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AUTHOR Henderson, Harold L.: Shively, Joe E.
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ABSTRACT

A study examined the degree to which experienced-based career education (EBCE) participation enhances students' self-concept. The following three instruments were administered to 265 high school juniors and seniors at five sites (Ames, Iowa: Bremen and Brunswick Georgia: and Syracuse and Ithaca, New York): (1) a student questionnaire designed to secure demographic data and student attitudes toward educational programs: (2) the Tennessee Self-Concept Scale, which consists of 100 self-descriptive items: and (3) a self-concept instrument measuring student ability to deal with such factors as tension, confidence, peer groups, and opportunities to make judgments and explore various roles. Data revealed that EBCE students were more positive than control group students in their attitudes toward their current school program. They considered their program superior for learning about career planning, job search skills, and specific job skills. Comparison and EBCE students did not manifest any significant differences in their responses on the latter two instruments. Designers of the project attribute this lack of difference between the experimental and comparison students to several factors, including the failure of at least one site to do any posttesting, a possible insensitivity of the instrumentation to self-concept changes occuring in EBCE students, and time limitations. (YLB)

EBCE AND SELF CONCEPTS--

Some thoughts on self-regard and career development

Harold L. Henderson, Ph.D.

Joe E. Shively, Ph.D.

Appalachia Educational Laboratory

Charleston, West Virginia

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Author's Note: Dr. Shively performed all of the statistical research. Dr. Henderson provided the conceptualization and is responsible for the content of this final report.

INTRODUCTION

Since the Fall of 1972, students around the country have been active participants in the development, evaluation, and implementation of the Experience Based Career Education (EBCE) concept. Although student involvement in the programs was associated with positive short-term impact, no assessment of long-term impact was possible until recently. In the last three years, as a result of cooperation by each of the four EBCE laboratories and encouragement from the National Institute of Education (NIE), follow-up studies have been conducted.

In 1976-77 NIE also encouraged modest research studies by the EBCE developers, and the AEL Self-concept study is a continuation of a small feasibility study begun under NIE's Education and Work Group as a directed development paper. The Institute's interest in the affective aspects of the learning process is well documented in their funding of the Kash and Borich (1978) research on teacher behavior and pupil self-concept. And their concern for career development is nicely demonstrated by their support of the theoretical work on career decision-making (Mitchell, Jones and Krumboltz, 1974).

All four EBCE laboratories (Far West in San Francisco, Philadelphia's Research for Better Schools, Northwest Regional Educational Laboratory in Portland, and our own AEL), apparently have case history evidence as to the impacts of experiential learning on self-concept (see the four Laboratories' yearly evaluation reports since 1972), but none has captured useful statistical evidence. This may be due to the poor quality of self-concept outcome measures (Wylie, 1974) or because researchers have not read

the excellent but little known theoretical work by Super and associates (Super, 1953 & 1963), or a result of incomplete conceptualizing on the part of EBCE staff.

A modest beginning has now been made by AEL in documenting positive changes in students' attitudes about themselves (Watts, Shively and Henderson, 1977) which goes beyond the observations made by parents with regard to their children's assuming greater responsibility for themselves ("getting it together") and teachers reporting that students have more positive self-perceptions as a consequence of exposure to EBCE.

Self-confidence or self-esteem (Wells and Marwell, 1976) is only one of many dimensions to self-concept (Shavelson, Hubner, and Stanton, 1976); however, it does seem to relate to more effective coping skills (Erikson, 1974; Zurcher, 1977) which have been frequently listed as a typical EBCE outcome.

Throughout the small research project reported in this paper, it had been our experience that if only self-report data (from interviews or questionnaires) were to be used for measurement purposes, one should operationally define self-concept rather broadly so that it included social, emotional, academic and physical variables (Shavelson, Hubner, and Stanton, 1976). Such variables would then encompass self-worth; perceptions of one's personality, values, interests, abilities, physical appearance; identifications with others; goals, plans and self-direction; and career identity (Marx and Winne, 1978).

Therefore, the instruments constructed by the authors and recently used by a number of AEL/EBCE adopters are broadly rather than narrowly focused; one is a revision (100 items reduced to 37 items) of the Tennessee Self

Concept Scale, and the other is the AEL Self-Concept Inventory (with 41 items).

However, although (1) all the theoretical constructs are not included, (2) this paper does not tie up many loose ends, (3) this is a very modest project--the total financial investment by NIE does not exceed six thousand dollars, it is now the firm conclusion of the authors that this research should have had a different design. First of all, the original literature review should have been more extensive and intensive. Secondly, the vocational or occupational definition of self-concept should have been used and the instrumentation more narrowly constructed.

It is for these reasons that Appendix A was commissioned and is included within this paper. It is a synthesis of work on self-concept theory as it pertains to career development. Written by Donald E. Super, it focuses on his theory and on aspects of John Holland's theory insofar as they are directly relevant. Any additional work should build upon Appendix A, not the design of the AEL project.

BACKGROUND

EBCE's internal program evaluation in 1975 indicated that about 90 percent of those parents whose children were in EBCE noticed improvements in the students' attitudes toward themselves. Nearly 90 percent of the parents also felt their children had shown improvement in assuming responsibility for themselves. These findings suggested that EBCE participation may enhance students' self-concepts significantly more than traditional education. In the past, insufficient refinement and definition of the conceptual elements and dimensions related to the self-concept have impeded assessment of

self-concept in EBCE programs. By developing a definition and selecting or generating appropriate items, assessment of the self-concept construct as it relates to career development can be conducted.

It appears that the research done on self-concept has only minimally addressed itself to the substantial problems of operational constructs, measurement, and interpretations. Considered as a body of research, Shavelson, Hubner, and Stanton (1976) contend that self-concept studies today may be criticized in the same manner that Crown and Stephens (1961) and Wylie (1961) did more than 17 years ago: the self-concept interpretations of their measurements may not be valid. Wylie (1961; 1973; 1978) indicated that a great many empirical studies relevant to self-concept do not address themselves to any one theoretical approach. In addition, definitions of self-concept are imprecise and vary from one study to the next. The imprecision makes it extremely difficult to specify (a) the population of self-concept items from which a representative sample would be drawn for the instrument, or (b) the population of subjects for which the measurement techniques and interpretations would be appropriate. While this study can in no way attempt to resolve all these problems, it will, however, focus on the more current literature relevant to formalizing an operational construct for the development of a self-concept measure.

OPERATIONAL DEFINITION

Adolescence is seen as a period in which young people explore the world in which they live, the subculture of which they are about to become a part, the roles they may be expected to play, and the opportunities to play roles which suit their personalities, interests, and aptitudes. It is

during the same period in which the adolescent, through experience and self-examination, clarifies his self-concept and begins to put it into words, finds out what outlets exist in society for one who seeks to play a given role, and modifies her self-concept to bring it in line with reality. Adolescent exploration is, then, a process of attempting to develop and implement a realistic self-concept. (Super, 1953; Super et al, 1963; Henderson, 1958)

General Self-concept

In very broad terms, the self-concept is a person's perception of himself/herself, in relation to values, interests, and abilities as they compare to others. These perceptions are formed through experiences with the environment, and are influenced especially by environmental reinforcements and significant others. One's perceptions of oneself are thought to influence the ways in which he/she acts, and his/her acts in turn will influence the ways in which he/she perceives oneself.

