school and the total community.

The State Department of Education in Utah (1973) developed a similar definition. Career education consisted of those parts of the educational system focused on providing the individual with the skills, understandings, and values necessary for obtaining and succeeding in gainful occupations in which the individual made a living, and in the useful occupation of homemaking. Utah, however, illustrated a stronger work orientation than Michigan. Career seemed synonymous with work. No mention was made in the Utah definition of preparation for other life roles. In this scheme, there were seven goal areas identified: (1) understanding one's self and relationships with others, (2) career orientation and information, (3) economic awareness and consumer competency, (4) career and skill exploration, (5) decision making and career planning, (6) specific skill development and application, and (7) career placement, stability, and advancement. The Utah definition was one of the few that included economic and consumer understanding as an important component of career development.

Economic awareness was also included as an element of career education by Kenneth Hoyt in a 1976 mini-conference report and by the State of Arizona Department of Education (1975) in its description of eight elements of career education to be woven into lesson and unit plans at all grade

levels and in all subject areas.

Ryan et al (1974) in the Maine University teacher training materials were also supporters of economic education. They conceptualized career education as an approach that helped students consider the social, economic, and personal significance of work. Unlike Utah, however, they recognized the family and community responsibilities as they impacted career choice. They indicated that the thrust of career education was the development of the individual as s/he interacts with the family, school, and community in relation to career management. Ryan et al also spoke of an integration of three kinds of learning similar to the skill, knowledge, and attitude elements of the Michigan model. Their labels for the three, however, were experiential, cognitive, and affective components in which they felt the student must progress simultaneously.

Very few of the conceptualizations of career education supported values development or teaching values. This may have reflected the position that the realm of values transfer was considered uniquely the family's role. Richard Peters (1978) did, however, define career education as a process of values development in the areas of social responsibility and work orientation. He suggested that helping individuals become familiar with their personal value system, and implementing those values in their lives in such ways that work became possible, meaningful, and satisfying was necessary. The Utah Board of Education (1973) also included

values as one of the concepts that should be provided to individuals for occupational success.

Values clarification and the application of individual value systems in the decision-making process was much more popular as a valuable component of career education than values development. Support for this approach was echoed by Ryan et al (1974), Wernick, Tiedeman, Eddy, Bosdell, Wessell and Hedstrom (1975), and Davis (1975).

Ryan et al (1974) placed major stress on the individual and his/her growth toward self-analysis in the career development process. They explained that their comprehensive approach, among other things, was intended to help students clarify their own values and apply that information as they developed the career aspect of self.

Wernick et al (1975) pointed out that for career education to work, teachers were to be role models in values clarification skills and decision-making practices.

The Anchorage, Alaska career development model (Davis, 1975) focused heavily on the individual student. It mandated that the whole environment of the student be a stage for learning, that each student be involved in his/her own education by helping them individually to understand themselves and others, identify a personal system of values, develop skills in planning and decision making, and ultimately choose a satisfying occupation and life style.

The developmental nature of career education was widely recognized. Havighurst (1952) defined a developmental task

as

> a task which arises at or about a certain period in the life of the individual, successful achievement of which leads to his happiness and to success with later tasks, while failure leads to unhappiness in the individual, disapproval by society, and difficulty with later tasks. (p. 2)

The most cogent example of the developmental nature of career education was the selection of and preparation for an occupation as discussed by Ginzberg, Ginsberg, Axelrod & Herma (1951). They noted that occupational choice was a decision-making process extending from pre-puberty until the late teens or early 20's when the individual made a definitive occupational commitment. This series of choices was governed by the child's stage of development and was necessarily consistent with his self concept. Therefore, as the child matured and proceeded through the stages of self awareness and career awareness, his occupational decision-making expression proceeded from a less realistic to a more realistic choice. Ginzberg et al classified these choices according to the Fantasy (6-11 years), Tentative (11-17 years), and Realistic (18 years and older) periods.

The career development component of the Michigan model identified four developmental stages. They were self-awareness and assessment, career awareness and exploration, career decision making, and career planning and placement. A single student functioned in all phases simultaneously. However, the level of sophistication of each activity and expected response varied according to his/her maturity level (Michigan Department of Education, 1973).

The identification of phases or stages in the process of career development was quite apparent in the literature. Hoyt, Evans, Mackin, and Mangum (1972) identified three essential phases for each individual in the career education process. The purpose of the first phase, awareness, was to familiarize individuals with the values of a work-oriented society. Exploring and personal decision making was the second phase. The objective of this phase was for individuals to integrate work values into their personal value systems. The third phase was implementing those work values into the individual's own lives. The three-step process was felt to be a continuing one that would occur repeatedly in life as individuals experienced occupational changes.

Hoyt et al (1974) later expanded their perspective on career phases and included awareness exploration, vocational decision making, establishment, and maintenance. This expansion reflected a more extensive occupational decision-making process and emphasized maintenance of job satisfaction as a phase. In both cases, a work role orientation dominated the descriptions of career education phases.

In North Carolina, Charles J. Law (1972) described a different set of career education phases. Career awareness (K-9th grades), career exploration (5th-12th grades), occupational specialization (7th-post secondary grades), and occupational advancement (9th grade-continuing education) were the phase designations he made. Much less emphasis was given to work values and much more to the investigation

of jobs and job skills, and to occupational preparation.

Ryan et al (1974) referred to levels of career education and included awareness, exploration, and preparation. Wernick et al (1975) used career awareness, orientation, exploration, and specification as phase designations. Wernick et al also specified grade levels which correlated with each stage. This designation was somewhat unique in that Phase IV, "Specification", applied to 11th and 12th grades, as well as to the post secondary level. This phase was followed by a recycling phase which highlighted their support of the lifelong learning concept. Sam Paravonian (1978) addressed the continuous learning aspect of career development and included learning areas clearly reflective of developmental stages, i.e. awareness of self, appreciation for the world of work, and the attainment of planning and decision-making skills.

Kansas State Department of Education (1976) offered a slight modification on the concept of career development phases including awareness, orientation, exploration, selective formulation, and action in the process. Their career components were also somewhat unique. They included self, work, leisure, and resources. Awareness of self and others, awareness of diverse careers and occupations, along with exploration, counseling and guidance, skills training, and job placement were stages of career development identified by Peters (1978). Hoyt's (1976) stages of career awareness, career exploration, and career preparation were

identical to the stages identified by Davis (1975). The concept of phases of career education was redefined by the Michigan Board of Education (1973) to include career development and career preparation. Career development, as previously discussed, included four components. The career preparation aspect was defined by the Michigan Career Education Consortium (1976) as "the acquisition of those knowledges and skills gained through formal and informal experiences in existing school programs." (p. 2)

As previously discussed, the Utah Board of Education (1973) defined seven goal areas rather than stages. These goal areas were referred to as career education elements (Arizona State Department of Education, 1975). They were career awareness, self awareness, appreciation and aptitudes, decision-making skills, economic awareness, and beginning competency. The remaining two elements were employability skills and educational awareness. In a discussion of the Portland, Oregon Career Education Program, four phases were highlighted: career awareness, career-self exploration, occupational preparation, and occupational specialization (David Douglas School District, 1973).

Many career education curriculum projects existed which were limited in design for use at specific grade levels. Most states and school districts, however, saw the value of a continuous approach K-12 or K-post secondary and tended to infuse into the regular curriculum objectives,

goals or learning activities that fostered career development as part of a comprehensive program.

Development of Experience Based Career Education

The concept of EBCE was initiated by the United States Office of Education in 1971 with four projects running concurrently through 1976. Designed for implementation at the secondary level, EBCE was intended to be a separate entity rather than an infusion strategy.

Although the program was relatively new, the idea behind it was as old as apprenticeship--the learning method used since man first discovered the need to pass on technical know-how, social skills, and human understanding. In a sense, EBCE looked back to a time when the entire community shared in the responsibility of opening an early door to adulthood (NIE, DHEW, 1975). The educational philosophy of experiential learning espoused by Pestalozzi (1951) and Dewey (Taylor et al, 1977) are but two examples which supported and reinforced the basic design of EBCE.

Recognizing the value of experiential learning, the National Institute of Education sponsored and funded four regional educational labs throughout the United States. Each lab was responsible for developing programs that bridged the gap between study and experience, and between the classroom and the community. The National Institute of Education provided each lab with the same set of guidelines for developing programs, but otherwise left them free to

build educational enterprises that seemed most appropriate to local resources and the characteristics of local young people (NASSP, 1975).

The programs that resulted were similar in that they were all student centered and provided personalized learning experiences to all students. Each program focused on student learning actitivies in the community at cooperating experience sites; each developed procedures and materials for integrating academic learning with career experience. However, while the four programs in overall configuration obviously belonged to the same family, some significant differences in approach emerged.

In one program, students continued essentially as regular members of their original high schools, while students in the other three EBCE programs operated out of external learning centers. Instruction in the basic skills also varied among the sites. Approaches ranged from the use of a programmed sequence of learning materials to informal on-the-job processes sometimes supplemented by tutorial assistance, small group discussions, texts or independent study activities. Counseling in two cases was provided as a separate service, while at the other two sites counseling was made an integral part of the instructional program.

Northwest Regional Educational Laboratory--the Parent Program

Since the fall of 1972, the NWREL had been sponsoring one EBCE model, Community Experience for Career Education $(CE)_2$, in Tigard, Oregon. This model was chosen for adoption by the Waterford and Wayne-Westland school districts outside of Detroit, Michigan. Subsequently, Grand Rapids Public Schools also elected to adopt the NWREL EBCE program and became a third generation site. As a demonstration project, Waterford and Wayne-Westland provided the technical assistance for implementation of an EBCE program in Grand Rapids.

The project at NWREL was a full-time comprehensive interdisciplinary program, with about fifty percent of the learning taking place in the community and fifty percent in a program learning center. The curriculum areas included basic skills, life skills, and career development.

In the basic skills area students were to increase their proficiency in reading, writing, oral communication, mathematics, and their ability to perform basic skill tasks identified on employer sites. Students were to develop an understanding of how basic skill needs vary as careers vary and how to adjust to those situations. They were also to have demonstrated an increased willingness to apply basic skills to everyday problems.

In the life skills area students were expected to increase their ability to think critically, to recognize and

apply scientific procedures and technology where appropriate, and to identify and participate in creative processes. They also were to increase their understanding and ability to apply democratic processes in the private sector and in governmental affairs. To better understand themselves, their behavior, and the effect their behavior and attitudes have on others were also life skill goals.

In the area of career development, student growth was measured by achieving greater self awareness, career awareness, employability skills, and acquiring increased knowledge of social, governmental, and economic trends and issues in the world of work.

At entry into the program students underwent an individual assessment to determine academic strengths and weaknesses, and to provide a starting point on which to build an individual learning plan. This plan was negotiated between each student and staff and was geared to meet the individual student's needs in each of the curriculum areas through the use of a variety of learning strategies. Those strategies included the use of individual projects, career explorations, learning levels, personal journals, employer seminars, survival skill competencies, and a variety of other group activities.

Students learned to negotiate individualized projects that incorporated the three curriculum areas, and to capitalize on their unique abilities and life/career goals. The projects were problem centered and were usually carried out

in the community.

During career explorations, visits to career sites of student interests, students were to begin to decide if they would be interested in pursuing the jobs that were viewed as careers for themselves. The experience usually lasted three days and preceded a learning level. The learning level varied from about three weeks to three months depending upon the student's interest and expressed desire to investigate an exploration site in greater depth. The learning level usually involved a more in-depth, "hands-on" approach than the exploration, and allowed the student to apply and record basic skills and specific job skills.

The journal, maintained by each student, served as a way of recording accomplishments and practicing written communication. All students participated in employer seminars held periodically to discuss world of work issues with community resource people. Students also participated in other group activities when work on common tasks was appropriate.

The final learning strategy in the $(CE)_2$ program was the survival competencies. All students were expected to demonstrate acceptable performance in skill areas identified by community representatives as necessary for survival as an adult. The community resource person, with expertise in a particular speciality, served to certify the students competence in that particular area. The competency areas identified in the $(CE)_2$ project were (1) credit, (2) checking

account, (3) insurance, (4) income tax, (5) budgeting, (6) physical health, (7) emergencies, (8) electoral process, (9) government, (10) individual rights, (11) public agencies, (12) employment, and (13) automobile (EBCE-NWREL, 1975). $(CE)_2$ students spent about 15 hours per week at employer/community sites and were required to complete a minimum of ten projects, five explorations, and one learning level per program year. Individual content requirements were negotiated but students must have completed the 13 competencies and generally demonstrated to staff and employer/instructors that they had adequately used employer site resources and opportunities while working on individual learning goals in order to earn a high school diploma (NIE, DHEW, 1976).

Upon completion of program requirements students received a standard diploma and a unique Experience Based Career Education Portfolio of demonstrated accomplishments that reflected a wide range of experiences in the southwest Portland metropolitan area (EBCE-NWREL, 1975).

Grand Rapids EBCE Program Variations

Though the validity of the Northwest Regional Education Laboratory $(CE)_2$ program model was unquestionable, local constraints necessitated minor modifications in the program when it was adopted by the Grand Rapids Public Schools. In the Tigard version of EBCE, $(CE)_2$, the program was offered as a full-time educational alternative for 11th and 12th graders. The Grand Rapids EBCE model was offered to 11th and

12th graders on a three-hour per day basis. In the $(CE)_2$ project, students received a comprehensive, fully accredited education that emphasized basic skills, as well as career development. Subjects needed for graduation were learned as much as possible through individualized projects, planned for each student in the context of working life in the community. There were no classes at the program's home base in the $(CE)_2$ program. In the EBCE project in Grand Rapids, the students had to complete all graduation requirements through regular classroom enrollment. While enrolled in EBCE, each student was required to enroll in at least one regular base school class. Basic skills and career development were addressed in the EBCE program.

Students in EBCE were limited to a one-semester enrollment while $(CE)_2$ students were not. $(CE)_2$ students were required to demonstrate acceptable performance in 13 survival skills for adulthood. Limited treatment time in the EBCE program reduced the number of competencies to eight.

In $(CE)_2$ transportation was provided by a program van which moved students around the community with a driver to coordinate schedules of students using the program's transportation service. In EBCE, transportation was the total responsibility of the student.

Summary

In this chapter, historical events and perceptions which led up to the birth of career education were highlighted. Similarities and differences among definitions offered

nationwide by proponents of career education were discussed and particular attention was paid to the phases of career education and the curriculum content generally considered a part of career education. The life roles concept, the K-adult developmental nature of career education and methods of delivery were briefly touched upon. Finally, the EBCE instructional strategy was explained with particular emphasis on the Northwest Regional Educational Laboratory model. The significant deviations in the Grand Rapids model from the parent project were pointed out.

CHAPTER III

DESIGN

Introduction

The purpose of this study was to determine the effectiveness of an EBCE program patterned after a nationally validated model but with reduced treatment time. The impetus for acquiring the data in this study stemmed from (1) a need to determine program effectiveness and (2) the local school district's requirement for supportive evidence to justify the continuation and/or expansion of this innovative program.

Students

A cross section of students was invited to participate in the EBCE program. A list was developed by counseling staff and letters of invitation were sent to parents by the administration. Interested students and their parents then opted for program enrollment. This selection process resulted in an experimental group as shown in table 1. For comparison purposes, a second group was selected from students attending the EBCE site high school. Experimental and comparison groups were similar in make-up with respect to grade, sex, PEB, and academic achievement.

TABLE 1

COMPOSITION OF EBCE EXPERIMENTAL GROUP

		WHITE	BLACK	HISPANIC
11th grade	Male	5	0	0
	Female	4	1	0
12th grade	Male	2	0	0
	Female	3	0	1

Research Questions

The evaluation design was structured to assess student growth in three (3) specific areas and the extent to which the growth was attributable to the EBCE treatment. The design also included the assessment of employer-instructor perceptions of program value for participating students. The case study method was used to gain additional insight into the career and life skill development of students. The research questions were as follows:

1. Did the EBCE students demonstrate achievement in basic skills (reading and arithmetic) equal to or better than students in the regular high school program as measured on the CTBS?

2. Did the EBCE students demonstrate more growth than the comparison group in career development as measured by the CEST?

3. Did EBCE students demonstrate growth in life skills as perceived by students, staff, and parents?

4. To what degree was EBCE student growth attributable to the EBCE program as perceived by students, parents, staff, and employer-instructors?

5. What were the perceptions of employer-instructors regarding the program and students?

Data Collection

In this study, multiple data collection strategies were used with a variety of subjects to obtain a cross validation of information about each of the students. The methods used included observation, interview, questionnaire/opinionnaire, and paper and pencil tests. Data was collected from students, staff, parents, and employer-instructors. Each student was observed in the following environments: learning center, community exploration site, and competency certifier place of employment. The CTBS and CEST were administered in a classroom setting in the EBCE site high school, initially, in September and, again, in January. The instruments used in the data collection were taken from the parent project. Minor modifications were made as deemed appropriate to address the local research questions. Table 2 shows the evaluation measures used for each research question.

Student records were identified as secondary sources of data for each student in the case study. These records included employer evaluations of students and student projects including journals, projects, and exploration packages.

TABLE 2

MATRIX OF RESEARCH QUESTIONS BY ASSESSMENT INSTRUMENTS

RESEARCH QUESTIONS	ASSESSMENT INSTRUMENTS									
	CTBS Reading & Arithmetic Subtests	Career Education Skills Test	Student End-of-Program Questionnaire	Student Interview	Parent Opinion Survey	Parent Interview	Staff Questionnaire	Staff Interview	Employer Opinion Survey	Employer Interview
1. Did the EBCE students demonstrate achievement in basic skills (reading & arithmetic) equal to or better than students in the regular high school program?	X									
2. Did the EBCE students demonstrate more growth than the comparison group in career development?		X								
3. Did the EBCE students demonstrate growth in life skills?			X	X	X	X	X	X		
4. To what extent was EBCE student growth attributable to the EBCE program?			X	X	X	X	X	X	X	
5. What were the perceptions of employer-instructors regarding the program and students?									X	X

Although the EBCE program was less dependent on normative data than on estimating student growth during the program, care was taken to test all students under the same testing conditions with the same directions to enhance the value of the measured individual student growth. Care was also taken to secure perceptual information from staff, students, parents, and employer-instructors in a standardized manner. In each case, the purpose of the instrument was explained to the subject and the data collection procedures were uniformly applied. Interview guide directions were followed explicitly.

Description of Instruments

This study required collection of data from several sources. Specifically, data were collected from parents, teachers, students, and employer-instructors via achievement tests, interviews, questionnaire/opinionnaires, and direct observation of student site experiences. A brief description of the instruments employed in this investigation follows; copies of these instruments are in appendixes B-K.

1. Career Education Skills Test (CEST). The CEST, a sixty-five (65) item test, was used in the parent site. The instrument measured both career information and the application of that information to simulated situations focusing on life/career decisions and roles.
2. Comprehensive Test of Basic Skills (CTBS). The CTBS was developed by McGraw-Hill Publishing Company to

measure basic skills. Two (2) subtests for this instrument were given. These were (1) Reading Comprehension and (2) Arithmetic Concepts and Applications. CTBS, Level 4, designed for grades 9-12, was the form administered. A description of each subtest used follows.

A. Reading Comprehension. This subtest measured each student's ability to comprehend the meaning of ideas, to interpret what was read, and to recognize the author's intention.

B. Arithmetic Concepts and Applications. The arithmetic subtest measured the student's ability to recognize and use the appropriate arithmetic concepts, i.e. principles, formulae, decimals, exponents, and to use arithmetic in problem solving.

3. EBCE Program Employer Opinion Survey. This instrument gained information from employers regarding their perceptions of program/students' strengths and weaknesses. In addition, the questionnaire was designed to obtain information regarding their perceptions of program overall effectiveness.

4. EBCE Program Parent Opinion Survey. This survey was designed to ascertain parent perceptions regarding the student's experiences in the EBCE program, as well as program strengths and weaknesses.

5. EBCE Staff Questionnaire. This questionnaire was administered to the EBCE staff at program end. It asked staff to rate the importance and perceived

effectiveness of learning strategies used in EBCE and student learning outcomes. It also contained questions dealing with the staff's perception of factors contributing to and limiting the success of the program, changes that the staff would suggest in the program, and areas in which students have made greatest and least growth. Staff was also asked to rate each student on seven dimensions using a five-point Likert scale.

6. Employer Interview Guide. This instrument was structured to ascertain the employer-instructors' perceptions of the career exploration and learning level experences. Specific questions included (1) contributions of site supportive services, (2) knowledge and awareness of program goals, (3) attitudes toward EBCE, and (4) general reactions regarding program effectiveness.
7. Parent Interview Guide. This instrument was employed with parents to assess their perceptions of processes and activities as a follow-up to questions asked on the EBCE Program Parent Opinion Survey, to gain further insight into parent responses to the survey.
8. Staff Interview Guide. This series of questions was structured to ascertain the student growth perceived in areas of Basic Skills, Life Skills, and Career Development.
9. Student End of Program Questionnaire. This questionnaire was designed to ascertain student knowledge about job trends and related information and to collect data

on student reflections about their school experiences.

10. Student Interview Guide. This guide was employed in a semi-structured interview with project students. The interview was conducted to assess student perceptions of processes and activities that could not be easily assessed by questionnaires or other means.
11. Student Survey. This survey was designed to ascertain the value students placed on the various learning processes used in the EBCE program. The instrument was given at the close of each student interview session.

Data Analysis Procedures

Data collected through interviews, observations, questionnaire/opinionnaires, rating instruments, and student achievement tests were analyzed using descriptive statistics consisting of arithmetic means and frequency distributions.

The perceptions of parents, employer-instructors, students, and staff were obtained by means of questionnaire/opinionnaires. Cumulative data by respondent group were reported indicating the mean for each item, as well as the mean for all items relating to a specific research question. For the items on questionnaire/opinionnaires and interviews which elicited a free or semi-structured response, percentage of respondents selecting a particular item and/or a frequency distribution was presented.

A *t*-test was applied to the CTBS and CEST pre and post test scores of the experimental and comparison student groups to determine significant differences. Content

analysis was used to evaluate student products. Case study narratives were used to analyze and synthesize data collected on case study students.

Summary

The design of the study was structured to measure the value of the EBCE instructional approach, the perceived changes in student behavior in the areas of Basic Skills, Career Development, and Life Skills and the degree to which the perceived changes resulted from the EBCE treatment.

The primary methods of data collection were observation, interview, and questionnaire. Individual student data from pre and post testing on CTBS and CEST were also used. Student products and school records pertinent to the study were examined as secondary sources of data. Guiding research questions were developed to direct the focus of the study. Parents, employers, staff, and students were surveyed to enhance the reliability of the data collected. Analysis of the data depended on the nature of the instrument, the research question(s) being addressed and the data reporting format.

CHAPTER IV

THE FINDINGS

Introduction

The purpose of this research was to determine the effectiveness of a one-semester, three-period per day EBCE program for secondary students. The perception of overall program value by employer-instructors was also sought.

Data were gathered from employer-instructors, parents, students, and staff during interviews, observations, and in questionnaire/opinionnaires. Pre and post test data on the CTBS and CEST were also gathered.

Some instruments covered more than a single research question and some research questions were measured by multiple strategies. Therefore, an organizational structure for data reporting that listed each research question was used. The research questions addressed in this chapter were divided into three sections.

The research questions in the first section were organized by EBCE goal areas, i.e. Basic Skills, Career Development, and Life Skills. A rationale for the research question and a summary of findings by instrument were reported under each research question. Summary tables were used to clarify the findings as necessary. Appropriate statistical analysis applied to comparison group scores was also described in

this section. In the second section, changes noted in the student's behavior, attitude, and/or performance, and the individual's perceptions of the extent to which the changes were attributable to the treatment were addressed under the appropriate research question. Overall program perceptions of employer-instructors comprised the third section and were reported under the related research question.

EBCE Program Goal Outcomes

Basic Skills Goal Area

Research question

Did the EBCE students demonstrate achievement in basic skills (reading and arithmetic) equal to or better than students in the regular high school program as measured on the CTBS?

Rationale

Because of the EBCE program's comprehensive design and project/activity orientation, mathematics and reading classes were not conducted, but the skills were reinforced through project activities. It was important, therefore, to assure that EBCE students learned no less in basic skills than their counterparts in the regular high school program. If EBCE students made significant gains in Life Skills and Career Development, and did as well as their counterparts in Basic Skills, program success was indicated.

Findings

The reading and arithmetic subtests of the CTBS, Level 4, Form S were administered to the EBCE students and to a comparison group of Union High School (UHS) students in early September 1971 and again in late January 1980. Raw score means and standard deviations on the pre and post tests for the EBCE and UHS students are presented in table 3.

TABLE 3

CTBS RESULTS

Groups	CTBS Subtest	N	Pre Test $\bar{X}$	Pre Test SD	Post Test $\bar{X}$	Post Test SD	Net gain/loss
EBCE	Arithmetic	16	31.2	9.9	35.3	9.1	+4.1
	Reading	16	30.4	9.8	31.9	7.9	+5.1
UHS	Arithmetic	12	34.5	12.5	38.8	12.9	+4.3
	Reading	10*	29.6	6.8	28.9	5.3	-0.7

*Two students were not present for the post test administration of the reading subtest. Scores for those students were not included in this report. This accounts for a different N for UHS group reading and arithmetic subtest scores.

Individual gain/loss scores from the pre and post tests in arithmetic and reading were computed for both experimental and comparison groups. This was done to determine whether the EBCE students performed as well as or better than the regular UHS students. A *t*-test was applied to determine statistical significance of observed gain/loss.

The data revealed no significant difference in mean gain/loss scores between the experimental and comparison

groups in arithmetic or reading. CTBS gain/loss score data are summarized in table 4.

