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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 at the end of its third 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, the JOBS instrument, the New Mexico Career Oriented Activities Checklist, the Student Attitude Survey battery, the Nowicki-Strickland Scale (locus of control), and a Student Information Questionnaire. Parents, employers, and EBCE staff were also asked to respond to an end-of-year questionnaire, and implementation process documentation was completed throughout the year. Analysis of student outcome data indicated that EBCE students did as well as comparison students and in some cases higher on tests of basic skills and that EOCE students showed positive increases in test results concerning career knowledge and planning, career maturity, attitudes toward education, sex-role stereotyping, locus of control, and attitudes toward self. Overall, parents and employers responded favorably toward the EBCE program. The implementation process was rated as satisfactory. (First- and second-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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FINAL EVALUATION

The operation of an EBCE program requires evaluation activities to provide quantitative and qualitative evidence of an efficient and effective product. The United States Office of Education (USOE) requires evaluation as a contingency for funding; specifically, the USOE requires that evaluation activities be conducted on Part D demonstration grants by an independent third-party evaluator. Conecuh County again selected the Appalachia Educational Laboratory (AEL) as the agency to conduct the comprehensive and objective evaluation of their program installation and operation.

Evaluation Plan

An EBCE evaluation plan was developed which delineated procedures pertinent to developing valid and reliable evidence regarding product effectiveness for purposes of decision-making. The evaluation plan presented the specific techniques and analytical procedures to be used in treating the data collected during the second year of program operation.

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 random sample of traditional students, some of whom participated in the recruitment process but were not selected for matriculation into the program.

Primary Hypotheses

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

1. Experimental students (E) will do as well in basic academic skills as comparison students (C) in a traditional high school.
2. Experimental students (E) will acquire significantly greater ($p < .10$) mastery in career knowledge than comparison students (C) in a traditional high school.
3. Experimental students (E) will acquire significantly greater ($p < .10$) career maturity than comparison students (C) in a traditional high school.
4. Experimental students (E) will develop significantly more positive ($p < .10$) attitudes toward learning environments than comparison students (C) in a traditional high school.
5. Experimental students (E) will develop significantly less ($p < .10$) sex-role stereotyping than comparison students in a traditional high school.
6. Experimental students (E) will develop significantly more ($p < .10$) internally oriented locus of control than students in a traditional high school.

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

1. The Reading Comprehension and Mathematics Concepts and Applications subtests of the Comprehensive Tests of Basic Skills (CTBS) provided an assessment of the extent to which the students developed basic academic skills. (Appendix A)

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 B)

3. The New Mexico Career Oriented Activities Checklist (NMCOAC) was used to measure students' career maturity and involvement in the career choice process. (Appendix C)

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 JOBS instrument was utilized to measure the degree to which sex-role stereotyping occurred. (Appendix D)

6. The Nowicki-Strickland (ANS-IE) was used to measure the change of internal versus external locus of control. (Appendix E)

The Student Information Questionnaire (SIQ) was utilized to obtain basic demographic data about the students and was administered only on a pretest 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 school year. Students exiting the program at the end of the year were posttested. Since Conecuh County operates on semesters (18 weeks each), some students pretested in the fall opted out of the program throughout the school year. These students were not posttested.

Data Analyses. Based on the experimental design being utilized, appropriate statistical analyses were selected and conducted to test the main

effects associated with each hypothesis. These analyses included both descriptive and inferential statistics.

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:

7. Parents of EBCE students will have positive attitudes toward the EBCE Program.
8. Community resource persons will have positive attitudes toward the EBCE Program.

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

7. The Parent Opinion Survey was utilized to assess parents' attitudes toward the EBCE Program. (Appendix G)
8. The Employer Questionnaire was utilized to assess experience site personnel's attitudes toward the EBCE program as it was implemented at their site. (Appendix H)

Testing Schedule. Employers and parents received their questionnaires only at the end of the testing period (since these assessments were directed at operation 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 included descriptive statistics.

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 the year EBCE staff perceptions were also obtained using the EBCE Staff Questionnaire. (Appendix I)

RESULTS

During year three of operation, Conecuh County again became involved in a system of mutual adaptations--a process of minor modification of the NWREL/EBCE model and of the local implementation site. Both state and local needs and constraints were taken into consideration as the program was operated and revised. These adaptations hopefully impacted students, parents, experience site personnel, and the EBCE staff. Thus; impact data will be presented in the following order: student demographic data; student outcome data; parent, experience site personnel, and the EBCE staff perceptions/opinions; and evaluator comments/insights about the implementation/operation/demonstration/dissemination/institutionalization process.

Student Demographic Data

Although many students participated in the EBCE program during the school year, demographic data (as well as outcome data) are presented for only those students who took pretests in the fall and posttests at the end of the school year (Groups E and C). Table 1 presents the demographic data obtained on the SIQ.

Table 1

From Table 1 it can be seen that there were more females than males enrolled in EBCE (61%), but about the same percentage (56%) of the comparison group were males. About half (47%) of the EBCE students were white; for the comparison students, however, 40% were white. While Conecuh County did not

Table 1

Demographic Frequency (SIQ) of EBCE and Comparison Students

Variable	n =	E 36	C 43
Sex			
Male		14	24
Female		22	19
Ethnic Group			
White		17	17
Black		19	26
Other		0	0
Grade			
12th		9	26
11th		27	17
Father's Education			
Less than High School		19	24
High School		13	14
More than High School		2	4
Missing		2	1
Mother's Education			
Less than High School		15	19
High School		14	19
More than High School		5	4
Missing		2	1
Number of Sibling Dropouts			
None		21	31
One		4	4
Two or more		10	7
Missing		1	1

Variable	n =	E 36	C 43
Long-range Goals			
Clerical		7	2
Craftsman		2	4
Farmer		0	0
Homemaker		1	4
Laborer		0	1
Manager		1	2
Military		3	3
Operative		2	0
Professional		7	15
Proprietor		0	0
Protective Service		0	0
Sales		2	0
Service		3	3
Technical		1	3
Other		3	1
Don't Know		2	5
Missing		2	0
Expectation one year later			
Working full-time		10	12
Entering OJT		0	0
Military		5	2
Homemaker		0	1
Academics - Jun./Comm. College		5	8
Tech/Voc. - Jun./Comm. College		1	8
4-Year College/University		3	2
Working part-time		9	9
Vocational School		0	0
Other		2	1
Missing		1	0

Table 1 (Cont'd)

Demographic Frequency (SIQ) of EBCE and Comparison Students

Variable	n = E 36	C 43	Variable	n = E 36	C 43
Major field of study			Mother's Occupation		
General	19	15	Clerical	1	3
Voc. Ed.	9	14	Craftsman	2	0
College Prep.	3	12	Farmer	0	0
Other	3	0	Homemaker	14	17
Missing	2	2	Laborer	1	2
			Manager	1	4
Father's Occupation			Military	0	1
Clerical	0	0	Operative	7	6
Craftsman	7	9	Professional	2	2
Farmer	2	6	Proprietor	0	1
Homemaker	0	0	Protective Service	0	0
Laborer	6	6	Sales	3	1
Manager	3	1	Service	3	5
Military	1	1	Technical	0	0
Operative	10	10	Missing	2	1
Professional	0	1			
Proprietor	1	2			
Protective Service	0	0			
Sales	1	1			
Service	1	1			
Technical	0	1			
Missing	4	4			

utilize sophomores in their program, 25% of the full year EBCE students were seniors; for the comparison group 60% were seniors.

Over half (53%) of the EBCE students' fathers had less than a high school education, 36% had a high school education, and only 5% had some post-secondary education. No data were available on two fathers. For comparison students, 56% of the fathers had less than a high school education, 33% had a high school education, and 9% had some post-secondary education. For the mothers of EBCE students, 42% had less than a high school education, 39% had a high school education, and only 14% had some post-secondary education. For the mothers of comparison students, 44% had less than a high school education, nearly 44% had a high school education, and 9% had some post-secondary education. The parental educational levels for the EBCE students were comparable to the comparison students.

In terms of the number of siblings who dropped out of school, 58% of the EBCE students indicated that they had had no siblings who dropped out, and 28% indicated two or more siblings who dropped out. For the comparison students, 72% indicated no siblings who had dropped out of school, and 16% indicated two or more sibling dropouts.

In response to the SIQ question on the long-range goals, 22% of the EBCE students indicated MANAGERIAL or PROFESSIONAL goals, 14% indicated that they didn't know or had OTHER non-specific long-range goals, and 22% indicated CLERICAL long-range goals. Of the comparison students 40% indicated MANAGERIAL or PROFESSIONAL goals, 16% indicated CRAFTSMAN or TECHNICAL goals, and 14% indicated no knowledge of or unspecified OTHER long-range goals. Not one of the EBCE or comparison students indicated a long-range goal of being a farmer or farm-manager.

Only 8% of the EBCE students expected to be attending a four-year college or university one year after completing high school, 28% expected to be working full-time, and 17% expected to be attending or taking courses at a vocational, technical, trade, or business school or at a junior college. Fourteen percent (14%) expected to be in the military and 25% expected to be working part-time. Only 5% of the comparison students expected to be attending a four-year college or university one year after completing high school; over 37% expected to be involved with courses at a vocational, technical, or business school; 28% expected to be working full-time; and 21% expected to be working part-time. Although over one-half of the respondents were female, only one of the EBCE and comparison students indicated that they expected to be a homemaker or housewife one year after completing high school.

Almost 53% of the EBCE students were enrolled in a general curriculum field of study, only 8% were enrolled in a college preparatory curriculum, and 25% were enrolled in a vocational education curriculum. Of the comparison students 35% were enrolled in a general curriculum, nearly 28% were enrolled in a college preparatory curriculum, and over 32% were enrolled in a vocational education curriculum.

Over 63% of the EBCE students' fathers were employed as laborers, craftsmen, or operatives; but over 11% of the data on fathers' occupations was missing. Over 58% of the comparison students' fathers were employed as laborers, craftsmen, or operatives; 14% were engaged in farming; and 9% of the data were missing. Thus fathers of EBCE students and fathers of comparison students were primarily laborers, craftsmen, or operatives.

Nearly 39% of the mothers of EBCE students were homemakers or housewives; nearly 28% were employed as craftsmen, laborers, or operatives; and nearly 17% were in sales/service. Over 39% of the mothers of comparison students were homemakers or housewives; nearly 19% were employed as laborers or operatives; over 16% were in professional, proprietary, or administrative positions; and 14% were in sales/service. 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 race, number of sibling dropouts, parental education and occupations, and short term goals. Sex, long-range goals, major field of study, and students' grade levels showed the greatest differences.