There are certain elements which are critically distinct to the self-concept; and from a theoretical standpoint, they lend to the dimensions of its abstract form. The self-concept can be described as organized, multifaceted, hierarchial, stable, developmental, evaluative, and differentiable (Shavelson, Hubner, Stanton; 1976). For example, all individuals organize their experiences into categories which may reflect their particular culture (Marx and Winne, 1978). Self-confidence or self-esteem (Wells and Marwell, 1976) is only one of many dimensions to self concept; however, it does seem to relate to more effective coping skills (Erikson, 1974; Zurcher, 1977) which have been frequently listed as a typical EBCE outcome. These

categories provide a perceptual set which predisposes the individual to attend to certain stimuli and to organize them in certain ways when perceived (Super, et al, 1963).

The different facets, reflected by the individuals, appear to relate to the categories by which they have been shown to organize their experiences. Jersild (1952) and Sears (1963) note that white middle-class adolescents referred to such areas as school, social acceptance, physical attractiveness, and ability. Further, the multifaceted structure of self-concept may be hierarchial on a dimension of generality (Super, et al, 1963). At the apex of the hierarchy is the general self-concept. The general self-concept is then divided into many components: academic/non-academic; child/student; worker/spouse/citizen, etc.

As one descends the hierarchy, the self-concept depends increasingly on specific situations, thus becoming less stable on the one hand and better anchored on the other. The self-concept is evaluative: evaluations can be made against "ideals," or relative standards such as "peers" or even perceived evaluations of "significant others."

Self-concept is also differentiable from other constructs to which it is related. For example, self-concept is influenced by specific situations. Therefore, the more closely self-concept is linked with specific situations the closer the relationship between self-concept and the behavior. Self-concept of mental ability should therefore be more closely related to academic achievement than to ability in social or physical situations. Thus, self-concept of academic behavior in science should be more related to achievement in science rather than in English or overall grade point average.

Finally, the concept of development through life stages has been central to much of the work in psychology for many years. Young children have not started to differentiably develop such that they can coordinate and integrate their experiences within one conceptual framework. Their self-concepts are more global, and entirely situation specific. One stage of self-concept development is that of children's identification with their parents (Super, et al, 1963; Henderson, 1958). With increasing age and experience, the self-concept develops maturationally into subparts (Shavelson, Hubner, Stanton; 1976).

The psychology of development studies subjects as gradually constructing and continually correcting their own knowledge, in part under the influence of the environment, but in part spontaneously. A key reason why studying the form of each stage and the sequence in which the stages evolve as important to the understanding of development, lies in the root hypothesis that development is a process of interaction. The structure of each stage delimits the range of actions the individual can make at that stage. Consequently, it determines the kinds of interactions one can have with the environment and the experiences encountered. Experiences feed back upon the present structure, and eventually, in ways that are still little understood, the present structure is qualitatively altered to become the structure of the next stage.

It was suggested that maturity could be judged, first, by the nature of the developmental tasks with which persons attempt to cope (these define the life stages in which one is functioning and may be viewed against actual age), and more precisely, the behaviors manifested by the person in coping with these developmental tasks. A number of possible measures of vocational

maturity in early adolescence were outlined by the Career Pattern Study staff (Super, 1955) and were eventually trial-tested (Super and Overstreet, 1960). These are merely the land-mark references, see Appendix A for recent work.

Vocational Self-concept

In terms of the vocational self-concept, Super (1955) has outlined five all-encompassing life stages and the major developmental tasks of these stages, drawing on Buehler (1933), Miller and From (1951), Havighurst (1953), and others. The life stages are those of (1) growth, (2) exploration, (3) establishment, (4) maintenance, and (5) decline. Each of these life stages is seen as characterized by certain tasks which the individual in that stage encounters and with which one must successfully cope before progressing to the next stage successfully.

Super (1963) indicated that there is a positive relationship between self-concepts and vocational development. He theorized that when individuals begin to express their vocational preferences, they are also seeking to implement their self-concepts occupationally. Hence, students who explore many different occupations throughout the year are beginning to implement their self-concepts by searching for the most ideal vocation so as to make possible the playing of roles most appropriate to their self-concepts.

Self-differentiation, identification, role-playing, reality testing, and an inexhaustible amount of other unknown processes are all occurring during the time of exploration. At the same time, all these processes will result in experiences which will either strengthen or modify the self-concept, and confirm or contradict the way in which they have been tentatively translated into occupational roles. Burgoyne (1979) recently

investigated the hypotheses that similarity of ideal self and occupational stereotypes are important in determining the vocational preferences of adolescents, while similarity between expected self and occupational stereotypes is important in determining their occupational expectations. Findings were consistent with the view that ideal self played an important role in determining vocational preferences for males and females. However, contrary to expectations, ideal self was more strongly associated than expected self with vocational expectations for females, though not for males.

The idea that occupational stereotypes are important in vocational decision making is a long-standing one in psychology (Parsons, 1909). Bordin (1943) proposed that a person selects or rejects occupations because of his belief that the field is either consistent or inconsistent with his view of himself. This proposal has been elaborated by Super (1957, 1963) who has developed a theory of how vocational self-concepts develop and change with time. In his construction of a theory of vocational development, Super (1953) assigned central importance to the role of self-concept, stating that vocational development is the process by which an individual's self-concept is developed and implemented. Self-concept is developed by the processes of differentiation (e.g., discovering and developing individual interests, attitudes, and values) and identification (e.g., role playing). Self-concept is implemented through the choice and pursuit of an occupation allowing outlets for an individual's abilities, interests, and values.

Super also noted that the process of vocational development occurs throughout the life span. He divided the life span into five stages--growth, exploration, establishment, maintenance, and decline (Super, 1963); Super, Crites, Hummel, Moser, Overstreet, and Warnath, 1957). Each stage is generally associated with an age range and some stages also have identifiable substages.

Exploration is one of the very important stages in development related to this paper. Children who are not hedged in by restrictions, who are allowed considerable freedom of movement by their parents and who are not only allowed but actually encouraged to seek and engage in new experiences are, as the studies of Baldwin (1955) and Levy (1943) have shown, more likely to show curiosity and to explore than children of over-protective, possessive, and dominating parents.