TABLE 4

COMPARISON OF UHS AND EBCE GAIN/LOSS SCORES IN ARITHMETIC AND READING

CTBS SUBTEST	N	GROUP	MEAN GAIN/LOSS SCORE	SD	t-VALUE
Arithmetic	16	EBCE	+4.1	3.5	.0888*
	12	UHS	+4.3	8.1	
Reading	16	EBCE	+1.4	5.1	1.0344**
	10	UHS	-0.7	4.9	

*p = .927 **p = .303

Career Development Goal Areas

Research question

Did the EBCE students demonstrate more growth than the comparison group in career development as measured by the CEST?

Rationale

The EBCE Program was designed, in part, on the assumption that knowledge of the world of work, knowledge about particular jobs and the requirements and benefits of them were prerequisites to appropriate career selection. Knowledge of personal aptitudes, abilities, and interests and the ability to apply this understanding to potential career interests were also assumed to be necessary. Significant gains that demonstrated this career knowledge on the CEST

by EBCE students over the comparison group was considered a measure of program success.

Findings

The CEST was administered to the EBCE students and to a random sample of UHS juniors and seniors in early September 1979 and again in late January 1980. Raw score group means and standard deviations on the pre and post tests for the EBCE and UHS students are summarized in table 5.

TABLE 5

PRE AND POST TEST MEANS AND STANDARD DEVIATIONS OF UHS AND EBCE GROUPS ON CEST

GROUPS TESTED							
UHS N=12				EBCE N=16			
pre $\bar{X}$	SD	post $\bar{X}$	SD	pre $\bar{X}$	SD	post $\bar{X}$	SD
49.9	6.7	49.8	6.7	48	8.0	59.6	3.7

Gain scores from pre to post test were computed for the total test to determine whether the program participants demonstrated more career development growth than the students in the regular high school program. A t-test was applied to determine statistical significance of observed gain/loss. The data indicated that the observed growth in career development of the EBCE participants over the comparison group was significant at the α =.0001 level. Total test gain/loss

information from the CEST is included in table 6.

TABLE 6

COMPARISON OF UHS AND EBCE GROUPS' GAIN/LOSS SCORES ON TOTAL CEST

GROUP	N	MEAN GAIN/LOSS SCORE	SD	t-VALUE
EBCE	16	+11.63	6.40	5.5251*
UHS	12	- .0833	4.12	

*p=.0001

Examination was also made of scores by the experimental and comparison groups on individual skill subsections of the CEST. A t-test was applied to each set of mean gain/loss scores. It was noted that EBCE participants demonstrated greater growth than was shown by the UHS students in each career development skill area, statistically significant at the α =.10 level. The findings are summarized in table 7.

TABLE 7

COMPARISON OF UHS AND EBCE GROUPS' MEAN GAIN/LOSS SCORES ON CEST SKILL SUBSECTIONS

CEST SUBSECTION	GROUP	N	MEAN GAIN/LOSS SCORE	SD	t-VALUE	p-LEVEL
Decision Making	EBCE	16	+ .4375	.5122	1.8538	.10
	UHS	12	+ .0000	.7385		
Career Knowledge	EBCE	16	+3.625	2.849	3.279	.003
	UHS	12	+ .4167	2.109		
Ed/Work Relationships	EBCE	16	+3.000	2.658	4.214	.0001
	UHS	12	- .5833	1.443		
Work Benefits Understanding	EBCE	16	+ .6250	.8851	2.533	.018
	UHS	12	- .1667	.7177		

Life Skills Goal Area

Research question

Did the EBCE students demonstrate growth in life skills as perceived by students, staff, and parents?

Rationale

In the EBCE program personal-social development was considered essential to life adjustment. Self-confidence in role relationships with peers and adults, as well as an understanding of self and acceptance of personal responsibility were guideposts to healthy development in the life skills area. Competence in survival skills such as securing a job, budgeting, and selecting appropriate future educational options were viewed as being required of mature members in society, but were often ignored in the traditional high school curriculum. If EBCE was successful, progress in the life skills area would have been evident.

Findings

Five students were selected as a representative sample of program participants for in-depth case studies. Interviews were held three times during the program year with these students. In the exit interview, students were asked to respond either "yes" or "no" to two questions regarding their personal-social development while participating in EBCE. When asked if there had been an increase in the frequency of conversations with adults and peers, and if in

these conversations the students exhibited self-confidence and understanding of the other person's messages and feelings, four students responded affirmatively. The remaining student responded that the frequency of her conversations with adults had increased but not so with peers. In response to the next question regarding acceptance of personal responsibility, all five students indicated that they had demonstrated increased acceptance of responsibility for the effects of their behavior and attitude on themselves and on others.

The student end-of-program questionnaire was administered to all 16 EBCE students during the final week of the program. Although the survey dealt primarily with students' perceptions of program effectiveness, it contained one free response question requesting program strengths and one regarding program weaknesses.

When asked to list program strengths, all 16 of the program participants responded. Two of the 16 responses focused on program benefits in the life skills area. One of these highlighted growth in self-confidence and the usefulness of the "securing a job" competency.

The other response cited growth in independent learning and experience in personal time management as a program strength. Of the remaining 14 responses, two were of a general nature and seven named community explorations and practice matching self to careers as factors contributing to their growth in career development.

The other five reflected a strong tendency to combine career development and life skill learning activities and resultant behavior outcomes in their identification of program strengths. Two of the five linked community explorations with competency achievement in their list of strengths; two others combined opportunity for communication with adults and career explorations. The remaining response highlighted personal maturity and career decision making as positive outcomes of the program. Responses are summarized in figure 1.

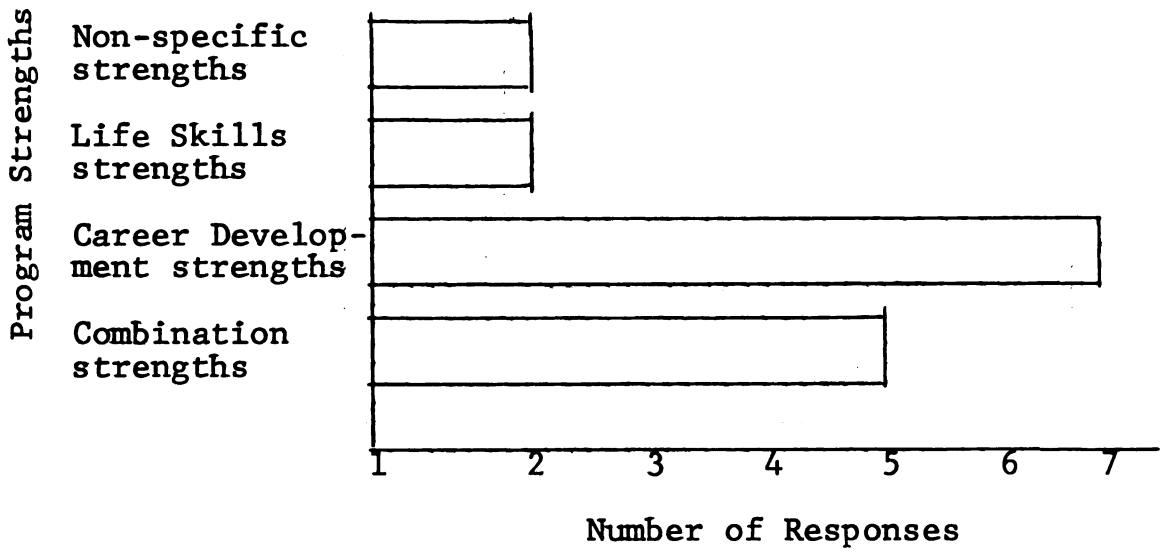


Figure 1. Categories of program strengths identified by program participants by frequency.

The program weaknesses cited in the second free response question were varied. Two of the students responded that they saw no program weaknesses. The weaknesses identified more than once by the remaining 14 students fell within six areas. The only weakness identified in the life skills area regarded the proportion of requirements between explorations

and competencies. Three students felt that the requirement for completion of five competencies and four explorations was out of balance. They felt that more explorations than competencies should have been required. The frequency of responses for each program weakness cited two or more times is shown in figure 2.

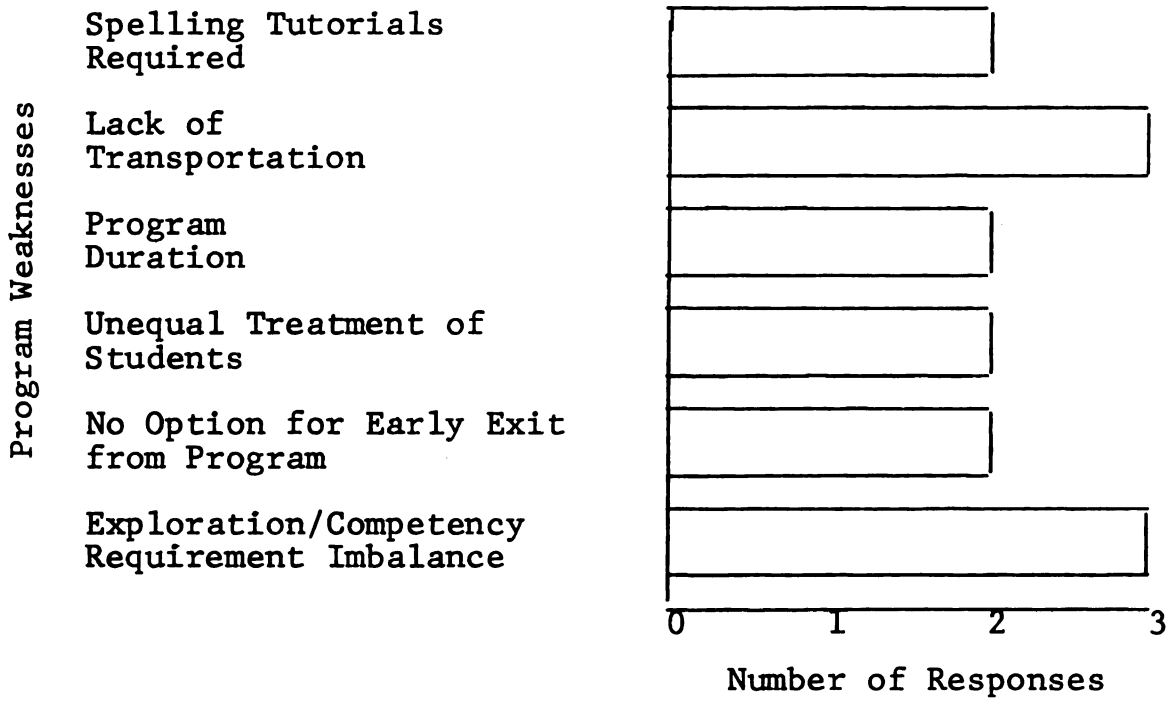


Figure 2. Frequency of program weaknesses by category.

In summary, although students perceived some program weaknesses, they also perceived personal growth in life skill areas as reflected in the interview and end-of-program questionnaire responses.

A staff questionnaire was administered to the learning manager and the community relations specialist at the end of the program year in January 1980. Six specific questions on that instrument provided perceptual data on EBCE students'

life skill growth.

One of these questions required a free response naming the areas in which it was believed that EBCE students had made the greatest overall growth. Both of the respondents named "communicating comfortably with adults" as the area with the most significant growth.

Four questions required identification of the level of achievement in four life skill areas attained by those EBCE students selected as case study subjects. Both staff members were asked to rate on a scale from one to five, each of the five students' level of achievement in four life skill behaviors. On the scale, one represented "definitely no" and five represented "definitely yes" in terms of the level of attainment evidenced. A mean was computed for the responses to the skill attainment level and a mean ranking was assigned to each. All of the skill behaviors were rated somewhat similarly. The four ratings ranged from 3 to 3.7. Understanding another person's messages and feelings was, however, perceived to be the highest ranked life skill behavior attained, as illustrated in table 8. The mean for each achievement rating is also listed in table 8, as well as the overall mean for all of the life skill behaviors in which achievement was shown.

TABLE 8

MEAN RANKING OF STUDENT LIFE SKILL ACHIEVEMENT BY STAFF

LIFE SKILL BEHAVIOR	$\bar{X}$	SD	$\bar{X}$ RANKING
Understanding of another person's messages and feelings	3.7	1.42	1
Self-confidence in conversations with adults	3.2	1.4	2
Self-starter behavior (initiative)	3	1.49	3.5
Assumes responsibility for task completion	3	1.63	3.5
Overall Mean	3.225	1.458	

Staff was given the opportunity in a free response question to identify the areas in which the EBCE students showed the least growth during the program. No life skills appeared in this response. Both staff persons indicated that the basic skills area, especially math, was the one area in which EBCE students showed the least growth during the year.

The staff interview, held at the close of the program with each staff member, supported the questionnaire data. When asked if the frequency of students' conversations with adults and peers had increased and whether the conversations exhibited greater self-confidence and understanding of others, both staff members responsed affirmatively. One staff member believed that all of the students had demonstrated increased acceptance of responsibility for the

effects of their behaviors and attitude on themselves and others. While no specific number was given, the other staff person perceived that this behavior was exhibited by only a portion of the program students. In summary, staff ratings of growth in each life skill area clustered near the midpoint on the Likert scale. Staff noted some student growth in personal-social areas of the life skills including self-confidence, communications with others and accepting responsibility for themselves in relationships with others. Understanding of the messages and feelings of others had the highest mean ranking while initiative and responsibility for task completion shared the lowest mean ranking.

A parent opinion survey was mailed to the parents/guardians of each of the EBCE participants at the end of the program year in January 1980. Responses were received from eleven of the sixteen program parents for a return rate of 68.75%. Since parents' names were indicated on the questionnaire, parents with negative feelings about the EBCE program may have been reluctant to respond. Although no information was collected to confirm this, the possibility of response bias should be kept in mind when interpreting the results of the Parent Opinion Survey.

Four questions in the parent survey dealt with the life skill development of the EBCE students. The first of these questions sought to identify the strengths of the EBCE program for students. Parents were asked to select as many of the six responses as applicable. There was also a seventh

write-in response included. The semi-structured responses and the frequency with which each was selected were arranged in rank order and are shown in table 9.

TABLE 9
PARENTS' PERCEPTIONS OF EBCE PROGRAM STRENGTHS

RESPONSES	FREQUENCY	(%)	RANK ORDER
Students learn about a variety of careers	10	23	1
Experience in working with adults	9	20	2
Students learn about "real life" situations	8	18	3
Quality of staff	7	16	4
Good alternative to a regular high school program	4	9	5
Good way of getting students to learn	3	7	6.5
Other (write in)			
Exposure to a wide variety of opportunities			
Learn things you wouldn't learn in regular classroom	3	7	6.5

Two of the choices, experience in working with adults and learning about "real life" situations, were indicative of student growth in the life skills area. Eight of the eleven respondents (73%) reported as one of the strengths of the program that the students learned about "real life" situations. Nine of the parents (81%) indicated that participation in the program provided students with experience in working with adults. The open ended response that identified

self-discipline as a strength also represented growth in the life skills area.

On a second question, which asked for identification of positive changes noticed in EBCE participants, parents were offered seven semi-structured responses. Parents were requested to check all of the responses that were applicable. Eleven parents replied to this question. The semi-structured responses and the frequency and percentage of response by category for each were ranked by frequency as shown in table 10.

TABLE 10

PARENTS' IDENTIFICATION OF POSITIVE CHANGES IN EBCE PARTICIPANTS

CATEGORIES OF POSITIVE CHANGES NOTED	FREQUENCY	(%)	RANK ORDER
Better understanding of jobs	10	29.4	1
Greater self-confidence	8	23.5	2
Greater maturity or self direction	5	14.7	3.5
Better able to relate to others	5	14.7	3.5
Clearer direction about his/her future	3	8.8	4
Improvement in basic skills	2	5.8	5
More interested in education	1	2.9	6

Greater self-confidence and maturity or self direction were most often recognized as areas of growth in the life skills.

Responses in these categories were exceeded only by the frequency of responses that indicated growth in the area of career development. There were two additional response categories which illustrated growth in the life skills area. Of those, ability to relate to others was selected as a growth area by 45% of the parents; clarity of future direction was selected by 27% of the parents.

On the third question respondents were asked to identify those knowledges/skills or attitudes that were gained by the students in the EBCE program that would not have been gained in the regular high school program. Semi-structured responses and one open ended response were available for selection. The response categories are listed in table 11 in order of frequency and percentage of response.

TABLE 11

PARENTS' PERCEPTIONS OF STUDENTS' KNOWLEDGES/SKILLS OR ATTITUDES GAINED IN EBCE

CATEGORY	FREQUENCY	(%)	RANK ORDER
First-hand knowledge of demands in a "real world" situation	8	27	1
Working with other people	7	23	2
On-the-job skills	6	20	3
Motivation to learn	5	17	4
Self-discipline	3	10	5
Other How to organize time by herself	1	3	6

Each category, except on-the-job skills, represented a life skill. The frequency of response to knowledge of the "real world" highlighted it as the life skill area of greatest growth. Self-discipline reflected the least amount of growth among semi-structured responses in the life skills area. Time management was added to the "other" category by one of the respondents as a life skill area in which student growth was identified.

The fourth question on which growth in the life skills area could have been identified in the parent opinion survey was a free response solicitation. In response to this question, initiative and maturity were noted as characteristics achieved by EBCE students. Both of these characteristics exemplify development in the personal-social area of life skills. Parents also had the opportunity to list little or no growth in the life skills area in response to this question. They did not. Also, in a separate free response question seeking identification of program weaknesses, parents had a second opportunity. Weaknesses identified, however, did not address the life skills area.

Parent interviews were conducted at the program end with the parents of each of the five case study students. Two specific free response questions that addressed the issue of perceived progress in the life skills area were asked. On the first question, "Have students increased in their frequency of conversations with adults and peers which exhibit the student's self-confidence and understanding of the other

person's messages and feelings?", 80% of the responses indicated that growth in this area had been achieved; 20% of the respondents were unsure of any growth. On the second question dealing with increased acceptance of responsibility, 60% indicated that their sons/daughters definitely had demonstrated the characteristic; 20% thought they probably had; and 20% were unsure of any growth in this area.

In summary, parents included maturity, acceptance of personal responsibility, interpersonal relationships with adults, self-confidence, greater recognition of "real world" demands, and a clearer sense of direction for the future as life skills in which growth was exhibited by the EBCE students

Effects of EBCE Treatment

Research question

To what extent was EBCE student growth attributable to the EBCE program as perceived by students, parents, staff, and employer-instructors?

Rationale

Recognizing the natural, developmental nature of human growth, the EBCE program was designed to facilitate and reinforce the natural maturation process. This aspect of the EBCE program was considered a strength, particularly when the EBCE program was compared to the regular high school program. Students', parents', staff's, and

employer-instructors' perceptions regarding the effect of EBCE in promoting demonstrated growth in life skills and career development and basic skills were considered indicators of the level of program success.

Findings

During the exit interview for the case study students, 80% of the students were able to indicate skills that they had acquired as a result of participation in the EBCE program. Items highlighted included interviewing skills, spelling and vocabulary, job-seeking/job-keeping skills, telephone usage, figuring percents in math, and adult competencies.

On twenty-two questions in the student end-of-program questionnaire, students were requested to rank each EBCE experience according to its usefulness in helping the student acquire a particular skill or behavior. A five-point Likert scale was used; a rank of five denoted "very helpful" and a rank of one denoted "of little help". Data from the responses to the questions were separated into three skill areas: basic skills, life skills, and career development skills. Means for each item were calculated as shown in table 12. A mean ranking was then assigned to each skill/behavior. The overall mean for each skill area was calculated as was the mean for the skill areas combined. These results are presented in table 13.

TABLE 12

MEAN RESPONSES OF STUDENTS' PERCEPTIONS OF EFFECTS OF EBCE ON THEIR ATTAINMENT BY SKILL

SKILL AREA	$\bar{X}$	$\bar{X}$ RANK	SD
Life Skills			
critical thinking	3.44	12.5	.96
self understanding	3.81	5.5	.98
getting along with others personal-social development	3.69	7.5	1.08
functional citizenship	2.38	14.0	.71
creative development	3.62	9.0	1.19
employability	3.75	6.0	.69
self-confidence in skill application	3.69	7.5	1.08
communication with adults (comfortably)	4.06	3.0	1.21
responsibility for self	3.88	4.33	1.26
tolerance of others	3.81	5.5	.98
adult survival preparation	3.56	10.5	.75
Career Development Skills			
self/career match	4.19	1.0	.98
knowledge of world of work issues	3.19	13.0	.98
career awareness	4.13	2.0	.95
career knowledge	3.88	4.33	.51
career decision making	3.5	11.0	1.16
decision making	3.56	10.5	.89
Basic Skills			
general (necessary for careers of interest)	3.88	4.33	.96
reading	2.19	15.0	.83
mathematics	1.94	16.0	1.01
oral communication	3.63	8.0	.96
writing skills	3.44	12.5	1.03

TABLE 13

TOTAL MEAN RESPONSES OF STUDENTS' PERCEPTION OF EFFECTS OF EBCE ON STUDENT SKILL ATTAINMENT

SKILL AREA	$\bar{X}$	SD
Life Skills	3.62	1.12
Career Development Skills	3.74	1.08
Basic Skills	3.04	1.20
Total All Skill Areas	3.52	1.16

Student responses indicated that EBCE had its greatest impact on the career development of program participants. The skills of matching self to career and career awareness received the highest and second highest ranking respectively. This ranking indicated the level of effect the program had on achievement of skill in these areas. The skill area showing the least benefit from the EBCE program was the basic skill area of mathematics. Communicating with adults, comfortably, was the highest life skill area in which growth was perceived as a result of the EBCE program.

Three other questions from the same student questionnaire compared the EBCE experience with the regular high school experience. The specific areas of comparison included the opportunity to learn about occupations, the opportunity for general learning, and the student's motivation for learning generated by the EBCE program. The mean of student responses on the five-point Likert scale indicated that EBCE provided a greater opportunity to learn

generally, a greater opportunity to learn about occupations, and greater motivation to learn than the regular high school program. The means of the responses to each question are included in table 14.

TABLE 14

MEAN RESPONSES OF STUDENTS' PERCEPTIONS OF THE OPPORTUNITY PROVIDED IN EBCE TO LEARN

FACTORS ATTRIBUTABLE TO EBCE	$\bar{X}$	SD
Learn generally	3.44	.73
Learn about occupations	4.44	.73
Become motivated to learn	3.75	1.13

In a free response question regarding the strengths of EBCE, 38% of 16 respondents listed one or more life and/or career development skills or knowledge gained which s/he felt was attributable to participation in EBCE.

In summary, students agreed that the greatest impact of the program occurred in the career development skill area. In that area, learning to effectively match self and career ranked highest.

Within the life skill area, growth in employability skills, self-understanding, and tolerance of others was also consistently noted to be attributable to EBCE. Although there was less consistency among student responses on the degree of effect EBCE had on the skill of communicating comfortably with adults, the mean response, 4.06 on a five-point Likert scale, indicated that EBCE had substantially

impacted student growth in this life skill.

In the basic skills area, EBCE was perceived to be the most helpful in learning the skills necessary to qualify for careers in which students were interested. Also within the basic skill area, EBCE had been particularly helpful in fostering growth in oral communication. EBCE was least helpful in developing math skills according to respondents.

The parents of EBCE participants also described the impact of the program in both the parent interview and on the opinion survey. In a free response interview question regarding the effect of EBCE on helping their child form career plans, 60% of the parents of the case study students described specific instances in which that had occurred; 20% indicated that the program had not been too effective in helping to develop career plans; and 20% indicated that the career exposure was good, but that no career plans had been formulated as a result of the exposure.

The parent opinion survey included a question which compared student motivation to learn in the EBCE program with motivation previously shown in the regular high school program. Most of the eleven parents responded that motivation to learn as a result of EBCE participation was higher than it had been in the regular high school program. On a five-point scale in which three indicated "about the same" and five indicated "much more", a mean of 3.45 (SD=.93) was calculated from the responses to this question.

From a semi-structured response list on the parent

opinion survey, parents were asked to identify as many knowledges, skills, and attitudes acquired by their sons/daughters in the EBCE program that the parents felt would not have been gained from a regular high school program. The parent response is shown in figure 3. Most (73%) of the parents responding (N=8) identified first-hand knowledge of real world demands and 64% (N=7) identified working with other people as skills acquired through EBCE which would not have been gained in the regular high school program.