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 are presented within each section, complete analysis of variance (ANOVA) and/or 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. Analysis of variance (ANOVA) and covariance (ANCOVA) procedures were 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 significant pretest differences between the two groups on two of the three subtests. However, there was a significant difference at the posttest period on the RC subtest. The data analysis indicated that C students had significantly more positive RC scores than did the E students. Based on the data presented in Table 2 and statistical analyses, the first hypothesis was partially rejected. The EBCE students did do as well in basic mathematics skills as comparison students enrolled in a traditional high school, but significantly less well in reading comprehension skills.

Figure 1 graphically displays the test results.

Figure 1

From Figure 1 it can be visually seen that EBCE students showed positive growth in math concepts and math applications, whereas they showed a decline in reading comprehension.

Table 2

CTBS Data

	E-pre	C-pre	E-post	C-post	Adjusted E-post	Adjusted C-post
Reading Comprehension (45 items)						
n	35	43	35	43		
$\bar{X}$	18.9	22.1	18.1	23.0		
s	7.7	9.3	8.0	10.2		
range	7-38	10-42	6-38	4-44		
F	2.76		5.23*			
p	nsd		<.05			
Mathematics Concepts (25 items)						
n	36	43	36	43		
$\bar{X}$	10.5	13.7	10.8	14.3	11.0	13.1
s	3.9	5.5	4.0	5.3		
range	4-19	4-24	4-21	6-24		
F	8.72**		10.42**		1.90	
p	<.005		<.005		nsd	
Mathematics Applications (25 items)						
n	36	43	36	43		
$\bar{X}$	6.5	10.0	7.6	10.0	8.7	8.9
s	4.1	5.6	4.8	5.5		
range	0-17	0-21	0-21	1-21		
F	9.85**		4.34**		0.01	
p	<.005		<.05		nsd	

*$F_{.05}(1,76) = 3.98$ **$F_{.005}(1,77) = 8.41$ **$F_{.05}(1,77) = 3.98$

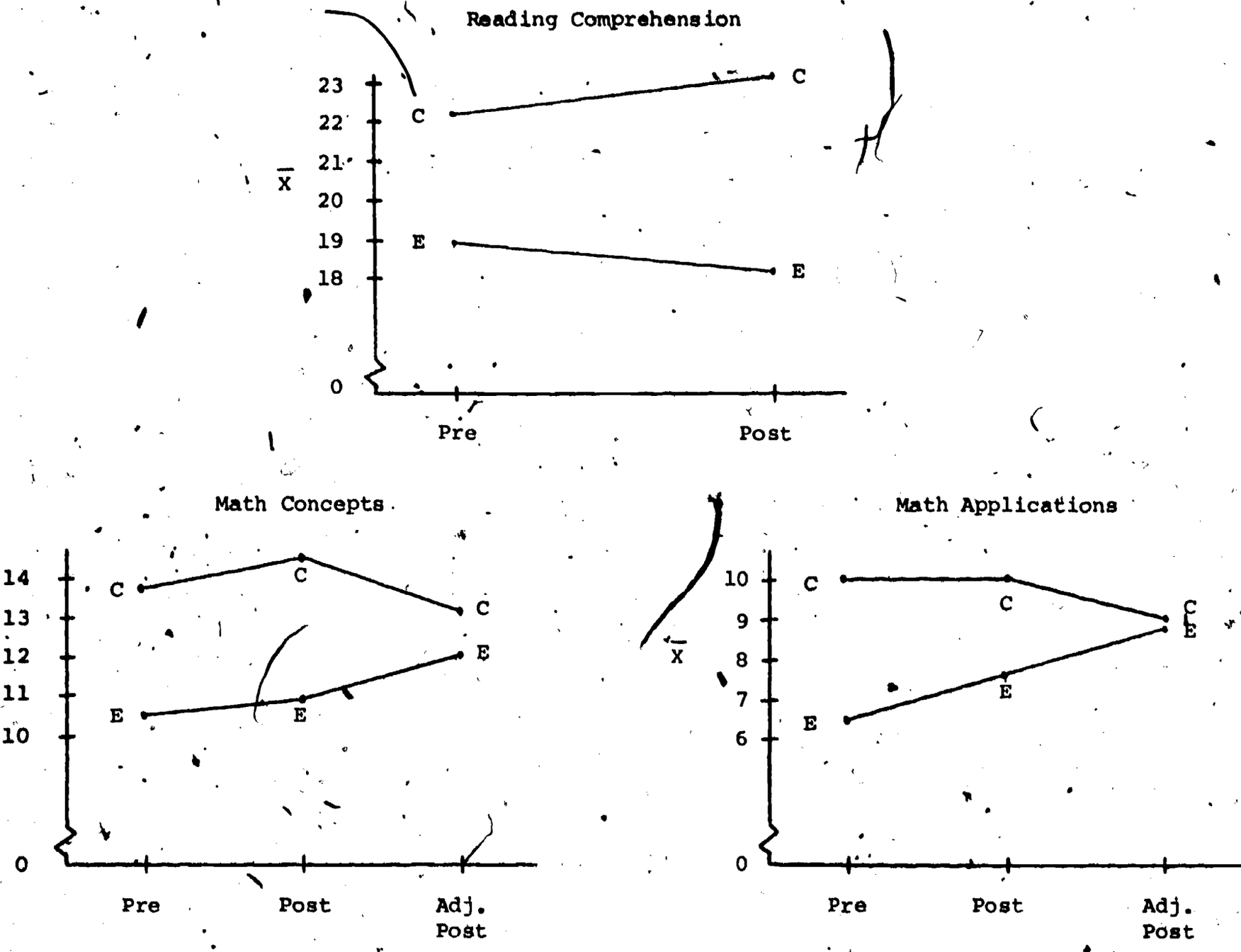


Figure 1

CTBS Data

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: career knowledge and career planning. Analysis of variance (ANOVA) and covariance (ANCOVA) procedures were 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 the career knowledge subsections but not on the career planning and the composite at the pretest period. Subsequently, EBCE students scored significantly higher on the composite (work) portion. Thus based on the data presented in Table 3 and on subsequent statistical analyses, the second hypothesis was rejected. The EBCE students did not acquire significantly greater mastery in career knowledge or career planning than did comparison students. However, significant results were reflected in the composite Work scores.

Figure 1 graphically displays the test results from the SAS - Part 2.

Figure 2

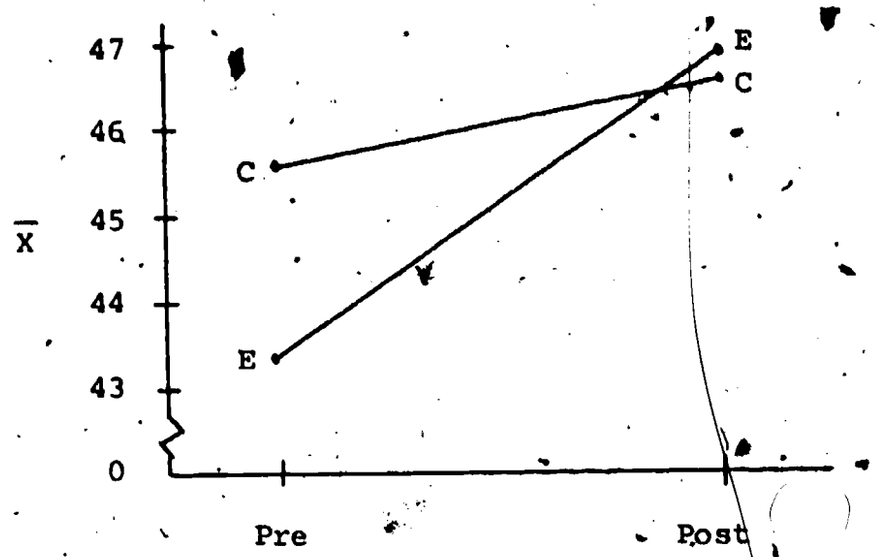
Table 3

SAS - Part 2 Data

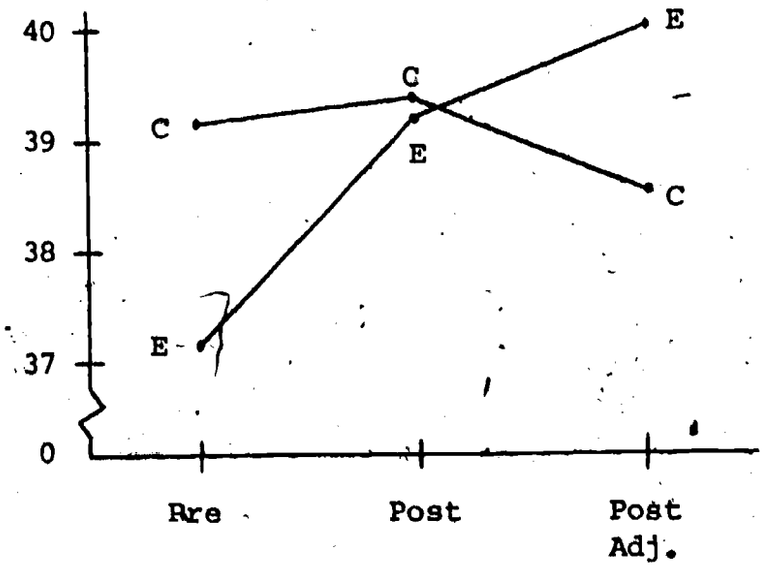
	n	$\bar{X}$	s	range	F	p
Career Knowledge (12-60 points)						
E - Pre	35	43.3	6.9	30-52	2.38	-
C - Pre	43	45.5	5.7	33-60		
E - Post	35	46.7	6.7	32-59	0.03	-
C - Post	43	46.4	6.5	28-60		
Career Planning (10-50 points)						
E - Pre	35	37.1	5.6	27-48	3.44*	.10
C - Pre	43	39.1	4.3	28-50		
E - Post	35	39.1	5.6	28-50	0.03	-
C - Post	43	39.3	4.9	30-50		
E - Post Adj.		39.8			1.55	-
C - Post Adj.		38.6				
Work (22-110 points)						
E - Pre	35	80.3	11.6	57-98	4.23**	.05
C - Pre	43	84.6	6.5	62-110		
E - Post	35	85.9	11.6	62-109	0.00	-
C - Post	43	85.8	10.1	61-110		
E - Post Adj.		87.6			3.77**	.10
C - Post Adj.		84.1				