Whether and how much a person will explore is not merely a matter of how much independence s/he is allowed; it is also a matter of how independent s/he is. The person who is submissive and conforming and who habitually bows to authority will, as Schachtel (1959) says, tend to accept the evaluation of others instead of exploring for himself. Reliance on authority, whether it be that of the parents, or the peer group, or some other agency, tends to limit exploration or to confine it to certain channels. Ausubel (1954) indicated that the development of the exploratory orientation is severely curtailed in the course of age-mate socialization. The adolescent's marginal status and her dependence on the peer society for status permits very little deviation from group values, and hence little opportunity for independent exploration.

While too great reliance on the standards, values, and expectations of the peer group can limit or channel the adolescent's exploratory behavior, identification with the peer group can also have beneficial results. It furnishes them with the backing they need when faced with conflicting demands of the kind described earlier. Given the support of the peer group and parents who are reasonably permissive and encouraging, facillation, inaction, and half-hearted exploration can be replaced by more adequate efforts at exploration.

Availability of roles and opportunities to explore also is a factor which influences the developmental process. There are several elements that can limit the individual's opportunities to play certain roles and to explore. One of these is socioeconomic status. As Hollingshead (1949) has shown, students from certain socioeconomic levels are not invited or do not feel free to participate in certain school and extracurricular activities. Socioeconomic status also influences the types of occupations the individual will become acquainted with through observation, hearsay, and contact with other adults. They will tend to be occupations located at the same level as the father's occupation.

Role-typing and child labor laws and trade union practices are two other elements which may limit opportunities for role-playing and exploration. The person who has been cast in a certain role, such as bookworm, clown, or rebel, may find it difficult to break out of the mold, and opportunities to try out other roles may be withheld from him. Child labor laws and trade union practices limit the kinds of work experiences which are possible for adolescents to get.

The translation of self-concepts into occupational terms can thus occur in several ways, although it should be noted that much of the theorizing on the subject is done by analogy from other aspects of developmental psychology and from everyday observation rather than inferentially from carefully collected and analyzed data. For example, identification with an adult sometimes seems to lead to a desire to play that adult's occupations role. Experience in a role in which one is cast, perhaps more or less through chance, may lead to the discovery of a vocational translation of one's self-concepts which is as congenial as it is unexpected. Awareness of the fact

that one has attributes which are said to be important in a certain field of work may lead one to look into that occupation; the investigation may lead to information of the idea that the role expectations of that occupation are such that one would do well in it and enjoy it.

PROGRAM DESCRIPTION: EXPERIENCE BASED CAREER EDUCATION

The purpose of AEL's EBCE program is to provide an alternative educational experience for high school students. The curriculum is characterized by an emphasis on direct community site experiences; personalization of each student's program in terms of individual needs, interests, and abilities; and the integration of field experience with academic learning. The program has been designed to be responsive to a student population with diverse socio-economic, racial/cultural backgrounds and a wide range of academic achievement, ability and career aspirations.

The basic procedures and the focus of development of the AEL/EBCE model can be described by addressing the model's five most key characteristics. First, it is a career exploration program. The main objectives of this focus are to (a) help students determine their interest and abilities and subsequently related directions for developing careers, and (b) to learn some of the tools and processes for making career decisions for the rest of their lives.

The model is experientially oriented. Students' career and academic experiences focus on the community as a resource -- a resource that is functionally tied into the instructional system. This includes the identification of businesses, social institutions, industry, labor unions, political

institutions, and service organizations, as well as the defining of those resources in such a way that they can be systematically tapped for inclusion in the learning process.

The program allows for total individualization of students' programs--both career and academic. This includes the presence of a content structure that can, on a personalized basis, be tied to students' interests and needs. Gagne (1974: 186) has pointed out that individualized instruction has been used to reference a diverse array of educational methods. In EBCE there can be pieces of all five of his elements: independent study, self-directed study, learner-centered programming, self-pacing and student-determined instruction. This individualization is completely documentable and accountable, so that students' programs can be checked at any time to determine progress. Included in this "accountability" is an individualized student evaluation and updating process.

As can be readily discerned from the preceding discussion of three focuses, the model is comprehensive. It includes all the essential elements for an educational system, from a defined content to an instructional delivery system, and from instructional strategies to underpinning and supporting materials. The model can also serve as an alternative. That is, a complementary program to other successful secondary education programs. It is important to emphasize "complementary" because EBCE was designed to provide an integral and missing part of a total career education program, not to replace working programs already in existence (Hyre and Henderson, 1976).

An EBCE student's goal is not to train for one pre-selected job, but to discover through direct experience what careers are found to be most

potentially rewarding by actually studying in the context of sites and people in the community and to become more responsible and mature by developing a conscious and consistent set of values.

The Student Career Guide (SCG), incorporated into the curriculum as the framework for a self-directed/collaborative counseling program, is utilized as a supplementary document in congruence with the actual on-the-site experience and for collaboration between students and their learning coordinators, counselors and/or resource persons. It provides a systemized method for self-examination, a vital component to sound career development. It enables the student to become more aware of his/her interests, temperaments, aptitudes, and work values. The SCG minimally requires that students develop objective information about themselves, discover some of the options open to them, and have some knowledge as to how to go about formulating goals, accomplish personal planning, and have practice in decision-making.

Although the term vocational exploration has been frequently used to describe two different kinds of activities (those which are job-oriented such as part-time employment, hunting for a job, inquiring into job possibilities, and trying out different occupations; and those which may not be specially job-oriented but are thought to have vocational relevance such as doing some of the things that professional people do) many of these situations and activities can occur not only in the EBCE program, but also in the traditional classroom. In addition, they may have various degrees of impact on not only the vocational self-concept (or the academic self-concept) but on the social, emotional and physical self-concepts as well (Super, 1963).

To investigate the effects of the EBCE program on the students' self-concept, the authors investigated those characteristics which are manifested

by the adolescents according to the more specific problems that each student will have to cope with. Therefore, research was focused upon Super's second stage: exploration. Exploration refers to activities, mental or physical, undertaken with the avowed or unconscious purpose or hope of eliciting information about oneself or one's environment, or of verifying, or arriving, at a basis for decision, conclusion, solution, or hypothesis (Super, 1963).

INSTRUMENTATION

AEL/EBCE thus proposed the utilization of three instruments to study the impact of EBCE on students' self-concepts: (1) Student Questionnaire, (2) selected items from the Tennessee Self-Concept Scale, and (3) AEL's Self-Concept Scale.

The Student Questionnaire (Appendix E) consists of six numbered items (with subparts). This instrument was designed to secure demographic data (e.g., sex, race, grade level) as well as attitudinal data related to educational programs.

The Tennessee Self-Concept Scale (TSCS) consists of 100 self-descriptive items. The instrument is designed to draw responses from both positive and negative items. For each item, the respondent chooses one of five response options labeled from "completely false" to "completely true." AEL elected to utilize the TSCS as part of the self-concept battery, after a revision was completed to eliminate all the items unrelated to the objectives of the EBCE program. The scale was finally reduced to 30 items (Appendix C).

