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ABSTRACT

The goal of the Conecuh County (Alabama) project was to successfully implement an experience-based career education (EBCE) program based on the model developed by Northwest Regional Educational Laboratory, which integrates academic requirements and work experience opportunities into a comprehensive curriculum. To determine program effectiveness of its first year of operation, a third-party evaluation was conducted. Assessment instruments were administered to EBCE and comparison students on a pretest/posttest basis. Students completed subtests of the Comprehensive Tests of Basic Skills, a Socialization Profile, the New Mexico Career Oriented Activities Checklist, the Student Attitude Survey battery, and a Student Information Questionnaire. Parents, employers, and EBCE staff were also asked to respond to an end-of-year questionnaire. Analysis of student outcome data indicated positive results favoring EBCE students in the areas of basic academic skills, career knowledge and planning, career maturity, attitudes toward education, sex role stereotyping, and attitudes toward self. Overall, parents and employers responded favorably toward the EBCE program. Observation of the implementation process was also made by the third-party evaluators and rated as satisfactory. (Second- and third-year evaluative reports are available in ERIC--see note.) (BM)

FINAL EVALUATION REPORT

for the

Conecuh County Part D

Experience-Based Career Education Program

Evergreen, Alabama

Project No. 502-AH6-0066

Grant No. G04-76-03000

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INTRODUCTION

Educational patterns in American high schools have changed only slightly in the last 50-75 years. However, strong and convincing arguments exist for making changes in schools and their curricula. The Committee on Secondary Education (1972), the National Commission on the Reform of Secondary Education (1973), the Commission on Non-Traditional Study (1973), the Special Task Force to the Secretary of HEW (1973), Silberman (1970), Marland (1974), Coleman (1973), the National Panel on High Schools and Adolescent Education (1975), and the public at large (Kappan, 1973) have all stressed the importance of educational options which involve action learning and community utilization.

These national commissions, scholarly symposia, parent pressures and student protests all have demonstrated that alternatives to traditional schools are necessary. It was this same climate that caused the U. S. Office of Education in 1971 to award four laboratories (Appalachia Educational Laboratory, Far West Laboratory, Northwest Regional Educational Laboratory, and Research for Better Schools) contracts to develop community-based experiential education programs. The Experience-Based Career Education (EBCE) programs, in short, are an attempt to provide students with learning opportunities which are realistic in terms of the actual demands and possibilities of adult life, and relevant in terms of what each individual student wants to learn. Thus, it hopes to provide a balanced perspective regarding the role of the learner, subject matter, and the learning process. But the impetus for dissemination of a program such as EBCE came much earlier.

National Involvement

Part D of the Vocational Education Act of 1963 provided for federally administered grants and contracts for Exemplary Projects in Vocational Education. The purposes of these exemplary projects were to: (1) create bridges between school and earning a living for young people who are still in school, who have left school either by graduation or by dropping out, or who are in postsecondary programs of vocational education; (2) promote cooperation between public education and manpower agencies; (3) broaden occupational aspirations and opportunities for youths, with special emphasis given to youths who have academic, socio-economic, or other handicaps; and (4) provide for the participation in the program of students enrolled in private nonprofit schools.

These projects were to be conducted under grants or contracts awarded by the Commissioner of Education in accordance with the provisions of Part D of the Act and within the applicable Federal regulations. These exemplary projects represent bridging efforts between research and development and actual operations in school settings.

In awarding grants from funds available for this program, the U. S. Commissioner gave priority to applications for three-year demonstration projects which ranked high on the basis of published criteria and which involved in a single operational setting one of the three program priority areas. (See Federal Register, 1975.)

Conecuh County, Evergreen, Alabama, elected to write a proposal directed at program priority area 1: Demonstration of the National Institute of Education's (NIE) Experience Based Career Education (EBCE)

program, and more specifically, the Northwest Regional Educational Laboratory's (NWREL) model. The general characteristics of NIE's EBCE program were three fold:

1. It represented a comprehensive alternative to regular high school, offering courses which either fulfilled or supplemented all requirements for graduation;
2. It was experientially oriented in that students were permitted to perform non-paid work tasks as well as to observe adults in their work environment. It entailed the opportunity for exposure to more than one community site, and required learning more than one type of work-related skill. The activities in the work place were to be organized to yield academic, career, and interpersonal skills as well as occupational skills; and
3. It possessed an organizational structure made up of school and community representatives whose sole purpose was to render advisory, policy-making, or operational assistance to the program.

NWREL/EBCE Program Description

An alternative educational program titled Experience-Based Career Education (EBCE) had been designed, developed, and tested by the Northwest Regional Educational Laboratory (NWREL). The purpose of the program was to provide an alternative educational experience for a cross-section of high school age youths. This experience was to be characterized by an emphasis on direct employer-site experiences personalized to each student in terms of individual needs, interests and abilities. The program

integrated academic requirements and work experience opportunities into a comprehensive curriculum which included experiences in Basic Skills, Life Skills and Career Development. It took the courses high school students normally study and added in people, self, jobs, and the way communities work. This enabled students to learn all about these things through direct experience with hundreds of adults in the community. In the process, students learned much about who they were and what they wanted to become, and obtained academic credit while exploring the real dimensions of many careers.

The entire community, with all its richness, confusion, and reality, became the school for these students. A student's goal was not to train for one pre-selected job, but to discover by direct experience what careers were found most potentially rewarding; not to use occasional "field trips" to supplement classroom study, but to actually do the studying in the context of sites and people in the community; not just to learn about responsibility, values, and maturity, but to become more responsible and mature, and to begin developing a conscious and consistent set of values. NWREL's EBCE program, in short, was an attempt to provide high school students with learning opportunities which were realistic in terms of the actual demands and possibilities of adult life, and relevant in terms of what each individual student wanted to learn.

Each student's learning is planned in terms of three content areas: Life Skills, Basic Skills and Career Development. The student's learning is carefully interwoven so that Life Skills activities involve practice in Basic Skills and help place Career Development experiences in perspective.

Life Skills organizes learning around the attitudes, information and techniques needed in adulthood. Six Life Skills categories emphasize lifelong learning, personal growth and the relationship of individuals to broader community, national and world concerns and activities. These six Life Skills categories are creative development, critical thinking, functional citizenship, personal/social development, science, and competencies. Basic Skills concentrates on the reading, mathematics, writing, listening and speaking skills essential to performing tasks and functions students encounter in the program and in adulthood. Basic Skills learning occurs largely through applied tasks in Life Skills and Career Development activities chosen by the student and practiced at community sites. Career Development helps students identify, assess and refine career information and skills through realistic onsite experiences with people and places in the community.

Students themselves choose how they learn in EBCE. They negotiate individual goals and courses of action (called learning plans) with EBCE staff to satisfy their interests and meet program expectations. All learning plans are based on assessment information, conferences with the student and evaluation of performance. Projects are problem-centered "learning contracts" individually negotiated with students to help them achieve their learning goals and make efficient use of their experiences in the local community. Projects combine learning in Life Skills and Career Development areas with practice in related Basic Skills. Project activities constitute the bulk of what students do at the learning center and in the community to meet their individual needs and program requirements.

To gain an understanding of jobs they might be interested in, all students visit at least five different places of business in the community each year for career explorations. During these explorations, students examine the nature of the work and the job functions performed there. Exploration Packages completed for each site help students focus on and record their observations, giving practice in job investigation and assessment skills useful in career planning for a lifetime.

Learning levels enable students to follow through on their career explorations by returning to particular sites for longer indepth learning experiences. Unlike the general observation activities of career explorations, learning levels give students "hands-on" practice in the skills, knowledge and attitudes required for specific jobs. To help place job skills learning in a broader context, students must negotiate projects for each learning level. These projects are based on careful analysis of opportunities for student learning available at the site and link the student's Career Development experiences with Basic Skills and Life Skills activities.

The competencies are unique in the NWREL/EBCE curriculum. Unlike other content areas, the competencies require all students to meet a standard level of performance for a specific set of skills identified by an advisory board from the community. Competency certification is the process whereby students demonstrate their proficiencies to the satisfaction of recognized experts from the local area.

In addition, students and staff share thoughts and feelings with each other through journal entries written to staff correspondents on a

regular basis throughout the year. Students also use special placements when they need resources available at a community site but do not wish to commit to career explorations or learning levels. Special placements are a short-term, intensive use of a site for a particular learning activity.

Conecuh County Project Description: Variations

Although Conecuh County planned to implement the NWREL/EBCE program with a rather high degree of fidelity, there were local and state needs and constraints which had to be taken into account as the program was installed. The program began operation in October, 1976. A staff was hired consisting of a learning manager, guidance/counselor, employer relations specialist, and secretary. Mr. Wayne Pope, Conecuh County Superintendent of Education, served as project director. Policies for EBCE are determined by the community through a twelve member Advisory Board, made up of students, parents, employers, school personnel, and citizens at large. Conecuh County had the distinction of being one of only two rural programs in the Southeast region serving more than one high school. The program served twenty-three students from two high schools, Evergreen High School and Lyeffion High School. In September, 1977, their plan is to have a total of sixty students, fifteen from each of the four high schools in the County.

The Learning Center was located in Southside Elementary School in Evergreen. The Learning Center was equipped with multi-media resources usable to the students and staff, and Career Education materials available

to all County teachers. The Learning Center was available for individual and group counseling and work sessions for all students. Students were transported to and from the Learning Center and community sites by two mini-vans.

Staff and students alike helped identify unique employer site materials that were applicable in student learning activities. They used existing community resources and a variety of audio-visual tools such as cameras and tape recorders in initial site explorations.

Students for both EBCE and the control group were selected randomly from applications received from both schools. Through discussion with principals, counselors, and various teachers, it was found that these applications represented a true cross-section of students both academically, socially and economically.

Students spent a minimum of two periods a day at their parent high schools, and the remainder of the day was spent on the job site or at the Learning Center. Alabama state law currently requires students to take English and history in the traditional classroom. During this time the students completed projects, which consisted of basic skills, life skills, and competencies. During a full year, students would complete ten projects, two in each of the five life skills areas, and thirteen competencies. However, since funding strategies only allowed operation of the program during second semester of the school year, only five projects and six competencies were required.

The EBCE curriculum was approved by the Alabama State Department of Education and is consistent with high school graduation requirements.

As stated, students took the two required subjects, English and History, at the parent high school, thus earning two Carnegie Units per year. The remaining three units of credit were earned under the EBCE program, and classified as Career Education units (which may be transferred back into academic subjects for college entrance purposes).

Third-Party Evaluation Directive

The development and dissemination of a product requires evaluation in a rigorous manner to insure the developer and the funding agency an efficient and effective product. As evidence of the central importance of evaluation, NIE requires evaluation as a contingency for further funding (Boruch, 1973). Similarly, USOE requires that evaluation activities be conducted on Part D demonstration grants (Federal Register, 1975). Thus, an independent third-party evaluation which was comprehensive and objective was required as part of the overall site proposal for securing federal monies.

Guidelines in the Federal Register (1975) indicated that the third-party objective evaluation should basically:

1. Assure the development of measurable process objectives and assure the documentation and, where appropriate, the evaluation of the effectiveness of the processes undertaken in the planning and implementation of the demonstration project.
2. Assure the development of a management plan which links the selected program priority area and other program features to the process objectives, to the human and financial resources to be applied,

and finally to the specific student outcome objectives anticipated.

3. Assure the development and specification of behaviorally stated, measurable student outcome objectives and the documentation of the educational experiences of each student (or group of students) with respect to the achievement of those objectives.
4. Assure that parental approval will be secured for the participation of the young person in the total evaluation and for the collection of student data with respect to age, grade level, socioeconomic level, ethnic group membership, and sex.
5. Assure that an adequate sample of young people will be included in the evaluation so that the results may be generalized and predicted for other comparable student populations given the same educational experiences.
6. Assure that the evaluation design will result in reasonable evidence that gains or improvements can be attributed to the educational and career experiences provided the young people through the project and not to some other experience encountered.
7. Assure that, where they exist in respect to a given student outcome, validated instruments will be used in measuring student gains.

Conecuh County selected the Appalachia Educational Laboratory (AEL) as the agency to do the independent evaluation of their program installation and operation.

AEL Research and Evaluation Capability

AEL has a capability for research and evaluation that is an integral part of the Laboratory's R & D work. This expertise has been successfully applied to the various projects of the Laboratory, and the competency and experience of professional staff who work almost exclusively in research and evaluation are available for small contract work to agencies in the Region.

Extensive experience of Research and Evaluation personnel widens the range of services they can perform. For example, R & E personnel have conducted an assessment of the current health education in West Virginia. The ten-week research project was performed under contract with the West Virginia Department of Education. It required a comprehensive health education case study of three selected high school sites, generally representative of urban and rural as well as large, medium, and small high schools. Representative samples of students, the school staff, and community persons were interviewed during two-day visits to each school site.

R & E personnel have also conducted a research study based on U. S. Census Bureau information concerning families of preschool children located in the Appalachian sections of 13 states. The study was initiated by the Laboratory during one stage of producing the Home-Oriented Preschool Education (HOPE) materials. Another activity which grew out of a staff interest was the evaluation of an Early Warning Signs brochure, developed by AEL, as part of a subcontract to the Consortium of State Departments of Education in the Appalachian Region.

An evaluation of the Mid-Atlantic Interstate Shared Accountability Project is an example of AEL region-wide involvement. The Mid-Atlantic Consortium on Accountability is a multi-state planning agency with representation from state-level education agencies serving the District of Columbia, Kentucky, Maryland, North Carolina, Virginia and West Virginia. AEL's evaluation sought to determine the workability and feasibility of the shared accountability model. AEL was awarded a contract for the project's 1976-77 evaluation activities.

An evaluation of a local program, the Fort Gay-Thompson, W. Va., Urban/Rural Project, was completed this past year. The R & E Division has contracted for a third party evaluation of an Educational Development Project in Region IX (EDRIX), Morehead, Kentucky, as well as another EBCE Part D site.

AEL's Research and Evaluation Division serves a valuable function within the Laboratory. Its small-contract work for various other agencies is providing a means whereby the Laboratory, through its staff expertise, can become meaningfully involved in education at all levels and in various geographical areas.

Since its inception, AEL has amassed an institutional capacity in terms of people, equipment and history that is considerable. AEL is now sufficiently mature as an R & D organization to offer its expertise to state and local educational agencies. We have identified staff's areas of specific competence, and this information has been disseminated to state education agencies through personal visits by AEL staff and Board members. This new dimension of service has made educational research and evaluation

available to state and local education agencies. AEL staff has multiple expertise allowing us to perform capably in several R & D areas; two of these areas include Experiential Education and Research and Evaluation. Dr. Joe E. Shively, Director of Evaluation for the Experiential Education Division had the major responsibility for carrying out the third-party EBCE evaluation tasks. (See Appendix A for vita.) He was assisted in the evaluation activities by several Evaluation Assistants.

Evaluation and Data Analysis Plan

As a research and development program, EBCE had naturally placed considerable emphasis on evaluation -- trying to ascertain what impact the program had on the students who had participated. Both students and their parents and participating employers have been assessed in an effort to achieve a comprehensive, detailed and valid evaluation of the program. So too does USOE place considerable emphasis on evaluation. In order that the Conecuh County EBCE program be properly evaluated an evaluation and data analysis plan was developed.

The EBCE evaluation plan delineates procedures pertinent to developing valid and reliable evidence regarding product effectiveness for purposes of decision-making. The evaluation and data analysis plan presents the specific techniques and analytical procedures to be used in collectively treating the data collected during the implementation and operation of the EBCE program in Conecuh County.

Design

In order that a rigorous and valid evaluation be conducted, it was necessary to establish a non-EBCE group whereby appropriate comparisons

may be made. This non-EBCE comparison group was comprised of a sample of students who participated in the recruitment process but were not selected for matriculation into the program. The establishment of this non-EBCE group provided for eventual data analysis utilizing a nonequivalent control group design (Campbell and Stanley, 1963).

Goals and Objectives

The major goal of Conecuh County was to successfully implement an EBCE program into its curricula offerings. Associated with this major goal were several outcomes objectives associated with the primary impact group (students) and with the secondary impact groups (experience site personnel and parents).

Primary Hypotheses. The following major hypotheses were tested under experimental design conditions. All dealt with one semester's effects of the EBCE Program:

1. Experimental students (E1) will do as well in basic academic skills as comparison students (C1) in a traditional high school.
2. Experimental students (E1) will acquire significantly greater ($p < .05$) mastery in career knowledge than comparison students (C1) in a traditional high school..
3. Experimental students (E1) will acquire significantly greater ($p < .05$) career maturity than comparison students (C1) in a traditional high school.
4. Experimental students (E1) will develop significantly more positive ($p < .05$) attitudes toward learning environments than comparison students (C1) in a traditional high school.

5. Experimental students (E1) will develop significantly less ($p < .05$) sex-role stereotyping than comparison students (C1) in a traditional high school.