*$F_{.10}(1,76) = 2.78$ **$F_{.05}(1,76) = 3.98$ **$F_{.10}(1,75) = 2.78$

Career Knowledge



Career Planning



Composite - Work

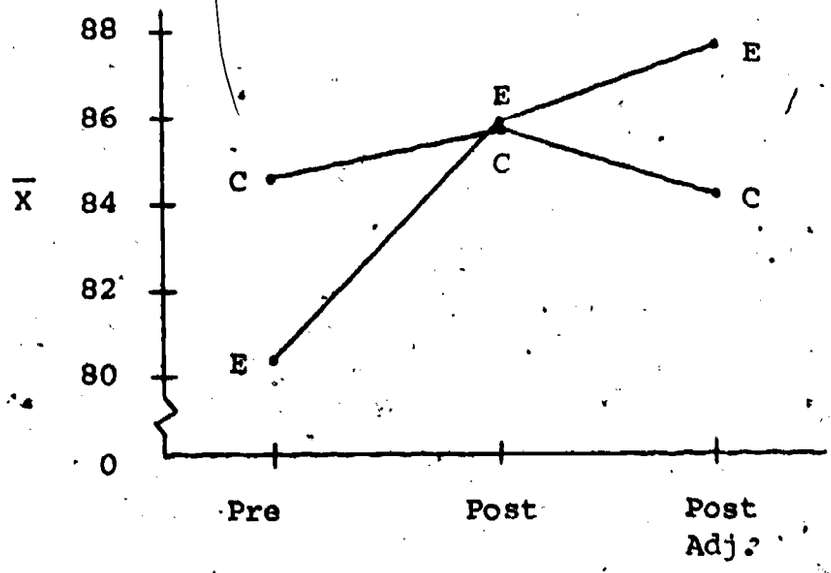


Figure 2

SAS - Part 2 Data

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 only slight growth in career knowledge and a slight decline (after statistical adjustment) in career planning 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 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

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 second 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

Table 4

NMCOAC Data

(0-69 points)

	n	$\bar{X}$	s	range	F	p
E - Pre	36	20.6	7.4	8-36	0.28	-
C - Pre	42	21.3	5.5	5-38		
E - Post	36	26.0	6.8	9-43	2.78*	.10
C - Post	42	23.5	6.6	11-38		

*$F_{.10}(1,76) = 2.78$

Career Maturity

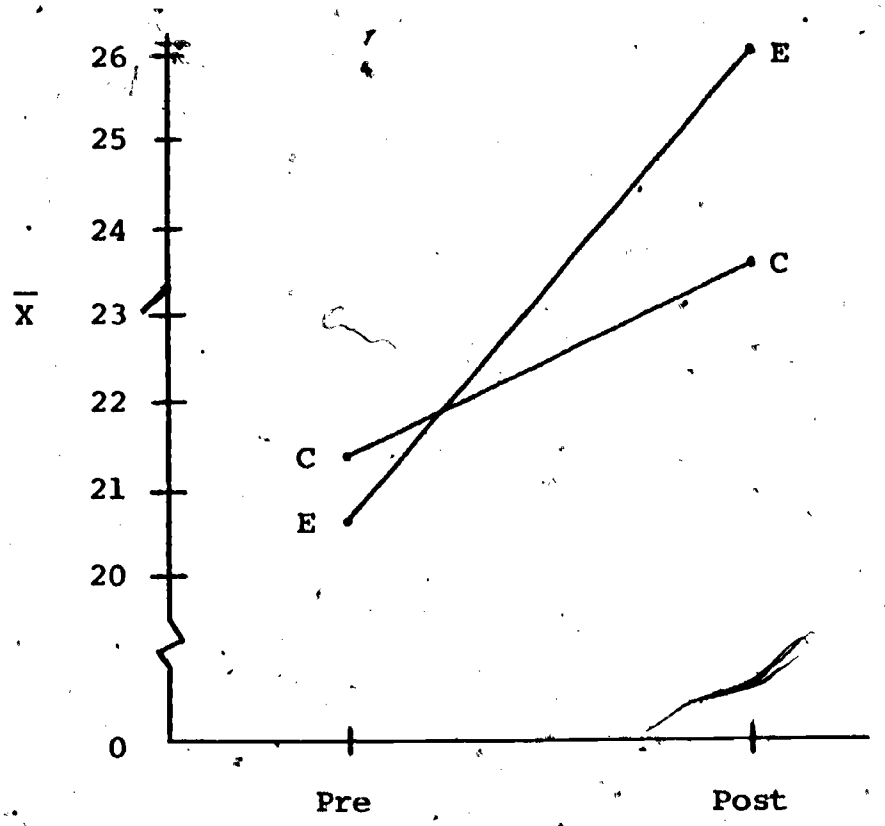


Figure 3

NMCOAC Data

From Figure 3 it can visually be seen that EBCE students showed a tremendous positive growth in career maturity. Comparison students, however, displayed a lesser degree of 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 five 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 variance procedure was necessary for four scores, since mean scores on the pretests (E vs C) were not significantly different; covariance was utilized for the first set of scores, however. On four sets of pretest data the comparison students obtained higher scores than did the comparison students (equal pretest scores on the fifth set). However, on all five sets of posttest data the EBCE students had significantly higher scores than did the comparison students.

Table 5

SAS - Part 1 Data

	n	$\bar{X}$	s	range	F	p
Part a - Education in General (7-35 points)						
E - Pre	35	23.6	5.2	14-34	3.24[a]	.10
C - Pre	43	25.6	4.7	12-33		
E - Post	35	27.6	5.0	14-35	8.31[b]	.01
C - Post	43	24.0	5.8	11-32		
E - Post Adj.		28.3			23.77[c]	.0001
C - Post Adj.		23.3				
Part b - School Curriculum (5-25 points)						
E - Pre	35	17.1	2.9	12-23	2.60	-
C - Pre	43	18.2	3.0	12-23		
E - Post	35	20.3	3.6	10-25	6.42[d]	.025
C - Post	43	18.3	3.3	12-25		
Part c - School Resources (9-45 points)						
E - Pre	35	28.8	4.9	15-36	0.22	-
C - Pre	43	29.3	5.0	20-40		
E - Post	35	34.6	7.4	17-45	26.11[e]	.0001
C - Post	43	26.3	6.9	14-38		
Part d - School Counseling (5-25 points)						
E - Pre	35	14.4	3.7	8-22	0.01	-
C - Pre	43	14.4	3.9	7-22		
E - Post	35	18.4	4.4	8-25	19.09[e]	.0001
C - Post	43	14.1	4.2	6-23		
Composite - Total Learning Environment (26-130 points)						
E - Pre	35	83.9	13.5	49-110	1.37	-
C - Pre	43	87.5	13.2	60-114		
E - Post	35	100.9	18.5	49-130	20.08[e]	.0001
C - Post	43	82.7	17.3	52-114		