The AEL-developed self-concept instrument (Appendix C) contained 23 items relating to the ability to deal with (1) tension, (2) frustration,

(3) objectivity, (4) confidence, (5) independence, (6) maturity, and (7) peer group; in addition to (8) the ability to make judgments and (9) the availability of opportunities to explore various roles. Items dealing with physical attractiveness and/or appearance are included but are directed to related objectives of the EBCE program (e.g., "my neatness is..." and "I think that people should conform to job requirements such as dress codes and hair length"). While some of the items may appear to be attitudinal, an individual's ability to make judgments which reflect confidence and maturity is an indication of one's self-esteem and self-concept. These items were designed to elicit responses from one of three varying Likert scales, all similarly ranging from "totally true" to "totally false."

A second section of the AEL-developed instrument compares self-perceptions to perceptions of others. It is designed to assess inter-individual comparisons from the student's viewpoint. There are 13 items eliciting responses on a 5-point Likert scale, ranging from "poor" to "excellent."

SITE DESCRIPTIONS

There were five sites that were utilized in this study. They were Ames, Iowa; Syracuse, NY; Ithaca, NY; Bremen, GA; and Brunswick, GA.

Ames, Iowa is located in the central portion of the state and functions as a distant suburb to Des Moines. While the program is deeply rooted in the AEL model, students at the traditionally academic Ames High School enroll in EBCE for one-half day and spend the other half day in the classroom. Hence the program can serve one group of students in the morning and another in the afternoon.

Syracuse, New York provides an EBCE program to four separate suburban high schools. The program is relatively congruent to the AEL model. The program in the four systems is coordinated by the Director of the area Business-Industry-Education Council.

Ithaca, New York also operates a program highly congruent with the model. The program serves 20-30 students per year, with the learning coordinator located in the local senior high school.

Bremen, Georgia is located about 50 miles west of Atlanta. In order to provide experiential learning to all of its students, Bremen High School established three EBCE options: full-time EBCE participation, about 70% participation in EBCE and 30% participation in the traditional classroom, and 30% participation in EBCE and 70% traditional participation. Bremen calls their program Community-Based Career Education (CBCE).

Brunswick, Georgia is located on the Atlantic coast in the southeast corner of Georgia. Their program, an adaptation of AEL's EBCE model and called Community-Based Vocational Education (CBVE), basically places students on the job in the community one-half day, three days per week and then one-half day, two days per week in the related classroom where they gain knowledge in science, math, and language arts.

PROCEDURE

This section will present information on the sample utilized, instrument administration, and data analysis.

Sample

The five sites which cooperated provided 265 EBCE experimental (E) and comparison (C) students. These students were primarily juniors and seniors, ages 16-18. Specifically the distribution was as follows:

Ames, Iowa:	E = 12, C = 79
Bremen, Georgia:	E = 14, C = 14
Ithaca, New York:	E = 14, C = 0
Syracuse, New York:	E = 14, C = 6
Brunswick, GA:	E = 85, C = 27

Instrument Administration

The TSCS and AEL Scale were administered to all students (both experimentals and comparisons) in February. The TSCS, AEL Scale, and Student Questionnaire were administered in May/June. Brunswick, GA. did not administer any instruments in May/June.

Data Analysis

The following statistical analyses were selected and performed, based on the experimental design being utilized. Since Brunswick did not administer posttest instruments, analyses were appropriately adjusted.

Specifically, because of sample size at four sites and the lack of posttesting at one site, the four sites (Ames, Bremen, Ithaca, and Syracuse) were combined. However, although the EBCE programs may not have been identified at the four sites (because utilization of local monetary support provided the locals with the right to adjust/revise the original model as they saw fit), past training and technical assistance (as well as ongoing monitoring and interaction) indicated sufficient similarity to enable AEL to combine data for both EBCE and comparison groups. Thus, the analyses

are related to EBCE versus control generally, rather than E versus C by site. Thus, there were 54 experimentals and 99 comparison students upon which all analyses were conducted. Brunswick--with only pretest TSCS and AEL Scale data--was utilized as a secondary group for purposes of comparison/validation of other results. There were 85 experimentals and 27 controls in the Brunswick group.

It should also be pointed out that this was a relatively low-budget study and was conducted only through delicate maneuvering, with the local sites requesting our assistance. Hence, much control was lost and thus comparison students within each school may not have been necessarily equivalent to EBCE-type students. Hence, the study was conducted and data analyzed even though control and measurement procedures were somewhat tenuous.

1. Descriptive statistics of the Student Questionnaire for the combined experimentals and comparison.
2. Descriptive statistics and analysis of variance of the TSCS and AEL Scale pretest scores (including analyses between combined experimentals and comparisons, Brunswick experimentals and comparisons, combined and Brunswick experimentals, and combined and Brunswick comparison students).
3. Descriptive statistics and analysis of variance of TSCS and AEL Scale posttest scores (including analyses between combined experimentals and comparisons).

RESULTS

Each of the AEL/EBCE sites has successfully implemented an adaptation of the EBCE program model, as required by student and community needs, in

order to secure for maximum learning potential. Various problems which occurred throughout the study may well have impeded the proper and complete measurement of the self-concept. Most of the difficulties revolved around the fact that AEL did not control the local test administration procedures as it could have done in previous years. Hence, not only was measurement impeded, but subsequent interpretation may be open to question.

Outcome Data

The primary objective of this study was to explore further the degree to which EBCE participation enhances students' self-concepts (perhaps significantly more than traditional education). The format of this section is to give the source of the data collected, a description of the findings, and a summary.

SQ. Table 1 presents the statistical data on the experimental and comparison group scores from the Student Questionnaire (SQ). These data are for the four combined sites and do not include data from the fifth (Brunswick) site.

Table 1

From Table 1 it can be seen that nearly three-fourths (72.2%) of the E students were 17-18 years of age and over three-fourths (86.8%) of the C students were 17-18 years of age. Most of the E students (90.7%)

APPENDIX A

Table 1

Demographic Data

Groups 1, 2, 3 & 4

Sample Size: E-54, C-99

		E		C	
1.	Age	n	%	n	%
	16	12	22.2	11	11.1
	17	24	44.4	42	42.4
	18	15	27.8	44	44.4
	19	2	3.7	2	2.0
	-	1	1.9	0	0.0
2.	Grade				
	10	4	7.4	3	3.0
	11	22	40.7	21	21.2
	12	27	50.0	75	75.8
	-	1	1.9	0	0.0
3.	Sex				
	Male	27	50.0	44	44.4
	Female	27	50.0	55	55.6
4.	Race				
	White	48	88.9	98	99.0
	Black	2	3.7	0	0.0
	Hispanic	1	1.9	0	0.0
	Other	1	1.9	1	1.0
	--	2	3.7	0	0.0

Table 1 (cont'd)