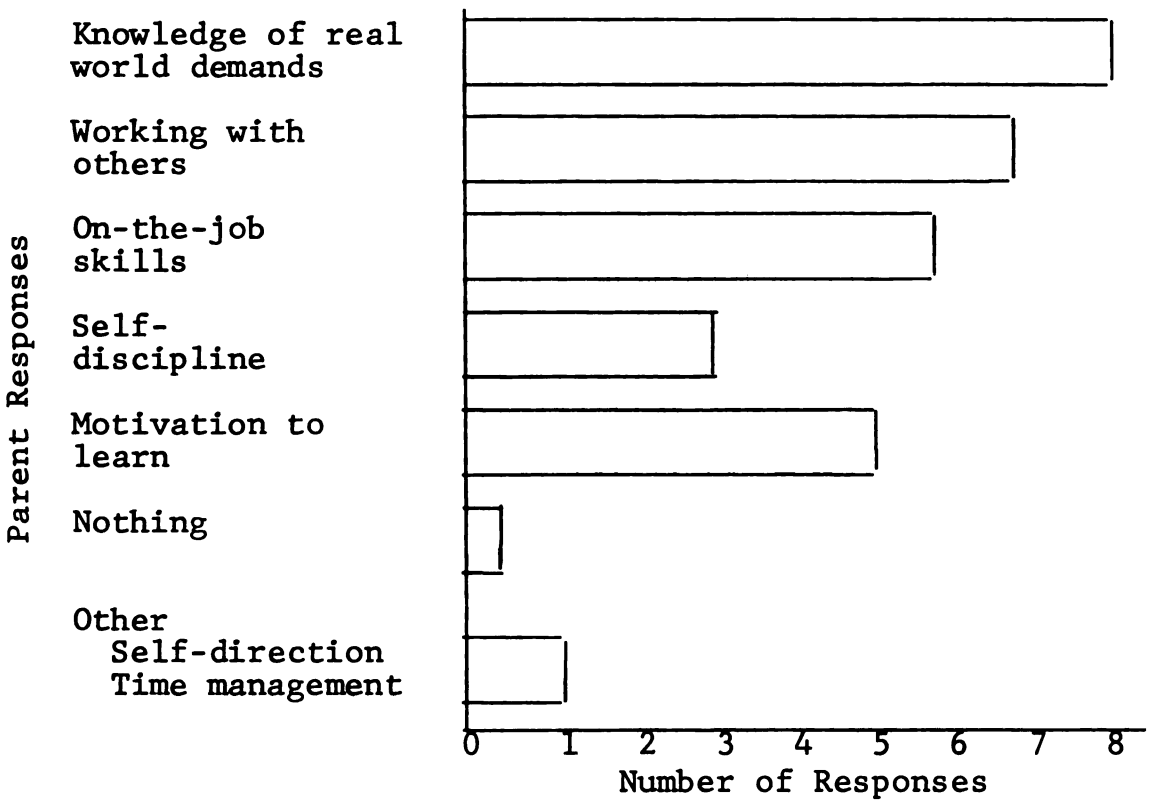


Figure 3. Parent responses on the Parent Opinion Survey indicating knowledges, skills, and attitudes acquired in the EBCE program.

In summary, program parents identified motivation to learn and ability to formulate career plans as areas of growth attributable to the students' participation in EBCE.

Other skills, knowledges, and attitudes in which student growth had occurred that was attributable to participation in EBCE included knowledge of real world demands, working with others, on-the-job skills, and self-discipline.

During the staff interviews, the EBCE staff identified two areas in which student growth had been significantly impacted by participation in EBCE. The first was in self understanding and acceptance of personal responsibility. The second area was that of decision making. In both cases, staff opinion yielded a mean of 4 on a five-point Likert scale and a SD=0.

Several questions on the staff questionnaire dealt with the impact of EBCE participation on student growth. The skill areas were subdivided into the categories of life skills, career development skills, and basic skills. Staff responded to each question on a five-point Likert scale on which one denoted "of little or no help" and five denoted "very helpful." Means and standard deviations were calculated for each item within each subsection; these appear in table 15. A mean for each category was also determined as was the mean for all the categories combined; these are presented in table 16.

As indicated in table 15, the EBCE staff perceived the greatest impact of EBCE participation to be on student growth in career knowledge, career decision making, and self-career matching, each representing skills in the career development area.

TABLE 15

STAFF PERCEPTIONS OF EBCE PARTICIPATION IMPACT ON STUDENT GROWTH IN LIFE SKILLS, CAREER DEVELOPMENT SKILLS, AND BASIC SKILLS

SKILL AREA	$\bar{X}$	SD
Life Skills		
critical thinking	2.5	.71
science	2.0	1.41
self-understanding	4.5	.71
personal-social development	4.5	.71
functional citizenship	2.0	1.41
creativity	4.0	1.41
employability	4.0	0
self confidence in skill application	3.0	1.41
communication	4.5	.71
responsibility for self	4.5	.71
tolerance of others	3.5	.71
adult survival skills	3.0	0
Career Development Skills		
self/career match	5.0	0
knowledge of world of work issues	2.5	.71
career awareness	4.0	0
career knowledge	5.0	0
career decision making	5.0	0
decision making	4.5	.71
Basic Skills		
general application to careers	3.5	.71
reading	2.5	.71
mathematics	2.5	.71
oral communication	3.5	.71
written communication	3.5	.71

As indicated in table 16, basic skills was the area showing the least impact overall from the EBCE program. Science and functional citizenship from the life skills area, however, shared the lowest individual skill mean score.

TABLE 16

TOTAL MEAN RESPONSES OF STAFF PERCEPTIONS OF IMPACT OF EBCE PARTICIPATION ON STUDENT GROWTH IN ALL SKILL AREAS

SKILL AREA	$\bar{X}$	SD
Life Skills	3.5	1.18
Career Development Skills	4.33	.98
Basic Skills	3.1	.74
Mean Total All Skill Areas	3.64	1.12

Employer-instructors' perceptions were sought through a question on the employer interview guide. The question requested data on student improvement as a result of participation at an employer site. Of the five employer-instructors interviewed, 100% indicated that students had improved in the area of career development by acquiring first-hand occupation/career information. Improvement in the basic skill area was also noted by 20% of the respondent group.

In summary, employer-instructors noted acquisition of increased career knowledge as an area of growth attributable to participation in EBCE. A small percentage also credited

EBCE with improvement in the basic skills of program participants.

Perceptions of EBCE

Research question

What were the perceptions of employer-instructors regarding the program and students?

Rationale

Because of the experiential nature of the EBCE program, participation by community instructors was essential. Their perceptions about the program and students were also very important. Employer satisfaction with program goals and operation and positive perception of overall program effectiveness were considered indicators of program success.

Findings

The employer opinion survey was mailed to 46 EBCE employer-instructors during the last month of the program. Thirty-five surveys (76.1%) were returned. Personal contact with EBCE staff was most commonly reported as the way employer-instructors became involved with the program (91.4%). Ninety-four percent indicated they would recommend involvement in EBCE to a potential employer or resource person. When asked how fellow employees had reacted to the respondent's participation in the program, 86% of the respondents gave a positive reaction. There were no negative reactions cited. Sixty percent of the respondents noted the benefits

of EBCE to other employees at the participant site. Specific benefits included awareness of youth, motivation for further training, reduction of workload, and increased interest in their own work. Eighty percent of the employer-instructors responding indicated their intent to continue participation with EBCE during the next year; 17% had not yet decided. When asked to give their reasons for continued participation, 30 employer-instructors responded. Ninety percent of those indicated that their participation was a community service; 40% noted either the challenge presented by the program or that they liked the people involved.

Fifteen respondents identified weaknesses in the EBCE program. The most frequently cited weakness (N=5) was students' inability to handle the freedom. Problems in the organization of the program (N=3) and insufficient training of students (N=4) accounted for 47% of the weaknesses pointed out. Shortness of time at the work site and preparation of students before coming to the work site were also cited as areas of weakness by 13% (N=2) of those commenting in a free response item at the end of the survey.

The most frequently noted strengths of the program were the opportunities provided for students to learn about real life situations and career exposures. The identified strengths are illustrated in figure 4.

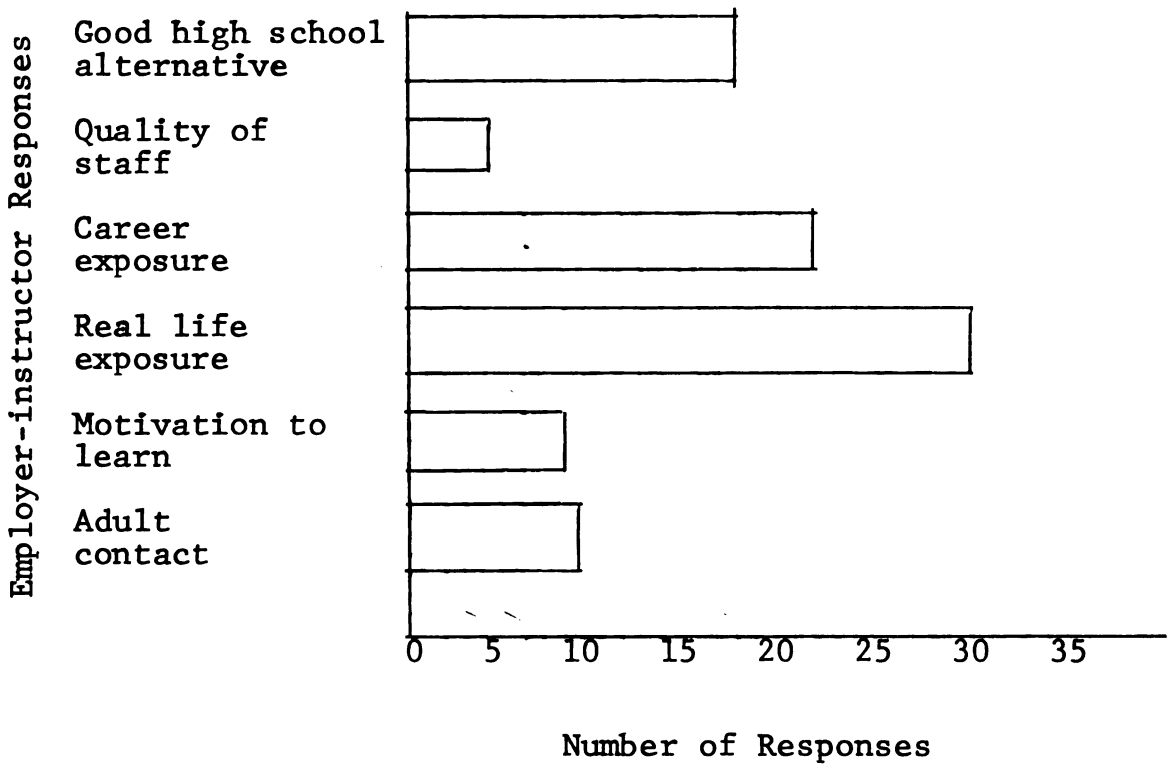


Figure 4. Frequency of strengths as indicated by employer-instructors.

Two questions on the employer-instructor survey dealt with the impact of EBCE on the student. Responses on both questions were requested on a five-point Likert scale with a rating of five meaning "definitely yes" and one meaning "definitely no". On the first item, respondents were asked to rate the interest shown by the students in the employer's site and on the second, the student's interest in the program. The results of both questions are shown in table 17.

TABLE 17

STUDENT INTEREST IN EBCE PROGRAM AND EMPLOYER SITE

STUDENT INTEREST	N	$\bar{X}$	SD
Program interest	33	3.89	.98
Site interest	34	4.29	.72

Employer-instructors who had worked with those EBCE students identified as in-depth case study subjects were interviewed on-site immediately following their session with the identified student. All (N=5) of the employer-instructors interviewed indicated that they had been provided with sufficient information to adequately direct student activities. When asked if they received adequate feedback about the effectiveness of their work with the students, the mean response was 3.4 (SD=.79) on a five-point Likert scale with five representing a "definitely yes" response. Using the same scale, employer-instructors agreed that the students had benefited from their sites ($\bar{X}$=4; SD=1) and that they had definitely shown interest in learning ($\bar{X}$=4; SD=1). In a semi-structured response soliciting ways in which EBCE participants had shown growth, improvement in occupational awareness was cited most often (N=5). There was no significant improvement in attitude or work habits noted.

In summary, employer-instructors showed general satisfaction with the program purpose and operation. Most indicated that it had benefits for both fellow employees and for the participating students. Weaknesses cited by some employer-instructors were the inability of some students to handle the freedom, insufficient training of students, program organization, and shortness of time at the work site. Most frequently cited strengths included career and real life exposure and provision of a viable alternative to the

regular high school program.

Summary

Both empirical and perceptual data regarding the EBCE program and its impact on student achievement were presented in response to five research questions. Evidence of student achievement in the basic skills, life skills, and career development skills was analyzed and reported in this chapter. This included standardized test scores, as well as data collected from EBCE participants, parents, program staff, and employer-instructors.

Pre and post test data from the CTBS showed an increase in achievement in the basic skills (reading and arithmetic) by EBCE students. The data revealed no significant difference in mean gain/loss scores between the experimental and comparison groups in either reading or arithmetic.

EBCE participants also demonstrated growth in career development when measured on the CEST. Mean gain scores of the EBCE students on the total CEST and on each of its subsections were significantly[1] higher than those of the comparison group.

The perception of the majority of EBCE students, staff, and parents responding to the questionnaire and interviews was that students demonstrated growth in life skills while participating in the program. The life skills in which

[1] Level of statistical significance differed for each subsection of the CEST.

growth was most apparent to the EBCE students were self-confidence, especially in communicating with adults, and maturity, i.e. acceptance of responsibility for behavior. Parents of EBCE participants cited interpersonal relationship skills and real world experience as the areas in which student growth was most noticeable. EBCE staff noted the most student life skill growth in self-confidence in interpersonal relationships and tolerance of others.

Students, parents, staff, and employer-instructors were asked to give their perceptions of the causal relationship between observed student growth and participation in the EBCE program. The skill area in which EBCE was consistently rated most helpful was career development. Within that area, EBCE seemed the most helpful in developing the skill of matching self to career.

Students generally agreed that EBCE had been least helpful toward improving student math skills. EBCE was more helpful than the regular high school program in providing the opportunity to learn about occupations. The majority of parents responding indicated knowledge of real world demands and working with others as two knowledge/skills that had been acquired by their sons/daughters that these students would not have gained in the regular high school program.

The program staff agreed that self understanding and acceptance of personal responsibility were career development skills in which student growth was most attributable to participation in EBCE. There was also general agreement

that observed student growth, which occurred in the areas of critical thinking and in reading and mathematics, was attributable to program participation.

Employer-instructors agreed that students had improved in the area of career development as a result of participation in the EBCE program by acquiring first-hand occupational/career information. Employer-instructors were also asked to give their perceptions regarding EBCE students and program impact. The majority of respondents planned to continue participation the following year and indicated that they would recommend participation to others. Most employer-instructors noted positive reactions of fellow employees and many other side benefits from program participation.

The greatest program strength cited was exposure of students to real life demands. However, the inability of some students to handle the freedom was cited as a possible program weakness. Employer-instructors strongly agreed that participating students were both interested in the program and in the community site and expressed general satisfaction with the program operation and purpose.

CHAPTER V

CASE STUDIES

This section of the dissertation contains student case study profiles. Unlike traditional evaluation methodologies which focus on outcomes, the case study approach zeroes in on the process of learning. Its primary focus is on the student experiencing the learning situation. It describes the student, the situation, and the resulting interaction of the two. Each of the five case studies provides a summary of selected data regarding an individual case study student. Fictitious names have been used to protect the confidentiality of individual student information. Unless otherwise indicated, statements in quotation marks refer to actual comments made during the interview or observation by the evaluator.

In each of the studies, when the term "average" is used to define a test measurement, it will mean that a student's score was within one standard deviation of the project's comparison group mean for that variable. Likewise, if "above average" or "below average" are used to define a test measurement, it will mean that a student's score was greater than one standard deviation above or below the comparison group mean for that variable, i.e. less than 18 percent of

the student's peers scored above or below that level.

Joan: An Illustrated Case Study

Background

Joan was entering her senior year. She had made the pom-pom squad and loved being physically active. She had maintained above a 2.0 grade point average on a 4.0 scale throughout her high school career, but disliked the homework and test taking required of her. She enjoyed English and history as well as art and gym, but felt that more emphasis on group discussion, hands-on activities, and projects would make the school task much more palatable.

Joan first heard about EBCE during the summer before its September 1979 implementation. On the recommendation of her counselor, she had been sent an informational letter about the program and a reply card. During the upcoming year she needed to complete a government class and 15 elective credits (1.5 Carnegie units) to graduate. EBCE seemed like a natural fit. It provided 15 credits and those who enrolled were required to take at least one course in the regular high school program. Also, students were allowed to investigate real jobs in the community. Joan liked the description of the program and thought it might shed some light on what she could do after graduation. After briefly discussing the program with her mother, she returned the reply card indicating her interest. Joan did not attend the orientation and enrollment session planned for parents and

prospective students, but was enrolled by her counselor, at her request, during the last week of August. Therefore, when she arrived in class on the first day of school, she was still somewhat unsure of the program's purpose and how it would personally fit her educational needs.

On academic tests administered during the first week of EBCE, Joan scored comparatively better in reading than in arithmetic. Both scores, however, fell within the average range of scores achieved by the comparison group. On a test of career information, she fell below the average in her knowledge of sex discrimination issues and of economic factors influencing career opportunities.

On a more subjective level, Joan recognized the need for increased time management skills. She also indicated that while she was mostly self-directed and enjoyed the project approach to learning, she would like to check in with someone now and again to make sure she was "on the right track." The EBCE learning manager worked with Joan to develop self-management skills while encouraging her to establish and adhere to a calendar of project target completion dates. A schedule of Joan's activities during the semester are shown in table 18.

Semester in EBCE

Deciding to make use of all available school time, Joan chose to enroll in two classes not required for graduation. A typical day for Joan started at 8:30 a.m., like any other

TABLE 18

TIME CHART OF JOAN'S ACTIVITIES IN EBCE

ACTIVITY	SEPT	OCT	NOV	DEC	JAN	DATES
Projects						
Critical Thinking EBCE For You	X---------X					9/16-10/15
Functional Citizenship Child Abuse		X-------X				10/19-11/01
Creative Development Children's Lit				X---------X		12/04- 1/21
Article Reports						
Report 1 - Written			X			11/21
Report 2 - Oral			X			11/16
Report 3 - Oral				X		12/07
Report 4 - Written			X			11/29
Report 5 - Written					X	1/18
Employer Sites						
Exploration 1	X-----X					9/28-10/02
Exploration 2		X------X				10/30-11/02
Exploration 3			X--X			11/14-11/27
Exploration 4				XX		12/03-12/10
Exploration 5					XX	1/04- 1/09
Exploration 6					X	1/08- 1/14
Competencies						
Budgeting Time & Money	X-------X					9/18-10/23
Future Educational Options		X				10/23-10/28
Insurance			XX			11/12-11/21
Housing			X------X			11/26-12/14
Checking & Credit				X--------X		12/19- 1/21
Spelling Units						
Unit 1			X			11/16
Unit 2			X			11/21
Unit 3			X			11/30
Unit 5				X		12/07
Unit 6				X		12/14
Unit 7				X		12/20
Unit 12					X	1/04

high school student, but the hours that followed differed greatly, When Joan arrived at school, she went immediately to General Merchandising, an elective class she had chosen to experience retail sales. This class was followed by American Thought and Language, an English elective, and Government, her last course requirement for graduation. With barely time for lunch, Joan reported to the EBCE learning center to verify her program activities for the day. The fact that a part-time job and pom-pom practice limited her homework time helped Joan to realize the necessity for better time management. Her initial competency on budgeting time and money guided Joan in this effort.

Joan's first project was a pre-designed unit emphasizing critical thinking skills. It was developed to familiarize students with the location of EBCE program resources and to provide practice in the project learning process. At first, the three-hour block seemed unusually long. Joan tended to catch up on the latest news from Mary, her best friend, before settling down to serious work. This habit left Joan little time to complete assignments during school time.

The first project was short, but "it really wasn't too interesting," Joan recalled; and it took nearly a month to complete. Joan was able to design and negotiate her next project and seemed much more excited about it. The topic was child abuse and was chosen from the functional citizenship area. Joan interviewed both a past victim of child abuse and a social worker who had dealt with child abuse cases. Beyond

the wealth of information uncovered by participating in this project, Joan also gained valuable interviewing experience and practice for the career exploration interviews. The learning manager, reviewing the completed project, was alerted to Joan's weakness in spelling and the need for more proofreading. Much to her distaste, Joan was given a special assignment, a portion of which was to be completed weekly.

After investigating several occupations on the MOIS computer terminal, Joan was ready to begin her explorations in several different areas. Those areas chosen during the first marking period included a women's apparel store and a school of cosmetology. Upon completion of the apparel store exploration, Joan decided not to consider retail sales as a life-time career goal and not to pursue an in-depth study in this area. However, she realized and noted in her exploration guide, that a sales position would be a good part-time job that could become a stepping stone to other career choices.

The training expense involved in cosmetology initially discouraged Joan from seriously considering it as a viable career until she learned of the possibility for financial assistance. She accepted an application for school enrollment, but before filling it out decided to visit another location in this same field. After visiting a beauty salon, Joan seemed to have decided that she was not suited for the work. According to her employer-instructor, she did

demonstrate a creative flair for hairstyling, but decided to learn more about hairstyling and cutting for personal application as a leisure time activity.

Joan's creative ability was further enhanced by her other EBCE experiences. She had previously put her artistic flair to work in numerous craft projects, particularly during her leisure time at home, but had not thought of the many creative ways that art could be used occupationally. She visited a commercial artist, a fashion designer, and a dance instructor and began to zero in on career options. However, in no case did she feel committed enough to invest her time in a learning level, In fact, the semester ended before she had made a decision to investigate the field of fashion design in more depth. Joan did, however, use her talent to carry out her final life skill project in creative design. To fulfill one of the requirements of the project on children's literature, she wrote and illustrated a children's book, a product certainly worthy of publication.

In her day to day writing, however, Joan was not as successful. Throughout the weekly writing assignments required in maintaining her journal, Joan showed little improvement in written communication. Her lack of proofreading continued and resulted in several spelling errors and words unintentionally omitted. While the ideas and feelings were interestingly written in a conversational style, the mechanics resulted in a loss of meaning for the reader.

The same feverish hastiness characterized much of Joan's work. Although she missed only one day of class, she felt she was always "behind" and that she wasn't living up to the program expectations. In her effort to better manage her time and eliminate the procrastination noted in her earlier performance, Joan maintained a strict calendar and perhaps did not allow ample time for task completion. In effect, she seemed forced to trade quality for quantity. This was especially noted on the competencies, one of which was so carelessly done and incomplete that it was unacceptable and had to be redone. Three of the five competency certifiers noted that although she was able to be certified, had she spent a little more time she would have sailed through with flying colors.

Between September and January, Joan had successfully completed four explorations, five competencies, four projects, eighteen journal entries, five special classroom reports, and two basic skill tutorials in spelling. She had attended numerous world of work seminars and student/staff meetings.

Reflections by Joan

Discussing her experiences in EBCE, Joan said, "(I) learned what different people liked about their jobs and what made their jobs worthwhile." She said that she had developed a more positive attitude toward education and that she had "learned more about work (occupations) in EBCE and

the importance of education." As a result of her experiences, she felt she had more or less eliminated job possibilities rather than deciding on one. She indicated that when she started EBCE she had weaknesses in the areas of spelling, arithmetic, and time management and that through her participation in EBCE she had improved in both time management and spelling. She felt that arithmetic was not specifically addressed and that in spite of the arithmetic practice in the budget competency her arithmetic skills had not improved significantly.

She indicated on a questionnaire given at the end of the program that EBCE was particularly valuable in helping her to understand more about herself, to develop her own creativity, to take responsibility for her own actions, and to communicate comfortably with adults. She felt it was also useful in helping her to improve her writing skills, to match her interests and abilities to potential careers, to learn what to look at when considering a job, and how to find a job. She felt that EBCE was only moderately helpful in improving her reading and arithmetic skills.

Reflecting on the greatest strengths and weaknesses of the EBCE Program, Joan stated that one of the strengths was "going out in the community and getting to talk with the employers and experience the job." Joan rated the exploration packages, the competencies, the project planning and negotiation process as the most helpful learning processes in EBCE. The program's greatest weakness, according to Joan

was lack of flexibility in the class hours. As she put it, "the class shouldn't be three hours long all semester. Some days should have two hours and maybe make up the hours on some other day."

Views of Joan's Parents

In a home interview, Joan's mother indicated that although transportation was a problem at first, the program had really helped Joan. Since her participation in EBCE, Joan seemed "more interested in education" and any chance she had she spread out the books and looked like a "professional student." Her mother also noted that Joan had improved greatly in her communication skills and ability to converse comfortably with peers and adults. On her restaurant job, Joan "goes up to people and smiles, waits for the order . . . she really carries on a good conversation. She always used to have a hard time with that. She's really grown up that way."

In the areas of self-understanding and acceptance of personal responsibility, her mother related that Joan "is more sure of herself; she could tell me now what her strengths and weaknesses are." She added, "she's getting so when she goes shopping, she gets stuff for the house . . . she's taking different values in life; now she's concerned about the others (sisters)." Her mother also noted an increase in Joan's knowledge of occupations and confidence in her artistic capabilities. She had even offered to do signs

and table brochures for the restaurant where she worked. Her mother said that Joan "didn't want to be swayed in the direction of one occupation just yet," and that Joan's hesitation might be because she didn't want to be a financial burden to her mother. She indicated that they had discussed the possibility of "grants and things" and that with Joan "finances override any decision."

Joan's mother's responses on a program survey supported the views expressed in the interview. She noted transportation as the only program weakness and identified the quality of staff, community experiences, and experiences in working with adults as the strengths of EBCE.

She listed greater maturity, self-confidence, and interest in education, as well as gaining a clearer direction about the future, a better understanding of jobs, and an ability to better relate to others as positive changes in Joan that resulted from her participation in EBCE. She also indicated that she felt that these gains would not have been made in the regular program. Improvement in basic skills was the only area Joan's mother did not feel EBCE had particularly helped Joan.

Test Progress Measures on Joan

The analysis of Joan's pre and post test scores showed a substantial loss in reading comprehension as indicated on the CTBS. In reading comprehension she went from a 13.6 grade equivalent to a 10.2 grade equivalent. In arithmetic

concepts Joan showed a slight gain; her scores showed an increase from a 9.9 grade equivalent to a 10.8 grade equivalent. In arithmetic applications she showed a slight loss; she went from an 8.9 grade equivalent to a 7.5 grade equivalent.

