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ABSTRACT

The report describes Experience-Based Career Education (EBCE) through examination of the concept as practiced at pilot programs in four initial communities. The first chapter discusses the creation of EBCE, identifies four crises to which schools must respond, defines EBCE, and describes program goals and characteristics. The next four chapters are brief descriptions of the programs including goals, components, and general outcome. In the Appalachia Educational Laboratory program in Charleston, West Virginia, high school students obtain academic credit through direct experiences in the community. The Far West School in Oakland, California, provides direct experiences to prepare tenth through twelfth grade students for entry in the adult world and high school graduation. Community classrooms, individualized learning, and performance-based curriculum characterize the suburban-rural Community Experiences for Career Education program in Tigard, Oregon. The Academy for Career Education, a part of the Philadelphia Public Schools, includes career guidance, basic skills, and career development in its program for high school students. Evaluations of the four programs indicate generally successful outcomes. The final chapter discusses the potential of EBCE in terms of what has been accomplished and the conditions necessary for replication of the programs. A bibliography concludes each chapter except the last. (Author/MS)

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EXPERIENCE-BASED CAREER EDUCATION:

A Description of Four Pilot Programs Financed Through The National Institute of Education

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Final Report

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Chapter I

THE CREATION OF EXPERIENCE-BASED CAREER EDUCATION

Introduction

When they were sent by the National Institute of Education to examine NIE's four pilot Experience-Based Career Education programs (EBCE), members of the first External Site Review Team knew little more than that the programs had been set into motion with remarkable speed. The review team members were at first skeptical -- until they began to interview the students who had been in the pilot programs for just a short time.

About 150 randomly selected students visited informally with members of the team, and all of the students expressed enthusiasm for their high school programs. That enthusiasm was shared by competent and dedicated members of the program staffs of each center. For a high school program to generate this response meant that EBCE was more than a passing fad and that it was creating something more than an experimental halo effect.

For at least one youngster, Experience-Based Career Education in less than one year helped stir a long-dormant interest in self-improvement through education:

> September --
>
> The people, or rather staff members, seem to be pretty far-out people. I don't hate any of them yet -- ha ha . . . I hope I'll like school this year . . . I know it couldn't be worse than last year . . .
>
> February --
>
> I really learned a lot when we went down to (the capital). It was almost unbelievable. I mean, I would never of learned that much, not in a million years, at - - - High School. I got to talk to a lobbyist from New York, to the president of the Senate; I was in (the governor's) office; I was a page . . . and I got to be on the (Senate) floor all day . . .

March --

Man, everything is looking up. Even the gas lines are shorter today . . . I don't mind living half as bad.

But citing one success or 150 subjective interviews is not sufficient grounds for an endorsement. By now, enough effort and public resources have been invested in EBCE to warrant an extensive study of its development and its promise, although the latter will be judged ultimately by educators, students, the public, and by time.

As its name implies, Experience-Based Career Education has at least two unique characteristics: it enables a student to focus on his or her career development, and it helps a student learn and grow through direct experiences in the community -- particularly work experiences. EBCE helps high school students complete graduation requirements while they learn through experiences outside the walls of a school building.

This book, commissioned by the National Institute of Education, attempts to describe the origins, characteristics and potential of EBCE through a close look at the concept as it has been practiced at pilot programs in the four initial communities.

We think the programs described in this monograph show promise of meeting some unmet needs of today's children and youth. This does not imply a negative view of what is occurring in our schools today. Children -- not all of them, to be sure, but most -- are learning basic skills. And large numbers are being prepared for college, careers, professions, and enjoyment of the arts.

American schools, in the words of at least two noted historians, have served this nation extremely well. To suggest that they can be helped to do even better -- especially for those young people who have not really benefited sufficiently from the schools up to now -- is not to deny past or present accomplishments.

Experience-Based Career Education, then, is not a replacement for the present educational system. It offers potential for incorporation into the existing system or for providing alternative educational approaches. It has established itself as part of the educational landscape. Now educators and the public need to better understand and evaluate it.

Origins

Every known human society makes some provision for guiding its youth from adolescence into adulthood. In a primitive society, the transition may be only ritualistic because youth have already learned to engage in life activities as novices or apprentices. But as societies become more complex and pluralistic, knowledge as well as skill is needed for effective participation, and the problems of moving into adulthood are both complicated and diffuse.

In societies marked by technology, adults work not only away from the home, but, increasingly, even away from the residential communities where their children grow to maturity. As a result, today's children have little, if any, chance to learn through direct involvement in the adult world of work, even though such involvement holds the key to their emergence into adulthood. Young people now spend most of their time in a world populated by their peers, and their dominant environment is either the school or the informal society of their age mates.

One of the leading issues confronting those who guide American education is how to deal with the diverse needs of children living in a pluralistic society. The American educational system has emerged out of its historical roots, and today its primary role is to help children acquire the basic learning skills and knowledge to prepare them for

their future adult roles. Compulsory education laws have imposed mass education upon the schools, so that curricula have had to be organized to deal with all of the children of all of the people as economically as possible. The result has been curriculum procedures and requirements so standardized that, in spite of pressures to the contrary, the school has had to concern itself primarily with the cognitive development of children.

This preparation may have been generally adequate for those children who are going to enter the more highly conceptual occupations and professions. But for those children who are less conceptually capable or oriented, serious problems have emerged.

The Four Crises of the Schools

There have been numerous diagnoses of the problems facing American public schools today, but most of them can be summarized in terms of four crises to which the schools must respond.*

First is the crisis of relevance. It is apparent that high schools -- particularly those in the urban areas -- are not capturing either the attention or the interest of many students. Absenteeism is very high. Students seem to be passed along without regard to accomplishment. Boredom and lack of purpose in young lives are revealed by unrest, violence, crime, drug addiction, and dropouts. Obviously, schools are not responsible for all the problems of youth. Just as obviously, schools cannot replace all other social agencies that need to deal with these problems. But neither can schools avoid their responsibilities for helping students cope with today's problems of living and adjusting. Standardized and

*See Bibliography at end of this chapter for supportive and recommended studies and analyses.

routinized school curricula and activities stand in sharp contrast to the reality that surrounds young people in their communities. The two worlds of youth -- one inside school and the other outside it -- may appear irreconcilable, but they must be bridged for the disaffected youth who actually may make up the majority of high school students.

Second is the crisis of the human and social problems facing youth as they grow to maturity in a complex, technological society. Mass society has become excessively bureaucratized, and young people, especially, feel like pawns at the mercy of forces beyond their control. Identity problems and the search for fulfillment are uppermost in their minds. Of what interest is the study of the great literature when graduation from high school means entering a life-career on welfare? When the environment and the land are being increasingly contaminated? When inflated prices are eroding the standard of living for the already economically deprived? When the availability of most prized jobs is decreasing while the costs for necessary training are too high for the poor? Whether this picture is entirely accurate, it is the one perceived by those striving to find their places and to cope with their present and future existence.

Third is the crisis of values and aspirations. Studies of the youth culture of the 1960s and 1970s, while more numerous and better disseminated than earlier studies, have not been entirely adequate. The best analyses show that youth are influenced by the current material culture as long as they can find the means to take part in it. But they are not the iconoclasts they are sometimes pictured to be. They appear to be searching less for new values and more for ways to bridge the gap between aspiring to and achieving their life roles.

Fourth is the crisis of recognizing human diversities. The dream of the American melting pot was never fully realized. For various reasons, ethnic and other groups formed enclaves within the broader society and sought to maintain their individuality -- some by enforced isolation from the "mainstream" and others by a desire to maintain their cultural uniqueness. But the schools, as well as other instruments of society, became part of a futile attempt at homogenization. The resulting homogenized school curriculum is a product of standardized textbooks, courses of study, instructional procedures, and structural characteristics. Diverse cognitive styles are rarely accommodated. Differing aspirations are generally ignored. Students are considered to share the same characteristics, and, in the better school systems, those who diverge too greatly receive special education to remedy seeming inadequacies for coping with normal learning situations.

In spite of more than a century's efforts at individualization and vocational education, there has actually been little departure from mass procedures in the school's traditional framework. So homogenization has failed, and now the greatest challenge to the contemporary school is to find ways to deal effectively with human diversities; to deal with the whole range of human needs and capabilities; and to build a meaningful educational program encompassing all of the psychological, cultural, sociological and value differences that characterize youth in school populations.

Career Education: One Response

One response to these crises, originally proposed by the U.S. Office of Education and subsequently shared with the National Institute of Education, is career education. How one phase of that effort has developed

and is operating, and its promise for the future are the subjects of this monograph.

Former U.S. Commissioner of Education, Sidney P. Marland, Jr. stated the need for schools to change when he said:

> We must purge ourselves of academic snobbery. For education's most serious failing is its self-induced, voluntary fragmentation, the strong tendancy of education's several parts to separate from one another, to divide the entire enterprise against itself. I propose that the universal goal of American education, starting now, be this: that every young person completing our school program at grade 12 be ready to enter higher education or to enter useful and rewarding employment (8, pg. 35).

With this statement Marland launched the career education -- a movement to combine all the disciplines of the traditional school into a program stressing education's relevance to the job of preparing youth for life roles:

> By career education I would have considerably more in mind than the teaching of specific skills. I think the student should learn about the wide range of job responsibilities; he should have guidance and counseling toward matching his interests and abilities with a potential career, and he should be guaranteed help in finding a job whenever he decides he is ready to enter the working world (14).

Many individuals, organizations, and school districts heeded Marland's call. A variety of interpretations of "career education" resulted. The National Center for Educational Research and Development (NCERD) of the Office of Education took on the job of developing some approaches to be funded by the federal government, approaches which would stimulate local and state efforts to accomplish the career education goals.*

What is EBCE?

One plan proposed by NCERD and accepted as a major program for the Office of Education was initially called an employer-based career educa-

*For a full discussion of the development phases, see Charles B. Stalford (16).

tion program. Its designers decided that, although employers would be involved, the whole program would not be employer-based, nor would this be its chief characteristic. Under the direction of the National Institute of Education, the name was changed to Experience-Based Career Education (EBCE). Experiential learning was emphasized within the context of the community's total functions. There was particular emphasis upon career exploration and development.

An NIE booklet (17) defines EBCE as follows:

> EBCE merges academic, vocational and general education into a program of total learning that makes maximum use of community resources and people. By providing students with cumulative experiences in a variety of everyday life and work settings, EBCE is helping young people:
>
> *Know themselves better by refining their interests, abilities and values to develop realistic and obtainable career and life goals.
>
> *Learn that basic skills in communications and mathematics are essential and relevant for accomplishing their career and personal goals.
>
> *Gain a broad understanding of the world of work -- its relevancies, rewards, and shortcomings -- by learning what they can expect from it and what it will require of them.
>
> *Build the decision-making skills needed to put what they have learned together with what they want to be.
>
> *Discover that the "adult world" is not simply an "establishment" but is made up of many different people with their own goals, values, and personal characteristics.