	E		C	
5. Program Enrolled	n	%	n	%
EBCE/CBCE/CBVE	47	87.0	0	0.0
Work Study	4	7.4	9	9.1
Traditional	2	3.7	76	76.8
Coop. Ed.	1	1.9	12	12.1
Dist. Ed.	0	0.0	1	1.0
--	0	0.0	1	1.0
6. Hours/Week in program				
0-5	4	7.4	10	10.1
6-10	27	50.0	8	8.1
11-20	7	13.0	18	18.2
21-30	15	27.8	37	37.4
31-40	1	1.9	17	17.2
--	0	0.0	9	9.1
7. During past year:				
a) non-school, paid jobs				
0-1	38	70.4	65	65.7
2-5	16	29.6	33	33.3
6-10	0	0.0	0	0.0
--	0	0.0	1	1.0
b) Hours/week worked on job				
0-5	18	33.3	18	18.2
6-10	9	16.7	9	9.1
11-20	10	18.5	41	41.4
21-30	10	18.5	21	21.2
31-40	3	5.6	6	6.1
--	4	7.4	4	4.0

Table 1 (cont'd)

			Excellent	Good	Average	Poor	Very Poor	Missing
			Experimental					
8.	Degree to which current school program:							
	a) provided educationally meaningful experience	n	27	23	3	0	0	1
		%	50.0	42.6	5.6	0.0	0.0	1.9
	b) clearly defined duties and responsibilities	n	21	22	9	1	0	1
		%	38.9	40.7	16.7	1.9	0.0	1.9
	c) expose student to new things	n	39	12	0	2	0	1
		%	72.2	22.2	0.0	3.7	0.0	1.9
	d) helped student make personal commitments	n	20	19	13	1	0	1
		%	37.0	35.2	24.1	1.9	0.0	1.9
	e) provided experiences relevant to career goals	n	28	19	6	0	0	1
		%	51.9	35.2	11.1	0.0	0.0	1.9
			Comparison					
	a) provided educationally meaningful experience	n	19	48	29	2	0	1
		%	19.2	48.5	29.3	2.0	0.0	1.0
	b) clearly defined duties and responsibilities	n	18	46	29	4	1	1
		%	18.2	46.5	29.3	4.0	1.0	1.0
	c) expose student to new things	n	29	45	21	3	0	1
		%	29.3	45.5	21.2	3.0	0.0	1.0
	d) helped student make personal commitments	n	18	35	35	10	0	1
		%	18.2	35.4	35.4	10.1	0.0	1.0
	e) provided experiences relevant to career goals	n	18	33	34	10	3	1
		%	18.2	33.3	34.3	10.1	3.0	1.0

Table 1 (cont'd)

9. Amount learned while in program		Traditional Experimental Very Much	Some	Very Little	Missing	Traditional Comparison Very Much	Some	Very Little	Missing	EBCE/CBCE Experimental Very Much	Some	Very Little	Missing
a) Reading Skills	n	16	21	5	12	26	53	17	3	8	21	16	9
	%	29.6	38.9	9.3	22.2	26.3	53.5	17.2	3.0	14.8	38.9	29.6	16.7
b) Math Skills	n	18	7	17	12	33	36	27	3	3	13	29	9
	%	33.3	13.0	31.5	22.2	33.3	36.4	27.3	3.0	5.6	24.1	53.7	16.7
c) Writing Skills	n	19	15	8	12	51	32	13	3	14	12	19	9
	%	35.2	27.8	14.8	22.2	51.5	32.3	13.1	3.0	25.9	22.2	35.2	16.7
d) Ability to communicate with adults	n	13	18	11	12	39	50	7	3	34	9	3	8
	%	24.1	33.3	20.4	22.2	39.4	50.5	7.1	3.0	63.0	16.7	5.6	14.8
e) Awareness of career opportunities	n	7	14	20	13	30	51	15	3	35	9	1	9
	%	13.0	25.9	37.0	24.1	30.3	51.5	15.2	3.0	64.8	16.7	1.9	16.7
f) Career planning	n	10	11	20	13	23	44	29	3	28	15	2	9
	%	18.5	20.4	37.0	24.1	23.2	44.4	29.3	3.0	51.9	27.8	3.7	16.7
g) Job-seeking skills	n	7	12	21	14	20	33	42	4	27	14	3	10
	%	13.0	22.2	38.9	25.9	20.2	33.3	42.4	4.0	50.0	25.9	5.6	18.5
h) Specific job skills	n	5	8	28	13	13	34	49	3	34	8	3	9
	%	9.3	14.8	51.9	24.1	13.1	34.3	49.5	3.0	63.0	14.8	5.6	16.7

Table 1 (cont'd)

10. Frequency of Ranks of top three (3) reasons for being in particular educational program.		Experimental Rank 1	2	3	0*	Comparison Rank 1	2	3	0*
a) Pursue chosen career	n	14	12	4	24	14	18	11	56
	%	25.9	22.2	7.4	44.4	14.1	18.2	11.1	56.6
b) College preparation	n	3	8	9	34	53	17	6	23
	%	5.6	14.8	16.7	63.0	53.5	17.2	6.1	23.2
c) Find a career	n	15	11	9	19	6	24	16	53
	%	27.8	20.4	16.7	35.2	6.1	24.2	16.2	53.5
d) Suggested by counselor	n	6	0	5	43	1	1	7	90
	%	11.1	0.0	9.3	79.6	1.0	1.0	7.1	90.9
e) Didn't know what else to do	n	1	2	3	48	1	2	6	90
	%	1.9	3.7	5.6	88.9	1.0	2.0	6.1	90.9
f) Pressure from parents	n	1	1	0	52	1	4	12	82
	%	1.9	1.9	0.0	96.3	1.0	4.0	12.1	82.8
g) Pressure from friends	n	0	0	1	53	0	1	3	95
	%	0.0	0.0	1.9	98.1	0.0	1.0	3.0	96.9
h) Couldn't find work	n	0	2	2	50	1	0	0	98
	%	0.0	3.7	3.7	92.6	1.0	0.0	0.0	99.0
i) Learn more about a particular subject or skill	n	10	15	11	18	14	26	25	34
	%	18.5	27.8	20.4	33.3	14.1	26.3	25.3	34.3
j) Vocational preparation	n	1	9	7	46	3	3	8	85
	%	1.9	0.0	13.0	85.2	3.0	3.0	8.1	85.9

*Number (and percentage) of respondents who did not rank the item 1, 2 or 3.

Table 1 (cont'd)

		Experimental		Comparison	
11.	In past four years	N	%	N	%
	a) Number of paid jobs				
	0-1	17	31.5	13	13.1
	2-5	30	55.6	71	71.7
	6-10	4	7.4	10	10.1
	10-20	0	0.0	3	3.0
	--	3	5.6	2	2.0
	b) Average hours/week worked on each job				
	0-5	10	18.5	7	7.1
	6-10	13	24.1	9	9.1
	11-20	15	27.8	41	41.4
	21-30	8	14.8	33	33.3
	31-40	4	7.4	5	5.1
	--	4	7.4	4	4.0

and C students (97.0%) were juniors and seniors.[1] The E and C groups were similarly split on male/female percentages. Almost all of the C group were white students (99.0%) and most (88.9%) of the E group were white.