On the Career Education Skills Test, Joan showed an increase in all areas except knowledge about job acceptance and retention. She exceeded the mean for her group in career planning and decision making, and knowledge of sex bias. She improved, but did not exceed the mean, in career training, career interest, and knowledge of economic factors influencing career opportunities.

As demonstrated on the student behavior sheets, the EBCE staff were somewhat divided on their perceptions of Joan's progress. Joan's learning manager rated her below average on knowledge and application of her personal aptitudes, interests, and abilities to career interests; while the community relations specialist rated her at the top of the scale. The learning manager also felt Joan was below average in her demonstrated willingness to apply basic skills to work tasks and to avocational interests and in assuming responsibility for carrying out tasks. The community relations specialist rated Joan above average in both of these categories. The learning manager and community relations specialist both felt that Joan ranked below average on self-starter behavior.

Evaluator's Reflections

Reflection on Joan's experience in EBCE revealed that she may not have been as negligent in managing her time as the learning manager felt. It appeared that Joan had over extended herself for the year by committing herself to a job, school club activities, and three classes in the regular program, in addition to the EBCE requirements. It also became apparent that she shared many adult responsibilities at home. This hectic schedule may have accounted for her constantly feeling rushed and yet always feeling behind. In spite of the fact that she did not complete, on time, all the tasks she attempted, she still seemed to have gained valuable experience in managing her time. Observation showed that by the semester end, she was no longer wasting time but planning her time carefully and working diligently. It was also noted that in the semester following her EBCE experience, Joan planned a somewhat lighter courseload. Joan also showed great strides in her role relationship with peers and adults, particularly in the family relationship, as highlighted by her mother. A change was also noted in her relationship with the learning manager and community relations specialist in the resource center. She seemed to communicate more easily with the learning manager in her journal as well. Joan's oral communication skills also improved from one-word answers during the first interview of this study and earlier explorations, to lengthy conversations on the later explorations, with customers on the job,

and in the final interview sessions.

One of the broad career development concepts of EBCE, eliminating careers from the realm of possibilities--a sort of honing down of interests, was apparent in Joan's profile. However, while Joan eliminated certain jobs as career possibilities, she maintained something from each exploration experience that could be useful in one of her other life roles, such as the use of cosmetology skills in her leisure. Her view of retail sales as a first step on a career ladder was also characteristic of her unwillingness to totally discard an experience as valueless.

Mary: An Illustrated Case Study

Background

Mary was a studious, 17-year-old senior. She had carried a heavy schedule of classes since her freshman year, but always found time to play the flute with the senior band. Mary also took an active part in school organizations, including the PEP Club and Business Office Education Club. She was a member of the National Honor Society, maintaining a grade point average of over 3.4 on a 4.0 scale. An analysis of her course selection profile, however, revealed that most of her credits were not earned in traditional college preparatory courses. Mary's interests varied widely as demonstrated by her course selections, e.g. foods, interior design, and typing and by her leisure time participation, e.g. roller skating, horseback riding, and crafts. Mary

came from a large, supportive family which provided her with many advantages, including chauffered transportation for the program. At the time of enrollment in EBCE, Mary had tentatively decided to pursue a career as a veterinarian. She planned to attend a four-year college; however, there was no indication that Mary was aware of college entrance requirements.

Mary and her parents attended an EBCE pre-school orientation meeting in response to an informational letter describing the program. Mary and her parents agreed that it would be wise for her to enroll in the EBCE program because it would provide an opportunity for her to test her initial career choice.

On academic tests administered during the first week of EBCE, Mary's scores in reading and mathematics fell within the average range of scores achieved by a randomly selected group of juniors and seniors at her high school. On a test of career education skills, Mary's scores fell within the average range for all areas tested.

On a more subjective level, Mary recognized the need to more effectively express herself. She had an adventuresome, inquiring nature and felt a need to learn first-hand about real world occupations. Mary was self-directed and confident of her academic abilities and was open to a variety of avenues for learning. The EBCE learning manager worked with Mary to identify activities that would provide opportunities to develop her oral and written communication skills. Because

of Mary's self-confidence and the fact that she had already tentatively identified her career choice, the community relations specialist arranged early in the semester for Mary's exploration experience with a veterinarian. A complete time chart of Mary's activities in EBCE is found in Table 19.

Semester in EBCE

Aside from EBCE, Mary was enrolled in a government and a shorthand class which occupied her time each morning from 8:30 until lunch. By noon, she was in the training center engrossed in her EBCE activities. Unlike most of the EBCE students, Mary rarely left the learning center except for explorations and competency certifications. She made extensive use of the resources available there to complete her assignments and confined her use of the school media center primarily to computer searches for occupational information. She also made limited use of community resources such as courts, public libraries, and post secondary institutions. Immediately following the program orientation and pre testing, Mary began her introductory critical thinking project and was ready to try her wings on her first exploration. In accord with her interest in veterinary science, Mary was placed in a small animal hospital where she spent four days out of the next five. While there, she observed and interviewed the veterinarian and his assistant, and performed minor tasks for clients and their pets.

Although Mary later eliminated this occupational choice,

TABLE 19

TIME CHART OF MARY'S ACTIVITIES IN EBCE

ACTIVITIY	SEPT	OCT	NOV	DEC	JAN	DATES
Projects						
Critical Thinking EBCE For You	X------X					9/16-10/05
Personal and Social Development What It's Like to be Blind		X----------X				10/03-11/15
Article Reports						
Report 1 - Oral		X				10/14
Report 2 - Oral		X				10/26
Report 3 - Oral			X			11/02
Report 4 - Oral			X			11/16
Report 5 - Oral			X			11/21
Report 6 - Oral			X			11/29
Report 7 - Oral				X		12/07
Report 8 - Oral				X		12/14
Report 9 - Oral					X	1/18
Employer Sites						
Exploration 1	XX					9/17-9/24
Exploration 2		XX				10/23-10/26
Exploration 3			X			11/28-11/30
Learning Level						
LL 1				X----------X		12/04- 1/21
Competencies						
Budgeting Time & Money	X------X					9/18-10/02
Checking & Credit		X-X				10/08-10/25
Housing		X----------X				10/29-12/04
Future Educational Options				X--------X		12/04- 1/04
Securing a Job					XX	1/14- 1/21

her initial enthusiasm remained throughout the exploration and prompted her to consider a learning level experience in this field. She also reaffirmed her desire to work in a service occupation. Following the completion of her first exploration, Mary began studying for the required competency on budgeting time and money. She quickly completed this unit and was certified the following week. Determined to be prepared to manage her own financial affairs upon graduation, Mary chose checking and credit as her second competency area.

An interest in helping and learning about others with special needs led Mary to her next project choice, "What It's Like To Be Blind", which extended over the next month. The depth of her investigation seemed to indicate the sincerity of her interest in the welfare of others, as did her second exploration to the county juvenile court. Mary explored the occupation of a social worker, and through her exploration saw, first hand, young people in trouble. Mary discovered the intricacies of the court system and became interested in a county rehabilitation program designed for youthful offenders. As a result, she made the decision to expand this experience into a learning level. While arrangements were being made for the learning level placement, Mary was able to experience an additional facet of the human services occupational cluster at a speech and hearing clinic. While there, she observed therapy sessions and was able to work with some of the children at the center.

In this and other explorations, Mary began to realize the relationship of school skills and occupational requirements. She also discovered that postgraduate training was necessary for two of the occupations she had observed. The cost involved in this training and her limited financial resources raised questions as to the practicality of her career choices thus far.

Throughout the month of explorations and projects, Mary kept a weekly log of her personal experiences and feelings. This journal and reports on articles she read provided practice in written communication. Her oral communication skills were strengthened by delivering her reports before the class. During this time, Mary was assigned a series of spelling units to remediate specific deficiencies revealed in her written reports and projects.

As Mary requested, a learning level was arranged for her at the local county juvenile court and she was able to explore in depth several of the programs operated by the court system. To complete her learning center assignments, Mary chose competencies in the areas of housing, future educational options, and securing a job. The scope of the competencies she chose reflected a certain maturity in her realization of the necessity for preparing for independent living.

Between September and January, Mary had successfully completed three explorations, two projects, five competencies, eighteen journal entries, nine special classroom reports,

five basic skill tutorials in spelling, and one learning level. She had also attended eighteen student/staff meetings, some of which were world of work seminars.

Reflections by Mary

In summarizing her experiences this year, Mary commented, "It's (EBCE) a good class. I really didn't know what I wanted to do. I'm a senior and I needed to know what I was going to do . . . what the options were . . . what I would like . . . college or not." She indicated that EBCE had been useful in helping her to become more self-confident in communicating with peers and adults. She said, "before I was kind of nervous to talk to people . . ." but now she really "enjoyed going out and meeting people and making friends." She felt that EBCE had helped her to apply knowledge of her aptitudes, interests, and abilities to potential career interests and to use the decision-making process in planning projects and selecting explorations. Mary indicated that she was strong in basic skills before entering EBCE and that none of the employer-instructors had identified a weakness in that area, but that the activities in the program had reinforced those skills. She cited the learning level as one activity in which she had practiced her arithmetic skills while figuring payroll. Mary felt that the explorations, in general, reinforced her reading skills and that the veterinarian exploration, in particular, called upon her writing skills in the completion

of reports. When asked if she could demonstrate an understanding between education and work, Mary rattled off several occupations and the educational requirements for each.

She indicated that EBCE had been only moderately helpful in oral communication, reading skills, getting along with others, and taking responsibility for her own actions. She also indicated that EBCE had no effect on her attitude toward school, but she confided, "I've always liked school." Some of the learning processes most useful to Mary were the explorations, competencies, project planning and negotiation, and the use of the computer. She felt that the testing and assessment process was least helpful and that the program would have been more effective with rigidly applied assignment deadlines.

As a result of EBCE, Mary's occupational interests changed. She was no longer interested in veterinary science for several reasons. First, the employment demand was not as great as she thought it was. Second, she found she would rather work with people than animals. Third, she could not afford the extensive training necessary for entry. And finally, she felt that the job of veterinarian was still viewed as a man's job and although realizing that this perception exemplified sex bias, she was unwilling to challenge that notion.

Mary appreciated the EBCE experience for introducing her to social work, her new career goal. She concluded that

while the program had no identified weaknesses, there were definitely "some people who were not cut out for it and who were not willing to work."

Views of Mary's Parents

In an interview in Mary's home, her parents shared the many changes Mary had undergone as a result of her experiences in EBCE. They felt, first and foremost, that Mary's "life was opened to an entirely new field that she felt she would like much better" after finding out that ". . . becoming a veterinarian was not what she wanted to be . . . " They added that Mary had become more "outspoken (when) meeting people . . ." and that she was "not the shy type anymore." Mary no longer asked things like "how should I dress", but seemed more self-reliant and through the program had discovered that she had a variety of abilities and aptitudes and ". . . (could) do a lot of things."

In a questionnaire, Mary's parents listed first-hand knowledge of demands in a "real world" situation, working with other people, on-the-job skills, and motivation to learn as benefits characteristic of the EBCE Program that would not have been evidenced in the regular school program. The only weakness in the EBCE Program noted by Mary's parents was the lack of school supported transportation. Mary's parents seemed genuinely sorry to see the semester ending and indicated that Mary would like to have even more explorations, perhaps in the area of wood finishing or

upholstery, if it could be arranged for her to continue another semester in the program.

Test Progress Measures on Mary

The analysis of Mary's pre and post test scores indicated that she had made substantial gains in the reading and arithmetic subtests of the CTBS. In reading comprehension she went from a 11.0 grade equivalent to a 13.6 grade equivalent. In arithmetic concepts she went from a 9.9 grade equivalent to a 13.6 grade equivalent. In arithmetic applications she went from a 8.9 grade equivalent to a 11.8 grade equivalent. Although Mary showed a gain in arithmetic applications, her post test score fell within the average range of scores achieved by the comparison group, non-EBCE participants randomly selected from juniors and seniors at Mary's high school. Mary's reading comprehension post test score was above the average scored by the comparison group. There was no significant gain shown by Mary's post test scores on the CEST.

The EBCE staff were in agreement on their perceptions of Mary's progress over the semester. They rated her above average in knowledge of personal aptitudes, interests, and abilities and at the top of the scale in the application of that knowledge to career choices. They also felt that she rated at the top of the scale in assuming responsibility for carrying out tasks and was between above average and superior on initiative behavior. In the application of basic skills to work tasks and to avocational interests,

the staff again agreed on the rating of above average.

Evaluator's Reflections

It appeared that Mary had an extremely positive view of her capabilities that was not entirely consistent with the empirical data. However, while all of her scores in the basic skills certainly did not exceed the average, her demonstrated performance on competencies, explorations, and projects did support her conclusion. Mary participated in her explorations with an open mind and learned early on that she enjoyed helping occupations. Consistent with that interest area, she established social work as a career goal.

Mary thought through her initial aspiration to become a veterinarian and, applying the decision-making process, systematically eliminated it as an occupational choice for herself. Mary had acquired much career information throughout the semester and was quick to supply examples of her increased knowledge during the interview. Willing to exercise responsibility for herself, Mary sought special permission to enroll in EBCE for a second semester in spite of the fact that her graduation requirements had been completed.

Ann: An Illustrated Case Study

Background

Ann, a reticent young lady, was entering her junior

year of high school and was very much interested in having a career in the music field. This year was her second at Union. Ann's former school had been closed as a result of declining enrollment and desegregation efforts in the city's schools. Out of six subjects carried during the past year, Ann had experienced academic success in only two--intermediate choir and ROTC. She had failed alegebra and had barely squeaked by in biology, English, and history. At her former school, Ann had achieved a 2.75 grade point average on a 4.0 scale. In her first year at Union, she had barely earned a 1.33 grade point average on a 4.0 scale. Though her self-concept seemed a bit shaken, she was not yet completely disillusioned with her school experience, and was prepared to make another effort at learning.

On the recommendation of her counselor, Ann had been invited to participate in EBCE. The counselor hoped participation in EBCE would improve her school experience by providing individualized attention to her academic deficiencies and making school more relevant to the world of work. Ann was not sure she understood the EBCE program, but liked the idea of learning about jobs and was enamored by her special invitation to participate. On that basis, she chose to enroll and hoped that through EBCE she would learn how to get into gospel singing as a career.

Because Ann was unable to attend the pre-school orientation session which provided more detail on program operation, when she arrived the first week in September she was

still somewhat expecting a regular high school classroom with perhaps a few extra field trips for occupational exploration. Ann expected and would have preferred a lecture/discussion instructional format with an identified text and written assignments so "I would really know I was learning something." The totally new approach to learning in this program was at the very least unsettling for Ann.

On academic tests administered during the first week of EBCE, Ann's scores in arithmetic fell below the average range of scores achieved by a comparison group of randomly selected juniors and seniors at her high school. In reading comprehension, Ann's scores were in the below average range of scores achieved by the comparison group. On a test of career knowledge, Ann scored below the average in the areas of career planning and decision making, career training, knowledge of sex discrimination issues, and understanding of economic factors influencing career opportunities. She scored within the average range on job acquisition and retention skills, and knowledge of career interests.

On a more subjective level, Ann felt that she was somewhat self-directed, but recognized that it took her longer to complete assignments than most students and that she often needed to be reminded about deadlines. Academically, Ann recognized weaknesses in the areas of spelling and arithmetic. She indicated that it was difficult for her to pay attention and that she needed to work on listening skills and following directions. She also felt she had a

hard time expressing herself and did not often participate in discussions. She seemed to frequently get hung up on the words in a conversation or question and lose the essence of what was being said. She also tended to use words out of appropriate context. She offered comments to discussions that appeared to have no relevance, leaving the receiver with an unclear picture of her message and the feeling that she was not quite on the same wave length with everyone else. Ann seemed unable to organize herself in unstructured learning situations and seemed on an endless journey in search of the single "right" answer to everything.

The EBCE learning manager initially explained the learning process that would be used in EBCE and worked with Ann to develop a PERT chart of activities for the first marking period. The community relations specialist also individually explained to Ann the intended purpose and planned procedure for each learning process. Ann seemed anxious to get started, though somewhat uncomfortable with the idea of working on several things at once. A schedule of Ann's activities during the semester is shown in Table 20.

Semester in EBCE

Ann had enrolled in two choir classes and the ROTC Program along with EBCE. While homework assignments, as such, were rarely required in her other subjects, practice time outside of the classroom was expected. Ann soon realized that she would be kept extremely busy with her full

TABLE 20

TIME CHART OF ANN'S ACTIVITIES IN EBCE

ACTIVITY	SEPT	OCT	NOV	DEC	JAN	DATES
Projects						
Critical Thinking EBCE For You	X--------X					9/10-10/11
Personal and Social Development Family		XX				10/10-10/17
Science Drugs			X			11/12*
Article Reports						
Report 1 - Written				X		12/07
Report 2 - Written				X		12/14
Employer Sites						
Exploration 1	X-------X					9/26-10/17
Exploration 2		X				10/26-10/29
Exploration 3					X	1/15*
Competencies						
Budgeting Time & Money	X-------X					9/24-10/23
Housing			X----------X			11/01- 1/09
Securing a Job		X----------X				10/24- 1/17
Future Educational Options					X	1/10*

* Incomplete

schedule. During the first month of the program, Ann worked on her first project, a pre-designed critical thinking unit developed to familiarize students with the location of EBCE program resources. The project also provided practice for Ann in the project learning process. Ann, however, had a more simplistic interpretation of rationale for project completion. Her reason was "because I have to do this project before I start my second (project)." She did not view the project information as useful but rather the process of completion as necessary. As evidenced by her weekly record sheet, Ann chose to work on only one thing at a time during the first few weeks. She visited the school media center numerous times, but had difficulty working without supervision and seemed to confuse the value of attendance at the media center with the production of work as a result of being there. By the end of the month, however, Ann had started the pre-designed competency on budgeting time and money. One purpose of the project was to help students like Ann learn to pace themselves in an independent learning situation. Ann, however, seemed only to be filling in blanks on the pages.

During this period, in response to an interest in the performing arts, Ann undertook an exploration on theatre. Ann spent four days, one of which was a Sunday, at a local performing arts theatre. The employer-instructor rated her as enthusiastic and willing to learn. At the time of her exploration, the theatre was preparing a children's

production and Ann was able to experience and observe the mechanics of directing a theatrical production about Marco Polo. The community relations specialist felt that Ann had "taken good advantage of the exploration, although she (continued) to be more interested in singing." Ann enjoyed the experience, but concluded that she did not want to explore that site in any greater depth as a learning level.

In the first project month, Ann had completed all of her journal entries, was nearing the end of her first project, and had completed all but one of her weekly record sheets which were used to record her daily schedule of activities. In an interview during that time, Ann said that she felt the program should require more work in the areas of science, English, and mathematics and that by participating in the program she was getting behind in her graduation requirements. At that point, she could not see the relevance of what she was learning or that work in each of those subject areas was possible through her projects. The first week in October, Ann met with the learning manager to discuss her progress and revise her initial target completion dates for her first competency and project. By the end of that week Ann had completed the critical thinking project and by the end of the next week she had completed her first competency and her first exploration.

Ann's next project was done in the personal and social development area on the family. Sticking to things that were familiar to her, Ann included research on biblical

family relationships, and compared those to Alex Haley's family tree from the book Roots. She completed this project in seven days and began a third project. She chose as her topic "Drugs: Use and Abuse" from the science life skills area. Although her log showed many notations of her work on this project throughout the third and fourth project months, the completed project was never submitted.

Ann completed one more exploration. She visited a local Bible and music college. Her career goal was still to become a gospel singer and she hoped that she might get some relevant information from this site. Ann spent two days at this site with a college admissions officer, but came away without any information on beginning a career in gospel singing. She did, however, acquire information about the school, its admission procedure, and a clear picture of the job duties and requirements of the employer-instructor. Following this exploration, plans were made for Ann to attend an exploration at a local television station. However, the employer-instructor asked to be dropped from the program after Ann repeatedly cancelled or did not show up for appointments.

During the next two months Ann's journal entries shrunk to less than half a page. She also ended up working on two competencies simultaneously. According to her marking period target sheet, she was to have been certified on the securing a job competency prior to initiating work on the housing competency. She, in fact, cancelled or did not show up for

six consecutive certification appointments before she finally completed the task, causing work on the two units to run together. Ann also had several unexcused absences during this period. In discussions with the learning manager she cited a multitude of personal problems as reasons for her lack of follow through. During the month preceding the project end Ann submitted her first of only two news article reviews. The first highlighted the life of a musician and the second dealt with money management.

Ann began a three-day special placement in January at a local school of hair design. Her purpose in choosing this site was not related to an occupational interest, but developed out of a personal interest in hair styling. Ann attended a portion of a theory lesson, was allowed to practice hair cutting on a mannequin, and received a free hairstyle. She did not, however, submit a report on this experience or her reaction to it.

At about this same time Ann started her final competency on future educational options. She did not complete this activity and made no attempt to take the certification test for the area.

During the semester Ann missed ten class sessions. She completed two projects, three competencies, two career explorations, sixteen journal entries, two reports, seventeen weekly record sheets, and had attended seventeen student/staff meetings some of which were world of work seminars.

Reflections by Ann

In discussing her experiences in EBCE, Ann said that the program was "really not very good for (her)" because she "can't hack it . . . it gets boring after the second quarter because we're doing the same thing over." She felt that she had fallen behind in the regular program because she had taken time out for EBCE. She perceived that the project staff was not concerned about her as an individual and that she received "no specific help from the teachers." On several data gathering instruments, Ann referred to a weakness she had in math and staunchly maintained that neither the program nor the staff did anything to address that deficiency. When asked if she felt she had acquired any knowledge or skills in EBCE that would be directly helpful for gaining or holding a future job, Ann responded, "I didn't get enough information to find something I like yet." However, after reflecting on her experiences, she did identify telephone usage, how to fill out a job application, how to get a social security card and work permit, and where to look for a job as useful knowledge that she had acquired.

In discussing the exploration process shortly before the end of the program, Ann indicated that she did not understand the pages in the exploration guide on which the student is to analyze the skills and tasks s/he observed as requirements on the job being explored. The student was to then rate the task as one that s/he either enjoyed or didn't enjoy and either liked or disliked. This citation also

requested information from the student regarding the skills that she/he is deficient in but would need for the job, and suggestions as to where the student could acquire those skills. Ann also had the impression that two other pages were supposed to have been completed by the employer-instructor. Those pages were, in fact, ones on which the student was to demonstrate ability to perform communications and arithmetic skills required on the job explored. Performance on each skill was to have been evaluated by the employer-instructor. Ann also indicated that she knew of no specific questions that were to be asked of an employer-instructor during an exploration interview. She was unaware of the possible application of responses to any questions for her personal career decision making.

Ann's response to the value of the EBCE learning process changed significantly over the course of the program. She initially felt that all the processes had high or medium usefulness. By the program end, however, she felt that the orientation was of little use and, in fact, that the information given at that time differed from the actual operation of the program. She also felt that the journal writing was of little value. She did, however, consistently rate the competencies and the project negotiation process as having high value. The actual projects and the testing and assessment procedures were also given high value ratings, but the exploration packages dropped in value in her perception. Ann felt that EBCE was of little or no

help in arithmetic and identified the repeated use of the three major learning processes, i.e. competencies, explorations, and projects as another program weakness. The program strengths were that "it helped (me) to have confidence in myself, (taught me) the rights and wrongs of an interview, how to fill out forms, and talk on the telephone." Ann stated, "when my mother used to ask me to call business people, I used to back out; now I don't." Ann concluded that if she had it to do over she did not think she would decide to participate in EBCE.

Views of the Parents

In an interview with Ann's mother, the mother cited lack of transportation as one program weakness. In addition, she said that Ann had experienced difficulty in "catching up to the people she was supposed to interview." Ann's mother said that in spite of Ann's participation in EBCE, Ann "had not yet come to a decision about a career." She felt that Ann was "frustrated and discouraged" and that maybe more individualized teaching would have helped. In a follow-up questionnaire, Ann's mother indicated that she felt students did not receive sufficient training to handle their assignments and cited Ann's drug abuse project as an example. She felt Ann was unable to complete the assignment "because of a lack of knowledge." She felt that there was inadequate supervision on the job sites and that some students could not handle the freedom.

Positive changes noted in Ann as a result of her participation in EBCE included a better understanding of jobs and the ability to work with other people. Unlike, Ann, her mother felt that the program had provided a greater opportunity for general learning, e.g. basic skills and life skills, than would have been provided in the regular classes, but that Ann did not like the program and was not learning. She did not feel that she had received enough information about Ann's progress in the program. She concluded that if she had it to do over again, she would not have wanted Ann to participate in the program.

Test Progress Measures on Ann

The analysis of Ann's pre and post test scores showed no change on the reading comprehension subtest of the CTBS. Her grade equivalent score remained at 7.6. In arithmetic concepts, she went from a 9.1 grade equivalent to a 9.5 grade equivalent. In arithmetic applications, she went from an 8.3 grade equivalent to a 7.5 grade equivalent. When compared to the comparison group, Ann scored in the below average range.

On the Career Education Skills Test, Ann showed at least a minor increase in each area. There was no significant difference between Ann's post test scores and those of the comparison group in areas of career planning and decision making, career interests, and knowledge of economic factors influencing career opportunities. She did, however, exceed

the comparison group mean by over one standard deviation in the areas of job acquisition and retention skills, knowledge of career training, and awareness of sex discrimination issues.