Instrumentation. The following instruments were utilized in pre/post testing each of the above stated hypotheses:

1. The Comprehensive Tests of Basic Skills (CTBS) provided an assessment of the extent to which the students developed basic academic skills. Two subtests (at Level 4, Form S) were utilized. They were the Reading Comprehension and Mathematics Concepts and Applications subtests. (Appendix B)
2. The second subtest of the Student Attitude Survey (SAS) deals with career knowledge and planning and was used to test the related hypothesis. (Appendix C)
3. The New Mexico Career Oriented Activities Checklist (NMCOAC) was used to measure students' career maturity and involvement in the career choice process. (Appendix D)
4. The Assessment of Student Attitudes (ASA) is the first subtest of the Student Attitude Survey (SAS) and was used to provide an assessment of student attitudes toward various aspects of schooling and the total learning environment.
5. The Socialization Profile (SP) was utilized to measure the degree to which sex-role stereotyping occurred. (Appendix E)

The Student Information Questionnaire (SIQ) was utilized to obtain basic demographic data about the students and was administered only on a pre-test basis. (Appendix F)

Testing Schedule. Based on the experimental design being utilized in this study, both EBCE and comparison students were pretested at the beginning of the term. Students exiting the program at the end of the term were posttested.

Data Analyses. Based on the experimental design being utilized, appropriate statistical analyses (Winer, 1962) were selected and conducted to test the main effects associated with each hypothesis. These analyses are listed below and are numerically keyed to hypotheses.

1. Descriptive statistics of E1 and C1 pretest and posttest CTBS scores.

   Analysis of variance on pretest CTBS scores of E1 and C1 groups.

   Analysis of variance (or covariance) on posttest CTBS scores of E1 and C1 groups.

2. Descriptive statistics of E1 and C1 pretest and posttest scores on SAS Part II.

   Analysis of variance on pretest SAS Part II scores of E1 and C1 groups.

   Analysis of variance (or covariance) on posttest SAS Part II scores on E1 and C1 groups.

3. Descriptive statistics of E1 and C1 pretest and posttest scores on the NMCOAC.

   Analysis of variance on pretest NMCOAC scores of E1 and C1 groups.

   Analysis of variance (or covariance) on posttest NMCOAC scores of E1 and C1 groups.

4. Descriptive statistics of E1 and C1 SAS Part I pretest and posttest ratings.

   Analysis of variance on pretest SAS Part I ratings of E1 and C1 groups.

   Analysis of variance (or covariance) on posttest SAS Part I scores of E1 and C1 groups.

5. Descriptive statistics of E1 and C1 SP pretest and posttest ratings.

   Analysis of variance on pretest SP ratings of E1 and C1 groups.

   Analysis of variance (or covariance) on posttest SP ratings of E1 and C1 students.

Secondary Hypotheses. Parents and employers were also administered appropriate assessment instruments to determine their attitudes toward the EBCE program. The following hypotheses associated with these topic areas were investigated:

6. Parents of EBCE students will have positive attitudes toward the EBCE Program.

7. Various levels of employers (i.e., community instructors, certifiers) will have positive attitudes toward the EBCE Program.

Instrumentation. The following instruments were used to investigate each of the above hypothesis.

6. The Employer Questionnaire was utilized to assess experience site personnel's attitudes toward the EBCE program as it was implemented at their site. (Appendix G)

7. The Parent Opinion Survey was utilized to assess parents' attitudes toward the EBCE Program. (Appendix H)

Testing Schedule. Employers and parents received their questionnaire only at the end of the testing period (since these assessments were directed at implementation characteristics, pretesting would be based on an empty set of experiences). These questionnaires/surveys were mailed to the parents and employers with instructions for completing the forms and returning them in stamped self-addressed envelopes.

Data Analyses. Statistical analyses were also selected and conducted to test these secondary hypotheses. These analyses are listed below and again are numerically keyed to hypotheses.

6. Descriptive statistics of employer questionnaire.

7. Descriptive statistics of parent opinion survey.

Additional Procedures

Information not related to respondent group outcomes was also collected and analyzed. Input on process objectives and other aspects of program implementation and operation was obtained from/provided to EBCE staff on an informal basis throughout the year. End of year EBCE staff perceptions were also obtained using the EBCE Staff Questionnaire. (Appendix I)

RESULTS

As implementation occurred at the site, Conecuh County became involved in a system of mutual adaptations -- a process of modification of the NWREL/EBCE model and of the implementation site such that a successful implementation could occur. Thus, student demographic data will be presented first, followed by student outcome data; parent, employer, and EBCE staff perceptions/opinions will be presented next, with comments about implementation process data presented last.

Demographic Data

Although partial data were available on 23 EBCE students and 23 comparison students, complete data sets were available on only 23 EBCE and 15 comparison students. Table 1 presents the demographic data obtained on the SIQ from both the EBCE group and the comparison group of students.

Table 1

From Table 1 it can be seen that there were slightly more females than males enrolled in EBCE (52%) whereas about two-thirds (60%) of the comparison group were females. Over 56% of the EBCE students were white, and over 43% of the students were black. For the comparison students, however, 40% were white and 60% were black. While Conecuh County did not utilize sophomores in their programs, 43% of the EBCE students were seniors and 57% were juniors. For the comparison group 33% were seniors and 67% were juniors.

Table 1

Demographic Frequency (SIQ) of EBCE and Comparison Students

Variable	n = E 23	C 15	Variable	n = E 23	C 15
Sex			**Long-range Goals**		
Male	11	6	Clerical	1	1
Female	12	9	Craftsman	4	1
			Farmer	0	0
Ethnic Group			Homemaker	1	1
White	13	6	Laborer	1	1
Black	10	9	Manager	2	0
			Military	3	3
Grade			Operative	0	1
12th Grade	10	5	Professional	5	6
11th Grade	13	10	Proprietor	0	0
			Protective Service	0	1
Father's Education			Sales	0	0
Less than High School	8	9	Service	1	0
High School	8	3	Technical	2	0
More than High School	5	3	Other	0	0
Missing	2	0	Don't Know	2	0
			Missing	1	0
Mother's Education					
Less than High School	9	9	**Expectation one year later**		
High School	11	5	Working full-time	6	2
More than High School	2	1	Entering OJT	1	1
Missing	1	0	Military	2	5
			Homemaker	0	0
Number of Sibling Dropouts			Vocational School –	5	0
None	19	12	Academics - Jun./Comm. Coll.	0	0
One	2	1	Tech/Voc. - Jun./Comm. Coll.	2	1
Two or more	2	2	4-Year College/University	6	5
Missing	0	0	Working part-time	1	0
			Other	0	0
			Missing	0	1

Table 1 (Cont'd)

Demographic Frequency (SIQ) of EBCE and Comparison Students

Variable	E n = 23	C 15
Major field of study		
General	6	9
Voc. Ed.	8	2
College Prep.	9	3
Other	0	0
Missing	0	1
Father's Occupation		
Clerical	0	0
Craftsman	8	5
Farmer	1	2
Homemaker	0	0
Laborer	3	3
Manager	3	0
Military	1	0
Operative	0	2
Professional	0	1
Proprietor	1	0
Protective Service	0	0
Sales	0	0
Service	0	1
Technical	1	0
Missing	5	1

Variable	E n = 23	C 15
Mother's Occupation		
Clerical	1	1
Craftsman	1	1
Farmer	0	0
Homemaker	8	5
Laborer	0	1
Manager	1	0
Military	0	0
Operative	4	2
Professional	2	2
Proprietor	1	2
Protective Service	0	0
Sales	1	0
Service	1	1
Technical	0	0
Missing	3	0

Over 34% of the EBCE students' fathers had less than a high school education, 35% had a high school education, and nearly 22% had some post-secondary education. No data were available on two fathers. For comparison students, 60% of the fathers had less than a high school education, 20% had a high school education, and 20% had some post-secondary education. For the mothers of EBCE students, over 39% had less than a high school education, nearly 48% had a high school education, and nearly 9% had some post-secondary education. No data were available on one mother. For the mothers of comparison students, 60% had less than a high school education, 33% had a high school education, and nearly 7% had some post-secondary education. Thus the parental educational levels of EBCE students and comparison students were relatively similar.

In terms of the number of siblings who dropped out of school, 83% of the EBCE students indicated that they had had no siblings who dropped out. For the comparison students 80% also indicated no siblings who had dropped out of school.

In response to the SIQ question on the long-range goals, 30% of the EBCE students indicated MANAGERIAL or PROFESSIONAL goals, 9% indicated that they didn't know their long-range goals, over 26% indicated CRAFTSMAN or TECHNICAL long-range goals, and 13% indicated MILITARY goals. Of the comparison students 40% indicated MANAGERIAL or PROFESSIONAL goals and 20% indicated MILITARY long-range goals. Not one of the EBCE or comparison students indicated a long-range goal of being a farmer or farm-manager.

Over 26% of the EBCE students expected to be attending a four-year college or university one year after completing high school, over 26% expected to be working full-time, and over 30% expected to be attending

or taking courses at a vocational, technical, trade, or business school or at a junior college. Over 33% of the comparison students expected to be attending a four-year college or university one year after completing high school, over 33% expected to be involved with the military, but only 13% expected to be working full-time. Although over one-half of the respondents were female, not one of the EBCE or comparison students indicated that they expected to be a homemaker or housewife one year after completing high school.

Over 26% of the EBCE students were enrolled in a general curriculum field of study, over 39% were enrolled in a college preparatory curriculum, and nearly 35% were enrolled in a vocational education curriculum. Of the comparison students 60% were enrolled in a general curriculum, 20% were enrolled in a college preparatory curriculum, and over 13% were enrolled in a vocational education curriculum.

Over 17% of the EBCE students' fathers were employed in professional administrative, or proprietary positions; and over 47% were employed as laborers, craftsmen, or operatives; nearly 22% of the data on fathers' occupations was missing. Only 7% of the comparison students' fathers were employed in professional, administrative, or proprietary positions; over 66% were employed as laborers, craftsmen, or operatives; and over 13% were engaged in farming. Thus fathers of EBCE and comparison students were primarily engaged as laborers, craftsmen, or operatives.

Nearly 35% of the mothers of EBCE students were homemakers or housewifes; over 17% were employed in professional, administrative or proprietary positions; and over 21% were employed as craftsmen or operatives. Over 33% of the mothers of comparison students were homemakers or housewives; nearly

27% were employed in professional or proprietary positions; and nearly 27% were employed as craftsmen, laborers, or operatives. Thus mothers of EBCE and comparison students were similarly represented in the various occupational groupings.

In summary, demographic data indicate that EBCE and comparison students were very similar as a group in terms of sex, race, and grade level. While parents' education levels and students' fields of study showed the greatest differences, parents' occupations, number of siblings who dropped out of school, long-range goals, and post-graduate expectancies were similar.

Outcome Data

The impact and effect of the EBCE program on various respondent groups was determined by testing a number of hypotheses. The format of this section is to state each hypothesis, give the source of the data collected to test the hypothesis and the procedure used for hypothesis testing, a description of the findings, and a summary. While pertinent data is presented within each section, complete analysis of variance (ANOVA) and analysis of covariance (ANCOVA) tables are presented in Appendix J.

Hypothesis 1

The first hypothesis associated with student outcome data related to basic skills performance: EBCE students (E) will do as well in basic academic skills as comparison students (C) in a traditional high school. Data used to evaluate the first hypothesis were students' scores on the Reading Comprehension (RC), Mathematics Concepts (MC), and Mathematics Applications (MA) subtests of the CTBS battery. An analysis of variance

(ANOVA) procedure was utilized to test the hypothesis about basic academic skills.

Table 2 presents the statistics on the CTBS outcomes.

Table 2

Data presented in Table 2 indicate that there were no significant differences between the two groups on any of the three subtests -- either at the pretest period or at the posttest period. Based on the data presented in Table 2 and subsequent statistical analyses, the first hypothesis was not rejected. The EBCE students did do as well in basic academic skills as comparison students enrolled in a traditional high school.

Figure 1 graphically displays the test results.

Figure 1

From Figure 1 it can be visually seen that EBCE students showed positive growth in reading comprehension and math concepts, whereas comparison students showed positive growth on all three basic skills subtests.

Hypothesis 2

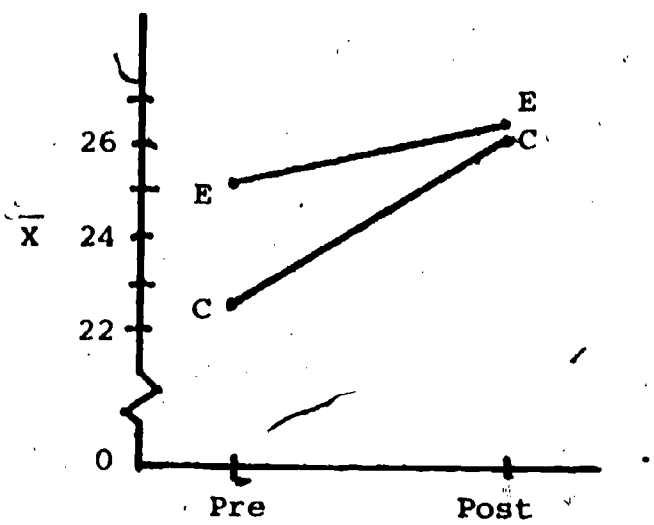
The second student outcome hypothesis related to acquisition of career knowledge: EBCE students will acquire significantly greater mastery in career knowledge than comparison students in a traditional high school. Data used to test this hypothesis were students' scores on the second subtest of the SAS. This second subtest not only provided a composite score (attitude toward Work) but also two partial scores:

Table 2

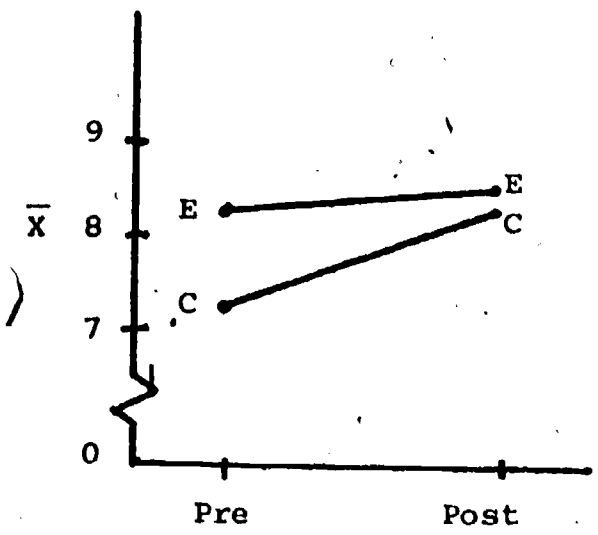
CTBS DATA

	EBCE - pre	Comp - pre	EBCE - post	Comp - post
Reading Comprehension (45 items)				
n	22	15	22	15
$\bar{X}$	25.3	22.9	26.6	26.2
s	10.1	10.1	9.4	8.9
range	10-40	5-38	11-41	10-39
F	0.51		0.01	
p	nsd		nsd	
Mathematics Concepts (30 items)				
n	22	15	22	15
$\bar{X}$	8.2	7.3	8.5	8.3
s	2.0	2.1	2.4	2.3
range	3-11	4-12	4-14	5-13
F	1.99		0.08	
p	nsd		nsd	
Mathematics Applications (20 items)				
n	22	15	22	15
$\bar{X}$	4.8	4.7	4.3	4.9
s	2.1	2.2	1.9	2.2
range	1-8	1-10	0-8	1-8
F	0.50		0.82	
p	nsd		nsd	

Reading Comprehension



Math Concepts



Math Applications

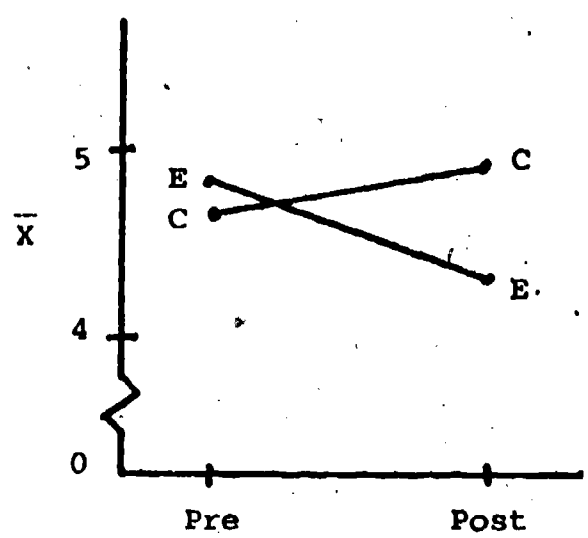


Figure 1

CTBS Data

career knowledge and career planning. An analysis of variance (ANOVA) procedure was utilized to test the second hypothesis.

Table 3 presents the statistics on the SAS - Part 2 outcomes.

Table 3

Statistics presented in Table 3 indicate that the EBCE and comparison students had equivalent scores on both subsections and the composite at the pretest period. Subsequently, EBCE students scored significantly higher on the career knowledge portion and the composite total. Thus based on the data presented in Table 3 and on subsequent statistical analyses, the second hypothesis was not rejected. The EBCE students did acquire significantly greater mastery in career knowledge than did comparison students. This positive result was also reflected in the composite Work score.

Figure 2 graphically displays the test results from the SAS - Part 2.

Figure 2

From Figure 2 it can visually be seen that EBCE students showed positive growth in career knowledge, career planning, and composite attitude towards work; whereas, comparison students showed growth only in career knowledge and the composite attitude towards work.