Nearly all (87.0%) of the E students were in an EBCE/CBCE/CBVE program. Over three-fourths (76.8%) of the C group were enrolled in a traditional program and nearly one-fourth (21.2%) were in either a work study or cooperative education program. Exactly one-half (50.5%) of the E group spent between 6-10 hours per week in their program, 13.0% spent 11-20 hours, and 27.8% spent 21-30 hours per week in their program. Of the C students, however, only 18.2% spent less than 10 hours per week, another 18.2% spent 11-20 hours, 37.4% spent 21-30 hours, and 17.2% spent 31-40 hours per week in their program (which is predominately a traditional educational program).

During the past year about two-thirds of both the E students and C students (70.4% vs. 65.7%) had one (or none) non-school related paid jobs. Similarly, about one-third had two to five such jobs (E - 29.6%; C - 33.3%). While 50.0% of the E group worked less than 10 hours per week on their non-school related paid jobs, only 27.3% of the C group worked less than 10 hours per week on their jobs. However, while only one-third (37.0%) of the E group worked between 11-30 hours per week, nearly two-thirds (62.6%) of the C group worked between 11-30 hours per week on non-school related paid jobs.

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[1]Although the C group had more seniors than the E group (75.8% vs. 50.0%) and more 18 year olds than the E group (44.4% vs. 27.8%), the EBCE program is designed as a junior/senior (non-distinguishable) program. Hence, no differentiation has been made between grade or age levels.

Students were asked to rate the degree to which their current school program impacted several factors. Most of the E students (92.6%) felt excellent or good that their current school program provided an educationally meaningful experience, while 67.7% of the C students felt excellent or good about their school program providing them an educationally meaningful experience. When response modes were analyzed separately, there were significant differences. (For E vs C on the excellent alternative, E > C where $X^2 = 16.00$* and $p < .0001$. Further, for the average alternative C > E where $X^2 = 11.17$ and $p < .001$.) Over three-fourths (79.6%) of the E students and 64.7% of the C students felt excellent or good that their respective current school program clearly defined duties and responsibilities. When response modes were analyzed separately, there was a significant difference. (For E vs C on the excellent alternative, E > C where $X^2 = 7.35$ and $p < .01$.) Most of the E students (94.4%) and nearly three-fourths of the C students (74.8%) felt excellent or good that their respective school program exposed them to new things. When response modes were analyzed separately, there were significant differences. (For E vs C on the excellent alternative, E > C where $X^2 = 26.08$ and $p < .0001$. For E vs C on the good alternative, C > E where $X^2 = 7.84$ and $p < .01$. For E vs C on the average alternative, C > E where $X^2 = 12.12$ and $p < .001$.) Nearly three-fourths of the E students (72.2%) and

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*$X^2_{.0001}(1) = 15.14$ $X^2_{.001}(1) = 10.83$

$X^2_{.01}(1) = 6.63$ $X^2_{.05}(1) = 3.84$ $X^2_{.10}(1) = 2.71$

about half of the C students (53.6%) felt excellent or good that their respective school program helped them make personal commitments. When response modes were analyzed separately, there were significant differences. (For E vs C on the excellent alternative, E > C where $X^2 = 7.59$ and $p < .01$. For E vs C on the poor alternative, C > E where $X^2 = 3.81$ and $p < .10$.) Finally, 87.1% of the E students and 51.5% of the C students felt excellent or good that their respective current school program provided experiences relevant to their career goals. When response modes were analyzed separately, there were significant differences. (For E vs C on the excellent alternative, E > C where $X^2 = 19.68$ and $p < .0001$. For E vs C on the average alternative, C > E where $X^2 = 9.51$ and $P < .01$. For E vs C on the poor alternative, C > E where $X^2 = 7.16$ and $p < .01$.)

Students were also asked to rate how much they had learned (with respect to identified topics) while in the traditional and/or experimental program. EBCE/CBCE students were asked to rate both types of programs; comparison students were asked to rate only the traditional program. Data in Table 1 (item 9) indicated that between 15-25% of the experimental students did not respond to this item.

In terms of amount learned about basic skills (reading, math, and writing), C students rated the traditional program more positively than did the E students; E students also indicated that they learned more about basic skills in the traditional program than they did in the EBCE/CBCE program.

In terms of ability to communicate with adults and awareness of career opportunities, C students rated the traditional program more positively than the E students rated the EBCE/CBCE program; similarly E students rated the traditional program lowest in terms of amount learned.

In terms of amount learned about career planning, job-seeking skills, and specific job skills, E students rated the EBCE/CBCE program more positively than the C students rated the traditional program; similarly E students rated the traditional program lowest in terms of the amount learned.

Students were also asked to rank the top three reasons (from a list of 10 choices) for being in the particular educational program. The four reasons chosen most frequently (i.e., assigned a 1, 2, or 3 ranking) by the E students were the same four reasons chosen by the C students. The four reasons were to pursue chosen career, for college preparation, to find a career, and to learn more about a particular subject or career. However, the percentage assigning a rank to one of the reasons differed between the E and C students. For example, while 53.5% of the C students indicated that college preparation was the most important reason for being enrolled in the traditional program, only 5.6% of the E students listed college preparation as the primary reason for being in EBCE/CBCE. Similarly, while 27.8% of the E students ranked "finding a career" as the most important reason for being in EBCE/CBCE, only 6.1% of the C students listed "finding a career" as the primary reason for being in the traditional program.

Finally, students were asked to indicate the number of different paid jobs that they had had in the past four years and to further indicate the average hours per week worked on each of the jobs. While a substantially higher percentage of E students than C students had one or less paid jobs (31.5% vs 13.1%) and while a substantially higher percentage of C students than E students had between 2-5 paid jobs (71.7% vs 55.6%), the combined percentages were very similar for the E and C students (E - 87.1%, C - 84.8%)

when five or fewer jobs were considered. In terms of hours per week worked, it appeared that C students worked more than did E students. Nearly half (42.6%) of the E students worked 10 hours or less, whereas only 16.2% of the C students worked 10 hours or less. Nearly half (41.4%) of the C students spent 11-20 hours per week on the job, but only 27.8% of the E students spent 11-20 hours. Similarly, 38.4% of the C students spent 21-40 hours per week on the job, but only 22.2% of the E students spent an average of 21-40 hours on each job.

TSCS. The revised TSCS was administered in a pretest/posttest fashion to the combined groups of experimental and comparison students, and in a pretest only fashion to the experimental and comparison students. Tables 2 and 3 provide descriptive and inferential statistics on the TSCS.

Tables 2 and 3

From Table 2 it can be seen that the combined students (E and C) were equivalent initially and also equivalent at the conclusion of the school year. Similarly, from Table 3 the Brunswick students (E and C) were equivalent initially.