The EBCE staff felt that Ann seemed somewhat confused at the start of the program, but seemed to be adjusting until the end of the first marking period when she seemed to take a nose dive in all areas. She failed to live up to commitments made in the community, was absent from class without excuses, and began not turning in assignments. By the end of the program, she was rated below satisfactory in the areas of judgment, observance of employer's rules, adherence to established schedule, punctuality, quality of assigned projects, initiative, use of employer site learning resources, and overall program performance. They felt that she remained above satisfactory in poise, self-confidence, courtesy, cooperation, team work, appropriateness of dress, concern for equipment and property, and acceptance of feedback information. Both the learning manager and the community resource specialist agreed that Ann did not understand her own aptitudes, interests and abilities, did not demonstrate a willingness to apply basic skills to work tasks and avocational interests, and did not assume responsibility for carrying out tasks.

Evaluator's Reflections

In appeared that in the opinions of Ann, her mother,

and the staff, the EBCE experience did not fulfill Ann's education needs. Yet, while the program goals may have differed from the student's and parent's perceptions of them, assessment results on the test of career knowledge and Ann's demonstrated behavior indicated otherwise. By the end of the program, Ann was better able to talk and work with adults, she did indeed gain some employability information and survival competencies for the adult world, and she did indeed become aware of some occupational issues, e.g. sex discrimination. She also acquired career experience that she would not have had in the regular high school program. In addition, she showed no significant loss in basic skills, as seemed to be the worry.

Ann did not appear well-suited for the EBCE Program approach and, indeed, might have functioned more comfortably in a less independent learning situation. She seemed never to have a clear understanding of what was expected of her; but to protect her self-image, she chose to believe she was bored. Analysis of the situation later revealed a major change in Ann's health during that period that impacted her physically and emotionally. Her inability to cope with the amount of responsibility she was asked to handle began to show up at the time of the first marking period when she was faced with the fact that in spite of her efforts, she had not completed sufficient work to be granted credit for her experience. At that point, she saw no support at home or at school. Her subsequent academic surrender,

signaled by her reduction in journal entries, non-adherence to established time lines and lack of task completion, became inevitable.

David: An Illustrated Case Study

Background

Sitting in a lecture was difficult for David. School was easy enough, but David often found himself wishing he was out-of-doors. The need for education, however, was heavily emphasized at home and David had learned quite well to achieve. David was entering his junior year with a grade point average of 3.3 on a 4.0 scale. At the same time, he worked part-time at a local hamburg stand. He was not active in sports or school clubs and found it difficult to express himself.

When David first heard about EBCE during the summer before it was initiated, he was dead set against participating. He was already "doing just fine" in the regular program, and "besides, none of (his) friends were going to join." However, after attending the EBCE pre-school orientation, David's parents insisted that the program had value for him as an individual and he reluctantly enrolled.

David's performance on the Comprehensive Test of Basic Skills during the first week of EBCE corroborated his academic strengths. His reading comprehension score was well above the average scored by a randomly selected group of

juniors and seniors at his school. His score on the arithmetic concepts and applications subtest was also slightly above the mean. On a pre-test of career education skills, David's scores on all subtests but one fell within the average range of scores achieved by the control group. In the area of knowledge of sex discrimination issues, his score exceeded the average. On a less tangible level, David's writing, though almost illegible, showed thought and was more expressive than his speech.

Early in the program year EBCE staff members described David as lacking in poise, self-confidence, interest, enthusiasm, and judgment. His attention in class was poor and exemplified a lack of genuine effort. The learning manager noted David's immature behavior in the learning center and felt he wasted a lot of time; "he seemed determined not to enjoy the program." One of the other staff members commented, "David appeared to work better in a structured setting and needed to understand and accept responsibility." David seemed only to recognize a surface connection between school subjects and his ultimate occupational choice. His favorite subjects were English and math, but his career interest was in becoming a game warden, wildlife specialist, or airline pilot. David planned to attend college because "you need to in order to get a good job."

Projects and explorations were planned to capitalize on David's existing occupational interests, to help him more clearly understand the education/work relationship, and to

accept greater responsibility for his own learning. David's listening skills and interpersonal communication skills were also targeted for improvement. A time chart of David's EBCE activities is shown in table 21.

Semester in EBCE

David began work on his first project and first competency almost simultaneously. The competency on budgeting time and money was initially submitted incomplete and was returned for completion. David was finally certified in this area a month after beginning his preparation for it. The project David undertook on critical thinking was predesigned to familiarize students with the structure of EBCE and provided practice in the learning processes used in the program. One of the activities in the unit required David to complete an occupational information search on a job of interest to him. He found information on three closely related jobs: fish culturist, conservation officer, and range manager. Shortly after finding this information, David arranged and began his first exploration at the Department of Natural Resources. He found the job of a conservation officer interesting, but the employment outlook was poor and the competition tough for the few available jobs in Michigan. After learning that even with a college degree he would have to take a competitive exam for existing openings, David's interest waned.

In the learning center, David was becoming more

TABLE 21

TIME CHART OF DAVID'S ACTIVITIES IN EBCE

ACTIVITY	SEPT	OCT	NOV	DEC	JAN	DATES
Projects						
Critical Thinking EBCE For You	X--------X					9/16-10/20
Personal and Social Development Study Habits		X------X				10/25-11/07
Science Deep Sea Fishing				X--------X		12/17- 1/17
Article Reports						
Report 1 - Oral		X				10/19
Report 2 - Oral		X				10/25
Employer Sites						
Exploration 1	X-----X					9/28-10/05
Exploration 2			X--------X			11/29-12/27
Exploration 3					X	1/15- 1/21
Competencies						
Budgeting Time & Money	X--------X					9/17-10/18
Taxes		X------X				10/09-11/07
Auto Buying & Maintenance			X----------X X----------X			11/12- 1/09 11/12- 1/14
Future Educational Options					XX	1/14- 1/18
Spelling Units						
Unit 1			X			11/16
Unit 2			X			11/21
Unit 3			X			11/29
Unit 5				X		12/07
Unit 6				X		12/14
Unit 7				X		12/20

comfortable and had completed two reports on articles from a flying magazine. These reports were presented orally. His interest in flying had been piqued by a field trip to the airport the week before, and David began to think about exploring that area. Many interests were being stirred in David at the same time, but action on none came quickly. The completion date for EBCE activities seemed a comfortable distance away and with his job responsibility and requirements of his regular high school classes pressing, David began to coast in EBCE.

Following a notice of unsatisfactory achievement sent to his parents at the end of the second project month and a subsequent discussion with them, David decided to "give it more of his best." His second project on study habits reflected this new effort. David sought to learn why he found it hard to concentrate and what he could do to improve his methods of studying.

During this time, David was also studying for certification in the taxes competency. Though David acquired sufficient knowledge to prepare tax returns, his forms were not as neat as expected by the community certifier. "When the accuracy of numbers is critical, legibility is a must," explained the certifier. David was certified, however, and went on to what he felt was a more exciting competency in auto buying and maintenance.

David was interested in purchasing a car so that what he learned in this competency was very important to him.

His study was extensive and very detailed. David felt pretty lucky that a few of the other students in the program were working on this competency at the same time. To become certified he had to be tested by an auto salesman and an auto mechanic. The other students working on this competency depended on David to arrange one of the competency certifications and he didn't let them down. They cooperated on transportation and all were certified together.

David's interest in outdoor occupations had not been forgotten and a month and a half after his initial exploration, David arranged to visit the city parks department. He was impressed with the variety of responsibilities of the department. He highlighted cemetary maintenance, repairing city playground equipment, cutting down of city trees, and feeding and caring for the zoo animals as some of the more interesting responsibilities. He learned that the work combined manual skills and working with people and animals. He was also told that all communication skills were necessary to successfully perform the work, as well as a working knowledge of metrics. Through several days of pouring rain David's interest in outdoor work was not dampened. Though he chose not to extend the experience into a learning level, David remained convinced that work in the out-of-doors was just what he wanted.

As the Christmas holiday approached, David became increasingly excited about an upcoming vacation in Florida and began planning a science project that he would complete

while there. The very thought of doing "school work" while on vacation was new for David and exemplified not just an interest in EBCE but in learning as well. This was a definitive step towards taking responsibility for his own learning. The topic David chose was deep sea fishing. The slide show and report he shared when he returned was exciting and well done.

David was nearing the end of the program and with it the completion of six spelling units he had been assigned to correct spelling deficiencies noted in his written work. He completed all of the assignments on time except one and felt it unfair that his evaluation would not reflect the completion of those tasks.

David's final competency was on future educational options. He read and reported on articles about the value of college and how to survive in it. He secured information on programming in the areas of natural resources and aviation, and on admission requirements from seven post secondary institutions. However, when asked to list two jobs he might like to hold after completing his education, David responded, "I don't know."

David ended the year with an exploration to the Federal Aviation Administration and an adjacent flight school. He did not seem particularly impressed by the job of the FAA administrator and made only one-word responses to direct questions. However, he left excitedly to join the pilot/flight instructor at the flight school. David was oriented

to flying in an airplane simulator and allowed to take over the controls. He was enthusiastic in reporting that he hadn't crashed. He was uncertain of his seriousness for a career goal in this area.

From September through January, David completed four competencies, three explorations, two article reviews, three projects, six spelling units, eighteen journal entries, and eighteen weekly record sheets. He had also attended sixteen student/staff seminars.

Reflections by David

David initially said that EBCE was "maybe not for me particularly." He was "not used to working by (himself)," he reasoned. The only parts of the program that he rated as being highly useful were the exploration packages. By the program end, David's perception had changed. He still had not decided on a specific job but said, "EBCE gave (him) a chance to be out in the community, to see what other jobs are like." He commented that the staff "had helped me to get my stuff done on time . . . making us set deadlines." He felt he was doing fine in the basic skills because he got "practice from all of the stuff you do." He felt that he had "become a better listener" and had gained skills in writing letters to employers. He rated the computer, competencies, seminars, and the employer-instructors as being most useful to him in the program. None of the learning processes were rated low in usefulness. David also felt that the project staff knew him better than the teachers in

the regular program. On a questionnaire at program end, David indicated that while EBCE had not helped him with reading and math skills, or in getting along with others, it had been moderately useful in improving his oral communication skills, in helping him to communicate comfortably with adults, in helping him to become more open to ideas and values different from his own, and definitely more helpful than the regular program in learning about occupations. He felt that the greatest strength in the program was the community experience and the greatest weakness was the grading process.

Views of David's Parents

David's parents were sold on the program from the beginning, but felt that by pushing David into it he might have initially resisted learning. In the interview, David's mother said, "I still believe it gave him some good exposure though (he made) no career plans especially . . . he's been to some interesting places and also (had) interesting class speakers." On a questionnaire at program end, David's mother noted greater maturity, self-direction, and better understanding of jobs as positive changes she had noticed in David. She felt he had acquired first-hand knowledge of demands in a real world situation and concluded that having to "make the contacts and meet the world on (his) own (was) also good."

David's mother's suggestion for improvement was to

"have a teacher, perhaps a male, with an association with sports" to attract students. She commented further that

> I think it vital that those who instruct such a different type of program from the usual, more structured classroom situation have a genuine understanding and appreciation of youth of this age and an ability to allow for individual differences.

Test Progress Measures on David

The analysis of pre and post test scores for David indicated that he remained at the same high level over the semester on both the reading and arithmetic subtests of the CTBS. On the CEST post test, David showed significant gains in two areas over the comparison group post test scores. On the subtests of career training and knowledge of six discrimination issues, David's scores fit in the above average range of scores when compared to the comparison group.

The staff agreed that David had shown growth in knowing his aptitudes, interests, and abilities, but less growth in applying them to career interests. David also was able to apply basic skills to work tasks and avocational interests. They concluded, however, on an end of program rating scale that David needed continued work on initiating behavior, understanding and accepting responsibility, and working as a team member.

Evaluator's Reflections

By program end David was no longer giving just one-word answers during the interview, but was not yet totally comfortable when communicating orally with adults. It appeared

that the EBCE program helped to validate David's interest in working out-of-doors, but did not provide enough of a variety of experiences to enable him to make a tentative career choice. David's apparent lack of initiative noted by staff may have been connected, in part, with a personality difference between him and one of the staff members, as noted by his mother.

David seemed to mature over the year and recognized some value in his experience in EBCE in spite of the fact that he was somewhat forced to enroll. He also acquired several competencies that should be of use as he enters adulthood. David's enrollment in agriculture the semester following his EBCE experience might have been the first example of David's acting on some of the self discoveries he made through participation in the program.

Mark: An Illustrated Case Study

Background

Mark was 16 years old and entering his junior year at Union High School. He maintained a 3.22 grade point average on a 4.0 scale, found no difficulty with school tasks, and could easily complete assignments in the time allotted. Mark was a little leery of math, but science, English, and woodshop were among his favorite subjects. He was a member of the Union soccer team and enjoyed "learning about the outdoors . . . about writing . . . and doing projects in the woodshop." He felt he was self-directed, but liked to check

in with someone now and again. Mark first heard about EBCE the summer before he entered. His parents had contacted him "up North," where he was working in the youth conservation corps, to alert him to an upcoming pre-school orientation meeting. Because Mark was unable to leave camp, but seemed interested in the program, his parents attended the meeting without him. After Mark heard more details about the program from his parents, he was sure he wanted to participate. He enrolled in late August when he returned from the camp worksite.

Early EBCE testing sessions at the start of the school year verified Mark's academic success. Mark's scores on the CTBS reading comprehension and arithmetic concepts and applications subtests each placed him at a 13.6 grade equivalent. When compared with the scores of the comparison group, a randomly selected group of junior and senior students at his school, Mark's reading scores were well above the average. Mark also scored above the comparison group mean on the arithmetic subtests, but remained within the average range of the group. On a test of career education skills, Mark scored well within the average range for the comparison group on all of the subtests.

On a more subjective level, EBCE staff had high praise for Mark. He was rated "excellent" or "commendable" in all areas of performance. When the staff explained something, Mark listened and seemed to understand clearly the first time through. He was able to work independently, and was

challenged by this new approach to learning. Mark had not identified a career interest area so explorations were planned to provide as much exposure to the world of work as possible. A time chart of Mark's activities in EBCE is shown in table 22.

Mark enrolled in speech, chemistry, and pre-calculus while taking EBCE, making his day a busy one. He began each morning at 8:30 and completed his regular high school classes before going to the EBCE learning center for the afternoon. Mark was anxious to get into the community; immediately following the orientation and testing sessions he was on the phone trying to set up his first exploration in forestry. During the summer, Mark had learned a lot about cutting down trees, laying trails, and preparing campsites. He discovered a real interest in that type of work and was looking forward to discovering more about the job of an urban forester. Because of the time constraints on the employer-instructor, Mark's exploration lasted only one day. However, in that time, he picked up job description information including planting trees in a tree plantation, checking for diseased trees, and planning for community development. He also learned the educational requirements for the job and planned to look more closely into a career in forestry.

Also during the first program month, Mark began work on his first competency and his first project. The competency on budgeting time and money was meticulously done. Through it, Mark learned the difference between goals and values

TABLE 22

TIME CHART OF MARK'S ACTIVITIES IN EBCE

ACTIVITIES	SEPT	OCT	NOV	DEC	JAN	DATES
Projects						
Critical Thinking EBCE For You	X--------X					9/24-10/30
Science ESP, Mysticism & the Occult		XX				10/15-10/31
Science Backpacking			X------X			11/26-12/14
Article Reports						
Report 1 - Oral			X			11/16
Report 2 - Oral			X			11/21
Report 3 - Oral			X			11/29
Report 4 - Oral				X		12/14
Report 5 - Oral					X	1/18
Employer Sites						
Exploration 1	X					9/27
Exploration 2		XX				10/18-10/25
Exploration 3			X------X			11/28-12/12
Exploration 4					X	1/15- 1/21
Competencies						
Budgeting Time & Money	X--------X					9/23-10/30
Future Educational Options		X-X				10/09-10/30
Auto Buying and Maintenance			X----------X X----------X			11/01- 1/09 11/011 1/14
Housing					X-X	1/07- 1/18

and the difference between needs and wants. He applied these concepts while developing several practice budgets for himself and his family. Mark learned and immediately put into use the techniques of planning his time more carefully and maintaining a weekly record of his time. On the certification test for this competency, Mark missed only one item.

Mark's initial life skills project was a pre-designed critical thinking unit entitled "EBCE and You." It was designed to prepare students for each of the major tasks that they would be expected to do in EBCE and to provide an opportunity to practice those tasks while under the watchful eye of the learning manager.

One of the activities required in Mark's initial project was to decide on several possible exploration sites. As a result of this activity, Mark's second, more lengthy exploration was born. Totally unrelated to the first, the second exploration was at a local newspaper. Mark shadowed a reporter, visited the editorial department and the sports department. He observed copy being corrected at a computer terminal and was impressed with the speed and relative ease with which editing and proofreading corrections could be made. Though he enjoyed the experience, Mark left knowing that a lifetime career as a reporter was not for him.

Back in the learning center, Mark had started work on his second competency in the area of future educational options, and was busily writing to area colleges to get information on programs offered in journalism and forestry.

He also read articles on college survival and the value of a college education. Mark researched two reference books on colleges in the United States and reviewed college catalogues of two year and four year post secondary institutions. He developed two alternative educational plans--one for a major in forestry and the other for a journalism career. Mark commented that the competency had been "helpful and informative" because he was really "interested in furthering his education."

During this time Mark had just finished reading The Amityville Horror and decided to do his next project in the science area on ESP, mysticism, and the occult. The activities he chose showed ingenuity and a genuine interest in the topic. Mark researched the topic extensively, interviewed individuals who had experienced such extrasensory occurences, held a seance, and reported his experiences to the class.

At midterm, Mark was very pleased with what he had accomplished so far. Because of his written work being virtually error free, he had not been required to do extra spelling units like many of his classmates. He was caught by surprise when he realized he had not been reporting on career-related articles as he should have been doing. In mid-November, he put himself on a strict schedule of one report per week. Before the end of the program, he had written and given orally five such reports dealing with post secondary training and employment.

Auto buying and maintenance was the topic of Mark's next competency; his work on it extended for over two months. He was finally certified by both an automobile salesperson and an auto mechanic. This unit had been fun, but very time consuming. In it, Mark had read articles on conserving gasoline, emergency repairs, depreciation costs of auto ownership, and how driving affects mileage. He had learned the most popular options being sold on cars and had discussed the advantages and disadvantages of buying a new car or used car. Mark had also developed a chart, explaining by month, the car maintenance necessary for one whole year.

Mark's last project was an action-packed one on backpacking. He read extensively and actually planned and carried out a backpacking and camping trip with one of the other EBCE students. When Mark returned, he used slides and a tape recording to tell the story to the rest of his classmates.

About the time of the backpacking trip, Mark undertook his third exploration. This one took him to several sites within the city's park department. Mark learned that within that department there were jobs available for all levels of experience and training. He commented on how much the workers seemed to enjoy their jobs and each other. This experience, like the natural resources exploration, tended to reaffirm Mark's desire to work out-of-doors at something that had to do with the environment. Mark's final

competency was on housing. He gained valuable information on purchasing a home, as well as on renting and leasing. Mark completed all of the activities in the unit without a hitch and was easily certified by a local realtor.

Mark chose to investigate a whole new aspect of the career world and selected a site in the area of budgeting and accounting for his final exploration. He took advantage of the proximity of the local school district accounting office and set up an appointment with one of the chief accountants. Mark quickly decided he neither liked the work nor had the physical requirements for the job. He could not sit for long periods of time nor did he want a job where dressy attire seemed dictated. He did think the exploration experience was a valuable one, however, because it showed him that the same basic skills are needed in jobs from all areas. It verified for him that he would not be well suited for this type of job.

During the program, Mark completed three projects, four explorations, four competencies, five articles, eighteen journal entries, and eighteen weekly record sheets. He also attended seventeen student/staff meetings some of which were world of work seminars.

Mark's View of EBCE

In summarizing his experiences this semester, Mark commented, "it taught me a lot that I don't think I'd ever learn in a conventional classroom", and gave the competencies

as an example. He stated that while he could have been "pushed more", he had learned "a lot about jobs that (he was) interested in . . . what (he'd) have to do in order to get and keep that job . . . and how to find the job (he was) interested in." Both at the beginning and at the end of the year, Mark rated the exploration package, the competencies, the student orientation, and the project negotiation process as being most useful in the program. He stated, "when I went out on my exploration, I hardly knew anything about the job, but after I came back, I knew more about the job and what I needed to do to get into that field."

Mark felt that math was not stressed in the projects, but he observed, "you do quite a bit of reading and writing." The projects enabled him to "show independent learning" and "for the first time in a long time (he) found out how it felt to really work hard."

As a result of his experiences in EBCE, Mark had made two tentative career choices, both of which he had observed during the explorations. He felt EBCE was very helpful in developing his creativity and oral communication skills, especially communicating comfortably with adults. Learning how to match his abilities and interests to potential careers and learning what to look at in considering a job were aspects he also found very useful. He felt EBCE was only somewhat helpful in improving reading and math skills, however. He felt that the EBCE staff knew him better than the teachers in the regular high school program, and that

he knew them better than he knew his other teachers. There were no areas mentioned where Mark felt the EBCE experience was of little or no help. He concluded that EBCE "was a great class" that he hoped would continue at Union.

Reflections of Mark's Parents

In an interview with Mark's parents, they indicated that Mark's knowledge of occupations had definitely grown through the EBCE experience. They felt that Mark had benefited from the explorations in that the explorations had given him a background into "the ones (occupations) he's investigated (and) made him realize that he's going to have to go to college to get into the field he wants to get into." They indicated that Mark had started looking harder for a job and knew how to talk to an employer.

Mark's parents felt that participation in EBCE had given Mark a more positive attitude toward himself. They noted that he was "not afraid to try something new" and hadn't said, "'what will others think'" as he had in past years. Referring to his project on backpacking they added, "he's not afraid to create new things, new perspectives on activities."

They also felt that participation in EBCE had helped Mark become more outgoing, "he's losing his shyness (about) getting out and talking with people."

Mark's parents' response on the parent opinion survey reinforced their comments in the interview and the father

concluded, "my wife and I believe this is a super program. Our son enjoys the class and seems to put 100% effort into it. I hope this program will continue and perhaps expand in the future."

Test Progress Measures on Mark

The analysis of Mark's pre and post test scores indicated no significant change over the term as measured by the reading comprehension and arithmetic concepts and applications subtests of the CTBS. All scores remained at the 13.6 grade equivalent level. On the CEST, Mark showed a raw score gain on each subtest. When compared to the comparison group, Mark scored above the average range of scores on the following subtests: job acquisition and retention skills, understanding of economic factors influencing career opportunities, knowledge of education/career opportunity relationships, application of career interests to planning and decision making, and understanding of sex discrimination issues. His score remained within the average range on the subtest measuring knowledge of factors about self in career planning and decision making.

The staff evaluated Mark on four sets of student behaviors: attendance/punctuality, attitude, learning process, and performance. As in the pre-test, Mark's rating in all four areas remained either commendable or excellent. The staff did disagree, however on the ratings of initiative and assuming responsibility for carrying out tasks. The learning manager rated Mark as average and the community

relations specialist rated him at the top of the scale.

Evaluator's Reflections

Mark appeared to have matured somewhat during his program experiences. The ease with which he communicated with employer-instructors at the end of the year was a change from the butterflies in his stomach that he described earlier in the year. He was not deficient in the basic skills area when entering EBCE and showed no loss during the program. Mark's career knowledge, as supported by the CEST results, had increased over the term. He had been able to make two tentative career choices as a result of his career exposures through the program. Mark was also able to eliminate one and possibly two careers from consideration for the future. He also acquired valuable survival skills through the competencies. He had already put to use skills acquired in the future educational options competency as he prepared for college. While Mark would have undoubtedly succeeded with or without EBCE, his praise and that of his parents reflected their feeling that the experience he received in the program, both of an occupational and of a life skills nature, was invaluable.

CHAPTER 6

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

In this chapter, the purpose of the study is summarized; the salient points from the review of the literature are provided; and a review of the research methodology is given. The case study findings are summarized and presented. The current status of the Grand Rapids EBCE Program is discussed, and based on the study findings, recommendations for future programming are made. Other conclusions drawn from the study findings and their implications are discussed. Suggestions for future research are also made.

Purpose of the Study

This study sought to ascertain the effectiveness of a one-semester EBCE program for secondary students. Employer-instructors' perceptions of overall program value were also sought. Group statistical and ideographic methodologies were both employed to determine the actual and perceived growth in students' basic skills, life skills, and career development skills, and the effect of EBCE on that growth. Reading and arithmetic were the basic skills examined. The life skills examined included personal-social development,

creative development, critical thinking, functional citizenship, and survival skill competencies. Self and career knowledge, and its application to career decision making were included among the career development skills examined.

Review of the Literature

The review of the literature established a conceptual framework for career education. Characteristics common to many of the concepts included self understanding and assessment, and individual lifelong growth in several developmental phases as a part of the preparation for functioning as an adult in several life roles. Differences in the emphasis on work as one of the life roles, and on work preparation were noted among those concepts of career education cited. The need for some form of community involvement in the career development process and for an integrated educational approach including guidance, general education, and vocational education appeared consistently in the literature. The infusion approach to career education was discussed as a method of instructional delivery for many states and school districts.

Also in the review of the literature, a historical perspective on the development of the career education concept was presented. Similarities between the goals of career education and the goals of education nationwide were highlighted from the 1918 "Seven Cardinal Principles of Secondary Education" through the 1966 "Imperatives in Education".

Legislative efforts leading to the birth of career education were also presented from the Morrill Act of 1862 through the Vocational Education Act of 1963 and its amendments to the present day employment/training legislation.

EBCE, an experiential instructional model at the secondary school level, was described as an alternative career education delivery system. It was noted that four regional educational laboratories across the United States were funded by the National Institute of Education to develop programs that bridged the gap between the community and the school. The programs that resulted all provided a community experience component and personalized, student-centered learning experiences. The differences cited among the four sites included the instructional approach to basic skills, the provision for counseling, the physical location of the program, and the relationship with the local high school program.