Hypothesis 3

The third hypothesis associated with student outcome data related to career maturity: EBCE students will acquire significantly greater career

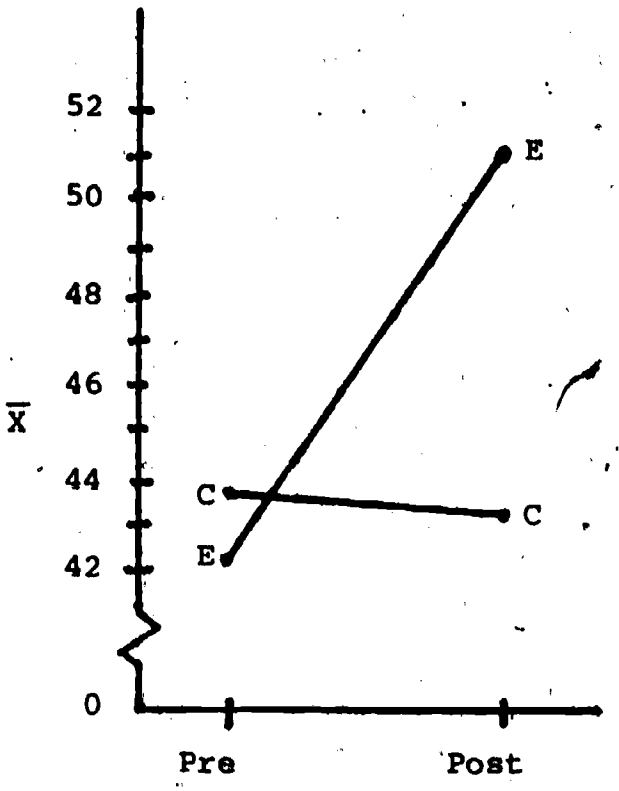
Table 3

SAS - Part 2 Data

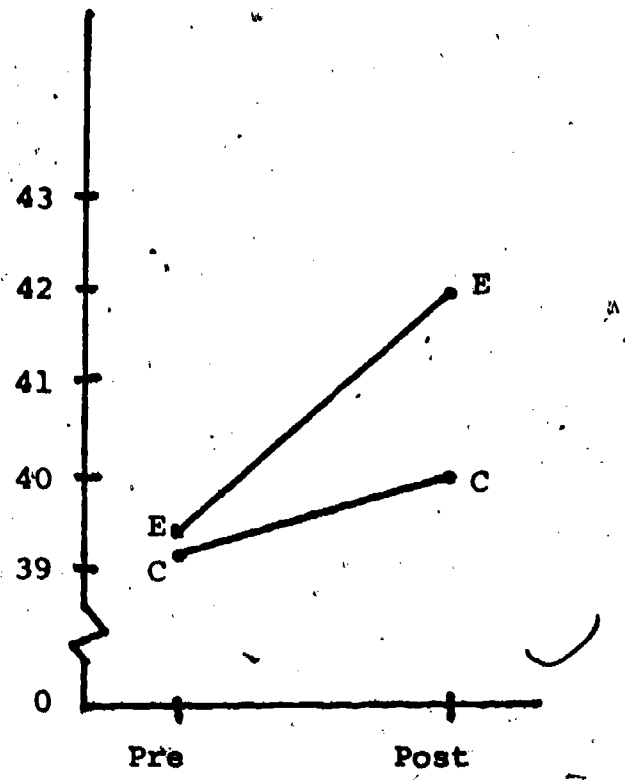
	EBCE - pre	Comp - pre	EBCE - post	Comp - post
Career Knowledge (12-60 points)				
n	23	15	23	15
$\bar{X}$	42.3	43.9	51.1	43.3
s	7.6	6.5	6.8	6.6
range	22-57	32-55	37-60	30-53
F	0.45		12.08*	
p	nsd		< .01	
Career Planning (10-50 points)				
n	23	15	23	15
$\bar{X}$	39.3	39.1	42.0	40.0
s	6.1	4.0	4.4	4.7
range	23-49	33-46	31-49	31-46
F	0.01		1.87	
p	nsd		nsd	
Work (22-110 points)				
n	23	15	23	15
$\bar{X}$	81.5	82.9	93.1	83.3
s	12.4	9.9	10.0	9.9
range	47-106	66-99	71-107	61-97
F	0.14		8.84*	
p	nsd		< .01	

*$F_{.99}(1,36) = 7.41$

Career Knowledge



Career Planning



Composite - Work

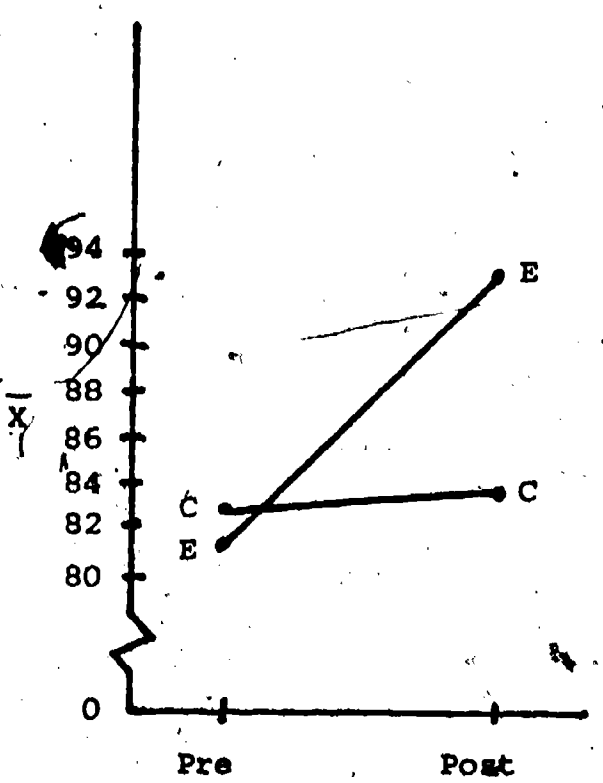


Figure 2

SAS - Part 2 Data

maturity than comparison students in a traditional high school. Data used to test this hypothesis were students' scores on the NMCOAC. An analysis of variance (ANOVA) procedure was utilized to test the third hypothesis.

Table 4 presents the statistics on the NMCOAC outcomes.

Table 4

NMCOAC Data

(0 - 69 points)

	EBCE pre	Comp pre	EBCE post	Comp post
n	21	15	21	15
$\bar{X}$	22.6	20.9	36.2	22.3
s	6.1	6.1	4.4	7.2
range	12-35	12-32	28-42	5-33
F	0.63		52.28*	
p	nsd		.0001	

*$F_{.9999}(1,34) = 19.52$

Statistics presented in Table 4 indicate that the EBCE and comparison students had equivalent scores on the pretest. However, EBCE students had significantly more positive scores on the posttest. Thus, based on this data and the statistical analyses, the third hypothesis was not rejected. The EBCE students did acquire significantly greater career maturity than comparison students.

Figure 3 graphically displays the test results from the NMCOAC.

Figure 3

From Figure 3 it can visually be seen that EBCE students showed a tremendous positive growth in career maturity. Comparison students, however, displayed only a slight growth in career maturity.

Hypothesis 4

The fourth student outcome hypothesis related to attitudes toward learning environments: EBCE students will develop significantly more positive attitudes toward learning environments than comparison students in a traditional high school. Data used to test this hypothesis were students' scores on Part 1 of the SAS. Part 1 of the SAS yields 5 different scores: attitude toward education in general, school curriculum, school resources, school counseling, and overall learning environment (composite). Analysis of variance (ANOVA) and covariance (ANCOVA) were used to test the fourth hypothesis.

Table 5 presents the statistics on the five outcomes of Part 1 of the SAS.

Table 5

Data and statistics presented in Table 5 indicated that an analysis of covariance procedure was necessary with respect to education in general, school resources, and learning environment (composite) scores; i.e., since mean scores on the pretests (E vs C) were significantly different,

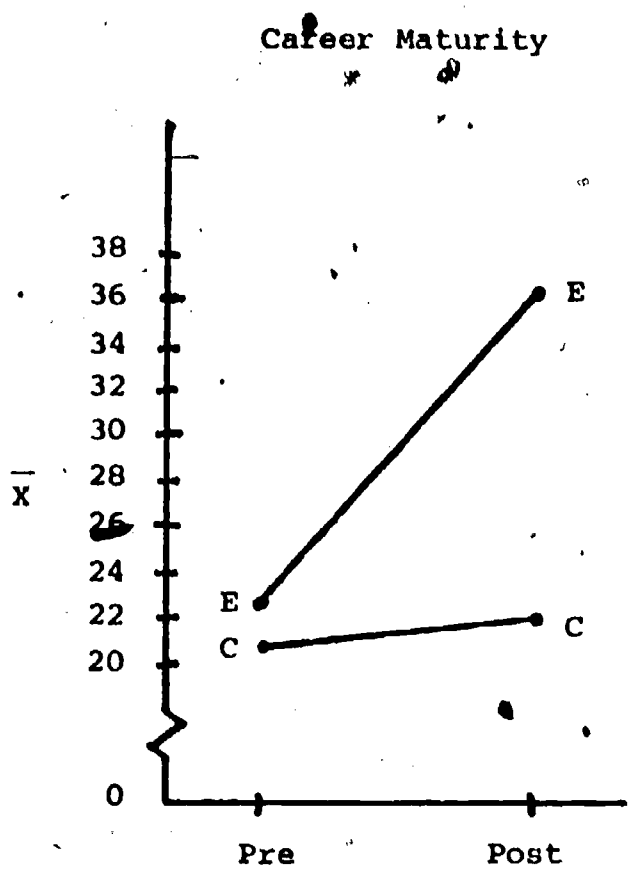


Figure 3

NMCOAC Data

Table 5

SAS - Part 1 Data

	EBCE - pre	Comp - pre	EBCE - post	Comp - post	Adjusted E-post	Adjusted C-post
Part a - Education in General (7-35 points)						
n	23	15	23	15		
$\bar{X}$	21.2	26.3	28.0	23.9	29.0	22.9
s	4.9	5.4	5.1	5.4		
range	13-29	17-34	17-35	15-31		
F	8.94*		5.19**		10.69***	
p	<.01		<.05		<.01	
Part b - School Curriculum (5-25 points)						
n	23	15	23	15		
$\bar{X}$	16.4	18.7	20.6	17.9		
s	3.9	3.2	3.1	4.0		
range	9-23	12-24	11-25	12-24		
F	3.84		5.38**			
p	nsd		<.05			
Part c - School Resources (9-45 points)						
n	23	15	23	15		
$\bar{X}$	25.0	29.7	34.7	28.6	36.0	27.4
s	6.1	7.6	8.1	7.2		
range	15-36	18-41	16-45	18-40		
F	4,59**		5.59**		12.01***	
p	<.05		<.05		<.01	

Table 5 (cont'd)

Part d - School Counseling (5-25 points)

	EBCE - pre	Comp - pre	EBCE - post	Comp - post	Adjusted E-post	Adjusted C-post
n	23	15	23	15		
$\bar{X}$	11.6	13.0	17.1	12.9		
s	4.3	4.0	5.4	5.1		
range	6-22	8-22	7-25	5-20		
F		1.00		5.77**		
p		nsd		.05		
Composite - Total Learning Environment (26-130 points)						
n	23	15	23	15		
$\bar{X}$	74.2	87.7	100.4	83.4	104.1	79.7
s	16.8	17.8	20.3	20.1		
range	47-101	61-115	59-130	52-115		
F		5.67**		6.42**		14.39****
p		<.05		<.05		<.001

*$F_{.99}(1,36) = 7.41$

**$F_{.95}(1,36) = 4.12$

***$F_{.99}(1,35) = 7.44$

****$F_{.999}(1,35) = 12.95$

statistical adjustment was needed. On all five sets of pretest data the comparison students obtained higher scores than did the EBCE students. However, on all five sets of posttest data (unadjusted or adjusted) the EBCE students had significantly higher scores than did the comparison students.

Figure 4 graphically displays the test results for the 5 subscales of Part 1 of the SAS.

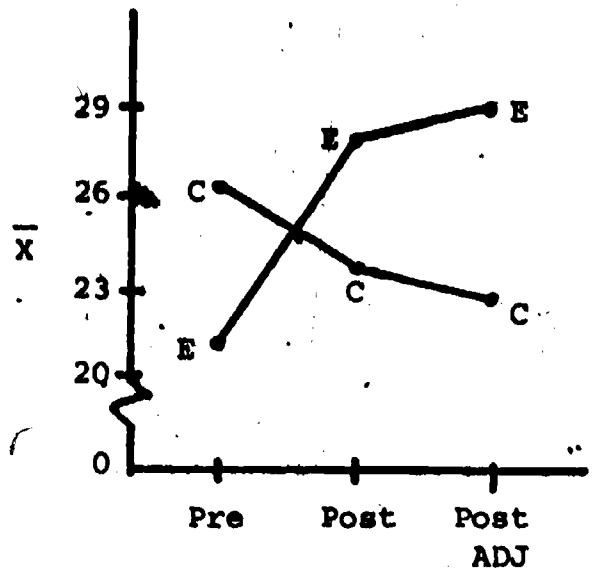
Figure 4

From Figure 4 it can visually be seen that EBCE students made great positive gains on all 5 subparts, whereas comparison students' scores declined on all 5 subparts. Statistical adjustments on subparts 1, 3 and 5 (education in general, school resources, and total learning environment) further separated the posttest means. Thus based on t[illegible] data presented in Table 5 and visually displayed in Figure 4, the fourth hypothesis was not rejected. EBCE students did develop significantly more positive attitudes toward learning environments than did the comparison students.

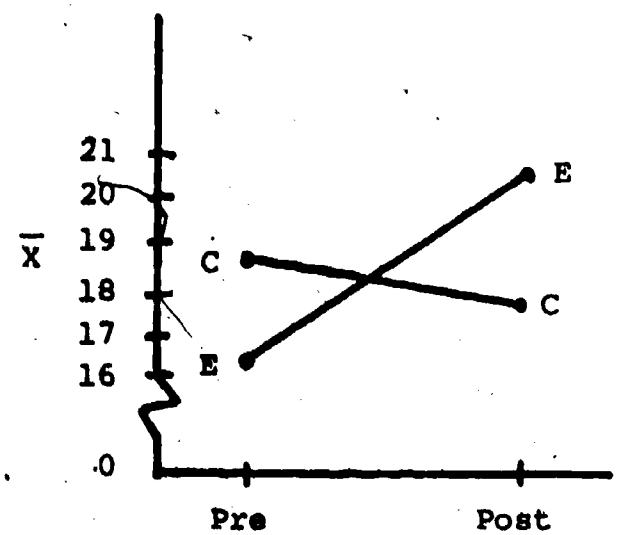
Hypothesis 5

The fifth hypothesis associated with student outcome data related to sex-role stereotyping: EBCE students (E) will develop significantly less sex-role stereotyping than comparison students (C) in a traditional high school. Data used to evaluate the fifth hypothesis were students' scores on the Socialization Profile (SP). Analysis of variance (ANOVA) and covariance (ANCOVA) procedures were utilized to test the fifth hypothesis. Correlated t-tests were also used to test gains/losses.

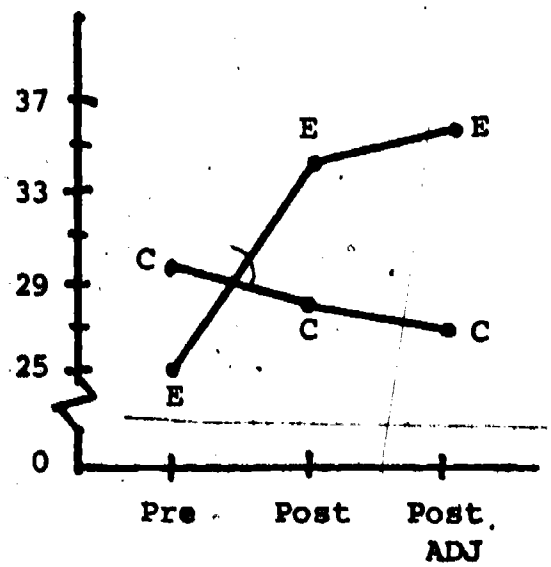
Education - General



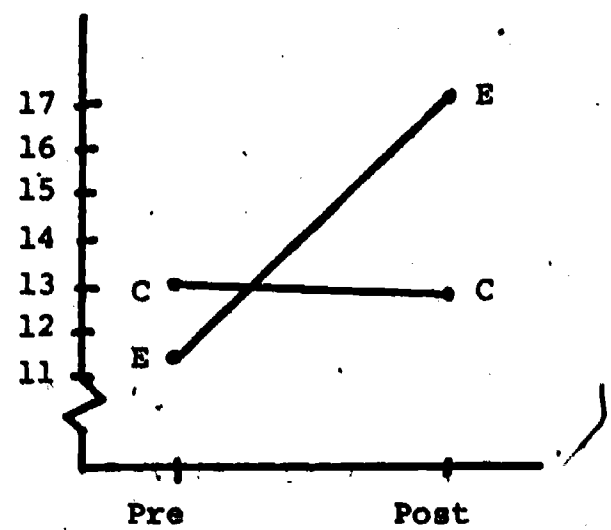
School Curriculum



School Resources



School Counseling



Learning Environment

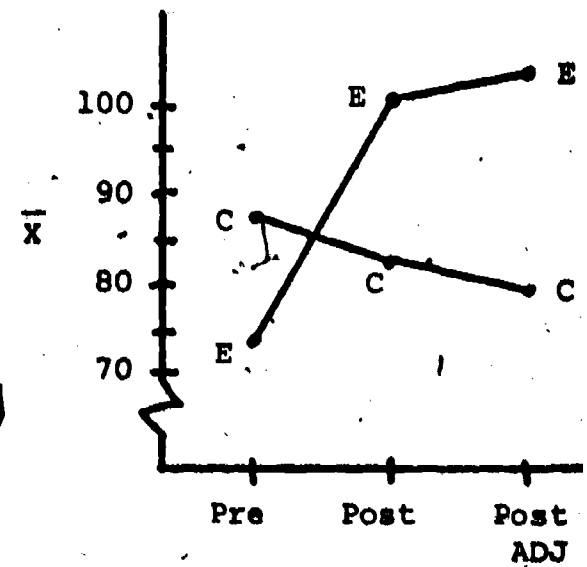


Figure 4

SAS - Part 1 Data

Table 6 presents the data and statistics on the SP outcomes.