Four regional laboratories were charged with developing the EBCE model: The Far West Laboratory for Educational Research and Development at Berkeley, California; the Northwest Regional Educational Laboratory at Portland, Oregon; Research for Better Schools, Inc., at Philadelphia, Pennsylvania; and the Appalachian Educational Laboratory at Charleston, West Virginia.

Program Goals and Objectives

A wide range of student objectives was set for the programs, as suggested in the initial EBCE concept. Each program included goals

in basic skills (stressing reading, communication and arithematic and sometimes covering both affective and psychomotor skills), life skills (including interpersonal relationships), and career skills (helping students learn more about themselves and the world of work).

After the first year, eight common goals were adopted:

1. Career development skills and knowledge
2. Self-knowledge-interests, abilities and values
3. Reading skills
4. Problem-solving skills
5. Skills of oral communication
6. Writing skills
7. Interpersonal skills
8. Basic quantitative skills (16, Section II, pg. 3)

How these goals are reflected in the programs of the various EBCE sites will be discussed in detail in subsequent chapters.

Basic Characteristics of EBCE

In its design, Experience-Based Career Education has melded three powerful concepts: (1) education through experience, (2) community education, and (3) career education. Each has stood well by itself for a long time, both in theory and in practice. EBCE's unique contribution is merging the three into a unified approach to meeting today's educational needs in the United States.

Perhaps most fundamentally, EBCE is a practitioner's approach to education rather than that of the philosopher or the theoretician. Far-ranging philosophical systems have been employed, but in simple fashion, much to the theoretician's concern. The designers of EBCE are pragmatists who asked two basic questions: "Does it work?" and "Are the consequences

relevant to today's American human and social needs?"

Education Through Experience

Learning through experience was undoubtedly the original form of education. Then, at some stage in their development, human beings learned to conceptualize on the basis of their experience. Experience was cumulative, and, as language emerged, the consequences of experiences could be passed on.

John Dewey, in recommending "learning by doing," recognized that while few individuals have relatively high abstract conceptual ability, everyone has some ability to conceptualize on the basis of experiences. Schools can help individuals find meaning through activities. They can provide settings where experiences reinforce as well as illustrate both learning and meaning. No one would accredit a high school science program which had no laboratories or a vocational program which had no shops. Both are instances of contrived laboratories for "learning through experience."

The progressive education movement of the 1930s broadened laboratory experiences to involve the social sciences and language arts. Students were urged to engage in "real life" situations in order to better understand how society operates. The problem with progressive education was that it was the idealists' system, and neither its strategies for use nor its systems for evaluation were sufficiently developed to permit well-designed instructional approaches.

EBCE's approach is within this framework, but with a remarkable exception: the experience is not aimlessly existential. All students have personal reasons for becoming involved in their experiences. Experiences, in other words, are instrumental to students' own recognized

educational aspirations. Students become skilled in the techniques of communication, learning how to draw conclusions from personal experiences, and in using their experiences to gain increased power of decision-making for both personal and social ends.

In EBCE, experiences can be either inside or outside the schoolhouse, but the school remains the center where students learn to synthesize their experience with accumulated knowledge. Put another way, EBCE uses the direct experience approach, so there is a reciprocal reinforcement between learning from books and other educational processes on the one hand, and from direct experiences on the other.

Community Education

Student experiences in EBCE do not occur in contrived or simulated situations. Students acquire meanings through real-life situations within the community in which they live. They become involved in that vast, real-life laboratory developed to provide for human needs in all sectors of society. No school system alone could afford to provide the human and material resources that the community can offer for student learning. The community provides the laboratory where children can explore, gain understanding and acquire competence; and it surrounds every school.

EBCE neither walls in the school nor walls out the community. It places students within the real life functions of the community -- be they economic, governmental, cultural, welfare, avocational, or educational -- as both observers and participants in quest of better understandings and skills.

It also brings the community into the learning center where students engage in the more formal learning aspects of school. Current formative evaluation data show that for most students, relevance and real-life

significance do not have to be contrived.

Career Education

One essential question still remains: experience and community life involvement for what?

EBCE is based upon the realistic and practical understanding that the public expects education to help children gain fulfillment through effective participation in and contributions to the social life of the community. Implicit within the emerging EBCE programs are four elements aimed at reaching this objective:

1) EBCE is not really a substitute for the basic educational studies in the established curriculum. In practice, the EBCE program is an alternative within the established school program rather than a substitute for it. When they enter an EBCE program, students continue their studies of the fields of knowledge, but for a different reason and from a different perspective than before. Experience in the first two years of EBCE programs indicates that students elect to continue their basic educational studies because they have found that such knowledge and skills are relevant to their needs. Some of the formative evaluation results indicate that this is more than an ideal; it actually happens because students have been helped to assess their needs in relation to what they want to accomplish in their lives. These studies, then, become truly instrumental for the students and not just ends in themselves.

2) What holds the students' programs together and arouses them to further effort is the emphasis upon exploring career alternatives and determining the paths that lead to their career objectives. This factor may not be as unique as it is sometimes considered to be. Schools have always been future oriented. Teachers have urged children to con-

sider how they are going to live their lives and "what they are going to be." But rarely have programs actually been devised to achieve this end for all students. Separation of the academic and the vocational programs in the high school has been a barrier to a fusion of the two. In EBCE the career emphasis is central because this is a main concern of adolescents as they approach adulthood. "When I grow up, I want to be. . ." is a significant statement by children at all ages, but it is particularly important during adolescence.

It should be noted that students have different emphases upon the need for exploration and for discovering unique pathways to their objectives. Some students with unusual interests or talents have already formed their objectives or have the scholastic aptitudes necessary for delaying their choices until they have accomplished further academic studies. But not all students should be forced into a single approach, as so frequently occurs. This is why EBCE should be viewed as "an alternative with" rather than an all-encompassing or universal substitute.

3) Life isn't all a matter of earning a living, even though everyone is expected to do so in one form or another. Failure to perform one's economic role effectively disrupts the other life roles, and failure to perform other life roles effectively may be equally disruptive. So EBCE also emphasizes greater effectiveness in <u>life skills</u>. Admittedly, students find this aspect of the program less exciting than the career orientation, and in most programs this area is less well-developed. But it is an intrinsic part of the program and needs to be improved. It emphasizes the individual's roles as citizen; as participant in recreational, avocational, and aesthetic experiences; as a member of the family group; as participant in community activities and organizations, among others.

4) Many high school graduates cannot participate effectively in various sectors of society because of poor communication skills, and this has created growing concern. Deficiencies in reading, writing, speaking, computation, logic and other skills become glaringly apparent as students become involved in occupational, service, and civic enterprise. For these reasons, EBCE has incorporated a corrective and remedial facet, focusing on improving students' effectiveness in basic skills. Guidance services help identify other deficiencies, and, then, individualized programs are developed. Hopefully, in the long run, as schools improve their ability to improve these skills in lower grades, this facet of the program will become less necessary.

Other EBCE Characteristics

One difficulty in describing the EBCE programs is that they appear to be prosaic or theoretical. Yet, they are anything but dull or formal in practice. Some of the characteristics which seem common among the EBCE programs help to reveal the esprit which currently dominates the programs. This esprit makes it hard to evaluate the programs objectively, for it is difficult to determine whether the students' accomplishments and achievements result from a combination of program elements, or if they reflect the exciting environments and personal interactions among students and operating personnel.

The regional laboratories established flexible guidelines for the development of EBCE programs. They stated that the high school population admitted to the programs should represent a fair student cross-section in the community; that instruction should take place at experience sites; that career and academic activities should be blended (and learning outcomes appraised accordingly); that instruction be individualized; that

students participate in decision-making; and that employers and community resources help set policy and make decisions. The laboratories were charged by NIE to develop a system for the governance of EBCE programs which would be lodged outside the laboratories, to maintain adequate documentation to help in the replication and diffusion of EBCE programs, and to establish a common cost accounting system.

1) Locus of Instruction. Although the original guidelines charged that instruction take place at employer sites, each EBCE program has gone beyond this requirement. Instruction is centered at sites away from the learning centers, but not exclusively at employment sites. These locations may be various commercial or industrial enterprises, but they also include educational, governmental, civic, service, recreational, and performing arts centers. It is more accurate to say that instruction is centered in community resource sites. Students use the learning center facilities and personnel extensively, but they use them to supplement their community site activities, to obtain guidance and development aid, to complete assignments which may be field related, and to work on their basic skills. Most EBCE students interviewed said there is not an essential distinction between the learning center and the community resource sites.

2) Blending of career and academic activities. Programs have not yet attained the ideal, but some modest gains have been made in blending career with academic work. Career orientation is central to most students' programs, but not all of the other activities have yet been integrated with this orientation, at least to the satisfaction of the students and operating personnel. Students seem to view the program elements as discrete components of the program, even though many elements

are blended. They have requested many different academic courses because they find them relevant to the career fields they are exploring or pursuing. One male student, for example, took science and mathematics courses because he felt that he needed them to become proficient as a fireman. A female student took an advanced course in mathematics and a special course in computer technology to prepare for a career as a sales representative for a computer firm. Another student elected to study biology because of his interest in a career as a technician in a medical laboratory, and he also sought remedial work in speech and writing so he could communicate better with fellow technicians in the laboratory. Such developments are significant accomplishments, but much more work needs to be done to advance both the technology and the knowledge of how career exploration and decision-making can become an educational motivator of adolescent students.

3) Individualization of instruction. Students entering any program work with learning coordinators or guidance personnel to establish their own goals and to select the activities appropriate to those goals. There is no prescribed course sequence. Each learning coordinator -- in cooperation with students and their parents -- orchestrates the program elements to help students develop their careers, complete graduation requirements, and fulfill curriculum requirements in the life and basic skills. Each program is tailored for each student and can be shifted to match their changing interests, strengths, deficiencies, and aspirations. Students have a learning plan, which becomes a contract between them and the learning coordinator. Student initiated changes in that plan involve negotiations among students, parents and various resource persons.

4) Student participation in decision-making. In each program, students helped formulate the instructional design and the delivery systems. Rules and regulations regarding student conduct and other aspects of the program were provisionally determined. Some students who helped develop the program said that they felt they made real contributions and that their perspectives were seriously considered by the professional personnel. Student participation ranges from an occasional conference between selected students and operating personnel to a formal system of student government and student involvement on governing boards and planning committees. In some instances, students have said that formalized involvement is not essential, since there is a very close working relationship between the operating personnel and students. Whenever problems arise, it is easy to review policy issues because there is open and frequent communication between the operating personnel and the students.