Table 4 presents the TSCS pretest data which contrasts the combined groups (1, 2, 3 and 4) and the Brunswick group (5) for both the experimentals and comparison students.

Table 4

Table 2

Tennessee Self-Concept Scale (TSCS)

Groups 1, 2, 3 & 4: E vs C

	E	C		Pretest SS	df	MS	F	p
n	54	99	Between	12.55	1	12.55	0.11	0.74
$\bar{X}$	110.4	111.0	Within	17609.50	151	116.62		
s	10.0	11.2						
				Posttest				
n	54	99	Between	6.04	1	6.04	0.05	0.82
$\bar{X}$	110.5	110.9	Within	17569.97	151	116.36		
s	9.4	11.5						

Table 3

Tennessee Self-Concept Scale (TSCS)

Group 5: E vs C

	E	C		Pretest SS	df	MS	F	p
n	85	27	Between	24.43	1	24.43	0.21	0.65
$\bar{X}$	111.4	110.3	Within	12797.82	110	116.34		
s	11.1	9.7						

Table 4

Tennessee Self-Concept Scale (TSCS)

Groups 1, 2, 3 & 4 vs Group 5: Pretest Only

				Experimental				
	1-4	5		SS	df	MS	F	p
n	54	85	Between	34.21	1	34.21	0.30	0.58
$\bar{X}$	110.4	111.4	Within	15620.78	137	114.02		
s	10.0	11.1						
				Comparison				
n	99	27	Between	9.62	1	9.62	0.08	0.78
$\bar{X}$	111.0	110.3	Within	14786.54	124	119.25		
s	11.2	9.7						

From Table 4 it can be seen that the two groups of experimental students were equivalent and also that the two groups of comparison students were equivalent.

AEL Scale. Table 5 presents data on the contrasts between E and C students in the combined group (1, 2, 3 and 4).

Table 5

From Table 5 it can be seen that E and C students were initially equivalent on the four subparts and the composite of the AEL Scale. Similarly, the E and C students had equivalent scores on the posttest for all four subparts and the composite score. There was very little change in scores from pretesting to posttesting.

Table 6 presents data on the contrasts between experimental and comparison students within Group 5 for pretest only.

Table 6

From Table 6 it can be seen that the two groups (E and C) were equivalent on all four subparts and the composite score of the AEL Scale.

Table 7 presents data on the pretest contrasts between the combined groups (1, 2, 3 and 4) and the Brunswick group (5) for both the experimentals and the comparison students.

Table 7

Table 5

AEL Scale

Groups 1, 2, 3 & 4: E vs C

Part 1

	E	C		Pretest SS	df	MS	F	p
n	53	99	Between	1.36	1	1.36	0.07	0.79
$\bar{X}$	38.3	38.1	Within	2761.91	150	18.41		
s	4.7	4.1						

				Posttest SS	df	MS	F	p
n	54	98	Between	6.50	1	6.50	0.47	0.49
$\bar{X}$	37.8	38.3	Within	2080.60	150	13.87		
s	4.1	3.5						

Part 2

	E	C		Pretest SS	df	MS	F	p
n	54	99	Between	0.36	1	0.36	0.07	0.79
$\bar{X}$	15.7	15.6	Within	788.32	151	5.22		
s	2.4	2.2						

				Posttest SS	df	MS	F	p
n	53	98	Between	7.97	1	7.97	1.41	0.24
$\bar{X}$	15.6	15.1	Within	841.21	149	5.65		
s	2.1	2.5						

Table 5 (cont'd)

Part 3				Pretest				
	E	C		SS	df	MS	F	p
n	54	99	Between	5.47	1	5.47	0.31	0.58
$\bar{X}$	30.9	30.5	Within	2662.78	151	17.63		
s	4.9	3.8						
				Posttest				
n	54	98	Between	0.00	1	0.00	0.00	0.99
$\bar{X}$	30.4	30.3	Within	2136.52	150	14.24		
s	4.5	3.3						
Part 4				Pretest				
	E	C		SS	df	MS	F	p
n	53	97	Between	15.80	1	15.80	0.67	0.42
$\bar{X}$	46.2	46.9	Within	3506.47	148	23.69		
s	4.8	4.9						
				Posttest				
n	53	95	Between	30.56	1	30.56	0.94	0.33
$\bar{X}$	46.1	47.1	Within	4766.36	146	32.65		
s	5.8	5.7						
Total				Pretest				
	E	C		SS	df	MS	F	p
n	54	99	Between	12.69	1	12.69	0.06	0.80
$\bar{X}$	129.5	130.1	Within	30716.03	151	203.42		
s	15.8	13.4						
				Posttest				
n	54	99	Between	20.77	1	20.77	0.08	0.78
$\bar{X}$	128.7	128.0	Within	40041.28	151	265.17		
s	14.1	17.3						

Table 6

AEL Scale

Group 5: E vs C (Pretest Only)

	E	C		SS	df	MS	F	p
Part 1								
n	85	27	Between	51.75	1	51.75	2.52	0.12
$\bar{X}$	39.1	37.5	Within	2262.32	110	20.57		
s	4.7	4.0						
Part 2								
n	85	27	Between	0.09	1	0.09	0.02	0.90
$\bar{X}$	15.6	15.6	Within	637.19	110	5.79		
s	2.5	1.9						
Part 3								
n	85	27	Between	8.81	1	8.81	0.53	0.47
$\bar{X}$	31.5	32.2	Within	1815.25	110	16.50		
s	4.1	3.8						
Part 4								
n	80	23	Between	15.47	1	15.47	0.47	0.50
$\bar{X}$	46.2	47.1	Within	3361.41	101	33.28		
s	5.8	5.8						
Total								
n	85	27	Between	381.30	1	381.30	1.32	0.25
$\bar{X}$	129.6	125.3	Within	31743.41	110	288.58		
s	15.5	21.2						

Table 7

AEL Scale

Groups 1, 2, 3 & 4 vs Group 5: Pretest Only

Part 1

	1-4	5		Experimental SS	df	MS	F	p
n	53	85	Between	17.44	1	17.44	0.79	0.38
$\bar{X}$	38.3	39.1	Within	3033.46	136	22.08		
s	4.7	4.7						

				Comparison SS	df	MS	F	p
n	99	27	Between	9.24	1	9.24	0.57	0.45
$\bar{X}$	38.1	37.5	Within	2020.76	124	16.30		
s	4.1	4.0						

Part 2

	1-4	5		Pretest SS	df	MS	F	p
n	54	85	Between	0.34	1	0.34	0.06	0.82
$\bar{X}$	15.7	15.6	Wtihin	862.89	137	6.30		
s	2.4	2.5						

				Comparison SS	df	MS	F	p
n	99	27	Between	0.09	1	0.09	0.02	0.89
$\bar{X}$	15.6	15.6	Within	562.62	124	4.54		
s	2.2	1.9						

Table 7 (cont'd)