Table 6

The information presented in Table 6 indicates that the two groups were initially significantly different. However, when posttest scores were analyzed (using ANOVA) there was no difference. Since the initial difference existed, the ANCOVA procedures were instituted -- again, no significant difference between the two groups was noted on the posttests. Use of the correlated t-test (Winer, 1962) was also instituted to test additionally generated hypotheses about gains/losses from pretest to posttest. Table 6 also presents those results. Results indicate that EBCE students exhibited less (but not significantly) sex-role stereotyping during the period that they were enrolled in EBCE. During the same period of time, however, the comparison students exhibited significantly greater sex-role stereotyping.

Figure 5 graphically displays the results from the SP scale.

Figure 5

From Figure 5 it can be seen that for the partial score related to stereotyping males, EBCE students exhibited progressively less and the comparison students progressively more over the time period. It can also be seen that EBCE and comparison students exhibited slightly more female stereotyping over the time period. However, when one looks at the combined scores (sex-role stereotyping), it can be seen that EBCE students are stereotyping progressively less whereas comparison students are sex-role stereotyping

Table 6

SP Data

(720 - 5040 points)

	EBCE - pre	Comp - pre	EBCE - post	Comp - post	Adj E-post	Adj C-post
n	22	14	22	14		
$\bar{X}$	3384.7	3151.1	3338.3	3289.8	3256.8	3371.8
s	291.7	242.8	302.7	296.3		
range	2957-3900	2778-3494	2878-3985	2785-3694		
F	6.22*		0.22		1.72	
p	< .05		nsd		nsd	

Gains/Losses: Means

	t	p
EBCE: Pre-Post	-0.77	nsd
Comp: Pre-Post	2.99**	<.01

*$F_{.95}(1,34) = 4.13$

**$t_{.99}(13) = 2.65$

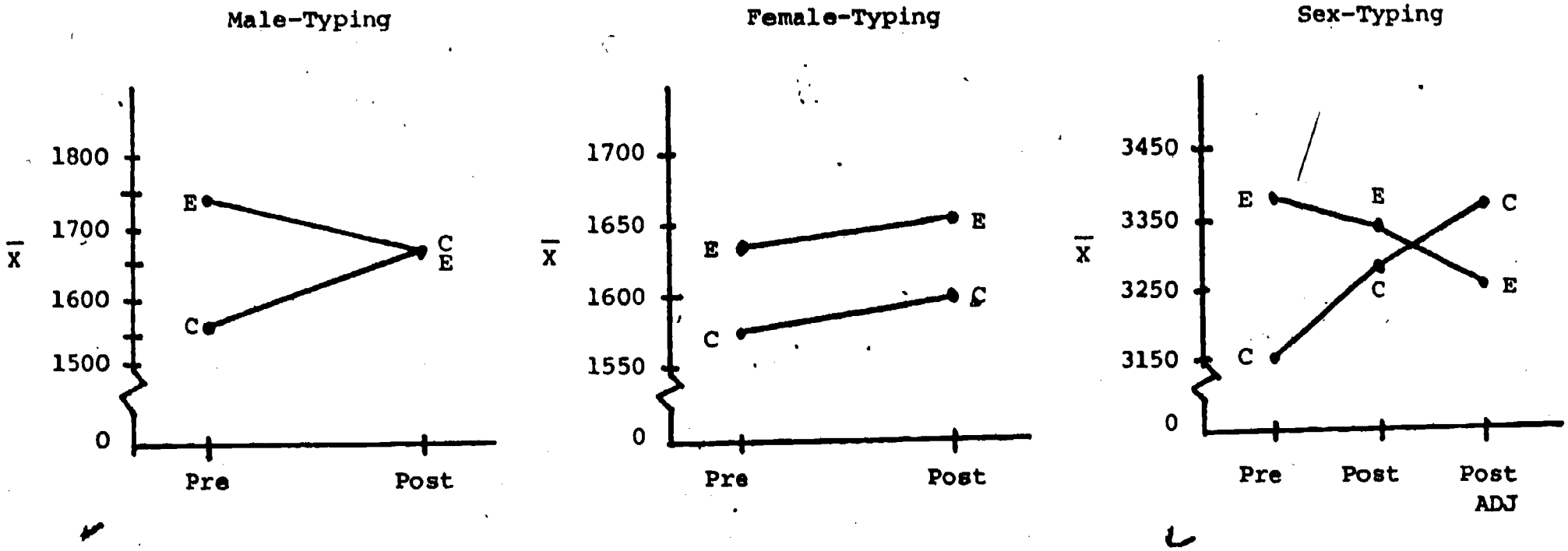


Figure 5
SP Data

progressively more. Although the fifth must be rejected -- EBCE students did not develop significantly less sex-role stereotyping than comparison students -- the results do favor the EBCE program operation.

Additional Student Hypotheses

Although not part of the overall evaluation plan, two additional research hypotheses were developed and student data were collected to test them. The first additional hypothesis related to attitude towards self: EBCE students will develop significantly more positive attitudes toward self than will comparison students in a traditional high school. The second additional hypothesis related to attitude of self towards others: EBCE students will develop significantly more positive attitudes toward others than will comparison students. Data used to test the first additional hypothesis were students' scores on Part 3 of the SAS and data used to test the second additional hypothesis were students' scores on Part 4 of the SAS. Analysis of variance (ANOVA) procedures were utilized to test each of the additional hypotheses.

Table 7 presents the statistics on the student outcomes on Part 3 and Part 4 of the SAS.

Table 7

Data presented in Table 7 show that the EBCE and comparison students had equivalent pretest scores on both Parts 3 and 4 of the SAS. However, EBCE students had significantly more positive posttest scores than comparison students on Part 3 (self) of the SAS. ANOVA results on posttest scores of Part 4 (others) of the SAS indicated no significant differences between the two groups of students.

Table 7

SAS - Parts 3 and 4 Data

(Self and Others)

SAS Part 3 - Self (19-95 points)

	EBCE - pre	Comp - pre	EBCE - post	Comp - post
n	23	15	23	15
$\bar{X}$	69.1	70.9	75.0	71.5
s	12.0	14.4	12.4	12.5
range	38-90	48-95	45-99	52-95
F	0.18		4.74*	
p	nsd		<.05	

SAS Part 4 - Other (13-65 points)

n	23	15	23	15
$\bar{X}$	49.8	49.3	50.5	48.8
s	7.0	8.3	7.8	6.7
range	39-60	36-61	31-64	37-65
F	0.04		0.47	
p	nsd		nsd	

*$F_{.95}(1,36) = 4.12$

Figure 6 graphically displays the test results from Part 3 (self) and Part 4 (other) of the SAS.

Figure 6

From Figure 6 it can be seen that EBCE students showed a greater rate of positive growth in attitude towards self than did the comparison students. Although the EBCE students showed a slight positive growth in attitude towards others and comparison students showed a slight decline, the combination of growth and decline was not sufficient to precipitate a significant posttest difference between the two groups.

Thus based on the data in Table 7 and Figure 6, the first additional hypothesis was not rejected but the second additional hypothesis was rejected. EBCE students did develop significantly more positive attitudes toward self than did comparison students; however, EBCE students did not develop significantly more positive attitudes toward others.

Parent Data

Although students are the main respondent group impacted by the program, the parents of EBCE students also have an interest in the program. Their cooperation and support are essential for continued program operation.

Hypothesis 6

The sixth hypothesis stated that parents of EBCE students would have positive attitudes toward the EBCE program. The data used to test this hypothesis were from the results of a Parent Opinion Survey which was mailed out to the parents of all 23 students in May, 1977. Responses from 13 parents were received and tabulated.

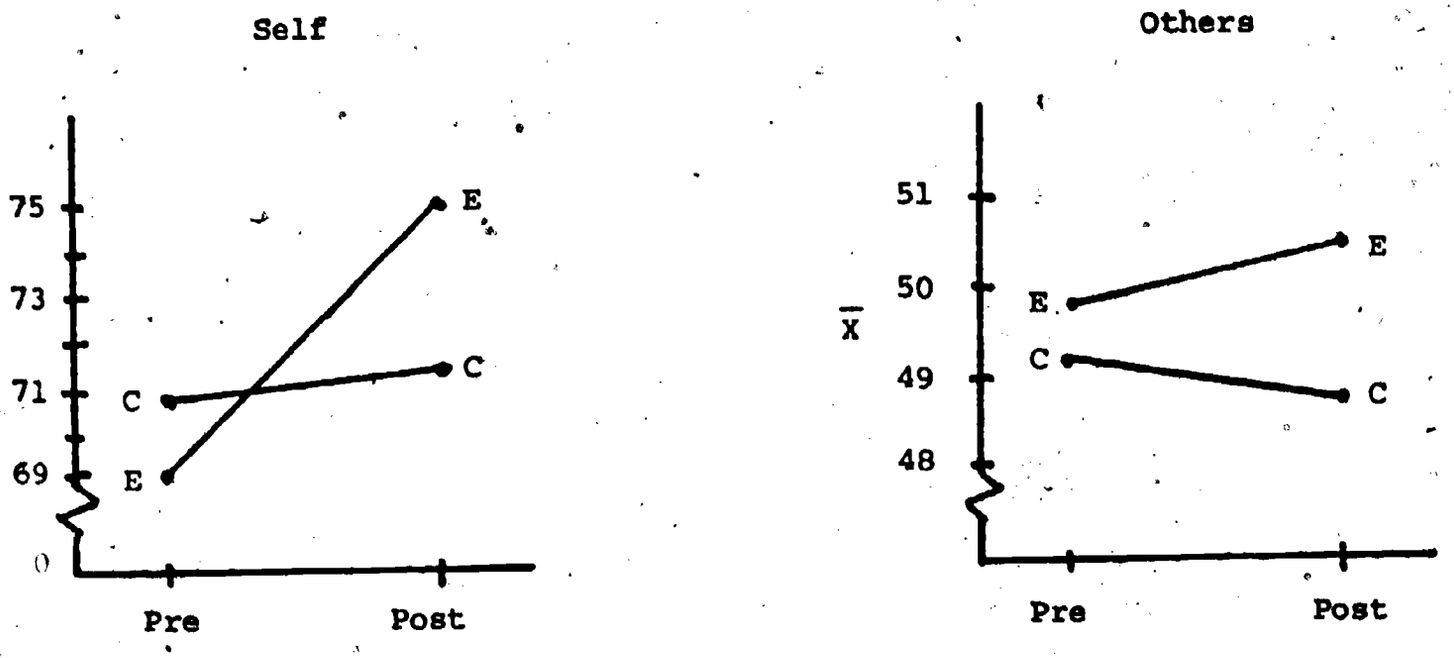


Figure 6

SAS Parts 3 and 4 Data

Results

Most parents who responded were very positive towards all aspects of the EBCE program. All parents were enthusiastic about the amount of opportunity the career education program provided their sons and daughters for learning about occupations. Over sixty-one percent (61.5%) of the parents felt that EBCE offered their children more opportunity for general learning; all parents (100%) rated the approaches to learning used in the EBCE program as very good or excellent.

Almost eighty-five percent of the respondents (84.6%) thought that their son or daughter liked the EBCE program much better than past school experiences and indicated that they would allow their child to participate in EBCE if they had this choice to make again. Parents felt the greatest strengths of the EBCE program were:

1. Helped students to plan and reach goals after graduation (16%).
2. Helped students learn to get along in the business world (16%).
3. Gave students more opportunities (12%).
4. Gave students more freedom (8%).
5. Helped students to make important decisions (8%).
6. Increased student/teacher relationships (8%).
7. Helped students to develop good attitudes and morale (8%).
8. Had a good guidance and counseling program (4%).
9. Helped students identify interests (4%).
10. Taught students about different careers (4%).
11. Helped students develop more interest in their work (4%).

12. Helped students to get along better with their fellow man (4%).

13. Will keep students from moving away after graduation (4%).

About half (50.1%) of the parents felt that the program had no weaknesses whatsoever. Those parents who did note any weakness stated that the program:

1. Needed better counseling (21.4%).
2. Needed more communication between staff, parent and companies (14.3%).
3. Needed to be larger (14.3%).

Almost eighty-five percent (84.6%) of the respondents thought that the EBCE program had had a good impact on helping their children to formulate career plans. All the parents (100%) thought that their sons and daughters were much more motivated to learn in the EBCE program than they were in traditional schools. Parents also mentioned that they had noticed positive changes in their sons or daughters that might be attributable to participation in the EBCE program.

Table 8

Only two parents mentioned that they had noted any negative changes in their children that might have resulted from participation in the EBCE program. One parent believed that their child was not as interested in the home high school, and the other parent noted that their child was still not being motivated to do homework.

Almost seventy-seven percent of the parents (76.9%) believed that their son or daughter talked with them "almost daily" about "what's going

Table 8

Positive Changes Attributable to EBCE

		Mention	Percent
1.	Students' grades have improved	3	14.3
2.	Student is more sure of him/herself	3	14.3
3.	Student has better attitude	3	14.3
4.	Student improved social skills	2	9.5
5.	Student knows what he wants to pursue after graduation	2	9.5
6.	Student is more independent	1	4.8
7.	Student is more responsible	1	4.8
8.	Student enjoys school more	1	4.8
9.	Student is more experienced in solving problems	1	4.8
10.	Student has more respect of others	1	4.8
11.	Student is better behaved	1	4.8
12.	Student is more aware of educational qualifications for various jobs	1	4.8
13.	Student is more aware of different income brackets for various jobs	1	4.8
		21	100.3*

*Due to rounding error, total is more than 100%.

on in the career education program;" thirty-eight percent (38.4%) stated that they had had frequent or very frequent contact with EBCE staff members. Over ninety-two percent of the respondents (92.5%) had attended at least one or two meetings during the school year where other parents of EBCE students were present. Almost all parents (84.6%) were definitely sure that they had received enough information about their children's progress in the EBCE program.

All parents contacted (100%) rated the general quality of the EBCE program staff as very good or excellent. Over two thirds (69.2%) rated their overall relationship with members of the EBCE staff as very good or excellent. (All but one of the remainder of the respondent group thought that it was satisfactory.) The enthusiasm of the EBCE staff was rated as very good or excellent by all but one parent (92.3%).

The majority of the parents (92.3%) indicated confidence in the occupational plans of their sons or daughters, where such plans existed; and only one parent stated that their son or daughter had made no firm occupational plans at the time of the survey. Over thirty-eight percent (38.4%) believed that their son or daughter would be attending college one year after graduating from high school; the same number thought their child would be working at this time. The remainder of the parents (23.2%) thought that one year after leaving high school their son or daughter would be going to a business or trade school.

Parents were also asked about where they had first heard about EBCE. Sources of initial information about EBCE most frequently mentioned by parents were their own children (61.5%) and the home high school (39.7%).

When parents were asked which kinds of students they thought would benefit most from a career education program, there seemed to be little consensus of opinion among the 11 parents who responded to the item. Table 9 categorizes and displays parents' replies to this question.

Table 9

Kinds of Students Who Benefit Most From EBCE

		Mention	Percent
1.	Those that are willing to work and study	3	27.3
2.	All students	2	18.2
3.	Any student who is having trouble deciding what he/she wants to be	2	18.2
4.	Those who are sure of their future	1	9.1
5.	A shy middle-class student	1	9.1
6.	Students who don't like to study	1	9.1
7.	Students who are determined to accomplish their goals	1	9.1
		11	100.1%*

*Due to rounding error, total is more than 100%.

Based on the data obtained from parents on the Parent Opinion Survey, hypothesis 6 was not rejected. The majority of parents who responded to the questionnaire did exhibit positive attitudes toward the EBCE program.

Employer Data

One of the major groups necessary for operation of an EBCE program is the employers at the experience sites. They serve as the instructors in the

community sites and provide input to students and serve as resources for experiential learning activities.

Hypothesis 7

The seventh hypothesis stated that experience site resource persons and contact persons (hereafter designated as "employers") at various levels of their organization would have positive attitudes toward the EBCE program. The data used to test this hypothesis were gathered from the Employer Questionnaire which was mailed to employers by AEL in May of [redacted]. Thirty-three (33) experience sites were randomly selected to be surveyed from a list of more than 60 available experience sites for the FY'77 school year. The 37 employers at the experience sites received the questionnaire in the mail during the first week of May. Even though employers were requested to return them by May 17, questionnaires which were received before June 30 were included in the tabulation. Eleven experience site personnel returned completed questionnaires to AEL/EBCE.

Results

Most employers were positive toward the EBCE program. They complimented EBCE strengths and offered suggestions for program improvement. Over sixty-three percent (63.6%) of the employers believed that their organization would continue to participate in the EBCE program in coming years and thirty-six percent (36.3%) were unsure or didn't know of their organization's plans to continue participation in the EBCE program; none of the employers reported a definite no. Almost eighty-two percent (81.8%) of the employers rated the program from moderately effective to very effective.