5) Involvement of employers and community resource personnel in policy- and decision-making. Each center has its own advisory or governing board, made up of people who represent various publics associated with the EBCE programs. These include representatives of labor and employer groups, employers involved in the program, parents, community leaders, school leaders and officials, and students. Depending upon the legal status of each EBCE program, these boards have varying degrees of responsibility. The Academy for Career Education is now part of and housed in an existing high school and accountable to the Philadelphia Board of Education. $(CE)_2$ in Tigard, Oregon, is a governing board which, in effect, contracts for operations with the regional laboratory (the prime contractor), employs personnel, makes decisions with respect to

students, and establishes final authority for programs, just as would a statutory board of education. In other instances the board may be advisory, meeting infrequently, and offering the members' suggestions only on matters of the agenda.

6) A clinical mode of operation. EBCE programs treat the educational process as a physician treats patients: diagnosis, analysis, prescription, experience, summation and assessment. One student complained that he was frustrated when he entered the program because past experience told him he would be assigned a place to sit, some textbooks to study, a schedule to follow, and work to do. Instead he found that the emphasis was on him and his needs. His first few days were devoted to taking tests, interviewing various personnel at the center, determining his interests and aspirations, setting his own goals, reviewing his past educational achievements, and seeing which EBCE experiences he should have to attain his objectives. This process has helped create new professional roles in EBCE programs. No one has the title of "teacher." New roles are devised to guide, to assist, to plan, to arrange, to recommend, to select, to provide alternatives, to support, to assess, and to reinforce the decision-making of the students. These clinicians are called learning managers, learning coordinators, guidance coordinators, and employer relations coordinators. Although further refinement is needed, their techniques are based upon some sound research and perspectives of how professionally prepared adults may relate themselves to the learning needs of students.

7) Student centered. The clinical mode of operation maintains a student-centered perspective throughout all of the EBCE programs. It emphasizes that each adult treat students as individuals who are looking

for a place in the world and preparing for adult roles. What the adult in the program wants is less significant than what the student needs.

8) Learning as exploration. Basically, student learning experiences are explorations that help them secure new understandings and refine old ones and see if the setting and its requirements match their aspirations, their concerns about establishing their ways of life, and their capabilities for both performance and self-fulfillment. The accumulated experiences should strengthen all students' capabilities to make those decisions which are of ultimate concern to them.

9) EBCE programs are systemic. There is an attempt to blend all the program's elements into a unified whole, but the concept of systemic organization goes beyond this. Directions are not left to chance. Although sequences are not dictated, their possible interrelationships and incorporations within the student's program have been clearly established. Since the range of students' interests may be far greater than that provided in the normal school, there are systems to help students explore areas not anticipated in the prepared materials or community contacts. No identified student need or interest should be overlooked in EBCE. The capability of the program must be greater than the demands on it.

10) Guidance and counseling are integrated with the total instructional system. Guidance and counseling are integrated with all the other elements of the instructional system. Since the ultimate objectives of EBCE are to help all students discover their most appropriate careers and life styles, guidance is aimed at career planning and decision making with respect to life roles -- not just the educational or crisis counseling characteristic of normal school processes. Most significantly,

guidance personnel come to know students well, work with them daily, participate in staff conferences relative to the progress and needs of students, and, in essence, become resource personnel for students, parents, and learning managers. Guidance personnel may also directly plan projects with students and work out program plans with a single student or with groups of students.

In some instances, guidance counselors may become disciplinarians. Monitoring student behavior in accordance with rules, regulations, and codes set by common consent is not foreign to the EBCE, but most of the guidance expertise will be used to help students achieve.

Guidance workers also maintain an important link with the community. In the normal school situation, school-community relations are limited to the interaction of the students with publics directly involved in the school or with the student's immediate family. These publics have diverse expectations for student behavior, and not all of the expectations are compatible with those officially established at the learning center.

Inevitably, some difficulties arise. Various links with diverse publics, therefore, have been established to manage some of these relationships. Guidance personnel, as well as employer relations specialists, play a fundamental role because of their work with students in cases where student perspectives may conflict with those of the public to the point of endangering school-community relationships. For example, a school's own dress code may contrast with that enforced at a community resource site. Employers who must maintain appearances in order to satisfy customers or their own legal requirements must have more rigid standards than normally would be expected in a school, especially one from which EBCE students come. Guidance personnel, thus, have to help work out the de-

tails of the sensitive relationships both to protect the employer and to build understanding among the students.

11) A functional record system. The record system in EBCE has to serve the developmental needs of students rather than simply provide a history of courses taken, credits earned, test scores and grades achieved. The record becomes not only a history of the student's educational experiences, but a diagnostic instrument. Not all of the problems of maintaining this record system have been resolved. The most significant issue is not how it can be done, but how it can be done without involving too much clerical time for professional personnel.

12) The coordination of instructional, development, and assessment teams. Funds allocated by the National Institute of Education not only operate EBCE programs in accordance with original development plans, but also maintain evaluation teams and support some research to permit drawing usable inferences from the projects. While operating personnel provide the best possible educational experiences for students, development teams at each EBCE school are constantly using the data from the instructional and evaluation teams to revise and refine the existing systems, strategies, technology, and materials, and to develop approaches for newly identified needs. The evaluation teams are constantly designing the evaluation procedures and identifying techniques for assessing the accomplishments of various aspects of the programs.

Although individuals are recognized for their discrete roles within the organization, there is constant interaction among the teams. Personnel from development and evaluation attend conferences held by the operation teams; development plans are evaluated by the operations staff; and evaluation staff work with both development and operations people.

This arrangement is a unique contribution to educational development since coordinating the three elements involves not only some discrete orientations, but a responsibility among all personnel for the total plan of operations and for installing the various program elements. To a considerable degree, but not without some continuing difficulties, the three teams have arrived at compatible operating patterns and are mutually reinforcing.

13) The psychological environment of EBCE schools. Whether planned or a consequence of the personalities of participants in an innovative program, a unique aspect of the EBCE schools is the esprit in each of the centers. In all of the centers, the administrators, professional staff, students, and parents were almost universally enthusiastic about the program. They felt that it was accomplishing its stated purposes and was meeting student needs in ways that the normal school program have never been able to do. In only one of the four centers did employers voice significant criticism, but even at this site employers generally agreed that the program was meeting a range of needs, and they recommended that it be maintained and extended.

Whatever its origin, this esprit does help account for the successful operations of EBCE and the significant accomplishment of developing the systems and maintaining effective operations in such a short period of time. On the other hand, three factors noted by several observers may also account for the excitement in this newly established environment.

First, all of those in the programs are doing things they want to do. It would be very difficult to be a part of any one of these schools and be only passively involved, because the systems themselves demand that individuals become active explorers. Some programs are more tol-

erant of wasted student time than others, and it is certainly necessary to recognize that no human organization can be devised to meet continually the needs of all the individuals in it. But a remarkable aspect of programs that tend to be open-ended is that so little wasted effort and so much active involvement are observed.

Second, much of the esprit seems to arise from the internal dynamics of learning centers. The focus is upon the needs of students. Relationships are based on mutual respect for the integrity of every human being. Everyone is called by first name: student, administrator, or a member of the professional staff. Professional staff members are available to help with the needs of the students. An open-office-door policy prevails among all levels. Physical facilities at all sites are minimal and not among the best. To overcome inadequate space, individuals have had to develop a tolerance for joint use and maintenance of close working relationships. As one student expressed it, "Nobody gets kicked around here." One student, after being penalized by a guidance officer, said, simply, "She did it because she wanted to help me, not because she was mad." Different points of view do prevail, but these generally are open to negotiation, so students do learn how to negotiate their differences with professional staff in an environment that promotes a clear rationale for decisions made.

Third, this environment is an open system whose elements can be negotiated and where closures lead to something other than termination. Students plan their own time, and one week's plan may be very much different from that of the week before. Students are responsible for how they spend their time and for meeting their obligations, regardless of the controls that may be exerted over them. If an experience is not

working, it can be terminated rather quickly and an alternative established. Resources are available in the learning center for students when they need them, and personnel are generally available when their assistance is wanted. The whole environment appears organized to help accomplish the objectives established by each individual. When a problem arises, a group can usually get together to tackle the problem immediately so it does not fester. Such an environment will inevitably feel congenial to those who are involved in it. It remains to be seen whether this environment can be maintained over time.

Each of the four laboratories has put these characteristics together into somewhat different EBCE plans. There is probably no one best way to accomplish the objectives. In the following chapters, each of the four plans is very briefly described.

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Chapter II

EBCE AT APPALACHIA

The Beginning

Is it possible to merge the worlds of classroom and community, of scholarships and experience?

And can it be done in a way that will make it an attractive and useful option for students and teachers alike?

These two questions faced planners and developers at Appalachia Educational Laboratory (AEL) in late 1971 as they grappled with the job of creating an Experience-Based Career Education program (EBCE) in Charleston, West Virginia.

Today they can point to an EBCE program which, in three years, has attracted the support and participation of hundreds of students, parents, employers, labor unions, and civic groups.

Appalachia's EBCE program takes the things that students normally study, adds many new ingredients (about people, jobs, self, and the way communities work), and then lets high school students learn about them in the community through direct experience with hundreds of adults. In the process, students obtain academic credit, explore the real dimensions of many careers, learn much about who they are and what they want to become, and master some of the skills they will need to negotiate the complex world of adult living.

Here is how one student fared in EBCE at Appalachia:

Diana at the AEL School*

Diana entered EBCE as a way out. "I was sick of school and just

*Provided for this publication by the AEL staff.

wanted to get it (senior year) over with," she said. "I didn't have any motivation to learn anymore. But she left EBCE with the comment that, "Now I see a purpose to my (school) work, and see that I can apply what I've learned."

Diana was one of 45 students who entered the AEL School in the fall of 1973 -- the second year of operation. Her test scores indicated below average to average math/science skills and above average verbal and reading abilities. Her grades, prior to entering EBCE, fluctuated but maintained a general consistency with her achievement scores (B-C range).

Diana brought with her to the AEL School some unique personal and academic experiences. During her sophomore year, she was "pulled out" of her regular high school and switched to a "home-bound" school (for unwed mothers). Following her experience in the home-bound environment, Diana chose not to re-enter her home school for her junior year. Diana said, although her own words were much different, that she had undergone an emotional/social experience for which her previous academic experiences and training had in no way prepared her. She wanted to attend a school during her junior year which would help her meet what she considered to be relevant personal needs. Diana chose to enter such a school, located out of state. Before leaving, however, she discussed her experiences with a girl friend, and the friend told Diana about a new experimental program she was entering that fall. She suggested that Diana might want to consider such an alternative when she was a senior. This was Diana's first contact with the AEL School.

Diana finished her junior year out of state, and then enrolled in a local summer school to catch up and re-orient herself to high school. But during the summer, she became very discontented with her courses,

the classroom atmosphere, and the teaching methods. She had experienced more academic freedom during her two previous years of schooling.