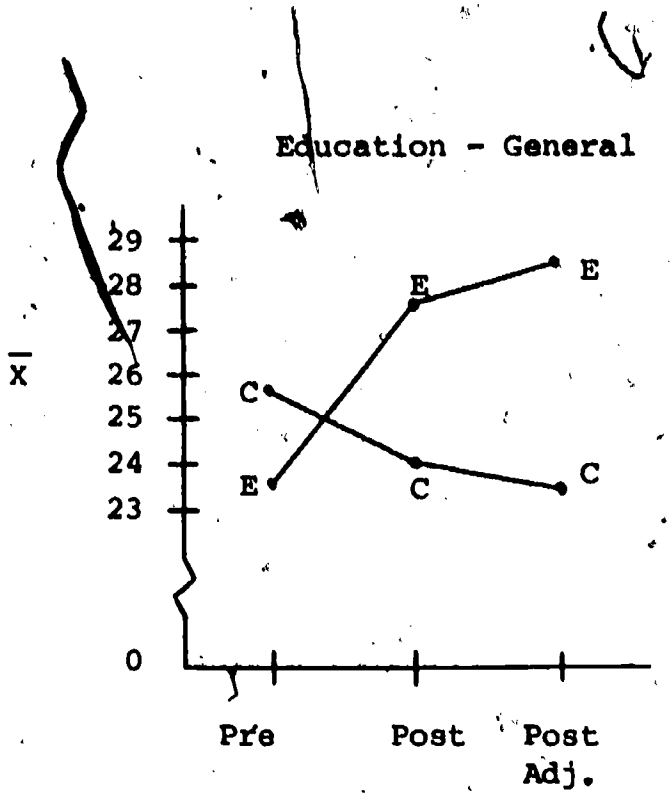
[a] $F_{.10}(1,76) = 2.78$

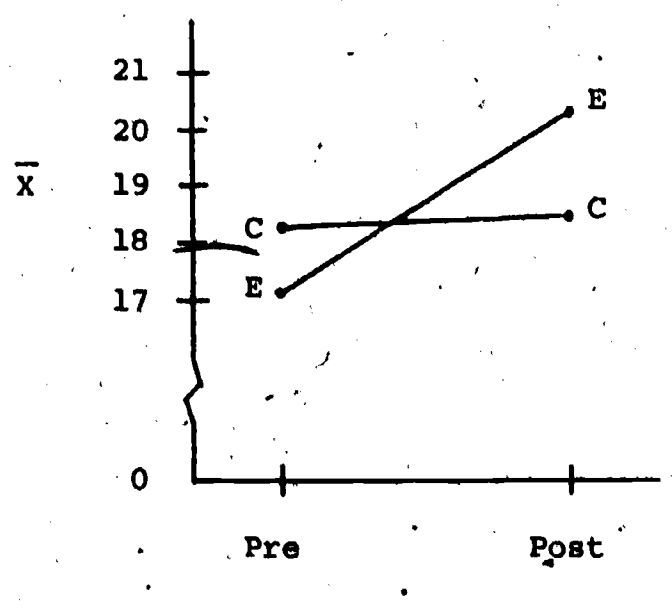
[b] $F_{.01}(1,76) = 7.02$

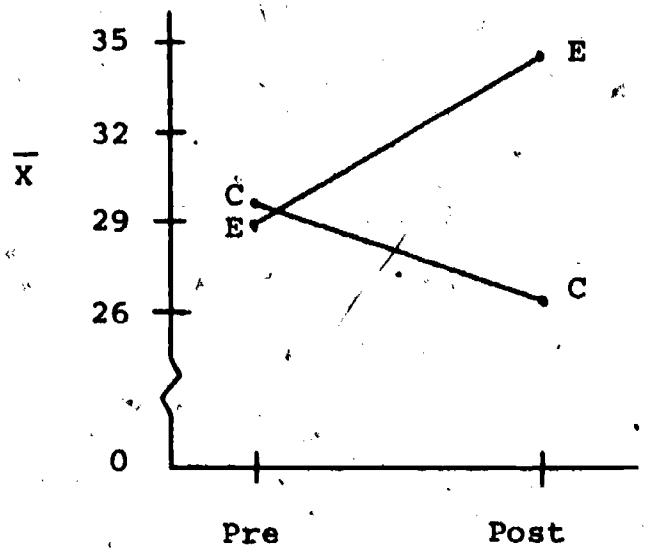
[c] $F_{.0001}(1,75) = 17.08$

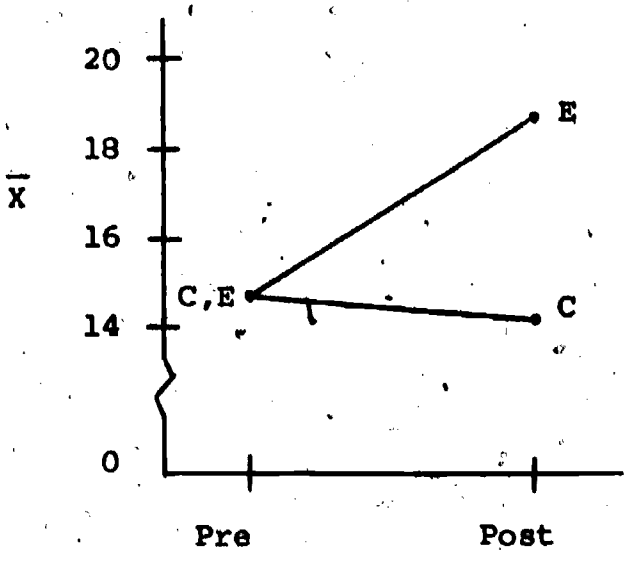
[d] $F_{.025}(1,76) = 5.25$

[e] $F_{.0001}(1,76) = 17.06$









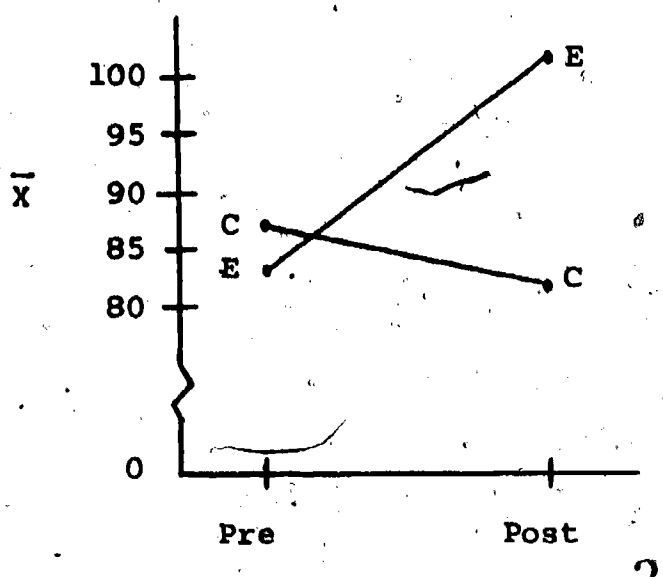


Figure 4

SAS - Part 1 Data

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

Figure 4

From Figure 4 it can visually be seen that EBCE students made positive gains on all five subparts, whereas comparison students' scores declined on four subparts. Thus, based on the 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 the learning environment than did the comparison students.

Hypothesis 5

The fifth hypothesis associated with student outcome data related to sex-role stereotyping: EBCE students will develop significantly less sex-role stereotyping than comparison students in a traditional high school. Data used to evaluate the fifth hypothesis were students' scores on the JOBS instrument. Analysis of variance (ANOVA) procedures were utilized to test the fifth hypothesis.

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

Table 6

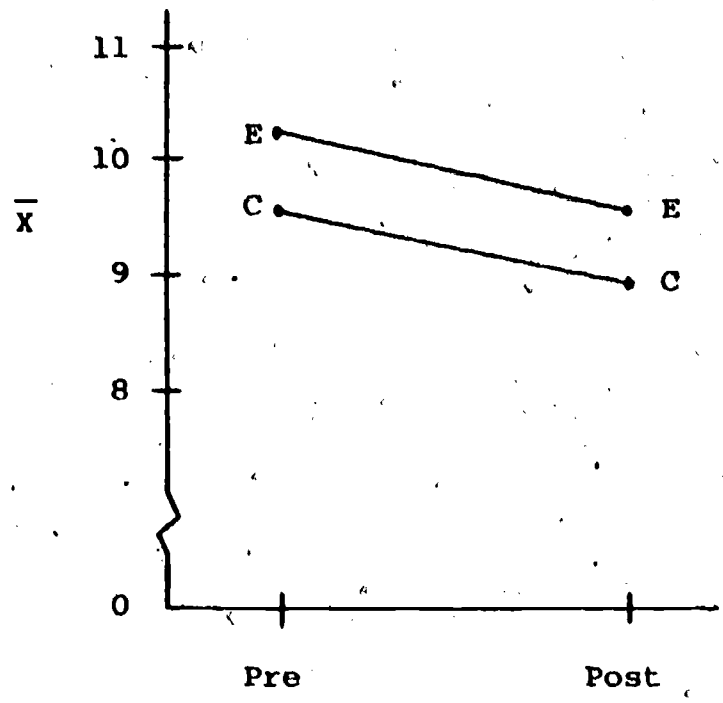
The information presented in Table 6 indicates that the two groups were initially the same. When posttest scores were analyzed (using ANOVA) there was still no difference. Results indicate that EBCE students exhibited less

Table 6

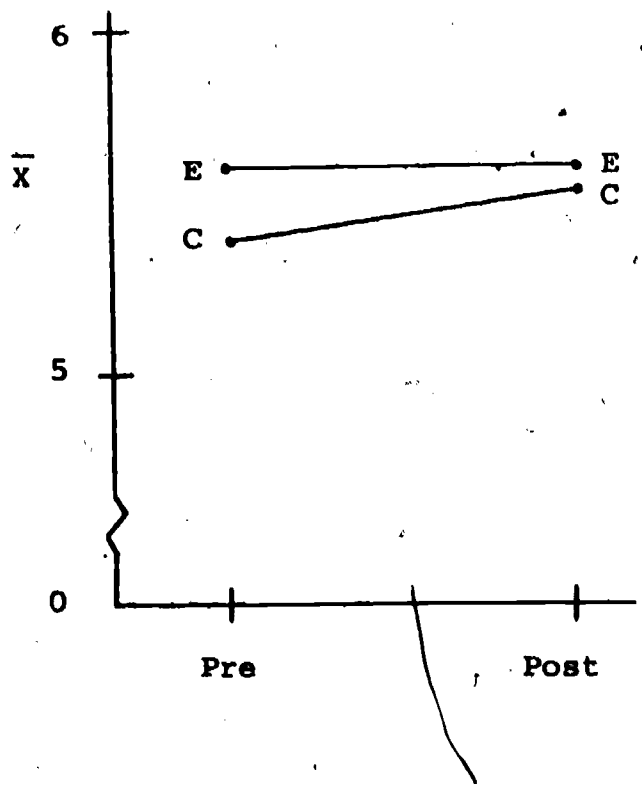
JOBS Data

	n	$\bar{X}$	s	range	F	p
Men (0-30 points)						
E - Pre	35	10.2	3.7	2-15	0.46	-
C - Pre	43	9.6	3.9	0-16		
E - Post	35	9.6	4.3	0-20	0.54	-
C - Post	43	8.9	4.5	0-18		
Women (0-30 points)						
E - Pre	35	5.7	2.9	1-14	0.18	-
C - Pre	43	5.4	2.4	0-11		
E - Post	35	5.7	3.0	0-11	0.03	-
C - Post	43	5.6	3.1	0-11		
Both (0-30 points)						
E - Pre	35	14.1	5.5	5-27	0.77	-
C - Pre	43	15.2	5.5	7-30		
E - Post	35	14.7	6.9	1-30	0.29	-
C - Post	43	15.5	7.0	4-30		

Male-Typing



Female-Typing



Sex-Fair Typing

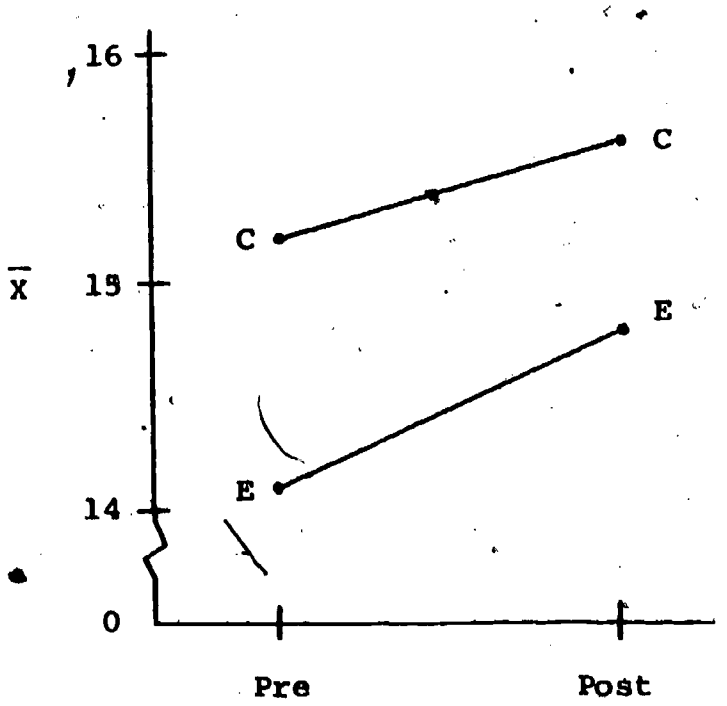


Figure 5

JOBS Data

sex-role stereotyping during the period that they were enrolled in EBCE. During the same period of time, however, the comparison students also exhibited less sex-role stereotyping.

Figure 5 graphically displays the results from the JOBS scale.

Figure 5

From Figure 5 it can be seen that for the partial score related to stereotyping males, both EBCE and comparison students exhibited progressively less over the time period. It can also be seen that EBCE students exhibited less female stereotyping over the time period (comparison students slightly more). When one looks at the combined scores (sex-fair typing), it can therefore be seen that both EBCE and comparison students are stereotyping progressively less. Although the fourth hypothesis must be rejected--EBCE students did not develop significantly less sex-role stereotyping than comparison students--the results of the EBCE program operation were favorable.