More than seventy-two percent (72.7%) of the employers felt that the EBCE staff had provided them with the necessary information to direct students' activities, and that the EBCE program functioned as they had been initially led to believe.

Almost eighty-two percent (81.8%) of the employers believed that the EBCE students who had been placed with them were interested in their organization. Over ninety percent (90.9%) of the employers reported that the EBCE staff always informed them of the specific reasons for making particular placements. Employers indicated that students placed at their sites frequently spent time in actively performing site activities, researching site materials, talking with experience site personnel, and observing site activities.

Experience site personnel often rendered various supportive services to EBCE students. The following services were frequently or occasionally rendered to students by employers:

1. Talked about activities at the job site (90.8%);
2. Talked about job opportunities (81.7%);
3. Evaluated individual student assignments (72.6%);
4. Helped plan students' assignments (72.6%);
5. Supervised students performing job-related tasks (63.5%);
6. Assisted students in non-job related tasks (63.5%); and
7. Talked about students' personal problems (54.4%).

(For a more detailed breakdown of services rendered by employers to EBCE students, see Table 10.) The employers mentioned an average of 5.4 services that they rendered to students.

Table 10

Services Provided by Employers to EBCE Students

(Percentages)

Service Provided	Frequently	Occasionally	Seldom	Never	No Answer
Supervision of students in job-related tasks	54.5	9.0	0	36.3	0
Talking about job site activities	81.8	9.0	0	0	9.0
Talking about job opportunities	45.4	36.3	0	9.0	9.0
Helping plan students' assignments	36.3	36.3	0	18.1	9.0
Evaluating individual students' assignments	54.5	18.1	0	18.1	9.0
Talking about students' personal problems	9.0	45.4	9.0	27.2	9.0
Tutoring in an academic area	18.1	18.1	9.0	45.4	9.0
Assisting students in non-job-related assignments	9.0	54.5	9.0	27.2	0

About half of the employers (45.4%) believed that the greatest strengths of the EBCE program were in the areas of career planning and opportunities for experience. They felt EBCE was an important means of exposing students to the world of work, enabling them to explore different careers and aiding them in developing leadership and good communications skills.

Most employers reported favorable reactions toward EBCE students from employees and top-level management. Over seventy-two percent (72.7%) of employers' comments mentioned favorable reactions toward EBCE students from employees, and more than eighty-one percent (81.8%) of employers' comments mentioned favorable reactions toward EBCE students from top-level management.

Fifty-four percent (54.5%) believed that the EBCE students' presence at their experience site had a positive impact on both the amount of work performed and the quality of work performed by regular employees. A positive impact on company training practices was noted by fifty-four percent (54.5%) of the employers, and twenty-seven percent (27.2%) thought that there was a similar effect on company hiring practices. Where an impact was reported, it was almost always positive; however, many respondents perceived no impact whatsoever on company policies and practices. (For a more detailed breakdown of the answers to this question, see Table 11.)

Table 11

Several employers suggested that specific changes be made in FY'78 to ameliorate certain perceived program weaknesses. Almost half of the employers (45.4%) felt that the students were spending too much time at the EBCE facility instead of at their experience sites, and one employer suggested that the EBCE staff provide more discipline within the program.

Table 11

Impact on Company/Policies and Practices

(Percentages)

Impact Area	Amount of Impact					Value of Impact			
	No Impact	Some Impact	Much Impact	Don't Know	No Answer	Good Impact	Bad Impact	Don't Know	No Answer
Quality of employee work	36.3	45.4	9.0	9.0	0	54.4	0	9.0	36.3
Amount of employee work	36.3	45.4	9.0	9.0	0	54.5	0	9.0	36.3
Company hiring practices	27.2	9.0	9.0	36.3	18.1	27.2	0	18.1	54.5
Company training practices	27.2	45.4	9.0	18.1	0	54.5	0	18.1	27.2
Other (pride of employees & customer relations)	0	18.1	0	0	81.8	18.1	0	0	81.8

Based on the data obtained from employer questionnaires, hypothesis 7 was not rejected. The majority of experience site resource personnel at various levels of their organizations did exhibit positive attitudes toward the EBCE program.

EBCE Staff Data

The EBCE staff (1 learning manager, 1 employer relations specialist, and 1 guidance counselor) rated various learning strategies in the EBCE program. Data are presented in Table 12.

Table 12

The staff members rated most of the learning strategies as being highly important (4 or 5) and highly effective (4 or 5) with the following exceptions:

a) Student Accountability System - 1 member rated as effective (3).

b) Journals - 1 member rated as important (3) and 2 members rated as effective (3).

c) Employer Seminars - 1 member rated as effective (3) and 1 member rated below effective (2).

d) Group Activities - 1 member rated effective (3) and 1 member rated below effective (2).

All three staff members rated the program as very helpful or helpful (4 or 5) in teaching students:

1) To solve problems logically;

2) To get along with others;

Table 12

EBCE Staff Ratings of Program Characteristics

(Frequencies)

Learning Strategies	How Important: Not Important 1	2	3	4	Highly Important 5	How Effective: Not Effective 1	2	3	4	Highly Effective 5	NA
a. Student Orientation	-	-	-	-	3	-	-	-	2	1	-
b. Student Acountability System	-	-	-	1	2	-	-	1	2	-	-
c. Student Negotiation	-	-	-	-	3	-	-	-	1	2	-
d. Preprepared Projects	-	-	-	1	2	-	-	-	2	1	-
e. Negotiated Projects	-	-	-	-	3	-	-	-	2	1	-
f. Journals	-	-	1	1	1	-	-	2	1	-	-
g. Competencies	-	-	-	-	3	-	-	-	2	1	-
h. Exploration Packages	-	-	-	-	3	-	-	-	3	-	-
i. Learning Level Process	-	-	-	-	3	-	-	-	2	1	-
j. Special Placements	-	-	-	1	-	-	-	-	-	-	3
k. [illegible] Materials	-	-	-	-	-	-	-	-	-	-	2
l. [illegible]ployer Seminars	-	-	-	2	-	-	1	1	-	-	1
m. Student Retreat	-	-	-	1	-	-	-	-	1	-	1
n. Group Activities (e.g., cadres)	-	-	-	2	1	-	1	1	1	-	-
o. Others (please specify):											

3) To understand themselves;

4) To develop their creativity;

5) To understand that society's values, the government, and the economy affects the world of work;

6) To see how their interests and abilities fit into potential careers;

7) To find and keep a job;

8) To analyze potential vocations;

9) To master the basic skills necessary for their potential careers;

10) To improve their written communication skills;

11) To become acquainted with a broad range of resources to use for gathering data on work and decision making;

12) To develop confidence in their ability to apply basic skills to complete tasks and solve problems;

13) To develop responsibility for their own actions;

14) To communicate comfortably with adults;

The staff members rated the program as being very helpful to below helpful (differential responses ranging from 5 through 2) in teaching students to:

1) Understand the democratic process;

2) Improve their reading skills;

3) Improve their math skills;

4) Be more open to ideas and values different from their own; and

5) Understand the role of science in our society today.

The staff noted that factors such as 1) the cooperation of the employers, school administrator, and faculty; and 2) the student's initiative and

attitude contributed in a major way to the success of EBCE. They felt that transportation; the lack of employer sites; the limited time for students on the job; the lack of LSAP's, resource persons, and staff; the absence of a project director; and the lack of projects being written according to job sites (especially in math skills area) were all obstacles that had limited the success of the EBCE program.

They perceived their students' greatest growths to have occurred in the areas of career knowledge and basic skills requirements, self confidence, oral and written communication, self-reliance and responsibility, and in setting and working toward definite goals. They all felt their students benefitted the least from EBCE in math and science or basic skills.

Their beliefs with respect to the effects of the EBCE program on the traditional high school program ranged from "none at all" to helping the students and traditional teachers in realizing the importance of the career education concept. In addition, the staff felt that the community has exhibited an increased awareness of and involvement with the school system in general.

Staff suggestions for program improvement during the next year were to:

1) Increase communication about projects and students total individual learning plans among the Employer relations specialist, Learning Managers, students and employers;

2) Increase site time per week, for students, to 15-20 hours;

3) Improve math, reading, spelling and vocabulary skills by administering diagnostic basic skills test to identify weaknesses which could be remediated through course work;

4) To discontinue weekly journals;

5) To develop local competencies applicable to the community and student weaknesses; and

6) To provide additional staffing.

Process Data

While some areas of evaluation were oriented towards the collection, processing, and analysis of rather objective and quantifiable data, other areas were associated primarily with the analysis and synthesis of more subjective and qualitative data. This section deals with those data and insights gathered through observation of the implementation process and procedures utilized in the Conecuh County EBCE program and through interacting with EBCE staff and students.

In general, this project has been on schedule and was going well. There appeared to be evidence of professional growth by the staff in understanding the EBCE concepts, as well as the operational procedures of the program. Positive aspects of the project included the general quality of the staff, cooperation by the community employers, and enthusiasm of all concerned -- EBCE staff, students, parents, employers, and school personnel.

It did appear that there were some weaknesses or problem areas that existed which reduced the potential for a totally successful implementation. Conecuh County is very traditional and there were few (only one or two) persons working in non-traditional occupational roles. Hence real-life opportunities for students to interact with such persons was almost non-existent. Therefore, it appears that a greater thrust in the area of sex-fair counseling activities needed to be undertaken.

Much of the management plan was developed prior to submission of the project proposal and is presented throughout in that proposal. However, the absence of a full-time manager for the project has reduced the impact of the project and deaccelerated many implementation activities. Although the Superintendent served as the Project Director, his numerous duties and responsibilities related to the total school system management limited his input to the EBCE project. Hence, the three member EBCE staff had to function as a team without a leader who could give daily input to the planning and operation of the program. Since a Project Director was just recently employed, his daily input should accelerate the operational activities and permit the operations staff to devote full-time to accomplishing their defined roles and functions. Nonetheless, it did appear that the program proceeded according to schedule with success in accomplishing the process objectives.

EBCE staff were trained by Northwest Laboratory personnel. The success of training was evidenced in the understanding and subsequent successful implementation of the NWREL model in Conecuh County.

Adequate physical facilities were provided for both staff and students. However, as the project expands, additional facilities will be required. These facilities need to include quiet offices for conducting individual conferences with students, and for making phone calls to employers for purposes of recruitment, utilization, and site maintenance. Partial walls provided visual privacy but did not provide oral/auditory privacy necessary for carrying on confidential conversations.

Curriculum activities appeared to be strained by the Alabama state law which required that English and history be taught in the traditional classrooms. The limited number of Learning Site Analysis Forms (LSAF's) also appeared to reduce the efficiency in preparing student oriented projects/ activities which were to be site related. Consequently, the Learning Manager became overburdened and pressured in attempting to develop adequate individual packages for the program. Continued and increased emphasis needs to be placed on interrelating the academics with the career exploration activities.

Although dissemination activities during the first year have been somewhat limited, they must be increased during the second and third years of funding. Under normal operating conditions, the project should move through four or five phases during the three-year cycle: 1) setting up and operating an EBCE site, 2) serving as a demonstration site (reactive) to other interested educational agencies; 3) increasing activities related to outreach/dissemination (proactive) activities; 4) providing training and technical assistance to other interested adoption agencies; and 5) providing evaluative services for those other adopting agencies. Although federal monetary support will cease at the end of three years, the use of the Conecuh County EBCE project as a fertile seed for the growth of other local or regional EBCE projects is a goal of the federally supported networking mechanism. The administrative support has made it possible for the program to develop to its current degree. Long range acceptance and support by the administration and the public will ensure the continuation of EBCE in Conecuh County in the future. The acquisition of a new Project Director will hopefully ensure that the project moves forward into the other phases of demonstration and outreach activity.

Finally, adequate implementation of the EBCE process can sometimes affect attendance rates. It appeared that no such differences occurred in Conecuh County. Based on a 74-day period (January 17 through May 10), the attendance rate of EBCE students was 96.2% whereas the attendance rate of comparison students was 94.1%. A t-test of differences between proportions was not significant.

SUMMARY & CONCLUSIONS

An alternative educational program titled Experience-Based Career Education (EBCE) was designed, developed, and tested by the Northwest Regional Educational Laboratory (NWREL), using both U. S. Office of Education (USOE) and National Institute of Education (NIE) monies. The purpose of the program was to provide an alternative educational experience for a cross-section of high school age youths. This alternative educational experience was to be characterized by an emphasis on direct employer-site experiences personalized to each student in terms of individual needs, interests, and abilities. The program integrated academic requirements and work experiences opportunities into a comprehensive curriculum.

Based on national public concern and national government priorities, USOE monies were made available from Part D of the Vocational Education Act for educational agencies to operate and demonstrate the EBCE-type programs. Conecuh County, Evergreen, Alabama, applied for and received a federal grant to operate and demonstrate the NWREL model of EBCE. In order that the Conecuh County EBCE program be properly evaluated, an independent third-party evaluation team from the Appalachia Educational Laboratory (AEL) developed and implemented an evaluation and data analysis plan. A summary of the results obtained from implementation of the plan follows.

Student Data

Assessment instruments were administered to EBCE and comparison students on a pretest/posttest basis. Students completed subtests of the Comprehensive

Tests of Basic Skills (Reading Comprehension, Mathematics Concepts, and Mathematics Applications), a Socialization Profile (sex-role stereotyping), the New Mexico Career Oriented Activities Checklist (career-maturity), the Student Attitude Survey battery (Learning Environment, Work, Self, Others), and a Student Information Questionnaire (demographic data).

Parents, employers, and EBCE staff were also asked to respond to an end-of-year questionnaire. Implementation process documentation involving observation and interaction with students and staff was completed throughout the implementation and operation of the program.

Basic Academic Skills. Analysis of student outcome data indicated positive results favoring the EBCE program. Analysis of scores on standardized basic skills tests (CTBS) indicated that EBCE students did as well as comparison students. Both groups had equivalent scores at the beginning of the program operation and also at posttest time in the Spring. Hence it can be concluded that EBCE students acquired facilitation in basic skills to the same degree as comparison students enrolled in the traditional high school.

Career Knowledge and Planning. Analysis of scores on Part 2 of the SAS battery indicated that students did acquire significantly greater mastery in career knowledge and exhibited significantly more positive attitudes toward work. During one semester of program operation, however, the EBCE students did not acquire significantly more positive scores in career planning.

Career Maturity. The EBCE students did acquire significantly greater career maturity as measured by the NMCOAC. Although comparison students showed a slight growth (possibly due to regression), the growth displayed by EBCE students was tremendous.

Attitudes: Education. EBCE students displayed significantly more positive attitudes toward various aspects of education and toward the total learning environment than did comparison students as measured by Part 1 of the SAS. Inspection of the data showed that on all 5 subscores: 1) comparison students scored higher initially than EBCE students, 2) EBCE students showed positive growth, 3) Comparison students showed negative growth, and 4) EBCE students scored significantly higher on the posttests (See Figure 4).

The research literature abounds with studies on the relationship between schooling and attitudes (e.g., Jackson and Getzels, 1959). Those who are low in ability and achievement often show dissatisfaction because of the numerous frustrations they experience in the classroom; those who are high in ability and achievement show dissatisfaction because of the relative lack of stimulation which they experience in the classroom. The author's conjecture about the current attitude data is graphically displayed in Figure 7.

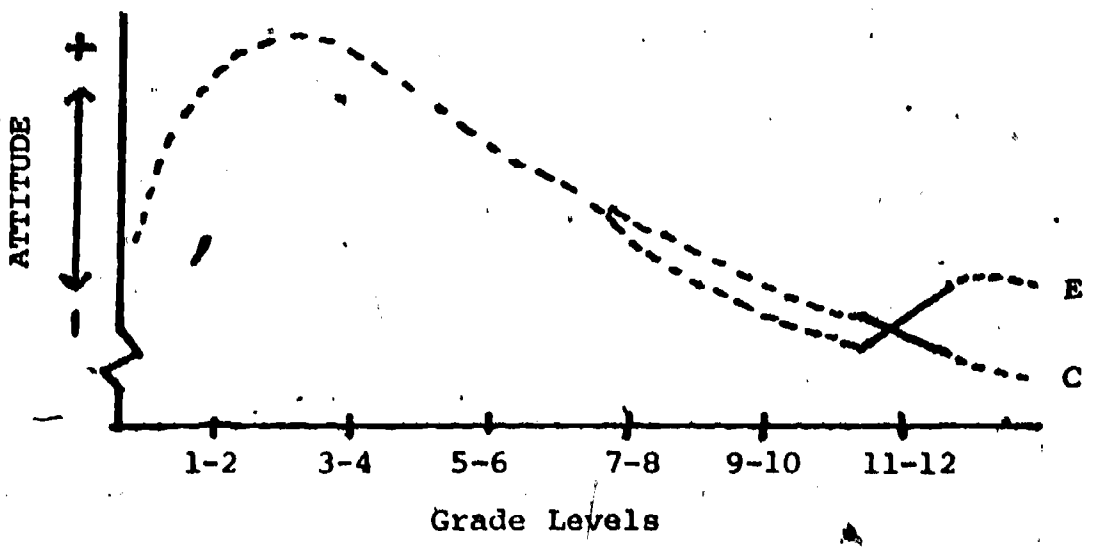


Figure 7

SAS - Part 1

Ex Post Facto Projection

The conjecture is that attitudes toward schooling are on the positive upswing before entering school and continues into the early elementary grades. Structure, regimentation, irrelevance, and repetition cause attitudes to take a negative downward swing in middle and upper elementary grades. In junior high, students move from a one-teacher situation to a multi-teacher situation, which continues on into the early high school grades. Since students have the option of eventually taking some "elective" courses, the rate of decline decreases slightly. However, two factions develop -- those who can withstand the structured situation and those who cannot withstand it. Students who were in the comparison group represent the first faction; students who volunteered to enroll in EBCE represent the second faction. Since comparison students remained in the traditional structured system, their measured decline is only a small segment of the continued negative rate of decline depicted in Figure 7. EBCE students, however, opted into an alternative educational program that was tailored to their needs, interests, and abilities. Thus they demonstrated a positive growth in attitude towards their learning environment -- EBCE.