While exchanging miseries with a friend one day, Diana discovered that her friend was planning to enter the AEL School in the fall. Diana realized that this was the same program she had heard about a year ago, and she also began making plans to enter.

Following her application, a parental interview, and overcoming some parental reluctance, Diana was accepted into the AEL School. She didn't have much idea what she wanted to do with her life, and didn't feel she was finding out. All she wanted was to finish her senior year, get her diploma, and get out.

At first, things weren't any better for her. She had to overcome a horrendous transportation problem -- waking at 6 a.m. to catch a bus which was in transit over an hour to reach the AEL School. At night it was the reverse. However, Diana soon adjusted to the long travel time. "The morning trip gives me an hour to think about my day and on the way home I have a chance to think about what's happened to me (that day) and unwind."

Besides needing just one credit each in communications skills and world culture, Diana expressed interest in areas related to her hobbies -- arts and crafts. She also had a deep interest in children, and wanted experiences which would better prepare her for life. Her stated career interests when she entered were "agrarian careers and mid-wife."

Her first placement was at a hospital in the pediatric ward. She experienced mixed emotions about the placement. The sight of seriously ill children depressed her, but by watching nurses care for their patients Diana could also see the rewards of healing the sick.

Diana was also frustrated because she was mainly just an observer in the hospital. "For once, I wanted to do something. I wanted responsibility, not just to watch other people. I wanted to help someone myself." So, at the end of this three-week placement, Diana negotiated a transfer to a more active site -- Mountain Artisans -- a specialty firm dealing with mountain arts and crafts. She enjoyed this site more, and learned more than at the hospital: for one thing, how to make a patchwork quilt "from scratch," a basic survival skill. Diana also liked Mountain Artisans because she was able to get more involved: "I really got into the work and liked the people."

Diana's next placement was again a site involving children: a day-care center for children of low-income, working mothers. She had difficulties at this site for which she was unprepared. Most of the staff and children at the center were black, and Diana felt that there was some resentment and prejudicial treatment because of her color and economic background. However, she was not sorry for the placement. "I gained real insight into how black children are raised and the problems of ghetto children. I think I understand them much better now. This placement changed some of my attitudes."

Diana still felt torn between a career in arts and crafts and one working with children. Her learning coordinator suggested a placement at the local art gallery because of the arts and crafts on display there -- many of which were done by regional artists and therefore related to her interest in mountain crafts.

The art gallery was part of a larger organization which housed, among other things, a children's museum. But at the time of Diana's placement, only the art gallery was being used in the AEL program.

Diana liked her placement at the art gallery, and found it was anything but a "dead place." She took time to explore the adjoining facility (the children's museum) and learn aboux the various programs existing there. She was turned on by the Children's Museum, and began pressuring the AEL School staff to develop the museum as a placement for her. The director of the Children's Museum readily agreed, and Diana found a "home."

When she switched from the art gallery to the Children's Museum, Diana became involved in all aspects of the museum's offerings. She helped teach arts and crafts to small children; she helped organize incoming and existing displays. Her world culture credit was partially fulfilled through a program in the museum -- the "suitcase loan" program, which involved setting up and coordinating cultural displays from various countries. Diana was ultimately given prime responsibility for coordinating it.

The response of museum staff to Diana was most supportive and encouraging. In addition to being responsible for coordinating several programs within the museum, Diana is also in charge of orienting AEL School students who request placements at the museum.

The high regard for Diana's abilities were clearly demonstrated when she was asked to accompany museum officials on a trip to Philadelphia for an educational seminar on museum activities and programs. The staff wanted her to be fully aware of the scope and implications of the career she was getting into. While in Philadelphia, Diana attended some of the seminars, and also made field trips to museums in the Philadelphia area to learn how programs are initiated, how displays are set up, and so forth. She described her experiences in a detailed log which she

maintained and for which she received partial credit in communications skills.

By the end of her 13-week placement, the longest any AEL student is allowed to remain at one specific site, Diana was anticipating future placements to relate as closely as possible to her work at the museum. She expressed happiness about her experiences and support for the AEL School. She believes it provided her with "real" experiences. "At Sunrise (the Children's Museum) I learned what having the pressures of a job are really like. I learned that you have to get to work on time and that you have to get along with the people you work with, or you're on your way out!"

She feels her home life and relationship with her parents have improved because of her participation. "When I came into the AEL School my parents and I didn't get along too well. I was lazy and unmotivated and didn't want any responsibilities. Now I'm learning to accept responsibilities and proving to my parents that I can get along. We have a much better relationship than we ever did before -- I can talk to them now as an adult."

As for college, Diana had no plans to attend college when she entered AEL and still doesn't -- "maybe later." She plans to get a job which will lead her into a career in children's art/crafts and/or museum work, and is exploring opportunities which will allow her to receive on-the-job training on a semi-professional level or perhaps become an art instructor at a museum or similar place where a teaching degree is not needed. "To me college is a tool and I don't need it now to do what I want to do. Maybe later on I will need more training or want to progress further in my career. Then I'll go to college and be ready for it.

Right now I'm not ready, though, and AEL has showed me how to succeed for now without it."

Although ruling out college for the present time, Diana is very supportive of the academic work in which she is engaged. "Before, I just did problems and stuff to get it done and I didn't think it was useful. Now I see a purpose to my work and see that I can apply what I've learned."

The AEL-EBCE Design for Learning

As with the other EBCE efforts, direct experience is the key to AEL's EBCE program. Students who are studying politics test their new knowledge against the practical insights of legislators, judges, city managers, and policemen. Students who think they're interested in a career in ecology, for instance, study and work alongside scientists, technicians, investigators, and secretaries. They discover that "ecology" is many jobs rather than one, that every job has its boredom and excitement, and that the specific ecology careers they want may require far more (or far less) education and experience than they expected.

The entire community, with all its richness and confusion, becomes the school for Charleston students enrolled in EBCE. Students do not train for one preselected job, but they discover by direct experience what career(s) they find most potentially rewarding. Rather than use occasional "field trips" to supplement classroom study, they study among people and in community locales. And they actually don't just learn about responsibility, values and maturity, but how to become more responsible and mature, and how to begin developing a conscious and more real set of values.

AEL's Experience-Based Career Education program is not one curricu-

lum, but many. Each student enters the program at a different point, with unique interests, abilities, academic backgrounds, and personal traits. y enter EBCE as a full-time activity; the school will be the total community, not just one classroom.

One of the two major priorities is to create a set of learning experiences uniquely appropriate to each individual. As a result, students experience their own special community, in terms of the people they meet, where they go, what and how they learn.

The program's other major commitment is to the belief that "courses" do not have to be separate sets of events. The content of social studies, English, science, and career development are inescapably different, yet within AEL's EBCE program they are combined into single sets of activities. An EBCE student, for example, may conduct biological research and experimentation (for science credit) while exploring a particular career in ecology (for career development credit). They may write reports on both of these activities, and have them evaluated for English credit. They may supplement any of these "on-site" activities with special tutoring, small group discussion, texts, or independent study activities in a special learning center. The primary criterion is what is best for the individual student, and the "best" is a joint decision by the student and his or her learning coordinator (and frequently parents, community adults, and guidance personnel).

AEL's Experience-Based Career Education program is, in short, an attempt to provide high school students with learning opportunities that are as realistic and as relevant as possible.

AEL's EBCE staff tried at the outset to break some new ground in translating EBCE from an idea into an actual program. Many of the ideas

behind EBCE were not completely new; programs were already bringing the classroom and the community closer together. But EBCE's planners at AEL hoped to put the pieces together in ways that went beyond most existing programs.

Vocational education, cooperative, and work-study programs emphasized training for a specific skill rather than learning about many careers before making a choice. They kept academic studies in the classroom rather than letting academic learning occur in the community; and they normally limited the student choices to a single site and a small number of courses, rather than encouraging them to study many things, in many ways, in a large number of community sites. One set of problems facing AEL's planners was to find ways to intermix all aspects of learning (career, academic, and personal growth), to use the live, real experiences of the community, and to provide each student with many learning alternatives based on individual needs, interests, and abilities.

The instructional "systems" which AEL has devised after three years of testing focus on seven basic ingredients:

*Community resource sites which employers volunteer for the program are thoroughly, yet inexpensively, analyzed to find out what students might learn there, and under what conditions (times, people, dress codes, etc.).

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

*Standard coursework has been re-worked into a concepts approach to curriculum in which students can pursue their courses in many different ways, depending on overall program needs and choices.

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

*Students' specific learning activities are carefully and individually described, tracked, and evaluated so that students don't "get lost" as they learn in the community or can't keep pace in competition directly with other students.

*A systematic, three-leveled process is used to guide students as they use the community to investigate the kinds of careers which might be most practically appealing.

*More specifically, educational program goals are designed to help students:

(1) Develop basic skills and knowledge that are requisite (e.g., mathematics, reading and communicating) or necessary to prepare for functioning in chosen, career, social, and personal environments;

(2) Develop life skills or necessary behaviors and attitudes which help individuals relate to the economic sector and other life roles in a self-fulfilling manner;

(3) Become knowledgeable about careers, jobs, and the job market;

(4) Develop a self-concept of individual characteristics, goals, values, and interests;

(5) Develop general and specific skills for career entry, career advancement, and career mobility and adaptation;

(6) Develop the ability to identify the social, psychological and financial rewards of careers;

(7) Develop the ability to make appropriate career decisions;

(8) Develop general and specific skills necessary for self-management, initiative, resourcefulness, and other coping skills.

*Finally, the traditional "teacher" has been replaced by a "learning coordinator," who has full responsibility for coordinating, guiding,

and evaluating all aspects of a student's program.

Community Resource Sites

A serious initial question for AEL's planners was whether the community would be willing to participate in an EBCE program at all. Would private businesses, labor unions, government agencies, and the like be interested in having students on their premises, and spend time helping them learn, without being paid, and without the promise of a trained potential employee at the end?

AEL's EBCE program operates in Kanawha County, with a population of about 250,000. The primary city within the county, Charleston, is the capital of West Virginia, and thus contains most of the major state agencies. The county itself offers a number of large and small industrial firms, a large and diverse group of trading, transportation, communications, and other business sites, and the standard mixture of commercial firms found in a metropolitan hub. Perhaps most vital to AEL's planners, Kanawha County had a long history of civic concern and involvement among its business, civic, and social groups.

AEL's EBCE planners adopted what has become known as a "front-runner" strategy in trying to elicit community support for its new program. This strategy provided that a well-known Charleston resident, with numerous leading business, civic, political, and social contacts, would be given responsibility for contacting and recruiting community support. Recruitment of sites, then, was to be initially targeted from the "top down," to take advantage of the community's tendency to rely on existing relationships and respect in "doing business."