Hypothesis 6

The sixth hypothesis associated with student outcome data related to locus of control: EBCE students will develop significantly more internally (therefore less externally) oriented locus of control than comparison students. Data used to evaluate the sixth hypothesis were students' scores on the ANS-IE instrument. Analysis of variance (ANOVA) procedures were used to test the hypothesis.

Table 7 presents the data and statistics on the ANS-IE outcomes.

Table 7

Table 7

ANS-IE Data

(0-40 points)

	n	$\bar{X}$	s	range	F	p
E - Pre	35	14.0	4.6	5-25	0.02	-
C - Pre	43	13.8	5.3	3-26		
E - Post	35	14.9	5.2	6-27	2.61	-
C - Post	43	13.0	5.0	4-24		

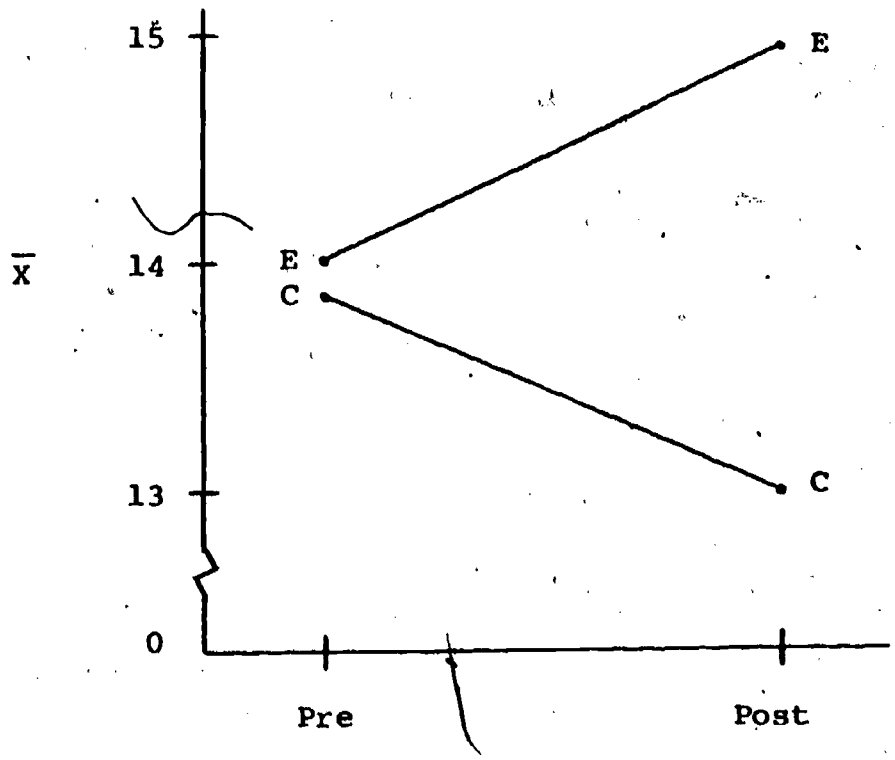


Figure 6

ANS-IE Data

The data presented in Table 7 indicate that the two groups were initially similar. However, by the end of the year EBCE students felt more externally controlled than did their counterparts.

Figure 6 graphically displays the results from the ANS-IE scale.

Figure 6

From Figure 6 it can be seen that EBCE students increased the slight gap that existed between them and the comparison students--the EBCE students became more externally controlled and the comparison group became more internally controlled. Hence, the fifth hypothesis must be rejected--EBCE students did not develop significantly more internal locus of control.

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) and covariance (ANCOVA) procedures were utilized to test each of the additional hypotheses.

Table 8 presents the statistics on the student outcomes on Part 3 and Part 4 of the SAS.

Table 8

Data presented in Table 8 show that the EBCE and comparison students had significantly different pretest scores on both Parts 3 and 4 of the SAS. E students did show increases in their attitudes toward self and others, while C students showed decreases in their attitudes toward self and others. Hence E students had significantly more positive attitudes towards self (not others) than did the C students.

Figure 7 graphically displays the test results from Part 3 (self) and Part 4 (other) of the SAS.

Figure 7

From Figure 7 it can be seen that EBCE students showed a great rate of positive growth in attitudes toward self and toward others. The comparison students showed a great decline in attitudes toward self and others. The rate of growth of E students and decline of C students was sufficient to precipitate a significant posttest difference between the two groups with respect to attitudes toward self.

Thus based on the data in Table 8 and Figure 7 the first additional hypothesis was not rejected and the second additional hypothesis was rejected. EBCE students did develop significantly more positive attitudes toward self than did comparison students; however, EBCE students did <u>not</u> develop significantly more positive attitudes toward others.

Table 8

SAS - Parts 3 and 4 Data

(Self and Others)

SAS - Part 3: Self (19-95 points)

	n	$\bar{X}$	s	range	F	p
E - Pre	35	65.3	11.3	31-82	7.92*	.01
C - Pre	43	72.3	10.5	45-93		
E - Post	35	69.9	11.2	44-88	0.05	-
C - Post	43	69.4	9.5	50-87		
E - Post Adj.		71.9			5.18**	.05
C - Post Adj.		67.4				

SAS - Part 4: Others (13-65 points)

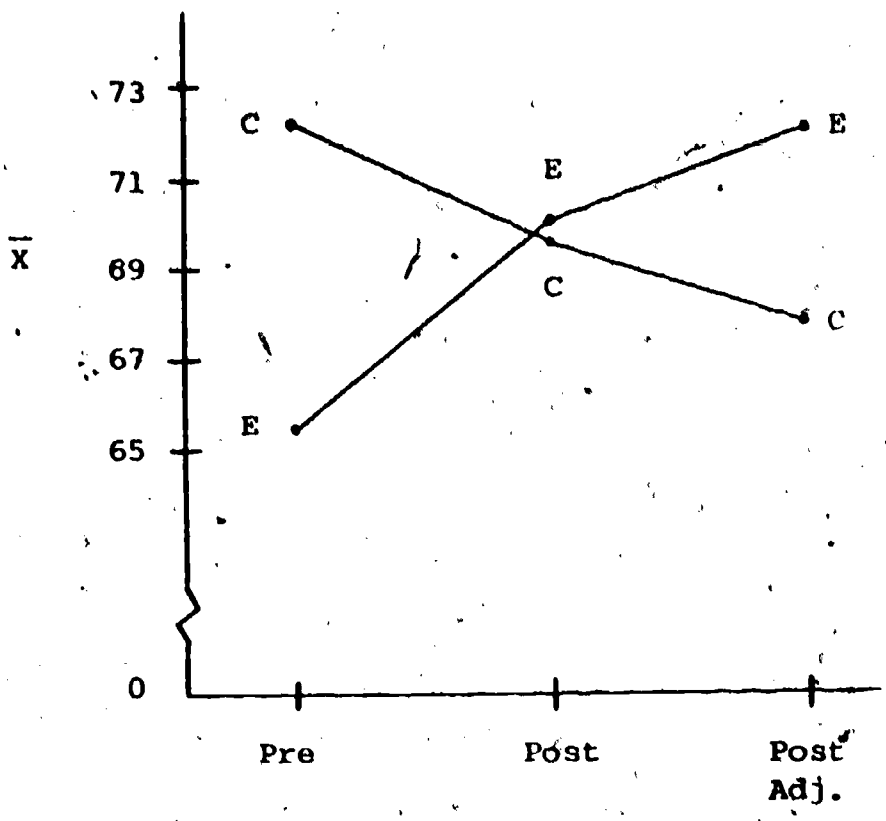
E - Pre	35	44.9	8.5	30-59	6.88**	.025
C - Pre	43	49.3	6.6	35-63		
E - Post	35	47.6	8.6	32-65	0.05	-
C - Post	43	47.3	6.4	31-59		
E - Post Adj.		48.7			2.67	-
C - Post Adj.		46.2				

*$F_{.01}(1,76) = 7.02$

**$F_{.05}(1,75) = 4.06$

**$F_{.025}(1,76) = 5.25$

Self



Others

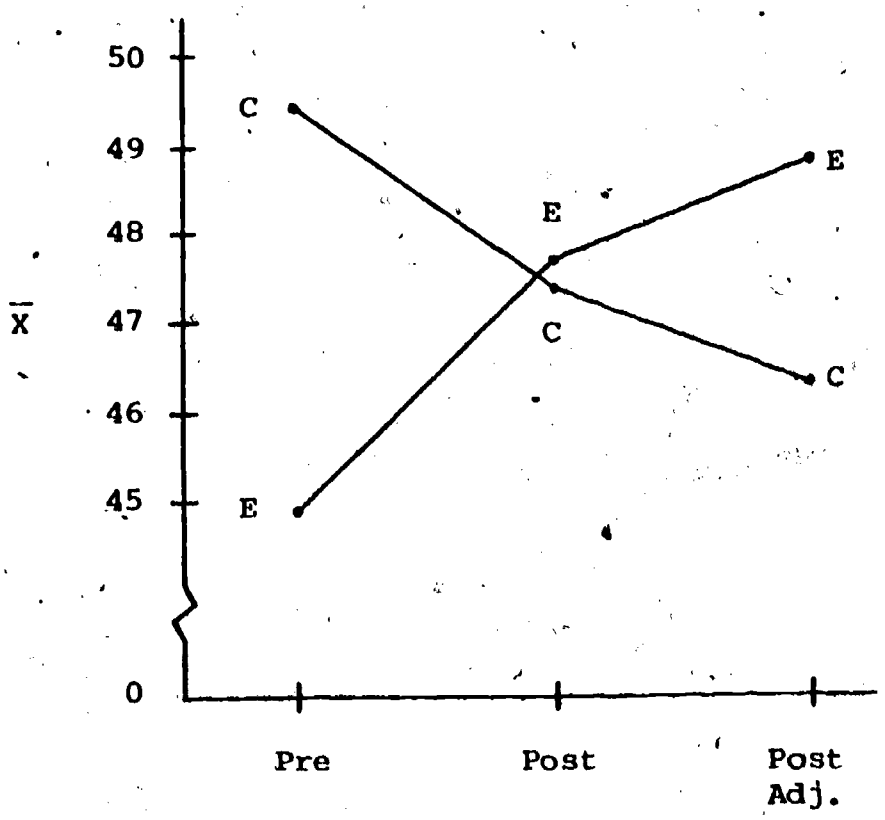


Figure 7

SAS Parts 3 and 4 Data

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 7

The seventh 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 the 41 students in April 1979. Responses from 17 parents (41%) were received and tabulated.