NWREL/EBCE, the Grand Rapids EBCE parent project, was highlighted as a full-time, comprehensive, interdisciplinary program with about 50% of the learning taking place in the community and 50% in a learning center. The three curriculum areas: basic skills, life skills, and career development skills were explained, as were the learning strategies employed. The strategies included individually negotiated projects, career explorations, learning levels, personal journals, employer seminars, and survival skill competencies. Significant operational differences between the Grand Rapids

EBCE Program and the parent project were also discussed. Among those differences was the fact that the NWREL/EBCE Program was offered to 11th and 12th graders as a full-time educational alternative for a year or more, whereas the GR/EBCE Program was offered to 11th and 12th graders as a one-semester, three-hour per day educational alternative. As a result of the limited treatment time, the number of required activities in the GR/EBCE Program was proportionately reduced. Also highlighted was the fact that elective rather than required credits were earned through participation in the GR/EBCE project, unlike the NWREL/EBCE project. Another significant difference was in the provision for transportation. In the GR/EBCE project, transportation was the responsibility of the student; transportation in the NWREL/EBCE project was a program responsibility.

Research Methodology

Data gathering techniques consisted of paper and pencil tests, interviews, observations, questionnaires, and student record and product reviews. Students, parents, staff, and employer-instructors were all sources of data collection. Data gathered was cross-checked whenever possible to minimize error, lessen subjective interpretation, and to eliminate unwarranted conclusions. Findings from interviews, questionnaires, and tests were reported by related research question in Chapter 4. Student learning process data, obtained through observation, interview, and student record

and product reviews, was presented in Chapter 5 in the case studies of five student participants.

Summary of Research Findings

Basic Skills

Did the EBCE students demonstrate achievement in basic skills (reading and arithmetic) equal to or better than students in the regular high school program, as measured on the CTBS?

Comparison of CTBS pre to post test scores for both experimental and comparison groups revealed no significant difference between the groups in either reading or arithmetic achievement goals.

Career Development

Did the EBCE students demonstrate more growth than the comparison group in career development as measured by the CEST?

EBCE participants demonstrated more growth than the comparison group in career development at $\alpha = .0001$ as revealed by a pre to post test gain/loss score comparison between groups on the total CEST. Experimental group students also showed significantly greater growth, statistically, than was shown by the comparison group in the CEST subsections of decision making, career knowledge, education/work relationships, and understanding of work benefits.

Life Skills

Did the EBCE students demonstrate growth in life skills as perceived by students, staff, and parents?

The perception of the majority of EBCE students, staff, and parents interviewed and of those responding to the questionnaire/opinionnaire was that students demonstrated growth in life skills while participating in the EBCE Program. Students most frequently cited self-confidence in communications with adults and personal acceptance of responsibility for the effects of behavior on self and others as life skills in which student growth was most apparent. Other life skill areas in which student respondents indicated that growth was shown included maturity and adult survival skill competency.

EBCE staff noted the most student growth in the life skills of understanding others and self-confidence in interpersonal communications. Acceptance of responsibility for the effects of personal behavior/attitudes on self and others, and initiative were also identified by staff as areas of student growth.

Parents of EBCE students named increased frequency of self-confident communication with adults as the area in which student growth was most noticeable. Experience in working with adults was noted as the greatest program strength in the life skill area. Other personal-social development skills were also mentioned as areas in which growth was shown by EBCE students, although not as frequently as the aforementioned life skills.

Effects of EBCE Treatment

To what extent was EBCE student growth attributable to the EBCE Program as perceived by students, parents, staff, and employer-instructors?

The skill area in which EBCE was consistently rated most helpful (by all groups) was career development. Within that area, EBCE seemed the most helpful in developing the skill of matching self to career.

Perceptions of EBCE

What were the perceptions of employer-instructors regarding the program and students?

Most employer-instructors expressed general satisfaction with the program's operation and purpose. Positive reactions of fellow employees and many other side benefits from program participation were noted by most employer-instructors. The majority planned to continue participation the following year, and indicated that they would recommend participation to others. Participating students were rated as interested in both the program and the community site to which they were assigned. The greatest program strength cited was exposure to real life demands; a potential weakness was the inability of some students to handle the freedom outside the school walls.

Case Study Summaries

The EBCE Program capitalized on individual needs, interests, and abilities of students in both the classroom

and community setting. A comparison of the five case studies highlighted the individuality of the program participants and their experiences in EBCE. The flexibility in the design of EBCE allowed for differences in the rate of assignment completion among participants, as well as individual choice of topic and a variety of activity combinations.

Students worked at their own pace and used from one day to over a month to complete a given assignment. Time was wasted at the beginning of the year until students realized that they were solely responsible for their own learning; then they began to better manage their time. Four of the five case study students showed improvement in time management. Students chose project topics of interest to them individually. Among the five case study students there were no duplicate projects. Even considering the limited number of competencies available, the students varied widely in the competencies they chose. Besides the required competency on Budgeting Time and Money, the competencies on Future Educational Options and Housing seemed to hold the most interest for students. The explorations chosen by the students reflected the career interests of those who had made tentative career choices and the personal aptitudes, abilities, and interests of those who had not made tentative career choices. Of the sixteen explorations completed by the five students, only two took place at the same site. The number of completed explorations, projects, and competencies also varied among the students.

EBCE took the subject matter that students studied and added many new elements about people, jobs, self, and life in the community as an adult. EBCE students learned more about what they wanted to become and mastered some of the skills they needed to negotiate successfully in the adult world. EBCE taught the application of basic skills (reading, communication, and math), life skills (personal-social development, functional citizenship, critical thinking, creative development, science, and competencies), and career development within the world of work.

The case study students agreed that reading, math, and communication skills were reinforced by participation in EBCE. However, communication was the only one of the basic skills in which definite growth was noted by the students and their parents.

Among the life skills, student growth seemed the most apparent in the personal-social development area. The case study students consistently pointed out maturity, greater responsibility for task completion, increased self-confidence, and ease of communicating with adults as examples of demonstrated growth. Numerous competency certifications were also indicative of student growth in the life skills area. The competencies were believed to be one of the most useful activities in EBCE according to four of the five students studied. A few of the students mentioned growth in creative development and other life skill areas. However, growth in these areas was dependent upon

completion of related projects and the abbreviated treatment time did not allow for extensive project completion by all students. The project negotiation process was, however, felt to be one of the most useful learning strategies in EBCE.

In the career development area, four of the five case study students cited acquisition of occupational information, understanding of the benefits of work, the relationship of education to work, and the ability to match self to career as examples of student growth achieved. One case study student believed that she had only acquired occupational information. Her scores on the CEST, however, indicated that she had indeed improved in all areas of career development. She, in fact, scored above the average for the comparison group on the subsections of education/work relationships, sex discrimination issues, and job acquisition and retention.

By matching themselves to several careers, most students were able to eliminate specific jobs which they had previously considered as career options. Definite occupational commitments were not made, however, as a result of the elimination process during this one-semester experience. One student made a second tentative occupational choice, but reenrolled in EBCE for more exploration.

One student did not seem to benefit as much from participation in EBCE as the others. This limited benefit was due, in part, to a health problem that surfaced midway

through the semester, causing both physical and emotional difficulty. Inadequate transportation to community sites was also identified as a problem by this student and several others. This student was functioning well below her class average in basic skills and experienced initial adjustment problems. The independent study approach required of EBCE participants was new and uncomfortable for the student. By the third quarter of the semester, her task completion was at a minimum. The student did not satisfactorily complete program requirements and dropped out of school the following year. In spite of the student's apparent lack of success, she gave high ratings to the instructional strategies used in EBCE with the exception of the journal requirement and the overall program orientation.

Program Status and Recommendations for Future Programming

GR/EBCE was not offered as a curriculum option to students in the fall of the following year. Per pupil cost, personnel reassignment, low student enrollment, expiration of state funding support, and lack of transportation were all given as reasons for discontinuing the program. Support from central and building administration was not evident and neither the learning manager nor the community relations specialist were convinced that the first program year had made a significant difference in any of their students. In addition, the learning manager was somewhat uncomfortable outside of the traditional teacher/lecturer role and found

it difficult to wait for students to choose and to structure their own learning experience.

Since that time, both staff members have discussed the student progress made in the program with students who have returned to visit. Students and staff now realize that progress was made particularly in the career development and life skills areas and would like to see the project reinstituted.

If the project were to be reinstituted, the learning manager would not be available to teach EBCE. This would necessitate training of new staff.

Based on the community support and student progress highlighted in this study, the EBCE program should be reinstituted. However, several alterations would be recommended.

As indicated in the study, public transportation to each community site was not available and few students were able to provide their own transportation. Transportation should, therefore, be provided by the project as needed.

Students should be allowed to reenroll for at least two semesters to allow for completion of a greater percentage of the competencies from the parent project and to increase the opportunity for career exploration. Much of the initial semester was spent on understanding and adjusting to the learning process and accounted for a great deal of the life skill growth noted. A second semester would capitalize on that growth and provide more indepth career development experiences. The extended time would also allow for the

completion of additional projects and a greater emphasis on basic skill development.

The findings of this study, particularly community support evidenced by it, should be used to rekindle building level and central administration support for the project. Methods of cutting per pupil cost, such as increasing the class enrollment and using trained volunteers to reduce the costs of certified personnel, should be investigated. Staff training should be provided to a cadre of individuals using state professional development funds earmarked for Career Education Inservice. This method of training would provide a ready reserve of staff in the event of another staff reassignment. Student enrollment should be actively pursued well in advance of the program starting date. Use of a slide/tape of program activities and/or previous EBCE participants should be made to accurately inform prospective students of program expectations. Approval for use of school assigned vehicles should be confirmed prior to program resumption.

Other Conclusions and Implications

Although it was impossible to draw a definite cause and effect relationship between student growth in life skills, basic skills, and career development and participation in the one-semester, three-period per day EBCE program, the study findings supported the value of this reduced treatment approach. Data collected from students, parents, staff, and

employer-instructors substantiated the value of this approach to the participants' growth in each area.

The fact that there was no significant difference between experimental and comparison groups in either reading or arithmetic achievement gains suggested that the concern regarding skill maintenance in reading and mathematics when reinforcment activities were substituted for a traditional instructional format was unfounded. It was also concluded that this instructional approach, though reduced in treatment time from the parent model, reinforced the basic skills.

The growth in career development demonstrated by EBCE participants which exceeded that of their counterparts in the regular high school program, supported the premise that a one-semester, three-period per day EBCE program effectively promoted student acquisition of self and career knowledge. It also seemed apparent that this skill, essential for each student's identification and selection of the most advantageous career, was not developed within the present regular high school curriculum.

Student growth demonstrated in the life skills was apparent to all groups. It was concluded that the reduced treatment time of this EBCE program did not substantially inhibit growth in the personal-social life skill area. However, there was not sufficient time under this plan for students to complete all of the recommended survival skill competencies or to complete projects in each of the remaining life skill areas. It was, therefore, assumed that

increased time would result in increased skill growth in the life skill area.

EBCE was determined to be effective in expediting the natural maturation process, particularly in life and career development skills. However, there was less agreement on the effectiveness of EBCE in basic skill improvement. Increased treatment time would allow for the addition of projects designed to improve this skill area.

The majority of employer-instructors recognized the benefits of the EBCE program, however, several indicated a desire for increased time with the students. Others noted an inability of some students to handle the freedom inherent in the program as a potential program weakness. There was also some indication that increased communication with the EBCE staff would have increased the effectiveness of the employer-instructor. Perceptions of student benefit from EBCE included high student interest in site placement and in the total program. It was concluded that while the benefits to students and employers were great, certain deficiencies emerged which emphasized the need for on-going communication between school and community volunteers, increased care in preplanning and orientation of employers and students, and adherence to the student accountability model for continued program success.

Two additional observations were made beyond the purview of the research questions that merit attention. Due to insufficient preparation time before program initiation,

several instructional products were not available when needed. Careful consideration should be given to advance planning time in future implementation efforts in order to alleviate this problem. Due to insufficient orientation of competency certifiers, some were unsure of their role and function in relationship with students and tended to be too lenient. Emphasis in future orientations should be placed on the importance of strict adherence to the competency standards while certifying students.

Suggestions for Future Research

This study was essentially an effort to determine the effectiveness of a one-semester, three-period per day EBCE program for secondary students. It also sought the employer-instructors' perceptions of the overall program value. As such, emphasis was limited to five specific research questions. However, as a case study it also provided an intensive analysis of several individuals and stressed developmental factors in relation to environmental treatment. It appeared to be useful in determining other significant educational outcomes not revealed in the statistical data.

As a result of this investigation, a number of additional research questions surfaced.

1. Do EBCE participants make more advantageous career selections than those who have not participated?

2. Did the value of the EBCE experience increase in

the opinion of the program participants after leaving high school?

3. How does the achievement of the life skills by regular high school students compare with EBCE participants?

4. There was limited data in this study on minority participation in the program. Further research on the success of minority participants in a reduced treatment EBCE program would be useful toward the substantiation of the findings of this study.

5. Grand Rapids School District students are now required to take a one-semester career development course in the high school. Further research should consider this additional career education exposure. Does a one-semester course in career development prior to EBCE exposure significantly reduce the difference in life skill and career development skill growth between EBCE participants and that of regular high school students?

6. This study was completed during the first semester of EBCE operation in Grand Rapids. To substantiate the findings of this study, further research after several program years of operation should be undertaken.

7. Other individuals who affect program operation or are effected by it but were not included in the data collection of this study should be considered if future studies are undertaken. The purpose of the described research would be to determine the extent to which the competency certifier, the building and central administrators, and non-EBCE

building staff affect program operation or are affected by it.

Reflections

Looking back over the experiences throughout the development and implementation of the GR/EBCE Program and its ill-fated expiration, it became evident that program existence was dependent on critical factors unrelated to the intrinsic program value realized through subsequent research and follow-up. A domino effect resulted from an initial delay in funding confirmation. This delay forced postponement of student recruitment beyond the regular student course selection process date. The postponement resulted in a low student enrollment. The low enrollment caused the staff to feel undue pressure to succeed with each program participant, and thereby, exaggerated an already erroneous perception of the staff's own lack of success. This perception was accentuated by a lack of hard data regarding student achievement and a lack of positive reinforcement from the administration which reduced staff commitment to program continuation. When program cuts were needed to maintain a balanced district budget, the staff offered no resistance to cutting the program, in spite of the long hours and hard work that they had put into building it.

The actors involved in the decision-making process constituted another critical factor inherent in the decision to terminate this instructional innovation. Between the time

of the initiation of the project and its discontinuance, there was a change in district administration. Concentration of the new administration was focused on learning the new job responsibilities and establishing administrative control and loyalty. Immediate actions did not reflect commitment to EBCE. Furthermore, the personalities of the program operators and the new administration seemed to be incompatible, and EBCE became a pawn in the process of establishing administrative control. Lack of even intermittent positive reinforcement to building administration and program operators, an essential for the maintenance of any innovation, diminished staff commitment to the project.

The process of decision making also appeared to be a critical factor. The decision to cut the program was made without due process. Data regarding student growth attributable to program participation were not considered in the decision. This situation was due, in part, to the untimely completion of program evaluation and the reliance on erroneous perceptions regarding program value by staff and students. The delay experienced in the realization of the program's value may be inherent in this instructional approach when student learning fits so smoothly into the natural maturation process.

Furthermore, no consideration was given to the fact that the cost of operation would diminish naturally over time after the initial high investment in start-up costs and could be enhanced through processes such as differentiated

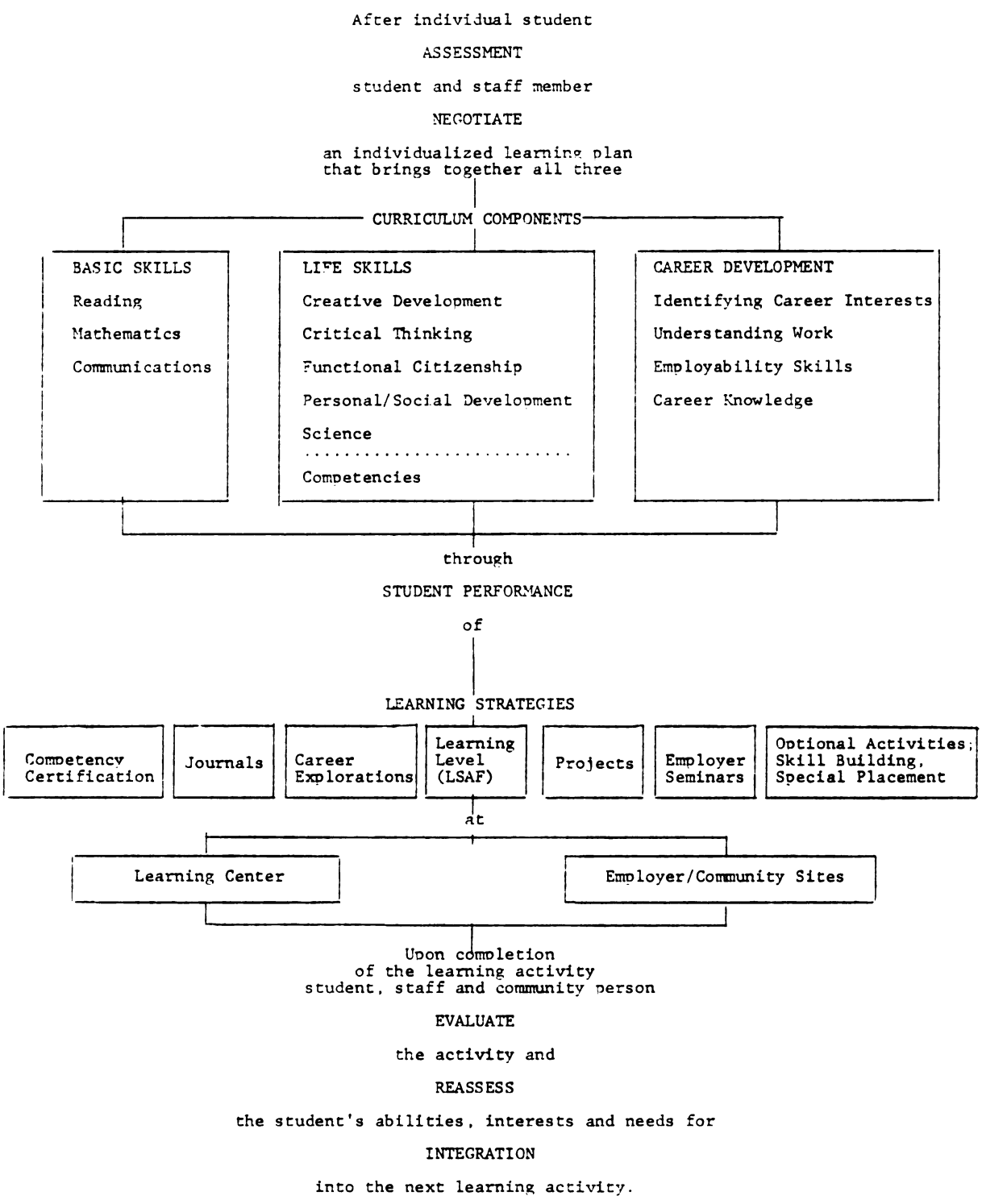
staffing and the staggering of student/staff contact hours. The latter could be instituted with increased staff experience in operating the project and would allow increased student enrollment, thus reducing per pupil costs.

The effects of maintenance considerations including adequate inservice for competency certifiers, transportation arrangements for participants, and timely development of recruitment materials were relatively minor in and of themselves. However, the effect intensified when put in juxtaposition with the other interconnecting circumstances.

Finally, perception of program success seemed to be reflective of the personality of the individual staff person. The EBCE instructional approach required far more than just good conscientious teachers. It was necessary for the staff to enjoy providing assistance to students in achieving their own independence and was very unlike the need in a regular classroom situation for the dependence of the students on the teacher. People who are successful in the regular classroom situation, may not perceive that they are successful in a situation in which this need is not only absent, but also definitely discouraged. In fact, the perpetuation of the dependence of students on the teacher is an indication of lack of program success. Factors such as the ones described herein should be given careful consideration in future EBCE implementation and evaluation efforts. Program success may well depend on such action.

APPENDIX A

GR/EBCE CURRICULUM PATH



APPENDIX B

Career Education Skills Test

Directions For Marking Your Answers

GENERAL DIRECTIONS

* Use a pencil to mark your answer sheet. DO NOT use a ballpoint pen.
* If you change your answer, ERASE your first answer completely.
* Each of your marks on your answer sheet should be DARK and should COMPLETELY fill the space for marking.

KINDS OF QUESTIONS

I. The questions in this booklet are followed by a set of answers from which you should choose only ONE answer. Read each of these questions carefully and choose the answer you think is MOST correct. ON YOUR ANSWER SHEET darken the letter that matches the answer you choose.

Read the sample questions below.

SAMPLE A: In your Test Booklet one item would look like this.

1. Which city is the capital of the United States?

   (A) New York City
   (B) Philadelphia
   (C) Washington, D.C.
   (D) Arlington

(C) is the correct answer.

SAMPLE B:

2. Which of the following is the BEST reason for obeying traffic rules?

   (A) You are told you must.
   (B) Your friends obey the rules.
   (C) You will be called a good citizen.
   (D) Your own safety is important.

(D) is the correct answer.

SAMPLE C:

3. Susan wanted to be dressed just right for an important date. Of the following persons, who would be the LEAST likely to help Susan pick the right thing to wear?

(A) A friend.
(B) A stranger.
(C) Her father.
(D) Her boyfriend.

(B) is the correct answer.

1. Which ONE of the following is the BEST reason why people need to be satisfied with their jobs?

   (A) They get along with other people on a job.
   (B) They are happier.
   (C) They must try hard to better themselves.
   (D) They earn more money.

2. Grace wants a job where she DOES NOT have to deal with many strangers. Which career do you feel would BEST match Grace's goal?

   (A) Nurse.
   (B) Bookkeeper.
   (C) Public librarian.
   (D) Salesperson.

3. As a result of Grace's matching her personal goal to her career choice, she will probably

   (A) be happier in her job.
   (B) have more free time.
   (C) make more new friends.
   (D) work for a large company.

4. Which ONE of the following is the MOST important factor in making a job personally satisfying for most people?

   (A) Having a clean, well-lighted room in which to work.
   (B) Having a long lunch break.
   (C) Having a chance to work at a job one likes.
   (D) Having a lot of work to do all the time.

5. Joe wants to be his own boss and run his own business. Which of the following careers BEST matches his personal goals?

   (A) Military service.
   (B) Agriculture.
   (C) Public school teaching
   (D) Government service

6. As a result of matching his personal goals and his career choice, Joe is MOST likely to

   (A) make more money.
   (B) obtain more education.
   (C) have greater job satisfaction.
   (D) explore new career directions.

7. Jessica Alden buys her clothes in Paris. She vacations on the Riviera and in Acapulco. She uses her private plane to visit her friends all around the world.

   While ONE of the factors below MOST influences Jessica's lifestyle?

   (A) Income.
   (B) Culture.
   (C) Education.
   (D) Career.

8. Paul Robinson and his family live on their farm. Like other families in their community, religion is very important to their lives. Women do not wear make-up; no one in the community smokes. Families in the community are very close and help each other.

   Which ONE of the factors below MOST influences Paul's lifestyle or way of life?

   (A) Income.
   (B) Culture.
   (C) Formal education.
   (D) Career.

9. So he could enjoy the beauties of nature, Ray Vargas gave up his successful advertising business to move to the country. He now has the time he desires for his hobbies of wood carving and painting.

   Which ONE of the factors below MOST influences Ray's lifestyle?

   (A) Education.
   (B) Income.
   (C) Personal value system.
   (D) Career.

10. Andrew Haynes works day and night in his laboratory. He forgets appointments and lets bills and letters stack up unopened.

    Which ONE of the factors below MOST influences Andrew's lifestyle?

    (A) Income.
    (B) Culture.
    (C) Personel value system.
    (D) Age.

11. David Perez and Jess Robinson are both applying for a job in the accounting department at a large plant. They seem to be equally smart and have had the same amount of training. David's goal in life is to do accounting work,

11. but Jess would have preferred a job in sports if any had been open. It would be more of an advantage to the plan to hire David instead of Jess.

What is the BEST reason for hiring David instead of Jess?

(A) David would probably be a better employee because he is more interested in his work.
(B) David should be better prepared for the job.
(C) Jess might not be satisfied with the amount of money he would make and would quit after a short while.

12. Joe Gonzalez wants a job at the Alice Printing Company. Here are some facts about Joe. His middle name is Antonio. His address is 444 Josephine Street. His telephone number if 664-2345. His emergency telephone number is 664-4004. His social security number is 465-39-5105.

Below are three application forms which he might have completed. Only ONE has been completed correctly. Darken the letter that indicates which form has been filled in correctly.

(A) Print Your Name Joe (First) Antonio (Middle) Gonzalez (Last)
Street Address 444 Josephine Street
Telephone Number 2345 Emergency Tel. No. 664-4004
Social Security Number 465-39-5105

(B) Print Your Name Gonzalez (First) Joe (Middle) Antonio (Last)
Street Address 444 Josephine Street, Alice, Texas 78332
Telephone Number 664-2345 Emergency Tel. No. 664-4004
Social Security Number 465-39-5105

(C) Print Your Name Joe (First) Antonio (Middle) Gonzalez (Last)
Street Address 444 Josephine Street
Telephone Number 664-2345 Emergency Tel. No. 664-4004
Social Security Number 465-39-5105

13. When you are filling out a job application blank, you should write "n/a"

(A) in blanks for questions to which you do not know the answer.
(B) in blanks for questions which do not apply to you.
(C) in none of the blanks on the form.
(D) in any blanks marked "Do not write in this space".