Sex-role stereotyping. Although EBCE students were initially sex-role stereotyping significantly more than comparison students, this was reversed during the project duration. EBCE students began stereotyping less and comparison students more. While persons working in non-traditional roles in Conecuh County are almost non-existent, the impact of sex-fair counseling, sex-role awareness activities, and sex-fair materials is evidenced in the data.

Self and Others. Additional hypotheses about attitudes toward self and toward others were also tested. Analysis of data indicated that EBCE students did develop significantly more positive attitudes toward self than did the comparison students. While a similar trend for EBCE students was apparent in the attitudes-towards-others data, the difference between the two groups was not significant.

Parent Data

A questionnaire was mailed to parents of all 23 EBCE students to assess their attitudes about the EBCE program. Only 13 parents (56.5%) responded to the questionnaire. Most parents who responded were very positive towards all aspects of the program. All the parents thought that their sons and/or daughters were much more motivated to learn in the EBCE program than they were in traditional schools. Nearly 85% of the respondents thought that their son or daughter liked the EBCE program much better than past school experiences and, furthermore, indicated that they would allow their child to participate in EBCE if they had the choice to make again.

Although the parents who responded expressed very positive attitudes toward the EBCE program, nearly one-half of the parents failed to complete and return the questionnaire. The authors can only speculate as to the meaning -- positive attitudes, ambivalence or apathy, or negative perceptions. A revision in the methodology will be incorporated in subsequent surveys to increase the rate of respondence.

Employer Data

A questionnaire was mailed to 37 employer instructors at 33 different

experience sites. Only 11 employers (29.7%) responded to the questionnaire. Most employers who responded were positive towards the program. They complimented the EBCE program strengths and offered suggestions for program improvement. Of those who responded to the items over 63% believed that their organization would continue to participate in coming years and almost 82% rated the program from moderately effective to very effective. About one-half of the employers believed that the greatest strengths of the EBCE program were in the areas of career planning and opportunities for experience; the greatest weakness was that students were spending too much time at the EBCE facility instead of at the experience sites. More than half of the employers also believed that the presence of EBCE students at their experience sites had had a positive impact on both the quantity and quality of work performed by the regular employees.

Although the employers who responded expressed positive attitudes toward the EBCE program, the return rate on completed questionnaires was very low. About two-thirds of the employers failed to return a completed questionnaire. The authors can only speculate (as with the parents) as to the reasons for such a low return rate. While the mechanics of survey research employed by the authors will be revised, it is their feeling that EBCE staff interactions with site personnel (including site recruitment, site analysis, site utilization, and site maintenance procedures) need to be investigated and possibly adjusted.

EBCE Staff Data

The three EBCE staff members rated most of the learning strategies utilized in the EBCE model as highly important and also indicated that such

strategies had been highly effective in producing student learning (e.g., exploration packages and negotiated projects). They also contended that the program had been quite helpful in teaching students behaviors such as getting along with others, solving problems logically, analyzing potential vocations, and understanding themselves.

EBCE staff felt that the cooperation of the administration, community personnel, and school faculty as well as the initiative and positive attitudes exhibited by students were the two major components contributing to the success of EBCE. They also felt, however, that variables such as limited transportation, limited experience sites, limited student placement time, the absence of a project director, and the limited number of LSAFs were obstacles that had limited the success of EBCE.

They also made several suggestions for program improvement for the next year. Some of the suggestions included discontinuing the weekly journals, developing locally-oriented competencies, increasing allotted time for student experience site placement, and administering diagnostic tests to assess basic skills deficiencies.

Process Data

Observation of the implementation process was made periodically by the third-party evaluators with formative input being given on an immediate as-needed basis. Through observation and interaction much subjective and qualitative data were gathered.

The project appeared to be on schedule in terms of control, planning, and management. Although a full-time project manager was not present during

the year, the general quality of the staff, cooperation by community personnel, and enthusiasm by all concerned helped to get over the larger hurdles.

There were some perceived weaknesses or problem areas which reduced the potential for a totally successful implementation. These weaknesses or problem areas included:

1) Lack of a full-time project manager,

2) Lack of persons working in non-traditional roles,

3) State requirements concerning the teaching of English and history in traditional classrooms, and

4) Lack of sufficient completed Learning Site Analysis Forms.

The first point has recently been remedied by the hiring or a full-time Project Director, Dr. Jimmy D. Nash. The second point must be remedied through increased sex-fair counseling activities. While the third point may not have an immediate solution (unless an experimental program waiver is obtained), the fourth point can be remedied through a more concerted effort.

The strengths of the program which have contributed to its current status include:

1) Quality and enthusiasm of the staff,

2) Cooperation of the community,

3) Administrative/Board of Education support,

4) Adequate training by the NWREL personnel, and

5) Adequate physical facilities.

While these have all contributed to the project's present status, enthusiasm of the staff, cooperation from the community, and continued administrative support must not be reduced or diminished. Training for new personnel and expanded physical facilities must also be undertaken.

Although the program was only in operation for one semester with students and the major emphasis was on start-up and operation, increased emphasis must be placed on demonstration, dissemination and outreach. If federal monies are to be spent in a cost-effective manner, then the emphasis of spending must shift accordingly.

In conclusion, it appears that the implementation process was progressing satisfactorily. Although the project operated about eight (8) months without a director, all major milestone events appeared to have been met and accomplished.

EBCE student accomplishments appeared to be tremendous. Unobtrusive assessment indicated that EBCE students were displaying more maturity and accepting responsibility more readily. Measured growth in basic skills was equivalent to that experienced by comparison students in traditional high schools. EBCE students' attitudes toward the various aspects of the learning environment, career knowledge, career planning, career maturity, and themselves were significantly more positive than comparison students. EBCE students also showed gains in reducing their sex-role stereotyping, whereas comparison students displayed more sex-role stereotyping.

Finally, the perceptions and attitudes of parents and employers as well as those of the EBCE staff were positively oriented. They complimented the strengths and successes and offered comments and suggestions to alleviate program weaknesses or problem areas.

It is the opinion of the authors that the EBCE program in Conecuh County, Alabama, has successfully provided students with an alternative educational opportunity which is relevant to their needs, interests, and

abilities. It is felt that EBCE will be the catalyst for making the transition from youth to adulthood a smooth and rewarding journey.

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APPENDIX A

Vita for Dr. Joe E. Shively

VITA

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1968 M.S. - Purdue University
Major: Educ. Research/Educ. Psychology
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M.S. Thesis - Characteristics of High School Students Unable to Take Driver Training

1970 Ph.D. - Purdue University
Major: Educ. Research/Educ. Psychology
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Ph.D. Thesis - Evaluation of the Effects of Creativity Training Programs in the Elementary School

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1963-67 Disney Scholarship
1966-67 U.S.O.E. Undergraduate Research Fellowship
1967-70 U.S.O.E. Graduate Educational Research Fellowship
1976-77 Personalities of the South

MEMBERSHIPS

American Educational Research Association
American Psychological Association
National Council on Measurement in Education
Phi Delta Kappa

EMPLOYMENT

1970 Purdue University, Lafayette, Indiana: Graduate Instructor of Statistics

1970-73 CEMREL, Inc., Carbondale, Illinois: Evaluation Specialist - CSMP

EMPLOYMENT (cont'd)

1970-73 Southern Illinois University, Carbondale, Illinois: Assistant Professor of Mathematics (Adjunct)

1973-75 Appalachia Educational Laboratory, Inc., Charleston, West Virginia: Research and Evaluation Specialist - MPEP

1974- College of Graduate Studies, Institute, West Virginia: Assistant Professor of Education (Adjunct)

1975- Appalachia Educational Laboratory, Inc., Charleston, West Virginia: Director of Evaluation - EBCE

PUBLICATIONS AND PRESENTATIONS

Asher, William and Joe E. Shively. The Technique of Discriminant Analysis: A Reclassification of Harbison and Myers's Seventy-Five Countries. Comparative Education Review, 13(2), June 1969, 180-186.

Shively, Joe E. and William Asher. Characteristics of Students Who Could Not Take and Schools Which Did Not Offer Driver Training. Journal of Educational Research, 64(4), December 1970, 185-189.

Shively, Joe E. and William Asher. Comment on "The Effects of Modified Programmed Lectures and Mathematical Games Upon Achievement and Attitude of Ninth-Grade Low Achievers in Mathematics." Psychological Reports, 26, April, 1970, 545-546.

Shively, Joe E., Adrian P. VanMondfrans and Cheryl L. Reed. The Effect of Mode of Feedback in Micro-Teaching. Paper presented at the annual meeting of AERA, Minneapolis, Minnesota, March 1970.

Shively, Joe. E., John F. Feldhusen, Donald J. Treffinger, and William Asher. Effect of Creativity Training Programs and Teacher Influence on Pupils' Creative Thinking Abilities and Related Attitudes. Paper presented at the annual meeting of AERA, New York, New York, February 1971.

Shively, Joe. E., John Feldhusen and Donald Treffinger. Developing Creativity and Related Attitudes. Journal of Experimental Education, 41(2), Winter 1972, 63-69.

Shively, Joe E. and Alan W. Holz. CEMREL-CSMP EVALUATION REPORT: Summary Evaluation of the Elementary Program, 1971-72. Technical Manuscript, CEMREL, Inc., St. Ann, Missouri, September 1972.

Shively, Joe E. Comprehensive School Mathematics Program Evaluation Reports. Technical Manuscripts (n=35), CEMREL-CSMP, Carbondale, Illinois, 1971-72.

Shively, Joe E. (with Martin Herbert and Laura Hinshaw). Comprehensive School Mathematics Program Evaluation Reports. Technical Manuscripts (n=34), CEMREL-CSMP, Carbondale, Illinois, 1970-71.

PUBLICATIONS AND PRESENTATIONS (cont'd)

Shively, Joe E. and Alan W. Holz. Finite Operational Systems for Elementary Students. School Science and Mathematics, LXXV(2), February 1975, 191-196.

Shively, Joe E. Technical Quality of Television Programs. Paper presented at the annual meeting of AERA, Chicago, Illinois, April, 1974.

Shively, Joe E. A Preschool Competency Based Investigation: An Analysis of the Procedures. Symposium paper presented at the annual meeting of NAEYC, Washington, D.C., November, 1974.

Shively, Joe E. Delineation of Appalachian Family and Community Characteristics. Symposium paper presented at the annual meeting of EKNE, Washington, D.C., January, 1975.

Shively, Joe E. Interpreting the Procedures of a Preschool Competency Based Investigation. Symposium paper presented at the annual meeting of AERA, Washington, D.C., April, 1975.

Shively, Joe E., Brainard W. Hines, and Dick Cagno. Visual Attention and Enthusiasm to Children's Television Programs. Paper presented at the annual meeting of AERA, Washington, D.C., April, 1975.

Shively, Joe E. Evaluation of the Technical Quality of Educational Television Programs. Educational Technology, XV(11), November 1975, 49-52.

Shively, Joe E. and Edward E. Gotts. The Appalachia Educational Laboratory's Home-Oriented Preschool Education Program (HOPE). Presentation made to the National Conference on Home-Based Child Development Programs, St. Louis, Missouri, March, 1975.

Shively, Joe E. Utilizing the Diverse Perspectives of Child Development Scholars and Practitioners in the Development of a Preschool Curriculum. Symposium paper presented at the annual meeting of AERA, Washington, D.C., April, 1975.

Shively, Joe E. Analyses of Goals and Objectives for Developing a Preschool Competency Based Curriculum. Symposium chairman at the annual meeting of AERA, Washington, D.C., April, 1975.

Shively, Joe E. Evaluation of EBCE. Presentation made to the Kanawha Valley Chapter, Phi Delta Kappa, Charleston, West Virginia, May, 1975.

Shively, Joe E. EBCE Evaluation: Have TA - Will Help. Presentations made to USOE, NIE, and SEA officials in Portland, San Francisco, Philadelphia, and Charleston, July, 1975.

Shively, Joe E. Evaluation of EBCE: Prospects of Immortality. Presentation made to West Virginia Academy of School Administrators, Charleston, West Virginia, October, 1975.

PUBLICATIONS AND PRESENTATIONS (cont'd)

Shively, Joe., Harold L. Henderson, Jack Sanders, and C. Steven Hyre. A Responsive Alternative: Experience-Based Career Education. Special session paper presented at the annual meeting of ASCD, Miami Beach, Florida, March, 1976.

Shively, Joe E. EBCE Evaluation: Internal Technical Assistance and External Auditing. Presentations made to USOE, NIE, and LEA officials in Philadelphia and Reno, March, 1976.

Shively, Joe E. and Jack Sanders. Alternative Education: Evaluation and Implementation of EBCE. Paper presented at the annual meeting of AERA, San Francisco, California, April, 1976.

Bertram, Charles L., Joe E. Shively, and De Lawhon. Social and Educational Characteristics of the Families of Appalachian Preschool Children as a Basis for Home-Based Education. Paper presented at the annual meeting of AERA, San Francisco, California, April, 1976.

Shively, Joe E. Personalized Education: Evaluation of EBCE. Paper presented to the Third National Conference of the Center for Personalized Instruction, Washington, D.C., May, 1976.

Shively, Joe E. Types of Instruction. Paper session chairman at the annual meeting of APA, Washington, D.C., September, 1976.

Shively, Joe E. and Jack Sanders. A longitudinal study of Experience-Based Career Education Graduates. Paper presented at the annual meeting of AERA, New York, New York, April, 1977.

CONSULTANCIES

1976 - Clarke County Schools, Athens, Georgia.
Dr. Jerry Purser - Career Education Evaluation

1976 - Joint School District No. 1, Fond du Lac, Wisconsin.
Mr. Fred Cruckson - Career Education Evaluation

1976 - Harrisburg Public Schools, Harrisburg, Pennsylvania.
Dr. Joan Beers, Career Education Evaluation

1976 - Cabin Creek Health Clinic, Cabin Creek, West Virginia.
Mrs. Linda Lucci, Health and Education Needs: ECE

THIRD-PARTY EVALUATIONS

1976-77 Conecuh County, Evergreen, Alabama: Career Education Program. Principal Investigator.

1976-77 Fayette County, Lexington, Kentucky: Career Education Program. Principal Investigator.

AEL PUBLICATIONS

Appalachia Needs HOPE: The Need for and Capability of the Appalachia Educational Laboratory to Develop a New Preschool Television Program. Charleston, West Virginia: Appalachia Educational Laboratory, Inc., May, 1973. (Authors: Charles Bertram, Benjamin Bailey, Brainard Hines, Joe Shively, and Ermel Stepp.)

Commercial Television Personnel's Review of the Technical Quality and Marketability of AEL's "Around the Bend" Pilot Tapes. Technical Report No. 29. Charleston, West Virginia: Appalachia Educational Laboratory, Inc., May, 1973. (Author: Joe Shively) ED 093 354

State Department Early Childhood Education Program Specialists' Review of the Content and Technical Quality of AEL's "Around the Bend" Pilot Tapes. Technical Report No. 30. Charleston, West Virginia: Appalachia Educational Laboratory, Inc., May, 1973. (Author: Joe Shively) ED 093 355

Educational Television Personnel's Review of the Technical Quality, Content Criteria, and Marketability of AEL's "Around the Bend" Pilot Tapes. Technical Report No. 31. Charleston, West Virginia: Appalachia Educational Laboratory, Inc., June, 1973. (Author: Joe Shively) ED 093 356

Marketable Preschool Education Program Evaluation Plan. Technical Report No. 33 Charleston, West Virginia: Appalachia Educational Laboratory, Inc., May, 1973. (Author: Joe Shively)

Children's Reactions to Segments of a Children's Television Series. Technical Report No. 34. Charleston, West Virginia: Appalachia Educational Laboratory, Inc., June, 1973. (Authors: Dick Cagno and Joe Shively) ED 093 357

Home-Oriented Preschool Education: Evaluation of the Prototype Home Visitor Training Package. Technical Report No. 45. Charleston, West Virginia: Appalachia Educational Laboratory, Inc., January, 1974. (Authors: Joe Shively, Brainard Hines, Ermel Stepp, and Charles Bertram) ED 093 358

A Demographic Study of Appalachian Parents of Preschool Children. Technical Report No. 46. Charleston, West Virginia: Appalachia Educational Laboratory, Inc., January, 1975. (Author: Joe Shively)

Study of Effectiveness of Parent Materials for Appalachian Parents. Technical Report No. 48. Charleston, West Virginia: Appalachia Educational Laboratory, Inc., January, 1975. (Authors: Joe Shively, Charles L. Bertram, and Brainard W. Hines)

A Television Survey of Appalachian Parents of Preschool Children. Technical Report No. 47. Charleston, West Virginia: Appalachia Educational Laboratory, Inc., January, 1975. (Authors: Joe Shively, Charles Bertram, and Brainard Hines)

Evaluation Plan for the Marketable Preschool Education Program. Charleston, West Virginia: Appalachia Educational Laboratory, Inc., August 31, 1974. (Authors: Joe E. Shively, Brainard W. Hines, Edward E. Gotts, and Charles L. Bertram)

Appalachian Parents' Expectations of Child Competencies. Technical Report No. 50. Charleston, West Virginia: Appalachia Educational Laboratory, Inc., January, 1975. (Author: Joe E. Shively)

AEL PUBLICATIONS (cont'd)

FY'75 Internal Evaluation Report. Experience-Based Career Education Final Report. Charleston, West Virginia: Appalachia Educational Laboratory, Inc., August 31, 1975. (Author: Joe E. Shively).