This strategy proved successful in Charleston. At present, AEL's EBCE program can draw upon some 120 different sites, with 400 to 500

individual "resource people." Fewer than 5 percent of those asked to participate have declined, or dropped out after initially agreeing. So far, the number of sites available to AEL's EBCE students has been limited primarily by the numbers the program needed, and there is no evidence that community interest has "bottomed out."

The other major issue was what to do with the sites after they agreed to participate. Given AEL's goals for EBCE, it was impossible simply to turn students loose on sites. EBCE had to find out what kinds of learning could go on there. It was equally impractical to obtain every bit of information which could be gathered about a given site.

The procedures now used at AEL took about two years of designing and revising to achieve a balance between too much and too little information and effort.

AEL's system for analyzing and documenting what learning can take place on a given community site focuses on an Experience Site Learning Guide (one for each site). This Learning Guide, which can be put together by paraprofessionals after a short training session, contains seven basic kinds of information:

*General information about the site (names, phone numbers, location, times, dress code, etc.);

*General descriptions of the site (kind of business, subdivisions within the organization, etc.);

*Task statements for each resource person in each subdivision (what they do, why, with what tools and instructions, etc.);

*Activities which a student may only observe (e.g., a lawyer resource person arguing a case in court);

*Activities which a student may do with no prerequisite training

or experience (e.g., setting up props in a TV studio under direction);

*Activities a student may do with prerequisite skills (e.g., writing radio scripts); and

*Special activities and projects (discussions, demonstrations, tutoring, etc.).

The first three items are relatively routine. The last four are the keys to learning. They involve the professional, analytical efforts by EBCE staff and site personnel to pinpoint career, academic, and personal development learning activities which the site can offer to students.

In use, the Learning Guides give the staff and students an opportunity to agree on sites, and general activities within a site, which match the student's overall program needs and choices. Once this is done, specific activities can be generated to guide and measure what a student is supposed to do and what he does on that site. Since the site personnel must "sign off" on the Learning Guide, both student and staff know in advance that the activities they create will be acceptable to the resource people at that site.

Student Needs, Interests and Abilities

Much of the student's first week or two in the AEL program is devoted to learning as much as possible about what that student needs, wants, and can do. This analysis process takes several forms, ranging from standardized testing and review of the student's high school transcript through special checklists and one-to-one discussion between the student and a learning coordinator.

A major concern in this process is to identify which credits the student needs. For seniors, EBCE must assure that each gets all the formal credits required to graduate. The staff members study the tran-

script, establish the student's credit needs and options, and then formally verify the results with the counselor at the student's home high school.

The first outcome of this analysis process is a tentative profile of the student. It might conclude, for example, that a student needs five credits to graduate (English, mathematics, and three electives), is "sort of" interested in careers as a teacher, an auto mechanic, or a lawyer, is slightly below average on standardized tests and in grades, is relatively outgoing and mature, and prefers to work with people rather than things (except that he has a knack for machinery).

Students and staff discuss this information as well as the available EBCE sites, and the interdisciplinary curriculum which EBCE offers. They agree on the student's academic studies, the first site(s) to be visited, and the first set of specific activities to be undertaken.

From then on, students and their learning coordinators will reassess this initial set of decisions, and will change or reinterpret them as the student progresses. The key ingredient in such changes is the students' opportunity to test their interests and abilities against real-life situations, and to change their course as they learn more about themselves and the adult world.

Students may be exploring auto mechanics at the local telephone company, for example, and may gradually (or rapidly) discover that they are more interested in selling or designing machinery than in getting their hands greasy fixing a car. As a result of this discovery, the next site assignment might be in the merchandising or research and development department of the utility company (or an electronics firm, or the telephone company). Different activities and objectives might

be specified for this assignment. Students will have an opportunity to look at what they liked and disliked about those career areas, and perhaps will pursue the required math credits by helping procure bids for equipment rather than through calculating costs of auto parts. Gradually, through this process, students "settle into" a pattern of overall studies as they discover the "goodness of fit" between themselves and the opportunities available in the real world about them.

Integrated Curriculum

Traditionally, one of the greatest barriers to linking different academic courses together has been the fact that such courses have focused on the classroom and on content materials. A chemistry course which emphasizes mixing chemical elements, for example, has been inevitably difficult (if not impossible) to unite with an economics course which emphasizes laws of supply and demand.

AEL has tried to blend many apparently discrete "subject" areas into single sets of activities by avoiding a focus on the classroom and on subject-matter content. The latter does not mean that students have no academic content in their studies; rather, the content itself is not the major organizing principle for learning.

Academic and career curricula within AEL's EBCE program are oriented toward what is known as the "concept/inquiry" model of learning. This model has two major elements: concepts and the inquiry process.

Concepts and objectives

Essentially, the model states that learning becomes more meaningful for students when they concentrate on key concepts and objectives in a particular area, rather than on a body of knowledge. A student might

need a civics or social studies credit. As part of this study he or she might explore the question of "Are particular groups who are in contact with each other basically cooperative or competitive?" (this is a sub-set of an overall concept of "Social Structure").

The student then might explore careers (and/or earn science credits) at a large chemical plant. In the social studies area, the student may learn that such large industries are both competitive (in sales and new product development) and cooperative (in basic research, in lobbying, etc.). One site, and one set of experiences, thus help students earn credits in several "courses," in ways that interest them and give them some valuable insights into the adult world.

Within AEL's EBCE program, then, students choose their academic learning objectives on the basis of key concepts which are functional and relevant for their life activities and roles. The specific emphasis and the subject matter used to help the student master a concept will be variable. The meanings and understandings which the student achieves, not the subject matter by itself, are the important factors.

Inquiry Process

The concepts already described serve essentially as the structure for student learning. Inquiry provides the key process for learning. Essentially, this means that the student has decided to master (part of) the concept of cooperation/competition -- understand it, chew on it, take it to heart, and apply it to the things already occurring.

The inquiry process helps students "master" the concept systematically, and in the process to develop rational thinking skills. Students select a concept, and work with learning coordinators to generate specific activities to "get at" that concept. This means, among other things,

getting opinions from 10 resource persons at the site about whether they are basically competitive or cooperative with rival companies, and identifying their reasons, values, and priorities in making those judgments.

Each activity relevant to the concept is given an "inquiry code." The codes used by AEL's EBCE program are based on five general levels of inquiry (eight specific types of inquiry activities); they include defining the problem, analyzing information, and communicating the conclusions. Cumulatively, each student will have gone through all eight steps a number of times during the year in EBCE, thus systematically preparing to think more rationally in future situations.

Once students select target concepts, they can "mix and match" concepts, sites, references, and learning materials in ways that are uniquely their own. AEL has developed special manuals, cards, and other materials which cross-reference community sites, texts, possible activities, and other information. This set of cross-referenced, concept/inquiry based materials lets student and learning coordinator translate general decisions about sites and concepts into an entire, personalized curriculum within a matter of minutes. Similarly, a student's curriculum can be changed with equal speed, by repeating the simple procedures.

Student Activity Sheets

Data from a site analysis, student assessment, and cross-referencing curriculum enable EBCE staff to track and evaluate in detail what happens to students as they go "on site." The major vehicle for tracking and monitoring is the Student Activity Sheet.

Once the student and learning coordinator have agreed upon the basic thrust of the student's program, they must turn general desires

into specific assignments. The student and the learning coordinator discuss a number of possible specific activities, and once they agree upon the first activity, an activity sheet is prepared. This sheet specifies: the site, the duration, the credit range to be given, the products to be produced, and the specific activities to be undertaken. Additionally, this activity sheet indicates the level of inquiry process involved in each activity.

This activity sheet serves many purposes: it is a binding agreement between student and learning coordinators; it insures that student, learning coordinator, and site personnel know what the student will be doing; it establishes the range and requirements of credit the student may receive; it sets a timetable for completion; and it documents the student's work for high school credit purposes.

After students complete an activity, their performance is evaluated by a learning coordinator, the site resource person, and the students themselves. The amount of credit awarded is negotiated and recorded in the permanent student file.

Career Decision-Making

All students in the AEL program are required to pursue learning activities in career development and communications. These curriculum components are designed to help students learn about possible careers and to master basic career decision-making skills. The instructional program is based on the idea that the most important career-related attribute for high school students is the ability to make rational (realistic) career decisions in the future.

The career development curriculum lists the same type of concepts and objectives as the other four basic curricula (communications, social

science, physical science, and mathematics). The concepts focus on such questions as "What types of behavior usually bring satisfying job advancement?", "What types of training for a specific job or position are transferable to what other jobs?", and "What are some of the advantages and disadvantages of membership in professional and union groups?"

In addition, the career development curriculum accommodates three levels of student involvement in careers: exploration, investigation, and specialization. Exploration implies at least a tentative interest in a general career area or cluster (e.g., construction or ecology); investigation indicates a heightened interest in one part of the overall career area (e.g., construction techniques or environmental pollution); and specialization indicates a high interest in a relatively specific aspect (e.g., carpenter or chemical researcher).

Students can make shifts within these areas, depending on their interests and abilities. One student may "explore" several sites before locking in on something. Another may go quickly to the specialization stage in his or her first interest area, and could then start in on very definite training. If students decide that they have made a mistake, they can return to exploration in another career area.

At all three levels, the student's activities are guided, documented, and evaluated through the use of separate manuals. These three manuals pinpoint the types of information the student should obtain, and how they should use that information. All three manuals emphasize collecting and assessing information not just as bald facts, but in relation to what students know and are learning about themselves. Career development within this concept is a process of rationally comparing external information with internal insights.

The Learning Coordinator

The final, and perhaps most crucial, central element of AEL's EBCE program is the learning coordinator. Manuals, catalogues, theories and site analyses all circle around the individual staff member who has to coordinate them so that they best serve the needs of each student. The learning coordinator is not the primary dispenser of information within AEL's EBCE program. Rather, the learning coordinator's prime function is to help students get to where the information is, secure the information, and then make use of it.

A single learning coordinator is totally responsible for each student within AEL's EBCE program (unlike more traditional programs, where a student must relate to several teachers and counselors).

Each student is assigned to a learning coordinator upon entering the program (changes in assignments can be made if there are severe conflicts or problems). That learning coordinator orients the student to the program, helps make the initial choices of sites, courses, concepts and activities, monitors the student while on site, evaluates the results, plans the next activities, counsels the student as needed, and continues all of these activities for that student throughout the year. All of the program's manuals, references and other materials are designed largely to provide the learning coordinators with the quick information and procedures they need to work effectively. At present, AEL's EBCE program has a student-learning coordinator ratio of about 15 to 1.

Perhaps the primary feature of the learning coordinators' role (aside from the mammoth responsibilities) is the degree to which they have effectively blended the traditionally separate roles of instruction and

guidance into a single event. Learning coordinators within AEL's program do, in fact, "teach" their students two things: (1) how to [illegible] the real-world community to gain access to relevant learning experiences; and (2) how to organize, assimilate, and draw inferences from those experiences.