14. Leo was applying for a writing job with LMA Chemical Company. He arrived early wearing a suit and filled out the application. During the interview Leo asked various questions about the job. In response to one of his questions, he was told that his main task, writing ads for new products, would be done during regular office hours. Leo asked how much secretarial help he would have. He was assured that he would have plenty. Leo eagerly presented some examples of his earlier work. The examples were neatly displayed and very creative. The personnel manager praised his work and was impressed with his enthusiasm. They agreed on a salary and Leo was hired for the job.

Select the ONE skill that Leo displayed which was probably the MOST important in getting the job.

(A) Arriving on time.
(B) Asking good questions.
(C) Presenting examples of his work.
(D) Dressing in a suit.

15. Which situation of the three described below is the POOREST example of interview behavior? Choose only one.

(A) Barb arrives for her interview. The personnel man begins by explaining the job requirements. Barb suddenly realizes that she is not well enough trained for the job and tells the interviewer this.
(B) As Jack sits talking with Mr. Smith, he rests his muddy shoes against the side of Mr. Smith's desk. When Jack leaves, Mr. Smith has to clean up around the area where Jack was sitting.
(C) After being interviewed briefly, Chad tells the office manager that he can not work for the salary that the company is willing to pay.

16. Which ONE of the following situations indicates personal job success?

(A) You work for a company that has signed a new labor contract and has given all employees an eight percent raise.

(B) You are asked to work overtime on Friday afternoons for the next two months.
(C) You are asked for your advice on changing employee work routines.
(D) You are asked to proofread your letters before they are mailed out.

17. Helen Marcus works on the assembly line in a radio factory. She has been late for work at least twice a week since she started work. This causes everyone else to have to wait until she arrives in order to begin work. She often makes careless mistakes. The area forman has told Helen that she needs to improve her behavior on the job or run the risk of being fired.

Helen needs to try to become more

(A) tactful and confident.
(B) neat and friendly.
(C) loyal and creative.
(D) punctual and accurate.

18. Phil Rose, a traveling salesman, had just lost another sale. Phil told the customer he would be in town on April 28th, but he did not show up until April 30th. When he finally arrived, he expected the customer to see him right away, but was told that he would have to make an appointment. At that point, Phil complained that he could not wait because he was already late. The customer then told Phil to forget the order and leave.

How should Phil change in order to increase his success on the job?

(A) Become more dependable.
(B) Become more loyal to the company.
(C) Become more accurate with numbers.
(D) Become more confident in his abilities.

19. Choose the BEST meaning for the work "technology".

(A) Substitutes mechanical labor for all human labor.
(B) New knowledge and/or applied scientific knowledge.
(C) Always uses a lot of machinery.

20. Which ONE of the following would be an example of new technology?

(A) The discovery of more oil.
(B) The building of new cars.
(C) The production of cars which do not use gasoline for fuel.

21. Three of the statements below describe how technology has changed our lifestyles since 1900. Select the statement which DOES NOT represent such a change.

(A) People are now able to learn news of the world more quickly.
(B) The number of recreational products has decreased significantly.
(C) People move and change their jobs more often.
(D) People have more time for pleasure and learning.

22. Lynn Rickert works in the patching department of the Classic Carpet Company. Lynn has often worked as many as forty-eight hours per week and has had very little time to spend with friends. Recently the company's new equipment reduced job time. Now Lynn works only thirty-two hours per week.

How will Lynn's lifestyle probably be affected by this use of technological improvement?

(A) Lynn will have more fringe benefits.
(B) Lynn will have a longer paid vacation.
(C) Lynn will feel her job is more important.
(D) Lynn will have more leisure time.

23. Which ONE of the following statements describes a situation where a job was discontinued due to improved technology and caused workers to need retraining?

(A) Workers were laid off when sales dropped.
(B) Sandy Clark left her summer job in the Clark Dairy to return to college.
(C) The nurses received the new equipment they had ordered.
(D) Buddy Hays went to night school after losing his job as a seam stitcher when the last company making shoes by hand changed to machine stitching.

24. With new machines and computers changing routine jobs, some assembly line and office workers may be fearful of

(A) overproduction of goods.
(B) losing their jobs.
(C) an increase in the cost of goods.
(D) longer working hours.

25. The Reserve Chemical Company recently added a computer to its bookkeeping department in order to summarize sales and trends very rapidly.

Which ONE of the following statements BEST describes how this change would likely affect employees of Reserve Chemical?

(A) Extra bookkeepers would be hired.
(B) Some employees in the department would be retrained and some replaced by people with computer training.
(C) There would be more bookkeeping done by hand.
(D) Personnel in other departments would not be affected by the change in the bookkeeping department.

26. In the past, in order to have many copies of the same report, each original had to be typed separately. Later, copying machines were invented. After learning how to operate the new machines, secretaries could make as many copies as needed. Now a secretary can type one copy, set a machine, and the machine types as many originals as needed.

Which ONE of the following BEST describes the example given above?

(A) Secretaries are retraining to learn how to operate new machines.
(B) Secretaries are adapting to unfavorable conditions.
(C) Secretaries are being promoted to office managers.
(D) Secretaries are developing the physical ability to type faster.

27. In former times, individuals and families were able to provide for a large part of their needs by the work of their own hands. Today, people must depend on others to supply their needs, such as food, clothing, shelter, and medicine.

Three of the following statements describe conditions resulting from dependence on others. Select ONE statement that DOES NOT.

(A) A person does not need to have as many different skills as before in order to live.
(B) Cooperation among people is more necessary than ever before.
(C) More people than ever before are completely independent.
(D) People have more opportunity than ever before to become very good at one skill.

28. In our society today, many products are the results of work of many people, each individual doing only a small part of the work. This division of labor results in

(A) workers having to work longer hours.
(B) fewer but better made products.
(C) workers having to depend more on each other.
(D) each worker having to do many different jobs.

29. Specialization and division of labor result in

(A) more interdependence among people.
(B) less interdependence among people.
(C) the same amount of interdependence among people.
(D) no interdependence among people.

30. Division of labor in making shoes today means that several individuals divide the necessary tasks in order to manufacture shoes.

Which ONE of these statements shows a RESULT OF this division of labor?

(A) The individuals doing separate tasks will not get along.
(B) The shoes can be sold at lower prices than if one person did all the tasks involved in making a shoe.
(C) No one individual can be blamed if the shoe falls apart.
(D) The shoes are likely to cost more because so many individuals are involved in the work.

31. In which of the following situations is the GREATEST amount of interdependence necessary for survival?

(A) Modern cities.
(B) Modern farms.
(C) Colonial farms.
(D) Colonial towns.

32. One result of the trend toward a highly specialized labor force is that

(A) factory workers have no pride in their work.
(B) factory workers seldom work on more than a small part of the product.
(C) more workers are needed to produce fewer goods.
(D) factory workers are less dependent on each other.

33. A group of similar courses is sometimes called a program of study. Which ONE of the following programs would probably be MOST helpful if you wanted a career in construction?

(A) General science.
(B) Vocational office education.
(C) Industrial arts.
(D) Physical education.

34. Which ONE of the following courses would probably be MOST helpful to you if you wished to go into secretarial work after graduating from high school?

(A) Computer programming.
(B) American literature.
(C) Typing.
(D) Accounting.

35. Select the program which would be the MOST helpful in assisting someone to get a job immediately after high school graduation.

(A) Advanced science.
(B) Advanced art.
(C) Business education.
(D) Physical education.

36. Which ONE of the following courses would probably be MOST helpful to you if you wished to be a bank clerk after graduating from high school?

(A) Chemistry.
(B) Bookkeeping.
(C) Home economics.
(D) American literature.

37. Which ONE of the following courses would probably be MOST helpful to you if you wished to go into farming after graduating from high school?

(A) General science.
(B) Industrial arts.
(C) Vocational agriculture.
(D) Geography.

38. If your career goal is to become a builder and developer of homes, which of the following IS NOT a reason why you need geometry?

(A) To determine the square footage of the homes.
(B) To calculate the pitch of the roof.
(C) To draw or read the blue prints of the homes.
(D) To figure the payroll of your employees.

39. To be a legal secretary, one need NOT be able to

(A) answer the phone courteously.
(B) understand some legal terms.
(C) recognize the usage of good English grammar.
(D) defend sections of a legal statement.

40. Which ONE of the following school learning experiences would MOST improve an individual's ability to pursue a career in advertising?

(A) Creative writing.
(B) General math.
(C) Typing.
(D) History.

41. Jayne would like to become a professional actress. Which of the learning experiences below will require Jayne to make changes in her behavior in order to become a successful actress?

(A) She forgot her lines in a school play frequently.
(B) She was never late for rehearsals.
(C) She enjoyed helping the other actors with their make-up.
(D) She met the foreign language requirements.

42. Matt has always looked forward to becoming a professional baseball player. Which of the statements below describes a school experience that would be the LEAST likely to affect Matt's career decision?

(A) He played thirteen of the fifteen games this season.
(B) He wrote a research paper on the history of baseball.
(C) He placed in three out of four golf tournaments.
(D) He participated on the prom decoration committee.

43. John assisted the physics teacher in the school's electronics laboratory for two years during high school. John has obtained a degree in electrical engineering and now operates an experimental laboratory for a research company. Which statement BEST describes John's high school experiences?

(A) Had no effect on his career choice.
(B) Gave him the opportunity to explore his interests in electronics.
(C) Encouraged him to change his career in the field of physics.

44. Janice Lane received a grant to work in a medical laboratory the summer after she got out of high school.

In addition to a scholarship, she received an expense-paid trip to Dallas to attend a meeting of the American Cancer Society, where outstanding scientists reported on their recent work. Which ONE is the MOST LIKELY reason that Janice was sent to the meeting?

(A) To stimulate her interest in cancer research.
(B) So she would know who in Texas was working on cancer research.
(C) To show her that her ideas are just as good as anyone elses.

45. Reading the editorial sections of newspaper will give you

(A) the individuals' views on various issues.
(B) factual information only.
(C) the best information available on various issues.

46. Charles Morgan is a student teacher. Every day after his classes he and the teacher discuss his performance. Which of the following is the BEST reason for him to listen to the teacher's comments concerning his work?

(A) He could learn better ways of getting certain points across to the students.
(B) He needs to learn the students' names.
(C) The teacher will always want to point out his errors.
(D) The teacher doesn't have time to talk to him during the day.

47. Gary has just started to work as a mechanic in a motorcycle repair shop. Which statement IS NOT a good reason for Gary to ask questions on his new job?

(A) If Gary asks questions, he will learn more about motorcycles.
(B) Asking questions may keep Gary from making mistakes.
(C) If Gary asks questions, his boss will think that he does not know enough about his job.
(D) Gary will be able to do his work better if he asks for advice when he has a problem that he can not solve.

48. Which is the BEST reason for students to ask questions in class?

(A) To show teachers that they are paying attention.
(B) To gain information that they feel they need.
(C) To make them appear smarter than the other students.
(D) To keep the teacher from moving on to a topic in which the class is not interested.

49. Larry Farrell has a part-time job mixing chemicals in a photography laboratory. He is getting ready to mix a new film developer, but he thinks that there is a mistake in the directions on the package.

Which statement below is the BEST reason Larry should ask questions?

(A) Larry will get a reward from the chemical company.
(B) Larry will be able to speed up the development process.
(C) If the developer is mixed incorrectly, Larry may ruin the film that he is supposed to develop.
(D) Larry will get an extra break from his work, while his boss checks the directions.

50. Graduation is coming. You have no idea of what you want to do when you leave school. Which of the actions listed below would be the LEAST helpful thing for you to do?

(A) Talk with the school counselor.
(B) Write to universities, community colleges, and trade schools to learn about opportunities.
(C) Find out what your best friend is going to do.
(D) Get information and advice from the local employment service.

51. You want to be an auto mechanic, but you lack the training. Which of the actions listed below would be the LEAST helpful thing for you to do?

(A) Go to vocational school in an auto repair program.
(B) Go to work in an auto parts store.
(C) Become an apprentice in a garage which repairs cars.
(D) Enlist in the armed forces in a vehicle mechanics program.

52. Elaine is interested in becoming a legal secretary. She has read about this career and has seen legal secretaries on TV shows. This seems to her to be a job she would enjoy. However, Elaine feel that this career requires someone who can meet people easily and who can speak well in conversations with important people. Her problem is that she is shy. Which of the actions listed below would be the BEST thing for her to do?

(A) Participate in clubs or other groups to develop skills of meeting and speaking to people.
(B) Work in a small office that doesn't have many clients.
(C) Become more skilled in her typing and learn more about law.
(D) Give up the idea of becoming a legal secretary.

53. Which statement is true about deciding on a career?

(A) A person who does well is school should only consider careers that require a college education.
(B) A person should decide alone what career to choose, and not seek advice from other people.
(C) A person should examine his/her abilities before deciding on a career.
(D) The money that can be earned in a career is the most important factor to consider.

54. Ann is taking night courses to become a registered nurse. Until she passes the license exam, she will continue to work as a nurse's aide. Which of the factors listed is PRESENTLY having the greatest influence on Ann's career choice?

(A) Sex discrimination.
(B) Lack of confidence.
(C) Her parents' attitude.
(D) Training requirements.

55. Sally wants to be a forest ranger, but she has been told that there are very few openings in that particular career. Which of the actions listed below would be the BEST thing for her to do?

(A) Do not consider how many openings there are if she has already made up her mind.
(B) Switch to a different career area that is less interesting to her but has more job opportunities.
(C) Postpone making a career choice until after she finishes training.
(D) Seek a career which is related to her choosen goal but in which there are more job opportunities.

56. Pierre is rather shy and stays mostly by himself rather than talking with others or entering into games and sports on the playground. He goes home right after school and either reads science fiction or builds model airplanes. In class, he almost never raises his hand to answer questions, but he is one of the best students in math and physics. Which one of the following occupations would be the BEST for him?

(A) Engineer.
(B) Librarian.
(C) Machinist.
(D) Insurance agent.

57. Jan has an interest in the personal needs and problems of other people and wants to assist them to solve those problems. Which one of the following occupations would be the best?

(A) Telephone operator.
(B) Dentist.
(C) Social worker.
(D) Waitress.

58. Women make up ____ of the nation's paid workforce.

(A) 26%
(B) 41%
(C) 54%
(D) 76%

59. Out of every ten young women in high school today, ____ will work for pay outside their homes at some point in their lives.

(A) 9
(B) 7
(C) 5
(D) 3

60. About ____ out of ten adult women are either single, widowed, divorced, or separated from their husbands and are therefore responsible for their own financial support.

(A) 2
(B) 4
(C) 6
(D) 8

61. Wanted: Administrator, must have Masters Degree or equivalent; business experience desirable, but not necessary; must be able to relate to students.

Is the above job description sex stereotyped?

(A) Yes, a female stereotype.
(B) Yes, a male stereotype.
(C) No, there is no stereotype.

62. At the Barton Steel Mill, the male typists are paid $4.00 per hour and the female typists are paid $3.85 per hour.

What, if anything, in the above situation is illegal according to current sex discrimination laws like Title VII of the Civil Rights Act?

(A) Men and women do not receive equal pay for the same work.
(B) The steel mill underpays its typists.
(C) The steel mill should not have both males and females as typists.
(D) There is no illegal sex discrimination.

63. Alice and Steve both have college degrees in computer programming and have worked for the same company. When they got married Alice quit her job, but often helped Steve with his work. After ten years, Alice and Steve are getting a divorce. Will Alice be able to get a job that pays the same amount of money as Steve's?

(A) Probably yes, because it is hard to find female programmers.
(B) Probably not, because Steve has received salary increases since Alice quit.
(C) Probably yes, because Alice has continued to work with Steve from time to time.
(D) Probably not, because most companies do not approve of divorced women.

64. An employer IS NOT allowed to select an applicant for a job on the basis of which ONE of the following?

(A) Whether the applicant has a certain amount of education.
(B) Whether the a-plicant has had related job experience.
(C) Whether the applicant is neat and courteous.
(D) Whether the applicant is male or female.

65. The government has passed laws which provide for protection against job discrimination. Which of the following groups WOULD benefit most from such protection?

(A) People with poor skills who need a job.
(B) Women whose wages are less than men in the same job.
(C) Employers who want to hire their relatives.
(D) Labor unions who want higher wages for their workers.

APPENDIX C

Employer Opinion Survey

Purpose

Since participating employers are an essential aspect of EBCE, their perceptions about the program and students is very important. This questionnaire is designed to determine how employers become involved with EBCE, how they judge the progress of students with whom they have worked, the impact of EBCE on them and their organization, and their perceptions of program overall effectiveness.

Directions for Data Collection

The Employer Opinion Survey instrument should be mailed out or delivered by an EBCE staff person to each employer/instructor who has worked with one or more students during the year on an exploration, learning level and/or skill-building level, or as a competency certifier approximately one month prior to the program end. By this time, the employer/instructor has been able to form an opinion about the EBCE Program. About two weeks after delivering the surveys, a follow-up call or delivery of a second copy of the survey should be made to employer/instructors who have not yet returned the survey. At program end, the complete set should be given to the evaluator for analysis.

EBCE Program

Employer Opinion Survey

1. How did you become involved with the program? Check appropriate response(s).

   _____ 1. Program personnel contacted me about the program.

   _____ 2. A student talked to me about the program.

   _____ 3. Another employer talked to me about the program.

   _____ 4. Company personnel talked to me about the program.

   _____ 5. Other (please write in) _____

2. Did the program staff provide you with enough information to help you direct student activities at your site?

   _____ 1. Yes COMMENTS: _____

   _____ 2. No COMMENTS: _____

3. Would you recommend to a potential employer or resource person that h/she also become involved with the program?

   _____ 1. Yes COMMENTS: _____

   _____ 2. No COMMENTS: _____

4. In general, do you think the EBCE students you have worked with are really interested in your site? Circle the appropriate number from 1 (definitely no) to 5 (definitely yes).

   Definitely No Definitely Yes

   1 2 3 4 5

5. In general, do you think the students you have worked with are really interested in the program?

   Definitely No Definitely Yes

   1 2 3 4 5

6. How have employees at your site reacted to participation with the program? Check one.

_____ 1. Positive reaction

_____ 2. Negative reaction

_____ 3. Mixed reaction

_____ 4. No reaction

_____ 5. Not applicable

_____ 6. Don't know

7. In what ways (if any) have the employees at your site benefited? Check one or more appropriate responses.

_____ 1. They haven't benefited

_____ 2. Increased their awareness of youth

_____ 3. Motivated the regular employees to further training

_____ 4. Reduced their workload

_____ 5. Increased interest in their own work

_____ 6. I don't know

_____ 7. Other (please write in) _____

8. Do you plan to continue participating with the program next year?

_____ 1. Yes COMMENTS: _____

_____ 2. No COMMENTS: _____

Why? (Check one or more reasons below.)

_____ 1. Program is worthwhile

_____ 2. I like the people involved

_____ 3. My participation is a community service

_____ 4. It is challenging to me

_____ 5. I have had problems with the staff

_____ 6. I have had problems with the students

_____ 7. The program is not effective

_____ 8. I don't have time.

_____ 9. Other (please write in) _____

_____

9. What do you think are the greatest strengths of the program? (Check one or more.)

_____ 1. Good alternative to the regular high school program

_____ 2. Quality of the staff

_____ 3. Students learn about a variety of careers

_____ 4. Students learn about real life situations

_____ 5. Good way of getting students to learn

_____ 6. Experience in working with adults

_____ 7. Other (please write in) _____

_____

10. What do you think are the greatest <u>weaknesses</u> of the program? (Check one or more.)

_____ 1. Some students can't handle the freedom

_____ 2. Problems in the organization of the program

_____ 3. Students not receiving sufficient training

_____ 4. Inadequate supervision of students on job sites

_____ 5. Too much paperwork

_____ 6. Other (please write in) _____

_____

Additional Comments: _____

_____

_____

_____

_____

APPENDIX D

Parent Opinion Survey

Purpose

The Parent Opinion Survey is designed to ascertain parents' perceptions of program benefits to their son or daughter participating in the EBCE Program, as well as, program strengths and weaknesses. Because student growth in EBCE goal areas should effect student behavior off site as well as in program activity, parental perceptions are important to assess.

Directions for Data Collection

Parent surveys should be mailed to parents approximately one month prior to program end. Mailing is preferred to relying upon students to take them home. An appropriate cover letter stating the purpose of the survey and insuring confidentiality is recommended. Enclosing a stamped, pre-addressed envelope with the survey helps insure a higher return rate. Follow-up mailing to parents who have not returned the survey after 3 weeks have elapsed is suggested.

EBCE Program

Parent Opinion Survey

Parent's Name_____ Date_____

Directions:

Most of the questions are to be answered on a scale of numbers from 1 to 5. Read the phrase above the numbers so you know what the scale means, then read each question and circle the number which is closest to your opinion. There are no right or wrong answers; your thoughts and feelings are the important things in this survey. The answers parents give will help determine how well the program is doing now and improve it in the future. Remember to circle a number for each item.

1. How well do you feel the EBCE Program compares overall with the past school experiences of your daughter or son?

Much Worse				Much Better
1	2	3	4	5

2. If you had it to do over again, would you want your son or daughter to participate in the EBCE Program?

Definitely No				Definitely Yes
1	2	3	4	5

3. How well do you think your son or daughter likes the EBCE Program compared with past school experiences?

Much Worse				Much Better
1	2	3	4	5

4. Have you received enough information about your son or daughter's progress in the EBCE Program either by phone, in person or by mail?

Definitely No				Definitely Yes
1	2	3	4	5

5. In comparison with regular classes, how much opportunity did the program provide your daughter or son for learning about occupations?

Much Less		About Same		Much More
1	2	3	4	5

6. In comparison with regular classes, how much opportun0 ity did the program provide your daughter or son for general learning (i.e. basic skills and life skills)?

Much Less		About Same		Much More
1	2	3	4	5

7. In comparison with past experiences in regular classes, how motivated is your daughter or son to learn in the EBCE Program?

Much Less		About Same		Much More
1	2	3	4	5

8. Before entering the program, how often did your son or daughter talk to you about what was going on in regular classes?

Almost Never				Almost Daily
1	2	3	4	5

9. How often does your son or daughter talk to you about what's going on in the EBCE Program?

Almost Never				Almost Daily
1	2	3	4	5

10. What do you think are the greatest weaknesses of the EBCE Program? (Check any of the following which are applicable.)

____ 1. Some students can't handle the freedom

____ 2. Problems in the organization of the program

____ 3. Students not receiving sufficient training

____ 4. Inadequate supervision of students on job sites

____ 5. Other (please write in)_____

11. What do you think are the greatest strengths of the EBCE Program? (Check any of the following which are applicable.)

____ 1. Good alternative to a regular school program

____ 2. Quality of the staff

____ 3. Students learn about a variety of careers

____ 4. Students learn about "real life" situations

____ 5. Good way of getting students to learn

____ 6. Experience in working with adults

____ 7. Other (please write in)_____

12. What positive changes, if any, have you noticed in your son or daughter that might be a result of participation in the EBCE Program? (Check one or more.)

____ 1. Greater maturity or self direction

____ 2. Better able to relate to others

____ 3. Greater self confidence

____ 4. Clearer direction about his/her future

____ 5. More interested in education

____ 6. Better understanding of jobs

____ 7. Improvement in basic skills

____ 8. None

____ 9. Other (please write in)_____

13. What types of knowledge, skills or attitudes have your son or daughter acquired in the EBCE Program that you feel he/she would not have gained from a regular high school program? (Please check those applicable.)

____ 1. First-hand knowledge of demands in a "real world" situation

____ 2. Working with other people

____ 3. On-the-job skills

____ 4. Self discipline

____ 5. Motivation to learn

____ 6. Nothing

____ 7. Other (please write in)_____

14. Comments: _____

_____

_____

APPENDIX E

Staff Questionnaire

Purpose

This questionnaire asks the staff to rate the importance and perceived effectiveness of learning strategies used in EBCE. It also contains questions dealing with the staff's perceptions of factors contributing to or limiting the success of the program, changes they would suggest in the program, and areas in which they feel students in the program have made greatest and least growth. The questionnaire also contains a student rating survey on which specific students identified for in-depth assessment should be evaluated. Because of their daily program contact, staff's perceptions and recommendations for change are important to consider.

Directions for Data Collection

This questionnaire is to be given to staff during the last scheduled interview with the evaluator. The purpose of the questionnaire should be explained and a request made for completion and return to evaluator within two weeks. Postage will not be necessary if inter-office mail service is used. Phone follow-up should be made if staff does not adhere to time constraints.

EBCE Staff Questionnaire

1. Listed below are major learning activities used in one or more EBCE programs. Please rate each, first in terms of how important you feel it is for EBCE students, and secondly in terms of how effective you feel it has been this year. Some activities may be considered important, but not producing effective results, while others may be considered very effective but of low importance. If the activity is not used in your project, please circle NA for not applicable. Circle 1 for not important or not effective to 5 for highly important or highly effective.