Experience-Based Career Education Formative Evaluation Reports. Technical Manuscripts (n = 21), AEL-EBCE, Charleston, West Virginia, 1974-75. (Authors: Charlotte Hollenberg and/or Barbara Mace. Director and Supervisor: Joe E. Shively)

Final Outcome Evaluation Report: Demonstration and Implementation Sites. EBCE Final Evaluation Report. Charleston, West Virginia: Appalachia Educational Laboratory, Inc., September 30, 1976. (Authors: Joe E. Shively and Phyllis Kessel).

APPENDIX B

Comprehensive Tests of Basic Skills

Comprehensive Tests of Basic Skills (CTBS)

Purpose

The CTBS were designed to provide improved measurement of the extent to which individual students have developed basic academic skills. There are four levels of the tests with alternate forms for each level.

Respondent Group

Students

Item Content

The CTBS battery booklet (Level 4 - Form S) includes tests in several basic skills areas: reading, language, arithmetic, study skills, science and social studies. The areas are divided into 10 separately-timed tests, each utilizing a multiple-choice item format. The 10 tests of the CTBS and a brief description are as follows:

Test 1 - Reading Vocabulary. This 40-item test provides a measurement of a student's ability to select the word that has the best meaning.

Test 2 - Reading Comprehension. This 45-item test is composed of blocks of items which test the reading of such selections as articles, stories, poems, and letters.

Test 3 - Spelling. This 30-item test measures the student's ability to recognize correct and incorrect spelling of words.

Test 4 - Language Mechanics. This 20-item test measures a student's ability to punctuate and capitalize.

Test 5 - Language Expression. This 35-item test measures the correctness and effectiveness of expression.

Test 6 - Mathematics Computation. This test consists of 48 items equally distributed among the four arithmetic operations: addition, subtraction, multiplication, and division.

Test 7 - Mathematics Concepts and Applications. The first 25-item test measures the student's ability to recognize and/or apply the appropriate concept and technique; the ability to convert concepts from one form to another; the ability to comprehend numerical concepts and understand their interrelationships; and the ability to organize all facts in more complex problems. The second 25-item test measures a student's problem-solving abilities. Separate scores are reported for each section.

Test 8 - Reference Skills. This 20-item test measures the ability to use reference materials - to locate various types of information and select the appropriate reference books for specific purposes.

Test 9 - Science. This 40-item test assesses the student's ability to investigate problems in science and recall scientific facts or concepts.

Test 10 - Social Studies. This 39-item test measures the student's grasp of concepts, generalizations, and inquiry

skills necessary for effective problem solving in social studies.

Administration Procedures

The CTBS-Level 4 may be completed by any student in grades 8 through 12. The CTBS total battery requires approximately 4½ hours (each test has a working time and time allotted for instructions). The instrument can be administered on an individual as well as a group basis. The complete CTBS battery or any subset of the 10 tests may be administered.

Scoring Procedures

The publisher furnishes a scoring key for hand-scoring or the answer sheets may be sent to the publisher for machine scoring. Percentile conversion tables are available in the manual.

Availability/Price*

Complete Battery	
Booklets	22.40/35
Partial Battery	
Booklets	21.70/35
Answer Sheets (IBM - hand score)	
Reading & Reference Skills	5.00/50
Mathematics	5.00/50

*as of 1-1-77

Hand-Scoring Stencils

Reading & Reference Skills	2.50/1
Mathematics	2.50/1

Order from:

CTB/McGraw-Hill
Order Service Center
Del Monte Research Park
Monterey, CA 93940
Phone: 408/649-8400

APPENDIX C

Student Attitude Survey

Student Attitude Survey (SAS)

Purpose

The SAS was designed to provide an instrument for the assessment of student attitudes toward learning environments, career knowledge and planning, self, and others.

Respondent Group

Students

Item Content

There are four parts to the survey. The first 26 items yield four subscale scores and a total composite score on attitudes toward learning environments.

Subscale 1. This subscale consists of 7 items which measure student attitudes toward education in general.

Subscale 2. This subscale consists of 5 items which measure student attitudes toward school curriculum.

Subscale 3. This subscale consists of 9 items which measure student attitudes toward school resources.

Subscale 4. This subscale consists of 5 items which measure student attitudes toward school counseling.

Composite Score. The totality of 26 items measure overall student attitudes toward the learning environment.

The next 22 items yield two subscale scores on career knowledge and career planning. There are 12 items in the

career knowledge subscale and 10 items in the career planning subscale.

The third subtest contains 19 items. This subtest assesses students' attitudes toward themselves. The fourth subtest contains 13 items. This subtest measures students' attitudes toward other people.

Administration Procedures

The SAS may be completed by any secondary school student. The SAS takes approximately 25 minutes to administer. Since the item order is randomized within the first 26 items, the subscales cannot be administered separately.

Scoring Procedures

Since many of the items utilize reverse-polarity, hand scoring keys are not available. Machine scoring and profile description sheets may be obtained from the publisher.

Availability/Prices*

Complete Battery	12.50/50
Part 1 only	8.50/50
Scoring	
SAS	.30/student
Part 1	.15/student

*Prices as of 1-1-77

Order from:

Materials Distribution Center
Research for Better Schools
Suite 1700
1700 Market Street
Philadelphia, PA 19103

APPENDIX D

New Mexico Career Oriented Activities Checklist

Order from:

Materials Distribution Center
Research for Better Schools
Suite 1700
1700 Market Street
Philadelphia, PA 19103

APPENDIX D

New Mexico Career Oriented Activities Checklist

New Mexico Career Oriented Activities Checklist (NMCOAC)

Purpose

The NMCOAC was designed to assess the steps that students have taken in their high school education in order to help make an occupational decision.

Respondent Group

Students (Grade levels: 9, 10, 11, 12)

Item Content

The NMCOAC contains 25 items which deal with four sub-objectives: consulted various sources of information about occupations (11 items), engaged in activities that would provide information about occupations the student is considering (6 items), obtained the high school training needed for the occupations being considered (3 items), and made definite plans regarding what will be done upon graduation (5 items).

Administration Procedures

The NMCOAC may be completed by any student in grades 9 through 12. It is a timed test with a 20-minute time limit. Answers are marked on separate answer sheets.

Scoring Procedures

The NMCOAC has two scoring stencils, one for responses earning one (1) point, and one for responses earning two (2)

points. The number of marks showing through the 1-point stencil are tallied. The number of marks showing through the 2-point stencil are multiplied by 2. The two scores are then added together to yield the total score. (Percentile and stanine norms for the ninth and twelfth grades are presented in the manual.)

Availability/Price*

Booklets:	$8.50/35	$22.50/100
Answer Sheets:	2.00/35	4.50/100

Scoring Stencils (2 stencils): $1.50

Manual: $2.50

Order from:

MONITOR
P. O. Box 2337
Hollywood, CA 90028

*Price as of 1-1-77

APPENDIX E

Socialization Profile

Socialization Profile (SP)

Purpose

The SP was designed to provide an assessment of the sex-role stereotyping that individuals do. It is still an experimental instrument.

Respondent Group

Students

Item Content

The SP utilized by AEL contains 36 bipolar items. Each item describes with an adjective or a short phrase a particular behavior trait or characteristic (e.g., very passive - very active). Students mark each of the 36 items first in terms of an adult male (M) and then in terms of an adult female (F). Hence, a student must make 72 responses on the instrument.

Administration Procedures

The SP may be completed by high school students and older adults. The instrument requires about 35 minutes to complete.

Scoring Procedures

Scoring procedures are available from the author.

Availability/Prices

Information on availability/prices may be obtained from the author:

Dr. Inge K. Broverman
Department of Mental Health
Worcester State Hospital
Worcester, Massachusetts 01613

APPENDIX F

Student Information Questionnaire

Student Information Questionnaire (SIQ)

Purpose

The SIQ was designed to obtain data on basic demographic variables.

Respondent Group

Students (EBCE and comparison/control).

Item Content

The 11-item questionnaire provides information on race, sex, grade level, age, parents' educational levels and occupations, and long and short-range goals.

Administrative Procedures

The SIQ is usually the first instrument that is administered in the pretest battery. It is untimed but is usually completed by students in 5-10 minutes.

Scoring Procedures

Each item is scored and analyzed separately. For those items utilizing a scalar response, descriptive statistics and tabulations are used. For those items requiring an open response, tabulations are used.

Availability/Price

The local implementation site is permitted to duplicate this instrument at their own expense.

AEL/EBCE/JES/8-25-76

NAME _____ DATE _____

SCHOOL _____ CITY _____ STATE _____

STUDENT INFORMATION QUESTIONNAIRE

1. Are you:

   ☐ Male

   ☐ Female

2. Are you:

   ☐ White

   ☐ Black

   ☐ Oriental

   ☐ Spanish Descent (Chicano, Puerto Rican, etc.)

   ☐ Native American

   ☐ Other (specify) _____

3. What is your current grade level (as of September, 1976)?

   ☐ 10th grade

   ☐ 11th grade

   ☐ 12th grade

4. What is your birth date?

   _____ _____ _____
   MONTH DAY YEAR

5. What is your father's highest level of formal education completed?

- ☐ None
- ☐ Elementary School
- ☐ Some High School
- ☐ High School Graduate
- ☐ Some post-secondary (for example, some college, junior college, business school, trade or technical school)
- ☐ College graduate (four-year degree)
- ☐ Some graduate work
- ☐ Advanced degree (specify) _____

6. What is your mother's highest level of formal education completed?

- ☐ None
- ☐ Elementary School
- ☐ Some High School
- ☐ High School Graduate
- ☐ Some post-secondary (for example, some college, junior college, business school, trade or technical school)
- ☐ College graduate (four-year degree)
- ☐ Some graduate work
- ☐ Advanced degree (specify) _____

7. How many of your brothers and sisters dropped out of school?

- ____ None
- ____ One
- ____ Two
- ____ Three
- ____ Four
- ____ Five or More

8. What are your long-range goals? Check only one.

- ☐ 1. CLERICAL such as bank teller, bookkeeper, secretary, typist, mail carrier, ticket agent
- ☐ 2. CRAFTSMAN such as baker, automobile mechanic, machinist, painter, plumber, telephone installer, carpenter
- ☐ 3. FARMER, FARM MANAGER
- ☐ 4. HOMEMAKER OR HOUSEWIFE
- ☐ 5. LABORER such as construction worker, car washer, sanitary worker, farm laborer
- ☐ 6. MANAGER, ADMINISTRATOR such as sales manager, office manager, school administrator, buyer, restaurant manager, government official
- ☐ 7. MILITARY such as career officer, enlisted man or woman in the armed forces
- ☐ 8. OPERATIVE such as meat cutter; assembler; machine operator; welder; taxicab, bus, or truck driver; gas station attendant
- ☐ 9. PROFESSIONAL such as accountant, artist, clergyman, dentist, physician, registered nurse, engineer, lawyer, librarian, teacher, writer, scientist, social worker, actor, actress
- ☐ 10. PROPRIETOR OR OWNER such as owner of a small business, contractor, restaurant owner
- ☑ 11. PROTECTIVE SERVICE such as detective, policeman or guard, sheriff, fireman
- ☐ 12. SALES such as salesman, sales clerk, advertising or insurance agent, real estate broker
- ☐ 13. SERVICE such as barber, beautician, practical nurse, private household worker, janitor, waiter
- ☐ 14. TECHNICAL such as draftsman, medical or dental technician, computer programmer
- ☐ 15. OTHER (specify) _____
- ☐ 16. DON'T KNOW

9. What do you expect to be doing one year after completing high school?

- ☐ Working full-time
- ☐ Entering an apprenticeship or on-the-job training program
- ☐ Going into regular military services or to a service academy
- ☐ Being a full-time homemaker
- ☐ Attending a vocational, technical, trade or business school
- ☐ Taking academic courses at junior or community college
- ☐ Taking technical or vocational subjects at a junior or community college
- ☐ Attending a four-year college or university
- ☐ Working part-time
- ☐ Other (travel, take a break, no plans)

10. What is your major field of study?

- ☐ General Curriculum
- ☐ Vocational Education Curriculum
- ☐ College Preparatory Curriculum
- ☐ Other (specify) _____

11. Under FATHER, circle the one number that best describes the work done by your father (or male guardian). Under MOTHER, circle the one number that best describes the work done by your mother (or female guardian). The exact job may not be listed but circle the one that comes closest. If either of your parents is out of work, disabled, retired, or deceased, mark the kind of work that he or she used to do.

(Circle one number in each column.)

	Father	Mother
CLERICAL such as bank teller, bookkeeper, secretary, typist, mail carrier, ticket agent	01	01
CRAFTSMAN such as baker, automobile mechanic, machinist, painter, plumber, telephone installer, carpenter	02	02
FARMER, FARM MANAGER	03	03
HOMEMAKER OR HOUSEWIFE	04	04
LABORER such as construction worker, car washer, sanitary worker, farm laborer	05	05
MANAGER, ADMINISTRATOR such as sales manager, office manager, school administrator, buyer, restaurant manager, government official	06	06
MILITARY such as career officer, enlisted man or woman in the armed forces	07	07
OPERATIVE such as meat cutter; assembler; machine operator; welder; taxicab, bus, or truck driver; gas station attendant	08	08
PROFESSIONAL such as accountant, artist, clergyman, dentist, physician, registered nurse, engineer, lawyer, librarian, teacher, writer, scientist, social worker, actor, actress	09	09
PROPRIETOR OR OWNER such as owner of a small business, contractor, restaurant owner	10	10
PROTECTIVE SERVICE such as detective, policeman or guard, sheriff, fireman	11	11
SALES such as salesman, sales clerk, advertising or insurance agent, real estate broker	12	12
SERVICE such as barber, beautician, practical nurse, private household worker, janitor, waiter	13	13
TECHNICAL such as draftsman, medical or dental technician, computer programmer	14	14

APPENDIX G'

Employer Questionnaire

Employer Questionnaire (EQ)

Purpose

The EQ was designed to provide an assessment of community persons' opinions about the EBCE program to which they have devoted time and resources.

Respondent Group

Community Employers/Resource Persons

Item Content

The 15-item questionnaire identifies community employers/ resource persons attitudes toward the EBCE program and elicits the degree of their support for continued participation.

Administrative Procedures

The EQ is designed to be completed by the community personnel in their places of business. Community employers/ resource persons are mailed the EQ, a cover letter explaining the purpose of the instrument, and a stamped, self-addressed return envelope. They are requested to return the completed EQ by a specified date. (A telephone call may be necessary to increase the return rate.)

Scoring Procedures

Each item is scored and analyzed separately. For those items utilizing a scalar response, descriptive statistics and

tabulations are used. For those items requiring an open-ended response, tabulations are utilized.

Availability/Price

The local implementation site is permitted to duplicate the EQ at their own expense.

Appalachia Educational Laboratory

May 3, 1977

Dear Contact Person:

Your organization has been most helpful to the local Experience-Based Career Education (EBCE) Program by contributing time and resources, thus providing students with an opportunity to learn. Appalachia Educational Laboratory has a contract to do an independent third-party evaluation of the federally funded EBCE program. It is extremely important that we find out what you who work with our students think about the EBCE program. A questionnaire was developed to help us to obtain some of this needed information. I would like you to give the enclosed questionnaires (and return envelopes) to the community instructors in your organization who have worked most closely with the students. If you fill the dual roles of organization contact person and community instructor, please feel free to complete one of the questionnaires.

I will be responsible for analysis of the data obtained on the questionnaire. I would like to assure you that the carefully coded information obtained from this questionnaire will remain confidential and will not be seen by anyone in the EBCE project. Printed reports of the data will contain only summary information and will not contain specific names of individuals or organizations.

If there are any questions about the procedures or any of the items on the questionnaire, please feel free to call me at 304/344-8371. I would appreciate it if the completed questionnaires were returned in the enclosed envelope by May 17.

Thank you for taking your valuable time to provide us with this most helpful information.

Sincerely yours,

Joe E. Shively

Joe E. Shively, Ph.D.
Director of Evaluation
Experiential Education Division

JES:cd

Enclosures

Appalachia Educational Laboratory, Inc. • Experiential Education Division
20th and MacCorkle Avenue, SE • Charleston, West Virginia 25304
(304) 344-8371

EMPLOYER QUESTIONNAIRE

Name of Resource Person _____

Name of Company _____

Questions

1. Did the EBCE staff provide you with the necessary information to help you direct students' activities at your site?

   Yes _____ No _____ Sometimes _____

2. Did the EBCE staff usually:

   _____ Show you the Student Activity Sheet(s)

   _____ Show you the Student Program Profile

   _____ Show you the type of products expected from student

   _____ Explain reason for the particular placement

   _____ Provide you with feedback on student's progress

3. Which of the following supportive services do you (or others at your site) provide for the Experience-Based Career Education (EBCE) program students? (Check each appropriate category.)