Results

Response data from the parent questionnaire are presented in Table 9.

Table 9

From Table 9 it can be seen that all of the parents thought that the EBCE program compared better or much better overall with the past school experiences of their child. Only one parent indicated a neutral response in terms of wanting their child to participate in the EBCE program again (if they had it to do over again). Most of the parents (94%) felt that their child liked the EBCE program better or much better than past school experiences. Ninety-four percent (94%) of the parents also felt that the EBCE program either had a good or definitely good effect on helping their child to form career plans.

Table 9

Parent Opinion Survey

1. How well does the EBCE Program compare overall with the past school experiences of your daughter or son?

Much Worse	1	2	3	4 *24%*	5 *76%*	Much Better

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

Definintely NO	1	2 *6%*	3	4	5 *94%*	Definitely YES

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

Much Worse	1	2 *6%*	3	4 *29%*	5 *65%*	Much Better

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

Definitely Bad	1	2 *6%*	3	4 *18%*	5 *76%*	Definitely Good

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

Much Less	1	2	3 *12%*	4 *18%*	5 *71%*	Much More

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

Almost Never	1 *12%*	2	3 *6%*	4 *12%*	5 *71%*	Almost Daily

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

Definitely NO	1 *6%*	2	3	4 *24%*	5 *71%*	Definitely YES

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

Definitely NO	1 *65%*	2	3 *18%*	4	5 *18%*	Definitely YES

Eighty-nine percent (89%) of the respondents felt that their child was more or much more motivated to learn in the EBCE program as compared with past experiences in regular schools. Eighty-three percent (83%) indicated that their child talked quite regularly with them about what was occurring in the EBCE program. Ninety-five percent (95%) also indicated that they had noticed positive changes in their child that might be attributable to EBCE participation; only 18% indicated noticing negative changes that might be a result of participation in the EBCE program.

Parents felt that the greatest weaknesses of the program were a lack of experience sites (18%), and not enough students can participate (18%). Parents felt that the greatest strengths of the EBCE program were its exposure of students to and understanding of the world of work through career explorations, career planning, and career decision-making (76%), as well as making them more responsible and mature (24%).

Based on the data obtained from parents on the Parent Opinion Survey, hypothesis 7 was not rejected. The majority of parents who responded to the questionnaire did exhibit positive attitudes toward the EBCE program. However, the fact that 59% of the parents did not respond to the questionnaire raises the question of validity of the reported data.

Employer Data

One of the major groups necessary for operation of an EBCE program is the personnel 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 8

The eighth hypothesis stated that community resource persons (hereafter designated as "employers") 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 April of 1979. A random sample of 91 employers was selected to be surveyed from a list of over 100 available experience site personnel for the FY 79 school year. The employers at the experience sites received the questionnaire in the mail during the first week of April. Even though employers were requested to return them by April 17, questionnaires which were received before May 22 were included in the tabulation. Thirty-one experience site personnel (34%) returned completed questionnaires to AEL.

Results

Most employers were positive toward the EBCE program. They complimented EBCE strengths and offered suggestions for program improvement. Response data from the employer survey are presented in Table 10.

Table 10

Table 10

Employer Questionnaire

1. 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	52%	45%	--	3%
Do you talk about the students' personal problems?	3%	52%	26%	19%
Do you talk about activities at your site?	81%	16%	--	3%
Do you assist students in non-job related assignments?	6%	23%	42%	26%
Do you supervise students to perform a specific job-related task at your site?	84%	10%	3%	3%

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

Yes 77% No -- Don't Know 23%

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

Yes 84% No 13% Don't Know 3%

4. How has top level management reacted to the EBCE students placed at your site?

Very favorable 45% Somewhat unfavorable 6%

Favorable 45% Very unfavorable 3%

Table 10 (Cont'd)

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

	Frequently	Occasionally	Seldom	Never
Observing site activities	77%	13%	3%	3%
Researching from site materials	26%	45%	19%	3%
Actively performing site activities	61%	26%	3%	3%
Talking with site personnel	71%	16%	6%	3%
Individual study	19%	42%	19%	6%

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

Very favorable 32%

Favorable 52%

Somewhat unfavorable 13%

Very unfavorable 3%

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

Very effective 23%

Effective 55%

Somewhat ineffective 16%

Totally ineffective 3%

From Table 10 it can be seen that over half (52%) of the employers frequently talk with students about job opportunities, over three-fourths (81%) talk about site activities, and 84% supervise students in performing specific job-related tasks at their sites. However, many employers occasionally talk about students' personal problems (52%), but only 29% occasionally or frequently assist students in non-job-related assignments. Although 90% of the top level management and 84% of the employees reacted favorably to the EBCE students placed at their sites, and 84% of the employer respondents felt that the program functioned as it was initially described to them during site recruitment, only 77% of the respondents were positive that their companies would continue working with the EBCE project during the next couple of years. (The other 23% of the respondents indicated a "didn't know" about future cooperation.) Three-fourths (78%) of the respondents also felt that the program was effective (or very effective) based on the students and staff that they had encountered.

While at the experience sites, 77% of the students frequently spent their time observing site activities, 45% of the students occasionally researched from site materials, 61% actively performed site activities, and 71% talked with site personnel. Only 25% of the students seldom or never engaged in individual study while at the site.

Fifty-two percent of the employers believed that the greatest strengths of the EBCE program were in the areas of career exploration, career planning, and career decision-making. They felt EBCE was an important means of exposing students to the world of work, providing them with career awareness opportunities, and giving them hands-on experience in real job situations.

Although many employers listed weaknesses associated with the program, there seemed to be no consensus of opinion as to any outstanding program weakness. Thirteen percent of the employers said that they can't spend enough time with students; i.e., students are not at the site long enough. Sixteen percent felt that the students were playing around--using EBCE to get out of classes or school. Lack of student pre-site preparation, screening of students, and site placement of uninterested students were collectively listed as program weaknesses by 19% of the respondents.

Based on the data obtained from the employer questionnaires, hypothesis 8 was not rejected. The majority of experience site resource personnel at the community sites did exhibit positive attitudes toward the EBCE program. However, the fact that 66% of the employers did not respond to the questionnaire raises the question of validity of the reported data.

EBCE Staff Data

The EBCE staff (2 learning managers, 1 counselor, and 1 project director) rated various learning strategies in the EBCE program. Data are presented in Table 11.

Table 11

All four staff members rated six of the learning strategies as being highly important (rank 5) and rated two as highly effective (rank 5). Competencies and group activities were the only learning strategies that were rated both highly important and highly effective.

The EBCE staff also rated 23 different areas of program impact--impact upon students. Data are presented in Table 12.

Table 12

All four staff rated only four experience areas as being very helpful (rank 5) to students in 1) understanding the role of science in our society today, 2) understanding more about themselves, 3) communicating comfortably with adults, and 4) feeling prepared to accept adult responsibilities. Similarly, all four staff perceived the improvement of reading skills, the use of information obtained through direct experiences in making decisions, and gaining confidence in their ability to apply basic skills to complete tasks and solve problems around them as the three areas least impacted by EBCE program experiences.

Table 11

EBCE Staff Ratings of Learning Strategies

(Frequencies)

Learning Strategies	How Important					How Effective					
	Not Important 1	2	3	4	Highly Important 5	Not Effective 1	2	3	4	Highly Effective 5	NA
a. Student Orientation	-	-	-	1	3	-	-	-	2	2	-
b. Student Accountability System	-	-	-	1	2	-	-	-	3	-	1
c. Student Negotiation	-	-	-	1	3	-	-	1	2	1	-
d. Preprepared Projects	-	-	-	-	4	-	-	-	1	3	-
e. Negotiated Projects	-	-	-	1	3	-	-	-	2	2	-
f. Journals	-	-	-	2	2	-	-	-	2	2	-
g. Competencies	-	-	-	-	4	-	-	-	-	4	-
h. Exploration Packages	-	-	-	-	4	-	-	-	1	3	-
i. Learning Level Activities	-	-	-	1	3	-	-	-	2	2	-
j. Special Placements	-	-	-	-	-	-	-	-	-	-	4
k. Employer Seminars	-	-	-	1	3	-	-	1	2	1	-
l. Student Retreat	-	-	-	-	-	-	-	-	-	-	4
m. Specialization Activities	-	-	-	-	-	-	-	-	-	-	4
n. Individualized Math Activities	-	-	-	-	4	-	-	-	2	2	-
o. Individualized English Act.	-	-	-	-	4	-	-	-	2	2	-
p. Group Activities	-	-	-	-	4	-	-	-	-	4	-

Table 12

EBCE Staff Ratings of Program Impact

(Frequencies)

How helpful have EBCE experiences been in helping students . . .	Very Helpful 5	4	3	2	Little or no help 1
a. Understand the role of science in our society today	4	-	-	-	-
b. Solve problems logically	1	3	-	-	-
c. Get along with others	2	2	-	-	-
d. Understand more about themselves	4	-	-	-	-
e. Develop their own creativity	2	2	-	-	-
f. Understand the democratic process	1	3	-	-	-
g. Learn how society's values, the government and the economy affect the world of work	3	1	-	-	-
h. Learn how their abilities and interests fit into potential careers	3	1	-	-	-
i. Learn how to find and keep a job	3	1	-	-	-
j. Learn to analyze potential jobs	2	2	-	-	-
k. Improve reading skills	-	3	1	-	-
l. Learn necessary basic skills for jobs of interest	3	1	-	-	-
m. Improve oral communication skills	3	1	-	-	-
n. Improve mathematics skills	2	2	-	-	-

Table 12 (cont'd)

EBCE Staff Ratings of Program Impact

(Frequencies)

How helpful have EBCE experiences been in helping students . . .	Very Helpful 5	4	3	2	Little or no help 1
o. Know level of basic skills proficiency required in jobs of interest	2	2	–	–	–
p. Improve written communications skills	3	1	–	–	–
q. Become acquainted with resources useful in gaining information for work and decision making	2	2	–	–	–
r. Gain confidence in applying basic skills to complete tasks and solve problems	–	4	–	–	–
s. Take responsibility for their own actions	3	–	1	–	–
t. Communicate with adults	4	–	–	–	–
u. Use direct experience information in making decisions	–	4	–	–	–
v. Become more open to values and ideas different from their own	1	3	–	–	–
w. Feel prepared to accept adult responsibility	4	–	–	–	–

The staff noted that factors such as: 1) the cooperation, enthusiasm, and dedication from the employers, the community, school administrators and Board of Education, and the EBCE staff and students; 2) the competencies within the EBCE curriculum; and 3) the emphasis placed on mathematics skills have contributed in a major way to the success of EBCE. They noted that the lack of a specialized mathematics curriculum, an inadequate student accountability system while at the site, and not enough time on the job site (due to transportation time and required lunch hour) 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 awareness; career decision-making; self-confidence and maturity; oral, written, and math skills; and acceptance of responsibility. They felt their students benefitted the least from EBCE in mathematics skills development, ability to apply skills to solve problems, ability to make logical decisions, and not using EBCE properly to define/limit career choice.