How Well Does AEL/EBCE Work?

As part of a federally funded research and development project, AEL's EBCE program has been (and still is being) constantly evaluated, studied, and measured. The results of such evaluations, though incomplete due to the complexity and uniqueness of many of the program's elements, indicate considerable effectiveness, at least at the subjective level. Standardized tests and measurements have thus far proven of uncertain value, even though results have shown that the EBCE students did as well as other high school students in Kanawha County in the cognitive areas. A number of evaluators have expressed concerns that such tests do not really measure the unique and wide-ranging types of learning occurring within AEL's EBCE program (i.e., interpersonal skills or career maturity). Attempts are being made to create other, more targeted, measures that will address these issues.

Evaluation results for the AEL/EBCE program indicate that each subsystem of the project had stabilized and was operating as expected during the second year of program operation. That is, the Experience Site Identification and Recruitment, the Experience Site Analysis, the Recruitment and Selection of students, the Delivery of Instructional Services, and the Support Subsystem were understood by those using them.

Eleven of 14 hypotheses were either completely or partially accepted, and three were rejected. EBCE students performed as well as the comparison

students on awareness skills and, in fact, displayed a greater gain in self-concept than did the comparison group students.

Important gains were made by EBCE students on certain aspects of career maturity as measured by the Career Maturity Inventory. Where EBCE students did not show important career maturity gains, they did as well as the comparison group students. EBCE students had important gains over comparison group students on the attitude scale of the Career Maturity Inventory and in their capability to plan for the future as measured by the Career Maturity Inventory.

EBCE students and comparison group students were similar in problem-solving ability, ability to choose realistic career goals, and in their ability to know themselves as measured by the Career Maturity Inventory. Although there was evidence that FY73 graduates had very little difficulty in finding a job or school, there were no data available to make comparisons.

Case histories of nine students indicate that four of the nine students studied improved substantially academically during the period in which they were enrolled in the EBCE program. Most students said they were very satisfied with their site placements, because most were compatible with their expressed and/or measured interests. Six students indicated that they made specific career choices as a result of their experiences in the EBCE program.

Where Does EBCE Go From Here?

AEL's EBCE staff has consistently stated that if the program would work only in a federally funded, experimental situation, then, it would be a failure. Their goal, from the outset, was to make their EBCE program sufficiently appealing, simple, and economical that it would find

ready adopters all across the nation.

To date, AEL's EBCE program has been maintained primarily as a pilot, experimental research and evaluation project, although in September 1974, the Kanawha County School System established an EBCE program in one of its high schools, independent of AEL. The purpose of this independent operation was to uncover at least some information concerning what would happen to the program if it were operated by non-AEL staff in a public school setting and as an independent operation. This program has not been operating long enough to produce significant information on that point; however, first indications are that this field test is having considerable success.

Currently, AEL's EBCE staff is discussing the feasibility of establishing other EBCE programs in various locations in the eastern United States, although it is also too early to see whether such discussions will soon lead to establishment of AEL's EBCE program in other locations. But the AEL staff seem convinced that their program will prove feasible and be welcomed in other localities. They point to the fact that all of their ingredients have been deliberately designed to make them workable elsewhere, and quote the judgment of a major external review team that AEL's EBCE program "is probably transportable now for replication purposes."

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Chapter III

EBCE -- FAR WEST STYLE

Overview

> "Helen was working harder and learning more than ever before. . . She still wasn't really sure of what she wanted to do with her life, but she knew now that she wanted to do something that would involve working with other people. . ."

* * *

The community is literally the school for students in the Experience-Based Career Education (EBCE) Program at the Far West School in Oakland, California. Located in an office building in the heart of Oakland, one of California's largest industrial centers and just across the bay from San Francisco, the Far West School (FWS) is a voluntary, comprehensive, community-wide and individualized learning program. It provides direct experiences to prepare high school students (grades 10-12) for successful entry into the adult world. In Oakland, it is seen as an alternative route to high school graduation.

Developed by the Far West Laboratory for Educational Research and Development in San Francisco, FWS not only emphasizes the knowledge and skills vital to career satisfaction, but it allows students to pursue traditional subjects and develop those basic skills by applying concepts and solving problems in a real-life setting. Specifically, FWS operates in a variety of life and work settings to provide students with (1) self knowledge, (2) a broad understanding of the world of work, and (3) fundamental coping skills.

Through a variety of self-selected projects, students earn credits toward graduation in the Oakland Public Schools as well as the knowledge and skills they need to enter college, technical training programs, or full-time employment.

The program's primary learning resources come from the entire community -- local schools, public agencies, recreational and cultural organizations, working individuals, parents, unions and employer organizations. Learning activities are highly individualized, with students establishing their own objectives based on their abilities, interests, and needs. Learning coordinators are the primary teachers and counselors, helping students develop and carry out learning programs to meet their needs and goals. Each learning coordinator monitors and evaluates student progress and recommends the amount of credit for each experience and project.

Skills specialists continuously monitor and document student progress in reading, writing, oral communication, and arithmetic skill development. Experienced tutors work as needed, and programmed materials help students who need to improve their competence. These are the supplementary learning resources. But much of the basic skill and life skill development is blended into the on-site and career-oriented experiences.

A resource analyst recruits, orients, and prepares indexed guides to the persons and organizations who are the primary learning resources in the community. This person is in close touch with learning coordinators and locates new resources in areas where student interest is growing.

Student Life

Students spend considerable time at the experience sites where volunteer resource people help them learn about specific careers. They are treated as colleagues rather than as students. Together, the learning coordinator and the resource person strive to help each student

obtain a meaningful experience, one requiring the student to make commitments toward completion of each learning project.

The atmosphere of the school is open. Each learning coordinator-student relationship is informal and friendly, although the authority role of the learning coordinator is maintained.

Students help each other carry out projects, and they reinforce and assist one another. Social interaction involving both peer and student staff relationships is a key to the success of the individualized EBCE program, where students are largely responsible for their own progress and for reaching their educational objectives.

Program of Studies

At its basis, the FWS Experience-Based Career Educational program is designed to produce graduates who can function in the working world of adults. Far West School graduates are expected to be:

1. "Turned on" to learning: work at it, view every situation and every human contact as an opportunity to learn something.
2. Planful: not only about their long-range futures, but about what they want to do and achieve each week.
3. Self-reliant: able to set their own goals, plan activities, manage their time and other resources, work independently, recognize when they need help and seek it, evaluate their own behavior and learn from it, and accept the consequences of their own decisions and actions.
4. Capable of interacting with adults as equals: know what is expected of them as adults, able to communicate on an adult level, able to make and keep realistic commitments to others, and have reasonable expectations of others.

5. Capable of making realistic and satisfying career choices: more informed about career options and requirements, and more aware of their own values, needs, goals, strengths, and limitations.

6. Independent learners: able to identify what's worth learning, identify and use effective sources and methods of acquiring information, analyze, evaluate, and incorporate new information into their own knowledge and experience base.

The student outcome goals are organized into three broad categories with several subheadings:

I. Career Development (self-development; career decision-making and planning)

II. Basic Skills (oral communication; writing skills; reading skills; basic quantitative skills)

III. Life Skills (interpersonal skills; problem-solving skills; decision-making skills; inquiry skills)

Not all students are expected to achieve all of the goals. Through a wide range of activities, students choose specific ones to meet their own interests, aptitudes, and achievement levels.

FWS "delivers" these activities through a series of projects, most of which are part of a larger unit called a "learning package." A "learning package" blends resource persons, resource organizations and community resources into learning experiences to help students meet their goals.

Here, for example, is a typical learning package:

Biology

Resource Organization -- Western Labs;

Resource Person -- Rich Alexander, Plant Chemist at the Richmond Water Pollution Control Plant;

Community Resource -- State Department of Public Health;

Package Objective -- "Learn to use the scientific method of investigation."

Students develop their projects with an objective they choose. Each project explores some career within the field covered by the "package." At the same time, the student can develop any needed basic and/or life skill.

Program Components

When they plan their learning projects, students select an area of investigation (biology), specify their objectives (analyze three careers, etc.), identify appropriate resources (Western Labs, etc.) and data-gathering methods, and list their planned products, deadlines and evaluation criteria. There are three levels of involvement -- orientation, exploration, and investigation.

At the orientation level, students view films, read background materials, visit and meet resource persons in an effort to broaden their knowledge of an organization and an occupation.

The next step, the exploration level, gives students enough experiences within an organization and career area so they can compare it with their own interests, abilities and values. Students accompany a resource person while he or she is doing routine responsibilities; they view people in the organization; and they have limited "hands-on" experiences at representative tasks. They are encouraged to add or delete interests and ideas as they broaden or narrow their real concerns.

Students then move to the more specific investigation level, where

they can gain the knowledge and skills they will need for personal, vocational or educational goals. They have a combination of experiences and learning activities which are centered around a community resource site, but which also involve the study of related materials.

While FWS emphasizes experiential learning in the community, learning activities are also carried out at the Resource Center. Students there participate in individual or small group sessions to: improve basic skills, work with the learning coordinators to plan new projects, share experiences with fellow students in rap sessions, or quietly read, write or engage in various project activities.

Highlights of One Student's Experience at FWS*

Helen had always planned to go to college. She had done well in her first two years of high school, but found most of her courses dull and uninspiring. Laboratory experiments in her biology and chemistry courses were her most interesting classes. More by default than anything else, she planned to major in science.

Hoping to find a greater challenge, she decided to enroll in the EBCE program at Far West School for her senior year. She made the decision after talking with a friend -- a college student majoring in marine biology who had been working as a science tutor for EBCE students. Helen was impressed that the program offered her an opportunity to get out of the classroom, explore the real world, and manage her own education. She saw EBCE as a way of escaping the rut in which she had been mired for the previous two years.

During the first days of the semester, Helen took some tests of her abilities in basic skills. Later, she went over the results with

*Prepared for this publication by the FWS staff.

her learning coordinator before preparing a plan of her year's work. She had average math skills, and good reading and writing skills. In preliminary conversations with her learning coordinator, Helen also discovered that even though she had liked science courses best in her first two years of high school, she was really more interested in exploring careers that involved dealing with people than in studying chemical reactions or dissecting laboratory specimens.

Working with her learning coordinator, Helen consulted Far West School's biology "package" and decided to explore health occupations. She visited several hospitals and medical research laboratories and talked to people in a variety of jobs, both professional and technical. As a project she wrote an account of her experience in the emergency room of the local county hospital.

Her learning coordinator encouraged her to have her report published in the Far West student newspaper. She had enjoyed writing this article, so Helen decided to modify her program. She looked into the communications and media "package" and decided to explore a journalism occupation. During several hours' talking with editors and reporters, she learned that a broad education in the liberal arts and social sciences was considered the best preparation for a journalist. Back at Far West, she and her learning coordinator planned a new set of experiences centered around a more intense exploration of the newspaper business.