Learning Activities	HOW IMPORTANT Not Imp.				Highly Imp.	HOW EFFECTIVE Not Eff.				Highly Eff.	
a. Student orientation	1	2	3	4	5	1	2	3	4	5	NA
b. Student accountability system	1	2	3	4	5	1	2	3	4	5	NA
c. Student negotiation	1	2	3	4	5	1	2	3	4	5	NA
d. Predesigned projects	1	2	3	4	5	1	2	3	4	5	NA
e. Negotiated projects	1	2	3	4	5	1	2	3	4	5	NA
f. Student journals	1	2	3	4	5	1	2	3	4	5	NA
g. Competencies	1	2	3	4	5	1	2	3	4	5	NA
h. Career explorations	1	2	3	4	5	1	2	3	4	5	NA
i. Learning level process	1	2	3	4	5	1	2	3	4	5	NA
j. Special placements	1	2	3	4	5	1	2	3	4	5	NA
k. ILA materials	1	2	3	4	5	1	2	3	4	5	NA
l. Employer seminars	1	2	3	4	5	1	2	3	4	5	NA
m. Student retreat	1	2	3	4	5	1	2	3	4	5	NA
n. Group activities (e.g., cadres)	1	2	3	4	5	1	2	3	4	5	NA
o. Others (specify)	1	2	3	4	5	1	2	3	4	5	NA

_____

_____

On the grid below please indicate how helpful you feel EBCE experiences have been in helping students to do each of the following: (Circle 1 to 5 for each statement).

		Of Little or No Help				Very Helpful
2.	Solve problems logically.	1	2	3	4	5
3.	Understand the role of science in our society today.	1	2	3	4	5
4.	Understand more about themselves.	1	2	3	4	5
5.	Get along with others.	1	2	3	4	5
6.	Understand the democratic process.	1	2	3	4	5
7.	Develop their own creativity.	1	2	3	4	5
8.	Learn how their interests and abilities fit into potential careers.	1	2	3	4	5
9.	Learn how society's values, the government, and the economy affect the world of work.	1	2	3	4	5
10.	Learn to analyze potential jobs.	1	2	3	4	5
11.	Learn how to find and keep a job.	1	2	3	4	5
12.	Learn the basic skills necessary for the careers that interest them.	1	2	3	4	5
13.	Improve their reading skills.	1	2	3	4	5
14.	Improve their math skills.	1	2	3	4	5
15.	Improve their oral communication skills.	1	2	3	4	5
16.	Improve their written communication skills.	1	2	3	4	5
17.	Know what level of basic skills proficiency is required in the jobs of interest to them.	1	2	3	4	5

		Of Little or No Help				Very Helpful
18.	Gain confidence in their ability to apply basic skills to complete tasks and to solve problems around them.	1	2	3	4	5
19.	Become acquainted with a broad range of resources to use in gathering information for work and decision making.	1	2	3	4	5
20.	Communicate comfortably with adults.	1	2	3	4	5
21.	Take responsibility for own actions.	1	2	3	4	5
22.	Become more open to ideas and values different from their own.	1	2	3	4	5
23.	Use information obtained through direct experiences in making decisions.	1	2	3	4	5
24.	Feel prepared to accept adult responsibilities.	1	2	3	4	5

25. What factors, if any, have you seen this year that are contributing in a major way to the success of the EBCE Program?

_____

_____

_____

26. What obstacles, if any, have you seen this year that are limiting the success of the EBCE Program?

_____

_____

_____

27. In what areas do you feel EBCE students have made the greatest growth this year? Why?

_____

_____

_____

28. In what areas do you feel EBCE students have made the least growth this year? Why?

29. What effects, if any, do you feel the EBCE Program has had on the regular high school program? Why?

30. What effects, if any, do you feel the EBCE Program has had on the community? Why?

31. What changes, if any, would you suggest in the EBCE Program for next year?

32. What types of technical assistance did you receive from NWREL? How useful was each type of technical assistance?

33. What additional types of technical assistance, if any, did you request this year from NWREL that you did not receive?

Student Rating Section _____ Name of Student

Directions: Circle the number that most nearly describes the level of achievement in the seven areas listed below that each identified EBCE Program student had attained by the end of the program. (Copy this sheet as needed).

34. Knows own aptitudes, interests, and abilities.

Definitely No				Definitely Yes
1	2	3	4	5

35. Applies knowledge of aptitudes, interests, and abilities to career interests.

Definitely No				Definitely Yes
1	2	3	4	5

36. Demonstrates willingness to apply basic skills to work tasks and to avocational interests.

Definitely No				Definitely Yes
1	2	3	4	5

37. Initiates program related behavior (is a self starter).

Definitely No				Definitely Yes
1	2	3	4	5

38. Assumes responsibility for carrying out tasks.

Definitely No				Definitely Yes
1	2	3	4	5

39. Conducts conversations with an adult that reveal self confidence.

Definitely No				Definitely Yes
1	2	3	4	5

40. Understands another person's message and feelings.

Definitely No				Definitely Yes
1	2	3	4	5

APPENDIX F

Employer Interview Guide

Purpose

The Employer Interview Guide provides some standardization among interviews, and focuses the interview topic thus saving time. The guide questions solicit information on the program operation, employer and company opinion of the EBCE Program concept, and progress of students served at the site. Because employers are an important part of EBCE, the value of their perceptions on overall program effectiveness is vital.

Directions for Data Collection

The Employer Interview Guide can be shared with the employer. Effort should be made to hold interview length to 30 minutes or less. However, neither time nor guide should be used to discourage anecdotal remarks regarding students or program operation. Responses recorded should be reviewed with the employer before the end of the session.

Employer Interview Guide

Employer Name_____

Title_____

Name of company/organization_____

Type of company/organization_____

Length of time you have been participating with the program_____

Students in the program visit employer sites for a career exploration (usually several days to get an overview of a particular job) or for a learning level (usually several weeks or more to work on a project or get a more in-depth view of an occupation).

1. Which of the following supportive services do you (or others at your site) provide for the students? (Check each appropriate category for career exploration and for learning level if you have had students for both levels.)

		Career Exploration		Learning Level
Talk about job opportunities?	(15)	_____	(24)	_____
Talk about the student's personal problems?	(16)	_____	(25)	_____
Talk about activities at your site?	(17)	_____	(26)	_____
Tutor in an academic area?	(18)	_____	(27)	_____
Evaluate individual student's assign-ments?	(19)	_____	(28)	_____
Assist students in non-job-related assignments?	(20)	_____	(29)	_____

		Career Exploration		Learning Level
Supervise students to perform a specific job-related task at your site?	(21)	_____	(30)	_____
Help plan student assignments?	(22)	_____	(31)	_____
Other (please write in) _____	(23)	_____	(32)	_____

2. Did the program staff provide you with enough information to help you direct student activities at your site?

   1. ( ) Yes
   2. ( ) No

   Why? _____

3. In general, do you think the EBCE students you have worked with have benefited by being at your site? Circle the appropriate number from 1 (definitely no) to 5 (definitely yes).

Definitely NO				Definitely YES
1	2	3	4	5

   If yes, in what ways? (Check as many as apply.)

   ( ) students have improved in basic skills

   ( ) students have improved in career/occupational information

   ( ) students have improved in attitude/work habits

   ( ) other, please explain _____

4. In general, do you think the students you have worked with are really interested in learning new things?

Definitely NO				Definitely YES
1	2	3	4	5

5. Do you receive adequate feedback about the effectiveness of your work with the students?

Never				Always
1	2	3	4	5

6. What do you like most about the program _____

_____

What do you like least about the program_____

_____

APPENDIX G

Parent Interview Guide

Purpose

The Parent Interview Guide focuses the interview topic, enhances the comfort of the parent during the interview, and provides some standardization among interviews. The guide should be used to encourage discussions of the specific program benefits for the son/daughter of the interviewee, the amount of program contact with the parent, and suggested changes for improvement in the program.

Directions for Data Collection

The Parent Interview Guide can be shared with the parents being interviewed. Parents should be encouraged to give examples to support their responses. Evaluator should plan about 20 minutes per interview using this guide. Recorded responses to the guide questions should be reviewed with the parents before the end of the session.

Parent Interview Guide

Questions: (Orally)

1. About how often have you had any contact with any EBCE Program staff members?

2. What effect, if any, has the EBCE Program had on helping your son or daughter form career plans?

3. How many meetings have you attended during this school year where other parents of EBCE students were present?

4. What negative changes, if any, have you noticed in your son or daughter that might be a result of participation in the EBCE Program?

   a. Less interested in education

   b. Less interested in working

   c. More critical of others

   d. None

   e. Other

5. What changes, if any, would you recommend in the EBCE Program?

6. Has your son/daughter demonstrated an increased proficiency in the basic skills (reading, communication arithmetic)?

7. Has your son/daughter increased in the frequency of conversations with adults and peers which exhibit his/her self-confidence and understanding of the other person's messages and feelings?

8. Is your son/daughter better able to identify and explain his/her interests, values, strengths, weaknesses?

9. Does your son/daughter demonstrate increased acceptance of responsibility for the effects that his/her behavior and attitudes have on him/her self and on others?

10. Has your son/daughter exhibited increased application of a decision-making process?

11. Has your son/daughter increased in his/her knowledge

of occupations?

12. Has your son/daughter increased his/her knowledge of his/her own aptitudes, interests, and abilities?

13. Has your son/daughter applied his/her understanding to his/her potential career interests?

14. Has your son/daughter demonstrated an understanding of the relationship between education and work?

15. Does your son/daughter have a more positive attitude toward education?

16. Has your son/daughter increased in his/her perception of the benefits of work?

APPENDIX H

Staff Interview Guide

Purpose

The Staff Interview Guide focuses the interview topic and provides some standardization among interviews. The guide questions solicit information on student progress in academic skills and in areas of career and personal development. Perceptions of the impact of the EBCE Program on student growth are also sought.

Directions for Data Collection

The Staff Interview Guide can be shared with staff. Approximate interview length is 30 minutes. Although informal discussions at times other than this interview should be used to discuss program operation or other staff concerns, staff should not be discouraged from providing anecdotal comments that illustrate student progress. Responses recorded should be reviewed with staff person being interviewed prior to end of interview session.

Staff Interview Guide

1. What behavior or attitudinal changes have you noted in the EBCE students since the start of the program?

2. What percent of the EBCE students seem to have shown growth in their basic skills?

0% 25% 50% 75% 100%

3. Where are they using those skills?

( ) learning center projects

( ) competencies

( ) exploration/learning level sites

( ) journal

( ) other, explain_____

4. Have the program students increased their knowledge about occupations?

1 2 3 4 5
very little somewhat very much

5. Do the program students seem to be using new occupational information in the selection of explorations, learning levels or projects?

1 2 3 4 5
very little somewhat very much

6. To what extent do you feel the students' participation in EBCE resulted in changes in their self-understanding and acceptance of personal responsibility?

1 2 3 4 5
very little somewhat very much

7. To what extent have the students' participation in EBCE resulted in changes in their decision-making strategies?

1	2	3	4	5
very little		somewhat		very much

8. Have the students demonstrated an increased proficiency in the basic skills (reading, communication, arithmetic)?

9. Have the students increased in the frequency of conversations with adults and peers which exhibit the students' self-confidence and understanding of the other person's messages and feelings?

10. Are the students better able to identify and explain their interests, values, strengths, weaknesses?

11. Do the students demonstrate increased acceptance of responsibility for the effects that their behavior and attitudes have on themselves and on others?

12. Have the students exhibited increased application of a decision-making process?

13. Have students increased in their knowledge of occupations?

14. Have students increased their knowledge of their own aptitudes, interests, and abilities?

15. Have students applied their understanding to their potential career interests?

16. Have students demonstrated an understanding of the relationship between education and work?

17. Do students have a more positive attitude toward education?

18. Have students increased in their perception of the benefits of work?

APPENDIX I

Student End of Program Questionnaire

Purpose

This questionnaire is designed to assess student knowledge about job trends and related information, and to collect data on student reflections about their school/EBCE experiences.

Directions for Data Collection

This questionnaire should be administered to EBCE students as a group during the post test session, during the last week of the program. Students absent during the group testing session should be allowed to complete the questionnaire on their own and turn it in to a staff member. This is not a timed instrument, but for planning purposes about 30 minutes should be allowed. Since student program perceptions, rather than an assessment of reading ability, are sought staff assistance should be provided to any student having difficulty with the test.

NAME _____ DATE _____

SCHOOL DISTRICT _____

STUDENT END-OF-PROGRAM QUESTIONNAIRE

You are ready to complete a year of participation in your Experience Based Career Education (EBCE) Program. This questionnaire asks some of the same questions that you may have been asked in September and adds some new ones that cover your career plans, personal experiences, and knowledge about the world of work. If you have any questions while you are completing the survey, just ask for assistance.

1. What do you expect to be doing one year after completing high school?

   _____ 1. Working full time.
   _____ 2. Entering an apprenticeship or on-the-job training program.
   _____ 3. Going into regular military service or to a service academy.
   _____ 4. Attending a vocational, technical, trade, or business school.
   _____ 5. Attending a junior or community college.
   _____ 6. Attending a four-year college or university.
   _____ 7. Working part time.
   _____ 8. Other (travel, take a break).
   _____ 9. I have no idea what I'll be doing.

2. How far do you plan to pursue your formal education?

   _____ 1. Don't plan to finish high school.
   _____ 2. High school graduate.
   _____ 3. High school plus one or two years of college, community college, or special training.
   _____ 4. High school plus three or more years of college, community college, or special training.
   _____ 5. Four year college graduate.
   _____ 6. Graduate or professional training beyond college.

3. Please list two jobs that you feel you might like to hold after completing your education. Give the vocation rather than location. For example, say "a draftsperson" rather than "working at General Motors".

4. Have you observed or directly worked at either or both of the two preferred jobs listed for question 3?

_____ 1. I observed or worked at both jobs.

_____ 2. I observed or worked at one of these two jobs.

_____ 3. I did not observe or work at either job.

5. How sure are you of steps to prepare for and enter the job which you would most like to hold after graduation?

_____ 1. Do not know where to begin.

_____ 2. Have some idea.

_____ 3. Steps pretty clear.

_____ 4. Steps quite clear.

6. Do you feel you will be able to complete the necessary steps for this job?

_____ 1. Yes.

_____ 2. Not sure.

_____ 3. Probably not.

7. What aspects of your learning experience this year (if any) influenced your choice of potential careers? (Check as many as apply).

_____ 1. None.

_____ 2. I talked to teachers or a counselor about my choices.

_____ 3. I talked to people who work at the jobs.

_____ 4. I talked with relatives or friends about my choices.

_____ 5. I had experience in observing or trying out the jobs.

_____ 6. I read about the jobs.

_____ 7. Other (please write in) _____

_____

8. a. Are there any jobs that last year seemed interesting that you now feel do not match your interests or abilities?

_____ 1. Yes.

_____ 2. No.

b. If yes, list these jobs _____

_____

8. c. Why do you now feel that the job(s) no longer match your interests or abilities? _____

_____

_____

_____

d. What caused you to change your mind about the job(s)? (Check one or more).

_____ 1. Advice from teachers or a counselor.

_____ 2. Advice from relatives or friends.

_____ 3. Advice from someone who works at the job(s).

_____ 4. Information I have read about the job(s).

_____ 5. Experience in observing or trying out the job(s).

_____ 6. My interests have changed.

_____ 7. I don't know.

_____ 8. Other (please state your reason) _____

_____

_____

_____

_____

For the questions listed below, please circle a number on the scale from 1 to 5 that indicates how helpful you feel (EBCE) has been to you in reaching each objective. If you feel (EBCE) was very helpful circle 5, if moderately helpful circle 3, and if of little or no help circle 1.

9. How helpful do you feel your school experiences this year have been in helping you solve problems logically?

Very helpful Of little or no help

5 4 3 2 1

10. How helpful have your (EBCE) experiences been in helping you to understand more about yourself?

Very helpful Of little or no help

5 4 3 2 1

11. How helpful have your (EBCE) experiences been in helping you to get along with others?

Very helpful — Of little or no help

5 4 3 2 1

12. How helpful have your (EBCE) experiences been in helping you to understand the democratic process?

Very helpful — Of little or no help

5 4 3 2 1

13. How helpful have your (EBCE) experiences been in helping you to develop your own creativity?

Very helpful — Of little or no help

5 4 3 2 1

14. How helpful have your (EBCE) experiences been in helping you to learn how your interests and abilities fit into potential careers?

Very helpful — Of little or no help

5 4 3 2 1

15. How helpful have your (EBCE) experiences been in helping you to learn how society's values, the government, and the economy affect the world of work?

Very helpful — Of little or no help

5 4 3 2 1

16. How helpful have your (EBCE) experiences been in helping you to learn what to look at in considering a job?

Very helpful — Of little or no help

5 4 3 2 1

17. How helpful have your (EBCE) experiences been in helping you to learn how to find and keep a job?

Very helpful — Of little or no help

5 4 3 2 1

18. How helpful have your (EBCE) experiences been in helping you to learn the basic skills necessary for the careers that interest you?

Very helpful — Of little or no help

5 4 3 2 1

19. How helpful have your (EBCE) experiences been in helping you to improve your reading skills?

Very helpful Of little or no help

5 4 3 2 1

20. How helpful have your (EBCE) experiences been in helping you to improve your math skills?

Very helpful Of little or no help

5 4 3 2 1

21. How helpful have your (EBCE) experiences been in helping you to improve your oral communication skills?

Very helpful Of little or no help

5 4 3 2 1

22. How helpful have your (EBCE) experiences been in helping you to improve your writing skills?

Very helpful Of little or no help

5 4 3 2 1

23. How helpful have your (EBCE) experiences been in helping you to know what level of basic skills proficiency is required in the jobs of interest to you?

Very helpful Of little or no help

5 4 3 2 1

24. How helpful have your (EBCE) experiences been in helping you to gain confidence in your ability to apply basic skills to complete tasks and to solve problems around you?

Very helpful Of little or no help

5 4 3 2 1

25. How helpful have your (EBCE) experiences been in helping you to become acquainted with a broad range of resources to use in gathering information for work and decision making?

Very helpful Of little or no help

5 4 3 2 1

26. How helpful have your (EBCE) experiences been in helping you to communicate comfortably with adults?

Very helpful Of little or no help

5 4 3 2 1

27. How helpful have your (EBCE) experiences been in helping you to take responsibility for your own actions?

Very helpful — Of little or no help

5 4 3 2 1

28. How helpful have your (EBCE) experiences been in helping you to become more open to ideas and values different from your own?

Very helpful — Of little or no help

5 4 3 2 1

29. How helpful have your (EBCE) experiences been in helping you to use information obtained through direct experiences in making decisions?

Very helpful — Of little or no help

5 4 3 2 1

30. How helpful have your (EBCE) experiences been in helping you to feel prepared to accept adult responsibilities?

Very helpful — Of little or no help

5 4 3 2 1

31. How would you rate the overall quality of your (EBCE) program?

Excellent — Poor

5 4 3 2 1

32. If you had it to do over again, do you think you would decide to participate in (EBCE)?

Definitely yes — Definitely no

5 4 3 2 1

33. In (EBCE), have you felt that you could progress at your own rate?

Definitely yes — Definitely no

5 4 3 2 1

34. In comparison with regular high school, how much opportunity did (EBCE) provide you for learning about occupations?

Much more — About same — Much less

5 4 3 2 1

35. In comparison with regular high school, how much opportunity did (EBCE) provide you for general learning?

Much more		About same		Much less
5	4	3	2	1

36. In comparison with past experience in regular high school, how motivated are you to learn in (EBCE)?

Much more		About same		Much less
5	4	3	2	1

37. What courses, if any, have you taken this year at the regular high school, a community college, employer site, or elsewhere? (Please list any courses and where they were taken).

_____ None

_____ Course_____ School/Agency_____

_____ Course_____ School/Agency_____

38. This year, approximately how many pamphlets, brochures, manuals, or magazine articles did you read?

_____ 1. None
_____ 2. 1 to 5
_____ 3. 6 to 10
_____ 4. 11 to 20
_____ 5. 21 to 30
_____ 6. More than 30

39. This year, approximately how many books (not counting textbooks) did you read?

_____ 1. None
_____ 2. 1 or 2
_____ 3. 3 to 5
_____ 4. 6 to 10
_____ 5. 11 to 20
_____ 6. More than 20

40. Do you read the newspaper?

_____ 1. No, or almost never.
_____ 2. Yes, at least once or twice a week.
_____ 3. Yes, most everyday.

41. If you read the newspaper at least once a week, what sections to you usually read? (Check one or as many as applicable).

_____ 1. Sports.
_____ 2. Fashions.
_____ 3. Front page news.
_____ 4. Comics

_____ 5. Editorial.

_____ 6. News columnists, such as Art Buchwald.

_____ 7. Other (please list) _____

_____

_____

42. During the school year, approximately how many visits did you make to the following community resources? (If none, write "0").

_____ 1. Public libraries.

_____ 2. Museums.

_____ 3. Courts.

_____ 4. Public meetings.

_____ 5. Local colleges or universities.

_____ 6. State legislature.

		Agree	Disagree
43.	Most persons remain in the same job throughout their adult lives.	_____	_____
44.	Few women work outside of the home after marriage.	_____	_____
45.	Less than one-third of all job openings require a college degree.	_____	_____
46.	Most people have the ability to do well in any job if they set their minds to it.	_____	_____
47.	There is only one "right job" for a person in terms of his/her abilities.	_____	_____
48.	The unemployment rate of 20-year olds in the labor market is usually less than the rate for other adults.	_____	_____
49.	The State Employment Service Office provides free information about job openings and job training programs.	_____	_____
50.	Apprentices are paid while they learn.	_____	_____
51.	The English and math skills of freshmen are about the same from one college to another.	_____	_____
52.	Ten years from now most jobs will require four or more years of college.	_____	_____

53. In your opinion, what are the greatest strengths of the (EBCE) Program? _____

54. In your opinion, what are the greatest weaknesses of the (EBCE) Program? _____

APPENDIX J

Student Interview Guide

Purpose

The Student Interview Guide focuses the interview topic, enhances the comfort of the student during the interview, and provides some standardization among interviews. The guide questions solicit student perceptions of their growth in career development and basic skills, and their adjustment to EBCE. Information regarding the value of program procedures, and overall operation of the program is also sought.

Directions for Data Collection

The Student Interview Guide can be shared with the student being interviewed. The guide should not be used to discourage anecdotal comments regarding student experiences in the program which might lend insight into how the student is functioning in the program. Interview length ranges from 20 to 30 minutes using this guide. Responses recorded should be reviewed with the student before the end of the session.

Student Interview Guide

Questions:

1. a. Do you feel that the project staff are concerned about you as an individual?

   b. Do they know more about you than your other teachers at Union?

   c. In what ways are the EBCE staff helping you the most?

   d. Are there other things that you feel they could do to help you more?

2. a. Do you feel you have acquired any knowledge or skills in EBCE so far that would be directly helpful for gaining or holding a future job?

   b. If yes, what?

3. a. Do you feel you are asked to fill out too many forms and reports in EBCE?

   b. Are there any forms you complete that you think should be eliminated or combined with others?

4. a. Are the procedures used by the staff to get students to complete program requirements (such as journals or projects) working okay?

   b. If no, how could they be improved?

5. a. Do you feel you are able to locate the resource materials necessary for working on your projects?

   b. Where do you usually get the materials?

   c. Have you also gotten information for your projects by talking directly with employers or people in the community?

6. a. How much involvement do you feel you have in selecting your own learning goals while developing projects?

   b. How do you go about negotiating a project with the learning manager?

   c. Do you have enough freedom in selecting how you're

going to go about working on the project?

7. a. How well do you feel you are doing in basic skills such as reading, spelling, and mathematics?

   b. What help have you received in these areas?

   c. How much progress do you feel you are making?

   e. Have employers helped you identify any basic skills that you need to work on?

   f. Have they helped you with any basic skills?

8. Have you demonstrated an increased proficiency in the basic skills (reading, communication, arithmetic)?

9. Have you increased in the frequency of conversations with adults and peers which exhibit your self-confidence and understanding of the other person's messages and feelings?

10. Are you better able to identify and explain your interests, values, strengths, weaknesses?

11. Do you demonstrate increased acceptance of responsibility for the effects that your behavior and attitudes have on yourself and on others?

12. Have you exhibited increased application of a decision-making process?

13. Have you increased in your knowledge of occupations?

14. Have you increased your knowledge of your own aptitudes, interests, and abilities?

15. Have you applied your understanding to your potential career interests?

16. Have you demonstrated an understanding of the relationship between education and work?

17. Do you have a more positive attitude toward education?

18. Have you increased in your perception of the benefits of work?

APPENDIX K

Student Survey

Purpose

The Student Survey ascertains how useful the student feels each learning process in EBCE has been. Perceptions of the students, as primary users of the learning processes, are important to consider.

Directions for Data Collection

The Student Survey is completed at the end of each student interview. Students are encouraged to add comments to the ratings they give to each learning process. Adequate completion time is about 10 minutes, although more time may be given if needed. Evaluator should collect the survey prior to departure rather than allowing the student to submit it at a later date.

EBCE Program

Student Survey

Student's Name_____ Date_____

Directions:

Here is a sheet showing the various learning processes in EBCE. Let's cross off any that you have not yet used. Please take a minute to rate each process as high, medium or low in terms of how useful you think it is in helping you to learn. As you go through the list, feel free to comment out loud on any ones you care to.

LEARNING PROCESSES	HOW USEFUL FOR YOUR LEARNING			NOT USED
	H	M	L	
a) Exploration package	___	___	___	___
b) Learning package	___	___	___	___
c) Employer/Community teachers	___	___	___	___
d) Employer seminars	___	___	___	___
e) Counseling groups	___	___	___	___
f) Negotiating (planning) projects	___	___	___	___
g) Working on projects	___	___	___	___
h) Student journal	___	___	___	___
i) Using the computer	___	___	___	___
j) Competencies	___	___	___	___
k) Actual work on an employer site	___	___	___	___
l) Student retreat	___	___	___	___
m) Testing and assessment	___	___	___	___
n) Student orientation	___	___	___	___

Overall, do you feel that EBCE is a good program for you?___

Why?_____

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