Part 3				Experimental				
	1-4	5		SS	df	MS	F	p
n	54	85	Between	14.34	1	14.34	0.73	0.39
$\bar{X}$	30.9	31.5	Within	2691.27	137	19.64		
s	4.9	4.1						
				Comparison				
n	99	27	Between	62.06	1	62.06	4.31	0.04*
$\bar{X}$	30.5	32.2	Within	1786.76	124	14.41		
s	3.8	3.8						
Part 4				Experimental				
	1-4	5		SS	df	MS	F	p
n	53	80	Between	0.00	1	0.00	0.00	0.99
$\bar{X}$	46.2	46.2	Within	3803.52	131	29.03		
s	4.8	5.8						
				Comparison				
n	97	23	Between	1.11	1	1.11	0.04	0.84
$\bar{X}$	46.9	47.1	Within	3064.36	118	25.97		
s	4.9	5.8						
Total				Experimental				
	1-4	5		SS	df	MS	F	p
n	54	85	Between	0.55	1	0.55	0.00	0.96
$\bar{X}$	129.5	129.6	Within	33254.89	137	242.74		
s	15.8	15.5						
				Comparison				
n	99	27	Between	486.31	1	486.31	2.07	0.15
$\bar{X}$	130.1	125.3	Within	29204.55	124	235.53		
s	13.4	21.2						

*$F_{.05}(1,124) = 3.92$

From Table 7 it can be seen that for subparts 1, 2, and 4 the composite score, the combined groups and Group 5 were not significantly different. Group 5 comparison students did have statistically significant higher subpart 3 scores than did the combined comparison students. However, this difference (32.2 vs 30.5) may not be practically significant.

Summary

From Table 1 it was seen that the combined students (E and C) were quite similar on several variables (e.g., sex and race). However, there were more seniors in the C group than in the E group, most C students were in a traditional educational program, and C students spent more time in their program than E students spent in theirs. While E and C students held about the same number of paid jobs during the past year, C students spent more time on their jobs. E students were much more positive than C students in their attitudes toward what their current school program offered them. In fact, E students expressed significantly more positive attitudes than C students in terms of five educational factors which their respective school programs impacted. (See Table 1, item 8.)

While C students felt that their traditional program was more conducive to learning basic skills and developing awareness to career opportunities (as contrasted to E students feeling about their program), E students felt that their EBCE/CBCE program was superior for learning about career planning, job-seeking skills, and specific job skills.

Finally, data presented in Tables 2 through 7 indicated that the combined groups of experimental and comparison students were not significantly

different initially on the other two self-concept assessment scales. Further, they were not significantly different at the end of the treatment period. Utilization of a pretest only fifth group (both experimentals and comparison students) helped to validate/confirm the other results.

DISCUSSION/CONCLUSION

The purpose of this study was to examine and compare the self concepts of EBCE-type and traditional classroom students. Past evaluation data seem to indicate that EBCE students develop a more positive self-concept. Year after year, parents of EBCE students have noted that their children have more positive attitudes toward self, and have seemed to assume greater responsibility for self. Because of insufficient data in the past to confirm these findings, this study was undertaken to further explore all the information related to these findings.

AEL utilized three separate instruments to measure the effects of EBCE on the self-concept: 1) the Student Questionnaire (SQ); 2) the revised Tennessee Self-Concept Scale (TSCS); and 3) the AEL Self-Concept Scale. The revised TSCS and the AEL Self-Concept Scale were administered on a pretest/posttest basis, while the SQ was administered only once. Testing was conducted at five AEL/EBCE sites.

Limitations of the Study

There were several occurrences during the course of this study that appear to have had a negative impact on the student outcome data. One site did not do any posttesting. Consequently the demographic questionnaire (administered during posttesting) and posttest self-concept data were not available on 112 students.

The instrumentation itself may well be insensitive to the change of self-concept that occurs within EBCE students. The researchers now believe that their instrumentation should have addressed specifically and narrowly the concept of self as worker, as contrasted to concept as self as student or a generalized self concept. However, while E and C subjects both had worked part-time (to varying degrees) and E subjects were in a community-based program, their major role was as student. Nonetheless, refocusing the response role may have generated different results--especially if one considered concept of self as worker in general or worker in the occupation to which s/he aspires or prefers. (See Appendix A).

Further, the period of time (treatment) which occurred between pretest/posttest administrations was very short. The period of time between testing ranged from two-four months. Because of the differential time periods involved, the procedure of grouping sets of EBCE scores together and sets of comparison scores together (in order to compare all EBCE students with all comparison students) may have confounded the resultant program impact.

The point was made earlier that the monetary support for the study was very limited and the sample sizes were not large. Since these EBCE-type programs were operating on local funds (as opposed to federal funds), the fidelity or congruency to the original AEL-model may not have been high. Utilization of local monetary support provides the locals with the right to adopt/revise the original model as they see fit in terms of their local needs. Hence, combining all scores (based on the assumption that all EBCE programs--and comparison programs--are essentially the same) may also have confounded some of the resultant program impact.

Recommendations

Based on the results obtained in this pilot study and its limitations, several things may be taken into consideration for the further investigation of EBCE impacts on the self-concept:

1) One variable which AEL had almost no control over was that period of time existing between pre and posttests. AEL feels that the period occurring between pretest and posttest should be extended. One semester of treatment may not even be enough to produce an impact.

2) All testing must be done on a pre-post fashion, in order to establish a baseline and measure gains.

3) AEL thus wished to further develop its own instruments for measuring the self-concept as it relates to vocational development. With a more clear understanding of the relationship of EBCE and self-concept (in terms of cause-effect or substantial relationships), it may be essential to move away from self-report assessment to either less transparent items, unobtrusive observations, peer ratings, or teacher/facilitator judgments. More extensive research and item analysis needs to be executed in order to revise and validate the instrument.

4) A more extensive investigation must be conducted of the commercially available and research available instruments, measuring self-concept. It has been theorized that the TSCS is too broad and not sensitive enough to assess the impacts produced by a semester or year of involvement in the EBCE program. Although the level of monetary effort allocated to this study was quite

low, what one needs to do is an instrument development study related to narrow work self and sensitivity. (Test the instrument in radically different situations and determine its sensitivity. Then evaluate the treatment of interest). References now identified were not used in the background conceptualization or the instrument development for this project. They must be used in any follow-up work:

Asche, 1973; Bachman et. al, 1978; Bell, 1969; Beerbohm, 1972; Counselman, 1971; Garfinkle, 1958; Hunton, 1972; Kash and Burich, 1978; Meredith, 1974; Purkey, 1970 and 1978; Richardson, 1972; and Rosenberg, 1979.

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INSTRUMENTATION

AEL Self-Concept Scale, Experiential Education Division, Appalachia Educational Laboratory.

Student Questionnaire, Experiential Education Division, Appalachia Educational Laboratory.

Tennessee Self Concept Scale, Counselor Recordings and Tests, Nashville, Tennessee.