	Frequently	Occasionally	Seldom	Never
Do you talk about job opportunities?	_____	_____	_____	_____
Do you talk about the students' personal problems?	_____	_____	_____	_____
Do you talk about activities at your site?	_____	_____	_____	_____
Do you tutor in an academic area?	_____	_____	_____	_____
Do you evaluate individual students' assignments?	_____	_____	_____	_____

	Frequently	Occasionally	Seldom	Never
Do you assist students in non-job related assignments?	____	____	____	____
Do you supervise students to perform a specific job-related task at your site?	____	____	____	____
Do you help plan student assignments?	____	____	____	____
Other (specify) _____				
_____	____	____	____	____

4. How do students spend their time at your site? (Check each appropriate category.)

	Frequently	Occasionally	Seldom	Never
Observing site activities	____	____	____	____
Researching from site materials	____	____	____	____
Actively performing site activities	____	____	____	____
Talking with me	____	____	____	____
Talking with other site personnel	____	____	____	____
Individual study	____	____	____	____
Other (specify) _____				
_____	____	____	____	____

5. Do you think the EBCE students have been interested in your site?

Yes _____ No _____ Don't know _____

Explain: _____

_____

6. Based on the EBCE students placed at your site, do you feel these students were interested in the concept of EBCE?

   Yes _____ No _____ Don't know _____

7. How have employees at your site reacted to the EBCE students placed at your site? _____

   _____

8. How has top level management reacted to the EBCE students placed here? _____

   _____

9. Have you been satisfied with the feedback that you received relating to what happens to the student after he leaves your site?

   Yes _____ No _____ Comment: _____

   _____

10. Do you think your company will continue working with the EBCE project during the next couple of years?

    Yes _____ No _____ Don't know _____

11. Based on the students and staff you've met, how effective do you feel the program was? _____

    _____

12. Do you feel the program functioned as you were led to believe when you were recruited as an employer site?

    Yes _____ No _____ Don't know _____

13. What do you feel the strengths of the EBCE Program are?

    _____

    _____

14. What do you feel the weaknesses of the EBCE Program are?

_____

_____

15. To what extent has the EBCE Program had an impact on . . . . .?

(Check each appropriate category.)

	How Much Impact				Value of Impact		
	No Impact	Some Impact	Much Impact	Don't Know	Good Impact	Bad Impact	Don't Know
a. Quality of work performed by regular employees	___	___	___	___	___	___	___
b. Amount of work performed by regular employees	___	___	___	___	___	___	___
c. Company hiring practices	___	___	___	___	___	___	___
d. Company training practices	___	___	___	___	___	___	___
e. Other possible impacts (list)							
_____	___	___	___	___	___	___	___
_____	___	___	___	___	___	___	___
_____	___	___	___	___	___	___	___

APPENDIX H

Parent Opinion Survey

Parent Opinion Survey (POS)

Purpose

The POS was designed to provide an assessment of parents' opinions about the EBCE program in which their son or daughter is participating.

Respondent Group

Parents (guardians) of EBCE students.

Item Content

The 24-item inventory identifies parent attitudes toward the EBCE program and permits parents to compare the EBCE program to the traditional high school program in which their children were previously participating.

Administration Procedures

The POS is designed to be completed by the parents in the privacy of their homes. Parents are mailed the POS, a cover letter explaining the purpose of the instrument, and a stamped return envelope. They are requested to return the completed POS by a specified date. (A telephone call may be necessary to increase the return rate.)

Scoring Procedures

Each item is scored and analyzed separately. For those items utilizing a scalar response, descriptive statistics

and tabulations are used. For those items requiring an open-ended response, tabulations are utilized.

Availability/Price

The local implementation site is permitted to duplicate this instrument at their own expense.

Appalachia
Educational
Laboratory

May 3, 1977

Dear Parents:

During the past year your child has participated in an Experience-Based Career Education (EBCE) program. Appalachia Educational Laboratory has a contract to do an independent evaluation of the federally-funded EBCE program. It is extremely important that we receive some information from you concerning your thoughts and attitudes toward the EBCE program. Your responses are therefore an important part of a national attempt to evaluate the EBCE project.

I will be responsible for analysis of the information obtained on the questionnaire. Your responses will be carefully coded so that confidentiality will be preserved. None of the teachers or administrators of the EBCE program will see your questionnaire. They will see a summarization of all the questionnaires in a Final Evaluation Report.

If you have any questions or concerns about any of the items, please feel free to contact me (collect) at 304/344-8371. Please return the questionnaire in the enclosed envelope by May 17.

Thank you again for taking your valuable time to assist us in evaluating and improving the EBCE program.

Sincerely,

Joe E. Shively

Joe E. Shively, Ph.D.
Director of Evaluation
Experiential Education Division

JES:cd

Enclosure

Appalachia Educational Laboratory, Inc. • Experiential Education Division
20th and MacCorkle Avenue, SE • Charleston, West Virginia 25304
(304) 344-8371

Parent Opinion Survey

This survey is meant to give you an opportunity to express your opinions about the Experience-Based Career Education Program your son or daughter has been participating in. Most of the questions are to be answered on a scale of numbers from (1) to (5). The phrases at the top and bottom of each set of questions indicate what the scale means. A (1) may mean something like "Definitely No"; if you feel strongly that the answer to the question is No, then you should circle the (1). A (5) may mean "Definitely Yes"; if you feel strongly that the answer is Yes, then you should circle the (5). The numbers in between (2, 3, 4) indicate an opinion somewhere in between "Definitely No" and "Definitely Yes". Some scales have different phrases, but they all work the same way.

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. Thank you for taking the time to fill out this survey.

PARENT OPINION SURVEY

1. How well does the EBCE Program compare 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. What do you think are the greatest weaknesses of the EBCE Program?

5. What do you think are the greatest strengths of the EBCE Program?

6. Have you received enough information about your son's or daughter's progress in the EBCE Program?

Definitely NO				Definitely YES
1	2	3	4	5

7. In comparison with regular schools, how much opportunity did the EBCE Program provide your daughter or son for learning about occupations?

Much Less				Much More
1	2	3	4	5

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

Definitely Bad				Definitely Good
1	2	3	4	5

9. In comparison with regular schools, how much opportunity did the EBCE Program provide your daughter or son for general learning?

Much Less		About the Same		Much More
1	2	3	4	5

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

Much Less		About the Same		Much More
1	2	3	4	5

11. How would you rate the approaches to learning used in the EBCE Program?

Poor				Excellent
1	2	3	4	5

12. What positive changes have you noticed in your son or daughter that might be a result of participation in the EBCE Program?

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

14. 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

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

Almost Never				Very Frequently
1	2	3	4	5

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

None	1	2	3	4 or More

17. How would you rate the general quality of the EBCE Program staff?

Poor				Excellent
1	2	3	4	5

18. How would you rate the business or community resources available in the EBCE Program?

Poor				Excellent
1	2	3	4	5

19. How would you rate your overall relationship with the staff of the EBCE Program?

Poor				Excellent
1	2	3	4	5

20. How would you rate the enthusiasm of the EBCE Program staff?

Poor				Excellent
1	2	3	4	5

21. What do you think of the occupational plans of your daughter or son?

a. ___ There aren't any firm plans yet.

b. ___ The plans should be changed.

c. ___ The plans seem to be good.

d. ___ We haven't really had a chance to discuss the plans.

22. What do you think your son or daughter will be doing a year after high school?

a. ___ Working

b. ___ Attending some kind of college

c. ___ Going to a business or trade school

d. ___ Military

e. ___ Other (please specify) _____

23. How did you first hear about the EBCE Program?

_____

24. What kinds of students do you think benefit most from the EBCE Program?

_____

_____

APPENDIX I

EBCE Staff Questionnaire

EBCE STAFF QUESTIONNAIRE

This questionnaire is being utilized to obtain your perceptions and opinions about the implementation of EBCE at your site. Your responses will be coded so that confidentiality will be preserved. None of the other local staff or administrators of the EBCE program will see your completed questionnaire. They will see a summary report of all the questionnaires in the Final Third-Party Evaluation Report. Thank you for again taking your valuable time to assist in evaluating and improving the EBCE program.

Name _____

Site _____

Position _____

1. Listed below are major learning strategies used in one or more EBCE projects. Some strategies may be considered important but not producing effective results, while others may be considered very effective but of low importance. Please rate strategy in terms of how important you feel it is for EBCE students and then in terms of how effective you feel it has been this year. Using the 5-point scale, rate importance and effectiveness by circling the appropriate number on the scale for each Learning Strategy. If the strategy is not used in your project, please circle NA for not applicable.

Learning Strategies	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. Preprepared 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. 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. Exploration Packages	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 (please specify):											

2. How helpful have EBCE experiences been in helping students understand the role of science in our society today?

Very helpful 5 4 3 2 1 Of little or no help

3. How helpful do you feel EBCE experiences this year have been in helping students solve problems logically?

Very helpful				Of little or no help
5	4	3	2	1

4. How helpful have EBCE experiences been in helping students get along with others?

Very helpful				Of little or no help
5	4	3	2	1

5. How helpful have EBCE experiences been in helping students understand more about themselves?

Very helpful				Of little or no help
5	4	3	2	1

6. How helpful have EBCE experiences been in helping students develop their own creativity?

Very helpful				Of little or no help
5	4	3	2	1

7. How helpful have EBCE experiences been in helping students understand the democratic process?

Very helpful				Of little or no help
5	4	3	2	1

8. How helpful have EBCE experiences been in helping students 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

9. How helpful have EBCE experiences been in helping students learn how their interests and abilities fit into potential careers?

Very helpful				Of little or no help
5	4	3	2	1

10. How helpful have EBCE experiences been in helping students learn how to find and keep a job?

Very helpful				Of little or no help
5	4	3	2	1

11. How helpful have EBCE experiences been in helping students learn to analyze potential jobs?

Very helpful				Of little or no help
5	4	3	2	1

12. How helpful have EBCE experiences been in helping students improve their reading skills?

Very helpful 5 4 3 2 1 Of little or no help

13. How helpful have EBCE experiences been in helping students learn the basic skills necessary for the careers that interest them?

Very helpful 5 4 3 2 1 Of little or no help

14. How helpful have EBCE experiences been in helping students improve their oral communication skills?

Very helpful 5 4 3 2 1 Of little or no help

15. How helpful have EBCE experiences been in helping students improve their math skills?

Very helpful 5 4 3 2 1 Of little or no help

16. How helpful have EBCE experiences been in helping students know what level of basic skills proficiency is required in the jobs of interest to them?

Very helpful 5 4 3 2 1 Of little or no help

17. How helpful have EBCE experiences been in helping students improve their written communication skills?

Very helpful 5 4 3 2 1 Of little or no help

18. How helpful have EBCE experiences been in helping students become acquainted with a broad range of resources to use in gathering information for work and decision making?

Very helpful 5 4 3 2 1 Of little or no help

19. How helpful have EBCE experiences been in helping students gain conficence in their ability to apply basic skills to complete tasks and solve problems around them?

Very helpful 5 4 3 2 1 Of little or no help

20. How helpful have EBCE experiences been in helping students take responsibility for their own actions?

Very helpful 5 4 3 2 1 Of little or no help

21. How helpful have EBCE experiences been in helping students communicate comfortably with adults?

Very helpful				Of little or no help
5	4	3	2	1

22. How helpful have EBCE experiences been in helping students use information obtained through direct experiences in making decisions?

Very helpful				Of little or no help
5	4	3	2	1

23. How helpful have EBCE experiences been in helping students become more open to ideas and values different from their own?

Very helpful				Of little or no help
5	4	3	2	1

24. How helpful have EBCE experiences been in helping students feel prepared to accept adult responsibilities?

Very helpful				Of little or no help
5	4	3	2	1

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?

APPENDIX J

ANOVA and ANCOVA Tables

Comprehensive Tests of Basic Skills (CTBS)

Source	SS	df	MS	F	P
Reading Comprehension		**Pretest**			
TRT	51.6	1	51.6	0.51	-
Error	3564.1	35	101.8		
Total	3615.7	36			
		Posttest			
TRT	1.1	1	1.1	0.01	-
Error	2951.8	35	84.3		
Total	2952.9	36			
Mathematics Concepts		**Pretest**			
TRT	8.2	1	8.2	1.99	-
Error	144.7	35	4.1		
Total	152.9	36			
		Posttest			
TRT	0.5	1	0.5	0.08	-
Error	202.4	35	5.8		
Total	202.9	36			
Mathematics Applications		**Pretest**			
TRT	0.2	1	0.2	0.50	-
Error	154.6	35	4.4		
Total	154.8	36			
		Posttest			
TRT	3.4	1	3.4	0.82	-
Error	143.7	35	4.1		
Total	147.1	36			

Student Attitude Survey (SAS) - Part 1

Education - General			Protest		
Source	SS	df	MS	F	p
TRT	235.5	1	235.5	8.94	<.01
Error	948.2	36	26.3		
Total	1183.7	37			
			Posttest		
TRT	146.9	1	146.9	5.19	<.05
Error	1019.9	36	28.3		
Total	1166.9	37			
			ANCOVA		
Total	1136.2	36			
Error	870.5	35	24.9		
TRT	265.7	1	265.7	10.68	<.01
					b = 0.40
School Curriculum			Pretest		
TRT	51.7	1	51.7	3.84	-
Error	484.1	36	13.5		
Total	535.8	37			
			Posttest		
TRT	65.0	1	65.0	5.38	<.05
Error	434.4	36	12.1		
Total	499.4	37			

SAS - Part 1 (cont'd)

Source	SS	df	MS	F	p
School Resources			**Pretest**		
TRT	207.2	1	207.2	4.59	< .05
Error	1625.9	36	45.2		
Total	1833.1	37			
			Posttest		
TRT	337.3	1	337.3	5.59	< .05
Error	2174.5	36	60.4		
Total	2511.8	37			
			ANCOVA		
Total	2325.3	36			
Error	1731.0	35	49.5		
TRT	594.3	1	594.3	12.01	< .01
					b = 0.52
School Counseling			**Pretest**		
TRT	17.6	1	17.6	1.00	-
Error	631.5	36	17.5		
Total	649.1	37			
			Posttest		
TRT	159.9	1	159.9	5.77	< .05
Error	997.6	36	27.7		
Total	1157.5	37			

SAS - Part 1 (cont'd)

Total Learning Environment

Source	SS	df	MS	F	p
			Pretest		
TRT	1669.3	1	1669.3	5.67	<.05
Error	10606.2	36	294.6		
Total	12275.5	37			
			Posttest		
TRT	2621.1	1	2621.1	6.42	<.05
Error	14691.1	36	408.1		
Total	17312.2	37			
			ANCOVA		
Total	16150.5	36			
Error	11444.5	35	327.0		
TRT	4706.0	1	4706.0	14.39	<.001

b = 0.55

Student Attitude Survey (SAS) - Part 2

Career Knowledge			Pretest		
Source	SS	df	MS	F	p
TRT	23.4	1	23.4	0.45	-
Error	1860.2	36	51.7		
Total	1883.6	37			
			Posttest		
TRT	545.8	1	545.8	12.08	<.01
Error	1627.2	36	45.2		
Total	2173.0	37			
Career Planning			Pretest		
TRT	0.3	1	0.3	0.1	-
Error	1043.7	36	29.0		
Total	1043.7	37			
			Posttest		
TRT	37.9	1	37.9	1.87	-
Error	729.0	36	20.3		
Total	766.9	37			
Work			Pretest		
TRT	18.1	1	18.1	0.14	-
Error	4730.7	36	131.4		
Total	4748.8	37			
			Posttest		
TRT	871.4	1	871.4	8.84	<.01
Error	3550.0	36	98.6		
Total	4421.4	37			

Student Attitude Survey (SAS) - Parts 3 and 4

Part 3 - Self			Pretest		
Source	SS	df	MS	F	P
TRT	31.0	1	31.0	0.18	-
Error	6074.7	36	168.7		
Total	6105.7	37			
			Posttest		
TRT	623.9	1	623.9	4.74	<.05
Error	4734.3	36	131.5		
Total	5358.2	37			
Part 4 - Others			**Pretest**		
TRT	2.2	1	2.2	0.04	-
Error	2046.6	36	56.9		
Total	2048.8	37			
			Posttest		
TRT	25.6	1	25.6	0.47	-
Error	1962.1	36	54.5		
Total	1987.7	37			

New Mexico
Career Oriented Activities Checklist
(NMCOAC)

Career Maturity					
			Pretest		
Source	SS	df	MS	F	P
TRT	23.5	1	23.5	0.63	-
Error	1262.1	34	37.1		
Total	1285.6	35			
			Posttest		
TRT	1708.0	1	1708.0	52.28	<.0001
Error	1110.8	34	32.7		
Total	2818.8	35			

Socialization Profile (SP)

Total Sex-role Stereotyping					
			Pretest		
Source	SS	df	MS	F	P
TRT	466909.3	1	466909.3	6.22	<.05
Error	2552493.7	34	75073.3		
Total	3019403.0	35			
			Posttest		
TRT	20114.0	1	20114.0	0.22	-
Error	3065500.8	34	90161.8		
Total	3085614.8	35			
			ANCOVA		
Total	1918229.9	34			
Error	1823296.9	33	55251.4		
TRT	94933.0	1	94933.0	1.72	-
				b = 0.70	