Her first job was proof-reading. She thought it would be dull, but she soon found herself studying the different styles in news copy, feature articles, and human interest stories for sports and society sections. She enjoyed working with the typesetters and operators. After she had gained an understanding of this area, she went to the

Times' managing editor -- her resource person in the organization -- who quizzed her on what she learned and then arranged for her to accompany a reporter.

Before accompanying the reporters, Helen saw a film at FWS on effective communications. The reporter had discussed differences between various kinds of people a journalist encounters and how each reacts to an interview. Helen had to demonstrate that she understood these insights before accompanying him on an interview. She also agreed to go to the library and compare the way by-line writers had done the same story in The New York Times and The Washington Post, and then analyze the way the same story had been handled by the wire services.

After watching the reporter conduct interviews, Helen got a chance to do one herself, with the reporter watching her and then evaluating her performance. She accompanied him on several assignments and did some practice news story writing. Then the reporter and managing editor agreed she was ready to try some stories of her own. They assigned her a human interest feature about the efforts of minority recruitment by local corporations, sending her back for a second try if she missed something in her first interview.

As she gained more experience, she agreed with her learning coordinator and resource person to undertake a project involving an article on the voting record of the city council. It involved extensive interviews, attending council meetings, and studying local issues. When it was finally completed, the Times managing editor felt it was good enough to publish as a brief series in the paper.

Helen found her interests becoming more diverse as she completed her exploration of the journalism profession. She had become interested

in politics, joined the League of Women Voters, and had begun doing research on some legislative issues. She had even helped write the pros and cons in position papers. She had taken up photography as a hobby. She had taken typing and speed-reading courses to help her in her job. She and some other EBCE students had organized their own economics study group, for which, among other topics, Helen had prepared a paper arguing against a proposed guaranteed annual wage.

Helen was working harder and learning more than ever before. She wasn't working to get a grade in a course that failed to excite her. Rather she was getting credits while directing her own course of learning and gaining the sort of competencies she felt would support her the rest of her life. She still wasn't exactly sure what she wanted to do with her life, but she knew now that she wanted to do something that would involve working with other people in community affairs. The spring of her year at Far West School she was accepted by San Jose State College. Before leaving for summer vacation, she told her learning coordinator she thought she might look into a degree in city planning and that she had applied for a part time job as a reporter with one of the local newspapers to help pay her expenses.

Program Organization

Helen's experiences illustrate EBCE's ability to adapt to her interests and needs. Beginning with the selection process and continuing through to the determination of credits earned, the central focus of FWS is on the individual student.

A student profile is prepared from the test results, a review of the high school transcript, and a student-learning coordinator interview. This profile serves as a guide in planning the students' educa-

tional programs.

Students then gather the information needed for their projects, identify resources, spell out objectives and products, and develop an initial project plan. The learning coordinator, meanwhile, insures that students' plans meet program criteria, that performance objectives and criteria are specified, and that the project includes activities to promote student growth in the appropriate basic and life skill areas.

The students' project plans are tentative. They can, with the learning coordinator's approval, change and modify their projects as they work with community employer resources and identify new interests and opportunities for learning.

Student Progress Monitoring. Together with a learning coordinator, students review at least every two weeks their schedules, activities, and progress. They also look at any problems encountered and devise solutions.

Student progress and problems are monitored by learning coordinators both through feedback from students, and through personal and telephone contact with the students' resource persons.

Each student's program should provide for:

1. Pursuit of individual areas of interest.
2. Fifty percent of the time in employer or community resource settings.
3. Earning at least 2½ Oakland Public School credits per semester.
4. Satisfactory progress toward graduation.
5. Growth in core curriculum (basic skill) areas.
6. No more than one regular high school or junior college course at any time.

7. Projects plans, including measurable performance objectives; specified performance tests, products, or deadlines; specified means and persons for evaluation; higher level cognitive objectives.

Figure 1 attempts to show how the student program is organized. Two students pursue entirely different projects and learning activities to achieve common package goals.

Resources and Staff

The people and facilities that comprise FWL's learning resources fall into three categories:

Resource Persons -- Individuals from various work settings who volunteer to share their time, knowledge, skills and experiences with students in a one-to-one relationship -- for a few days or over several months.

Resource Organizations -- Agencies or organizations which offer small group activities to orient students to careers and provide the settings in which students can explore various positions within an organization. These activities are preplanned by the organization's management, but students can help in planning.

Community Resources -- Public resources which allow individuals or small groups to broaden their understanding of the community beyond the "economic" sector. Because these agencies and facilities are available to the public, there is little need for extensive on-site, preplanned activities. Students themselves often make the arrangements to use community resources.

The Far West School's internal resources -- its staff -- is made up of several teams: program management, school operations, and develop-

ment and evaluation.

The program management team provides the administrative tie to the Far West Laboratory, and the development team designs, sets up and refines procedures and documents in the FWS instructional system. The evaluation team members collect and analyze data, and they provide feedback on student activity and resource use. They also assist the development team and evaluate the effectiveness of EBCE.

The school operations team conducts FWS and administers the Resource Center in downtown Oakland. It includes a director, five learning coordinators, a skills specialist, a resource analyst, a recorder and a secretary. Each has credentials to meet state and district certificate requirements.

The director is the principal of FWS. Each learning coordinator handles 25 students, helping them develop decision-making skills and seeing to it that they have meaningful learning activities. The skills specialists help students meet high school graduation, college entrance and basic skills requirements. The recorder maintains student files, resource information files and the instructional materials collection.

A major role is that of the resource analyst, who is charged with analyzing the educational features of resource organizations and community resources. This person does a complete job analysis -- or learning experience analysis -- so both student and learning coordinator know exactly what is available at a site before they select it as a resource.

Management and Governance

The program management group, including the program director and other administrators, directs the technical aspects of FWS.

A policy advisory board, established in January 1973, has 20 to

24 members representing private employers, organized labor, community service agencies, business and professional associations, individual professionals and entrepreneurs, the public schools, EBCE parents and EBCE students. The Board sets policy, reviews operations and evaluations, plans for program operation after the research and development phase ends, and presents the program to the community.

The superintendent of Oakland Public Schools helps develop policy for student recruitment and translation of EBCE credits into high school credits. Funding and contractual agreements are handled through the parent Far West Laboratory, which also sets personnel, finance, and administrative policies of EBCE at the Far West School.

Legal Aspects

Since the Far West School is an alternative program in the Oakland school system, it requires no special accreditation. The school offers a diploma through the Oakland Public Schools.

The public schools' central office has helped set credit and graduation requirements, a process that translates the individualized EBCE achievements into credit for specific subjects and graduation requirements. Pass-fail grading has been used except when parents or colleges have specified letter grades.

Generally, 15 hours' productive work (classroom or on-site) converts into one FWS credit, and 10 FWS credits equal one Oakland Public School credit. Student projects are evaluated on productive hours spent and quality of work performed. Each student report of project activities is examined by a committee.

Problems concerning the various high school graduation requirements are not yet resolved. Although Oakland Public Schools has a minimum

requirement, each of the six high schools has considerable flexibility in implementing these minimums. As a result, FWS has to deal with six different requirements and establish six different equivalency plans for its students.

Student transportation has not created great problems. FWS has leased a station wagon to transport students to and from a few sites in the community; however, most students use the Bay Area transit systems.

External Relationships

Industrial, business and civic agencies have been highly involved in EBCE: in the first year of operation, 63 adult volunteers served as resource persons and provided on-site learning activities, and four organizations served as resource organizations and provided orientation and exploration activities. By August 1974, the number of available resource persons had increased to 134 and the number of available resource organizations was 23.

Both staff members and students recruited volunteer resource persons. These volunteers spent 1,847 hours with 30 students throughout the 1972-73 school year, playing a variety of roles. Occasional workshops train resourse persons and identify the issues that need attention. Students generally have had a very positive attitude toward the resource persons with whom they work.

Recruiting and using employer organizations was not easy, so an employer consultant was hired to help organize orientation activities for small groups of students. During the first year each organization had orientation sessions and activities, but very few had exploration level activities.

Learning activities at a resource organization are prescribed,

carefully monitored by the FWS staff, and constantly revised on the basis of students' experiences with them.

Far West School has made a special effort to involve organized labor, a segment that was first reluctant to become involved. Now unions are represented on the Policy Advisory Board, and the Central Labor Council has voted to allow interested EBCE students to sit on labor negotiations sessions.

Student Body Characteristics

During the first two years at FWS, 78 different students have been selected from 271 applicants to participate in the EBCE program. Most were generally dissatisfied with the traditional high school program. Some had dropped out and others felt unchallenged. For the most part, they saw EBCE as a way out of what appeared to be an intolerable situation.

The 78 EBCE students vary from their regular school counterparts in ethnic group membership, sex, grade level and age. But they are similar in family backgrounds and the traditional academic indices -- reading, mathematics and language skills as measured by the Iowa Test for Educational Development, Career Maturity Inventory and the Personal Orientation Inventory.

The ethnic composition of the 78 FWS students as compared to the Oakland public high schools population is shown below:

	Asian	Chicano	Black	White
FWS	3%	18%	32%	47%
OPS	8%	8%	63%	21%

There are three possible reasons for the large discrepancy in the black population. First, it was relatively unknown in the Oakland black community until the summer of 1973. Second, it seemed to have a somewhat

uncertain funding future that accentuated the risk accompanying entry into experimental programs, and third, McClymonds High School, a nearly all-black public high school in West Oakland, has a strong career education program of its own. (3, pp. 22-23)

The grade level and sex data for each year are:

	72-73 (N=30)		73-74 (N=55)*	
Grade	M	F	M	F
10	1	1	6	9
11	10	7	6	8
12	8	3	14	12
Total	19	11	26	29

*Total N-85 due to some students continuing during the second year.

The sex makeup of Oakland public high schools is 52 percent male and 48 percent female, compared to 47 percent male and 53 percent female at FWS.

Qualitative and Quantitative Measures

Student progress is monitored and assessed through a variety of interviews, check lists, and rating forms. Student products are evaluated by the learning coordinators and resource persons to determine how well goals were achieved, by the skills specialist to assess development of writing skills, and by the credit committee to assess the amount of credit earned.

Several forms and reports are submitted by the students: long term plan -- plans for semester or year; project plan form -- project goals, objectives, products, deadlines; weekly student activity report -- the type and number of activities and amount of time spent; project summary report -- record of students activities, objectives completed, skills

and knowledge developed, and request for credit.