Their beliefs with respect to the effects of the EBCE program on the traditional high school program ranged from "probably none" to investigation of the curriculum (needs analysis) to greater acceptance by high school teachers. In addition, some staff felt that the community has become more involved with the schools and improved its perception towards young people, and thus has been favorably impacted.

Staff suggestions for program improvement during the next year were to have students spend more time on the job site (no lunch break), use sophomores, require a mathematics course, design an accountability system for employers to track students, and finally (and probably the most urgent), secure funding for continuation.

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 briefly 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. Positive aspects of the project included the general quality of the staff, cooperation by the community employers, and enthusiasm of EBCE staff, students, parents, employers, and school personnel. It did appear that there were some topics which may have reduced the potential for a totally successful implementation.

While curriculum and instruction activities appeared to be adequate, there were some perceived deficiencies in interrelating career exploration activities and academic requirements. But since only elective career education credit was given, the impetus for integration was reduced (if not totally eliminated). The loss of two professional staff members at mid-year could possibly have been detrimental to program operation. However, the subsequent replacement of one person and a consolidation of job duties prevented any perceptable decline in program operation or impact. Further, although a new project director was named at the beginning of the school year (because the former project director resigned to assume an administrative position in another school system), he had already served the project for two years as the site analyst/placement coordinator and thus had no problems whatsoever assuming leadership of the project.

SUMMARY AND 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 experience 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, a third-party evaluation team from 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 the reading comprehension and the mathematics concepts and applications subtests of the Comprehensive Tests of Basic Skills, the JOBS instrument (sex-role stereotyping), the New Mexico Career Oriented Activities Checklist (career maturity),

the Student Attitude Survey battery (Learning Environment, Work, Self, Others), the Nowicki-Strickland Scale (locus of control), and a Student Information Questionnaire (demographic data - pretest only).

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 on standardized basic skills tests (CTBS) indicated that EBCE students did as well as comparison students in mathematics concepts and applications; however, comparison students did significantly better than EBCE students in reading comprehension. On all three subtests C students had higher scores initially than E students.

Career Knowledge and Planning. Analysis of scores on Part 2 of the SAS battery indicated that students did acquire significantly more positive attitudes toward work. During year three of program operation, however, the EBCE students did not acquire significantly more positive scores in career planning or career knowledge. Again, C students had higher scores initially than E students on all three variables.

Career Maturity. The EBCE students did acquire significantly greater career maturity as measured by the NMCOAC. Although comparison students showed some growth, the growth displayed by EBCE students was greater.

Attitudes: Education. EBCE students displayed significantly more positive attitudes toward several 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: 1) comparison students had

initial scores equivalent to the EBCE students on four subscores (significantly higher on one), 2) EBCE students showed positive growth on all five subscores, 3) comparison students showed negative growth on four subscores, and 4) EBCE students scored significantly higher on the posttests on all five subscores (see Figure 4 and Table 5).

Sex-role stereotyping. Although EBCE students were initially sex-role stereotyping slightly more than comparison students, this was not reversed during the project duration. 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 should have been evidenced in the data. However, such was not the case. Further, the instrumentation itself may well not be sensitive enough to detect subtle changes that do occur.

Locus of Control. EBCE students slightly increased their feelings of externally oriented locus of control while comparison students slightly decreased their externality. However, neither change was sufficiently great to establish a significant difference. It should be noted, however, that as a group the Conecuh County students do appear to be predominately internally controlled.

Self and Others. Additional hypotheses about attitudes toward self and toward others were also tested. Analysis of data indicated that EBCE students developed significantly more positive attitudes toward self than did the comparison students. A similar trend (though not significant) for EBCE and comparison students was apparent in their attitudes toward others. Again, both groups of students appear to have quite positive attitudes toward themselves and others.

Parent Data

A questionnaire was mailed to parents of the 41 EBCE students to assess their attitudes about the EBCE program. There were 17 parents (41%) who responded to the questionnaire. Most parents who responded were very positive towards all aspects of the program. Most (89%) of the parents thought that their sons and/or daughters were more motivated to learn in the EBCE program than they were in traditional schools. Nearly all (94%) of the respondents thought that their son or daughter liked the EBCE program better than past school experiences. Furthermore, 94% indicated positively that they would allow their child to participate in EBCE if they had the choice to make again, and 100% believed that the EBCE program experiences were better than past school experiences of their children.

Employer Data

A questionnaire was mailed to 91 employers at experience sites. Thirty-one (34%) employers responded to the questionnaire. Most employers who repsonded were positive towards the program. They complimented the EBCE program strengths and offered suggestions for program improvement. Of those who responded to the items 77% believed that their organization would continue to participate in coming years and 78% rated the program from effective to very effective. Over half of the employers believed that the greatest strengths of the EBCE program were in the areas of career exploration, career planning, and career decision-making; there was no consensus as to the greatest weakness.

EBCE Staff Data

The four EBCE staff members rated six of the learning strategies utilized in the EBCE model as highly important and also indicated that two of the strategies had been highly effective in producing student learning (competencies and group activities were the only strategies rated both highly important and highly effective). They also contended that the program had been quite helpful in teaching students behaviors such as understanding the role of science in our society today, understanding more about themselves, communicating with adults, and feeling prepared to accept adult responsibilities.

EBCE staff felt that cooperation, dedication, and enthusiasm of various groups; the competencies; and the emphasis placed on math skills were three major components contributing to the success of EBCE. They also felt, however, that variables such as the lack of a specialized math curriculum, inadequate student accountability system, and insufficient on-site time 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 having students spend more time on site, use sophomores, require a math course, and design a student accountability/tracking system.

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

There were some perceived weaknesses or problem areas which impacted the operation implementation. These weaknesses or problem areas included deficiencies in interrelating academic and career activities and developing integrated learning programs. Utilizing only elective credits, however, reduced the impetus for integration.

The strengths of the program which have contributed to its current status include the quality and enthusiasm of the operations staff and management staff, cooperation of the community, administrative/Board of Education support, and utilization of a comprehensive instructional delivery system. 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.

In conclusion, it appears that the implementation process was progressing satisfactorily and all major milestone events appeared to have been met and accomplished. It was obvious to the evaluators that the program was operated and managed in an efficient and effective manner. It was also obvious to the evaluators that the students were being impacted in a positive way.

EBCE student accomplishments appeared to be substantial. EBCE students' attitudes toward aspects of the learning environment, work, career maturity, and self were significantly more positive than comparison students. EBCE students showed no significant gains in reducing their sex-role stereotyping

or increasing their internal locus of control. However, unobtrusive assessment indicated that EBCE students were displaying more maturity and accepting responsibility more readily. It should also be pointed out that there was a substantial difference between the E and C groups with respect to grade level: only 25% of the EBCE students were seniors whereas 60% of the comparison students were seniors. This difference may account for the results in reading comprehension (favoring comparison students) as well as the fact that on every variable that was assessed, the comparison students had more favorable scores initially.

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 educational opportunity which is relevant to their needs, interests, and abilities. It is felt that as students become full-fledged members of the world of work, their experiences in the EBCE program will have positively impacted the transition.

Appendix A

Comprehensive Tests of Basic Skills

Comprehensive Tests of Basic Skills (CTBS)

Purpose

The CTBS were designed to provide improved measurement to 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
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

*As of 1-1-77

Appendix B

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

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

*Prices as of 1-1-77

Appendix C

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 D

JOBS

JOBS

Purpose

The JOBS instrument was designed to provide an assessment of degree of sex-role stereotyping demonstrated by individuals. This AEL-developed instrument is based on activities in the AEL/EBCE Student Career Guide. It is an experimental instrument.

Respondent Groups

Students and other adults.

Item Content

The instrument contains a list of 30 occupations. Students mark the occupations in terms of whether the job can best be performed by a man (M) or a woman (W), or performed equally well by either sex (B).

Administration Procedures

The JOBS instrument may be completed by secondary or post-secondary students, or other adults. The instrument requires about 15 minutes to complete.

Scoring Procedures

Three scores are obtained: frequencies of M, W and B responses. These three scores can be utilized to assess degree of change in stereotyping.

Availability/Price

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

AEL:JES:8/77

Name _____ Date _____

School _____ City _____ State _____

JOBS

INSTRUCTIONS: Below is a list of jobs. Use the following code to mark each item:

M - this job can best be performed by a man.

W - this job can best be performed by a woman.

B - this job can be performed equally by either a man or woman.

_____ nurse

_____ mechanic

_____ surgeon

_____ lawyer

_____ electrician

_____ machinist

_____ secretary

_____ babysitter

_____ veterinarian

_____ pilot

_____ shop teacher

_____ farmer

_____ stock broker

_____ creative writer

_____ dental hygienist

_____ plumber

_____ beautician

_____ scientist

_____ telephone operator

_____ clothes designer

_____ accountant

_____ dispatcher

_____ cashier

_____ counselor

_____ truck driver

_____ engineer

_____ detective

_____ mortician

_____ receptionist

_____ insurance agent

Appendix E

Nowicki-Strickland
ANS-IE

Nowicki-Strickland Scale (ANS-IE)

Purpose

The ANS-IE was designed to assess the extent to which an individual's locus of control is internalized or externalized.

Respondent Group

Students and other adults.

Item Content

The adult form contains 40 items with a Yes-No response mode.

Administration Procedures

The ANS-IE may be completed by students and other adults by circling their response (Yes or No) for each of the 40 items. The instrument requires about 20 minutes to complete.

Scoring Procedures

A single score is obtained by counting the frequency of externally-endorsed responses.

Availability/Price

Information on availability/prices/scoring keys may be obtained from:

Experiential Education Division
Appalachia Educational Laboratory
P. O. Box 1348
Charleston, WV 25325

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.

NAME _____ DATE _____

SCHOOL _____ CITY _____ STATE _____

EBCE STUDENT: ☐ YES ☐ NO

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?

   ☐ 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

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.

Repsondent Group

Parents (guardians) of EBCE students.

Item Content

The 10-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

April 2, 1979

Dear Parents:

During the past year your child has participated in an Experience-Based Career Education (EBCE) program, called ACTIO-N. Appalachia Educational Laboratory has a contract with the Conecuh County Board of Education 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 call me toll free at 800/624-9120. Please return the questionnaire in the enclosed envelope by April 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

cc: Mr. Harold Ryals

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 questions 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 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

5. 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

(continued on reverse side)

6. 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

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

Definitely NO				Definitely YES
1	2	3	4	5

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

Definitely NO				Definitely YES
1	2	3	4	5

9. What do you think are the greatest weaknesses of the EBCE Program?

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

Appendix H

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 9-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

April 2, 1979

Dear Community Instructor:

Your organization has been most helpful to the local Experience-Based Career Education (EBCE) Program, called ACTIO-N, by contributing time and resources, thus providing students with an opportunity to learn. Appalachia Educational Laboratory has a contract with the Conecuh County Board of Education 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 complete the enclosed questionnaire and return it to me in the enclosed stamped envelope.

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 800/624-9120. I would appreciate it if the completed questionnaires were returned in the enclosed envelope by April 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

cc: Mr. Harold Ryals

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. 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 assist students in non-job related assignments?	___	___	___	___
Do you supervise students to perform a specific job related task at your site?	___	___	___	___
Other (specify) _____				
_____	___	___	___	___

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

Yes ___ No ___ Don't know ___

3. 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 ___

4. How has top level management reacted to the EBCE students placed at your site?

___ very favorable ___ somewhat unfavorable

___ favorable ___ very unfavorable

(continued on reverse side)

5. 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 site personnel	____	____	____	____
Individual study	____	____	____	____
Other (specify) _____				
_____	____	____	____	____

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

____ very favorable
____ favorable
____ somewhat unfavorable
____ very unfavorable

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

____ very effective
____ effective
____ somewhat ineffective
____ totally ineffective

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

_____

_____

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

_____

_____

Appendix I

EBCE Staff Questionnaire

EBCE Staff Questionnaire (SQ)

Purpose

The EBCE Staff Questionnaire was designed to provide an assessment of staff's perceptions and opinions about the EBCE program implemented at their site.

Respondent Group

EBCE Administrators, Learning Coordinators, Counselors and Site Analysts/Placement Coordinators.

Item Content

The 31-item questionnaire elicits staff opinions/attitudes toward the program and its effect on students, community and traditional program.

Administrative Procedures

The SQ is designed to be completed by EBCE staff members. Questionnaires are mailed to Program Director with cover letter and stamped, self-addressed envelopes. They are requested to return the completed SQ by a specified date.

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 SQ at their own expense.

Appalachia Educational Laboratory

April 17, 1979

Mr. Harold Ryals
Conecuh County ACTIO-N
Box 388
Evergreen, AL 36401

Dear Harold:

Enclosed are questionnaires for your staff to complete as part of the 1978-79 third-party evaluation effort. Please have each staff member listed below (including yourself) complete the form and return it by May 1 in the enclosed stamped envelope. Thank you for your cooperation in this matter. If you or any staff member has any questions, please feel free to contact me.

Sincerely yours,

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

JES:cd

Enclosures

Carol Adams
Louise Bradley
William Bodiford

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

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 Activities	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. Employer Seminars	1	2	3	4	5	1	2	3	4	5	NA
l. Student Retreat	1	2	3	4	5	1	2	3	4	5	NA
m. Specialization Activities	1	2	3	4	5	1	2	3	4	5	NA
n. Individualized Mathematics Activities	1	2	3	4	5	1	2	3	4	5	NA
o. Individualized English Activities	1	2	3	4	5	1	2	3	4	5	NA
p. Group Activities (e.g., counseling)	1	2	3	4	5	1	2	3	4	5	NA
q. 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				Of little or no help
5	4	3	2	1

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

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

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

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

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

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

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				Of little or no help
5	4	3	2	1

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

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

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				Of little or no help
5	4	3	2	1

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

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

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

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

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)

Reading Comprehension					
		Pretest			
Source	SS	df	MS	F	p
TRT	205.0	1	205.0	2.76	-
Error	5638.7	76	74.2		
Total	5843.7	77			
		Posttest			
TRT	450.8	1	450.8	5.23	<.05
Error	6553.3	76	86.2		
Total	7004.1	77			
Mathematics Concepts					
		Pretest			
TRT	203.2	1	203.2	8.72	<.005
Error	1797.7	77	23.3		
Total	2000.9	78			
		Posttest			
TRT	233.3	1	233.3	10.42	<.005
Error	1725.8	77	22.4		
Total	1959.1	78			
		ANCOVA			
Total	666.4	77			
Error	650.1	76	8.6		
TRT	16.3	1	16.3	1.90	-
					b = 0.77

CTBS (cont'd)

Mathematics Applications

Source	SS	df	MS	F	p
Pretest					
TRT	243.2	1	243.2	9.85	<.005
Error	1904.0	77	24.7		
Total	2147.2	78			
Posttest					
TRT	116.2	1	116.2	4.34	<.05
Error	2062.5	77	26.8		
Total	2178.7	78			
ANCOVA					
Total	1235.5	77			
Error	1235.3	76	16.3		
TRT	0.2	1	0.2	0.01	-

b = 0.66

Student Attitude Survey (SAS) - Part 1

Source	SS	df	MS	F	p
Education - General		**Pretest**			
TRT	77.5	1	77.5	3.24	<.10
Error	1816.7	76	23.9		
Total	1894.2	77			
		Posttest			
TRT	247.6	1	247.6	8.31	<.01
Error	2268.1	76	29.8		
Total	2515.7	77			
		ANCOVA			
Total	1962.1	76			
Error	1489.1	75	19.9		
TRT	473.0	1	473.0	23.77	<.0001
				b = 0.66	
School Curriculum		**Pretest**			
TRT	22.4	1	22.4	2.60	-
Error	656.6	76	8.6		
Total	679.0	77			
		Posttest			
TRT	76.4	1	76.4	6.42	<.025
Error	900.9	76	11.9		
Total	977.3	77			

SAS - Part 1 (cont'd)

Source	SS	df	MS	F	p
School Resources		Pretest			
TRT	5.4	1	5.4	0.22	-
Error	1873.0	76	24.6		
Total	1878.4	77			
		Posttest			
TRT	1334.2	1	1334.2	26.11	<.0001
Error	3880.8	76	51.1		
Total	5215.0	77			
School Counseling		Pretest			
TRT	0.1	1	0.1	0.01	-
Error	1092.6	76	14.4		
Total	1092.7	77			
		Posttest			
TRT	358.8	1	358.8	19.09	<.0001
Error	1425.0	76	18.8		
Total	1783.8	77			
Total Learning Environment		Pretest			
TRT	243.3	1	243.3	1.37	-
Error	13505.4	76	177.7		
Total	13748.7	77			
		Posttest			
TRT	6390.3	1	6390.3	20.08	<.0001
Error	24180.1	76	318.2		
Total	30570.4	77			

Student Attitude Survey (SAS) - Part 2

Career Knowledge					
		Pretest			
Source	SS	df	MS	F	p
TRT	93.7	1	93.7	2.38	-
Error	2987.8	76	39.3		
Total	3081.5	77			
		Posttest			
TRT	1.5	1	1.5	0.03	-
Error	3275.7	76	43.1		
Total	3277.2	77			
Career Planning					
		Pretest			
TRT	83.6	1	83.6	3.44	<.10
Error	1845.1	76	24.3		
Total	1928.7	77			
		Posttest			
TRT	0.7	1	0.7	0.03	-
Error	2087.7	76	27.5		
Total	2088.4	77			
		ANCOVA			
Total	1307.7	76			
Error	1281.2	75	17.1		
TRT	26.5	1	26.5	1.55	-
					b = 0.66

SAS - Part 2 (cont'd)

Work					
		Pretest			
Source	SS	df	MS	F	p
TRT	354.3	1	354.3	4.23	<.05
Error	6371.9	76	83.8		
Total	6726.2	77			
		Posttest			
TRT	0.1	1	0.1	0.00	
Error	8872.0	76	116.7		
Total	8872.1	77			
		ANCOVA			
Total	4885.0	76			
Error	4651.2	75	62.0		
TRT	233.8	1	233.8	3.77	<.10
				b = 0.81	

Student Attitude Survey (SAS) - Parts 3 and 4

Source	SS	df	MS	F	p
Part 3 - Self		**Pretest**			
TRT	928.2	1	928.2	7.92	<.01
Error	8908.6	76	117.2		
Total	9836.8	77			
		Posttest			
TRT	5.8	1	5.8	0.05	-
Error	8088.7	76	106.4		
Total	8094.5	77			
		ANCOVA			
Total	5518.3	76			
Error	5161.6	75	68.8		
TRT	356.7	1	356.7	5.18	<.05
				b = 0.57	
Part 4 - Others		**Pretest**			
TRT	385.3	1	385.3	6.88	<.025
Error	4259.7	76	56.0		
Total	4645.0	77			
		Posttest			
TRT	2.6	1	2.6	0.05	-
Error	4242.4	76	55.8		
Total	4245.0	77			
		ANCOVA			
Total	3347.0	76			
Error	3232.0	75	43.1		
TRT	115.0	1	115.0	2.67	-
				b = 0.49	

ANS-IE

Locus of Control		Pretest			
Source	SS	df	MS	F	p
TRT	0.6	1	0.6	0.02	-
Error	1900.9	76	25.0		
Total	1901.5	77			
		Posttest			
TRT	69.0	1	69.0	2.61	-
Error	2005.7	76	26.4		
Total	2074.7	77			

New Mexico
Career Oriented Activities Checklist
(NMCOAC)

Career Maturity		Pretest			
Source	SS	df	MS	F	p
TRT	11.7	1	11.7	0.28	-
Error	3128.2	76	41.2		
Total	3139.9	77			
		Posttest			
TRT	123.8	1	123.8	2.78	<.10
Error	3387.5	76	44.6		
Total	3511.3	77			

JOBS

Total Sex-role Stereotyping

Source	SS	df	MS	F	p
Pretest					
TRT	22.9	1	22.9	0.77	-
Error	2274.0	76	29.9		
Total	2296.9	77			
Posttest					
TRT	14.0	1	14.0	0.29	-
Error	3690.2	76	48.6		
Total	3704.2	77			