Forms and reports are gathered by learning coordinators in working with the student. These include:

1. Initial diagnostic report -- reading test scores, math test scores, interests, and requirements to be met.
2. Progress monitoring worksheet -- record of observations of student behaviors and progress in reading, math, and oral communication skills.
3. Writing skills rating scale -- rating of two student products by the skills specialist.
4. Oral communications rating scale -- ratings by the learning coordinator and two other staff members.
5. Overview of student's program -- student project and activity plans with estimates of credit to be earned.
6. RP contact report -- report of LC contacts with RPs and student progress toward project goals.
7. Credit assignment -- report of semester projects completed, reviewed and approved by the credit assignment committee.

The student activity report, where students describe the depth and scope of activities, has four parts: (A) the resources contacted and the amount of time spent with each; (B) the time spent in related activities (reading, research, report writing, etc.); (C) activities at the FWS Center (group meetings, workshops, tutoring, etc.); and (D) external classes and physical education activities. (9, pp. 171)

A review of the student activity reports during the 1974 spring semester showed a median of 27 hours per week spent by students in educational activities. This compared favorably with the standard of 25 hours

per week established as a goal for EBCE students.

A review by the credit assignment committee showed that during the 1973-74 school year, FWS students averaged 5.18 credits earned, compared to the 5.00 required of OPS students.

There are qualitative measures, too, and they are provided by interviews and questionnaires. At the end of the first year, a two-hour interview was conducted with 15 students and their learning coordinators. The results showed that the EBCE program:

> helped students make decisions about vocational goals using knowledge of their own abilities, interests and values, and that the students became more interested in active participation in learning and became more mature. They also indicated that the students saw the FWS experience as preferable to the conventional school, made good use of increased freedom that the FWS permitted, and were able to capitalize on the opportunity to work directly with adults.
>
> However, the ratings also imply that the program failed to improve students' reading and mathematic skills and also that the students, as a group, did not find working with resource organizations a positive learning experience.

During the second year, each EBCE evaluation director agreed to collect student opinions about various aspects of the program. A common 38-item questionnaire was developed for use at all four sites. The major findings for FWS were:

1. Students were generally positive about attending the EBCE program and felt more motivated to learn than at their previous school.
2. If faced with a choice, students said they would enroll again.

3. Students were favorable in responding that the EBCE program provided more opportunities to learn about the future, to form career plans and to learn about jobs than their previous schools.
4. Students were very positive about their freedom in choosing employer sites and determining the time they spent at these sites.
5. Students were less positive about the general quality of the learning activities at the employer sites.
6. Students were very positive about the freedom in choosing activities, progressing at their own rate and the personal counseling they received.
7. Students were less positive about the relationship of activities at the FWS center to the careers they were studying.
8. Students were very positive in looking forward to jobs, having a choice of occupations, and believing hard work could have an affect on achievement.
9. Students were appreciably less positive to the opinion that people receive satisfaction from their work.

In another questionnaire, the students, their parents, and the resource persons were asked to rate the effectiveness of FWS in 15 student learning areas. The learning areas and each groups rating are in Table 1.

Table 1

Students learn to:	Measure Effectiveness ratings by: Students	Parents	Resources
A. Perform specific occupational skills	3.67	3.75	3.23
B. Be punctual and organize their time	3.90	3.82	3.10
C. Assume responsibility for themselves	4.35	4.47	3.67
D. Make decisions and follow them	4.18	4.15	3.43
E. Communicate with others in a mature way	4.14	4.29	3.50
F. Be aware of more career opportunities	4.49	4.41	3.77
G. Work with others	4.12	4.12	3.86
H. Evaluate their own work	3.73	4.15	3.55
I. Perform basic academic skills	3.38	3.44	3.42
J. Think through and solve problems	4.00	4.12	3.43
K. Have a positive attitude toward work	3.75	4.47	3.68
L. Have a positive attitude toward self	3.96	4.47	3.41
M. Have a positive attitude toward learning	4.22	4.15	3.70
N. Prepare for further education	3.96	3.79	3.58
O. Improve interpersonal and social skills	4.04	4.06	3.58

*1 = not effective 5 = highly effective

To augment this internally gathered information, FWS contracted with Human Factors Research, Inc., to conduct, analyze and interpret the results of personal interviews with students, parents and resource people.

Sixteen Far West School students made up an experimental group and 14 Oakland Public School students were a control group. More FWS students than Oakland Public School students (75 percent to 29 percent) had an overall, unqualified, positive attitude about their school, whereas more Oakland Public School students (50 percent to 0 percent) had an overall, unqualified, negative attitude about their school. FWS students were judged to "exhibit more confidence and to be better in expressing themselves" but they were no more open or mature than the Oakland Public School students.

Parents and resource people were interviewed by telephone. Twenty-six (26) parents of the FWS students were involved, and most (65 percent) had a positive attitude toward FWS. Twenty-three percent said that "Far West School offered an excellent practical program and that their children liked it better than regular school." Fifteen percent said that there was "not enough communication between the school and parents." Generally, parents "perceived their children as being more interested in school, working harder, more responsible, more confident, more mature -- in general, more motivated and doing a better job than they had been before."

Twenty-eight resource people were interviewed. "Most resource persons (71 percent) felt the experience was worthwhile to them, and a somewhat lesser number (64 percent) felt the experience was worthwhile to the student." Forty-three percent observed growth in the student's job knowledge and abilities during the period the resource person worked with

him, while 28 percent observed no change and 28 percent felt they had not spent enough time with students to observe change. Fifteen percent said they would like to have more students, and only one said he was not satisfied with the program.

In summary, all three groups indicated positive reactions and continued support of the EBCE program.

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Chapter IV

$(CE)_2$ COMMUNITY EXPERIENCES FOR CAREER EDUCATION

Introduction

Community classrooms, individualized learning, and a performance-based curriculum characterize the suburban-rural Experience-Based Career Education model in Tigard, Oregon. It is called Community Experience for Career Education $(CE)_2$.

In the case of 17-year-old Mike, for example, EBCE at Tigard initially involved "freedom shock" -- a common occurrence for youngsters removed from the structure of the traditional high school setting and put into a specially designed program that placed a heavier emphasis on individual responsibility and learning by doing.

Marked by early and continuing exposure to his preferred field -- computer programming -- Mike's EBCE experience included training horses in a 4-H project, volunteer work at a local zoo, and production of a major research project on immigration laws and regulations.

Along the way, he progressed from a youngster rated as deficient in communications skills, self-confidence, and grooming into a young man who took renewed pride in his appearance, and whose reading and language abilities showed significant upgrading.

Developed by the Northwest Regional Educational Laboratory (NWREL) in Portland, Oregon, the Tigard EBCE model is designed to help students like Mike sharpen a number of skills and abilities, including:

*Skills and knowledge required of a citizen, worker and family member and the ability to use leisure time effectively;

*Ability to take responsibility for planning and managing their own activities as learners and workers;

*Ability to work comfortably and productively with a variety of people on real tasks of the community;

*Skills and attitudes required to get and keep employment;

*Experiences in various occupations and community activities;

*Experiences that will aid in their total development, including creativity, personal/social development, understanding of the scientific process, and critical thinking;

*Competency in survival skills necessary for a successful adulthood.

$(CE)_2$ is a private nonprofit corporation, operating under a subcontract with The Northwest Regional Educational Laboratory (NWREL) and governed by its own Board of Directors. The Corporation has policy responsibility for staff and student activities. NWREL handles overall management, providing technical assistance and liaison with the National Institute of Education, a design responsive to one of the original EBCE project goals: "To develop, test and document a governance system which places educational management decisions in the hands of people who directly and consciously represent the role of employer, laborer, student and parent."

The 13-member $(CE)_2$ Board of Directors includes six employers, three labor representatives, one student, one public school representative and one member-at-large.

The program draws its students (25 in 1972-73, 50 in 1973-74 and 60 in 1974-75) from Tigard, a suburban-rural district located about 20 miles southwest of Portland. With eight staff members who work directly with students and additional support staff to aid in the research and development, $(CE)_2$ operates from a professional building in Tigard and uses community-learning sites and personnel from the Tigard and Portland

Metropolitan area. This metropolitan area, with its million-plus population, is a center of business and commerce for the state and the Pacific Northwest.

Program Description

For the educator faced with the continual reality of putting theory into practice, a closer look at Mike's experiences in the program might help explain the dynamics of the program.

Mike -- A Case Study*

Background. Sitting in a classroom at Tigard High School was difficult for Mike. In some classes he was far behind. But in math he was always the first to finish a test. "I loved math and could always finish a test in about 10 minutes, but I wasn't doing well in my other classes," Mike explained.

Now a 17-year-old junior, Mike first heard about $(CE)_2$ when he was a sophomore at Tigard High. He liked the $(CE)_2$ notion of learning on the job, and he also thought the program might allow him to work at his own speed.

Early testing sessions verified the inconsistency of Mike's experiences in school. Although his reading and language scores were well below the average scored by a randomly selected group of juniors at Tigard High, he showed above average abilities in study skills and demonstrated superior ability in math.

On a less tangible level, $(CE)_2$ staffers found Mike to be hyperactive, submissive, lacking in self-confidence, and unconcerned about his health and physical appearance when he started the $(CE)_2$ program. He was also

*Prepared for this publication by the $(CE)_2$ staff.

having severe writing deficiencies. Consequently, Mike's $(CE)_2$ learning manager devised a learning plan that would build his communications skills (in both writing and interpersonal relations) while encouraging him to explore several career possibilities. Mike's job experiences and projects were designed to capitalize on his existing interests and to broaden them.

$(CE)_2$ Experiences. A typical day for Mike started at 8 a.m., just as in any other high school, but his schedule for the rest of the day was different. When he first arrived at the $(CE)_2$ Learning Center, Mike usually spent some time "fooling around" with the computer before he worked on projects underway at the center.

On his original application Mike indicated a career preference of computer operator. So, following an initial learning level experience in an elementary school, Mike's second level experience took place in the computer department of Firstbank Services. He divided his time there into morning and afternoon blocks, often arriving ahead of his employer instructor each morning. Mike usually spent that time going through computer workbooks. When his employer instructor, arrived they went over flow charts together and worked on computer language.

Mike returned each day to Tigard High School for lunch and for a German class he selected as a project. $(CE)_2$ students seldom take classes at Tigard High, but Mike had a special interest in German since his grandparents speak the language.

Following German class, Mike returned to the Learning Center for an hour's work on other learning activities, then went back to Firstbank. "I often stayed there until 5 p.m.," Mike said.

Mike's activities and interests widened after that first year in

$(CE)_2$, but his goal to become a computer programmer was reinforced by the learning level experience at Firstbank.

Mike's $(CE)_2$ experience also enhanced a long-held interest in animals. His family had owned a horse since Mike was 12 years old. One of Mike's favorite projects during the year related to his horse. The project was designed to help Mike with basic skills and to improve his critical thinking skills. He read about breeds of horses and how to train them, and has joined a 4-H group with hopes of training his horse for show.

Also during his $(CE)_2$ year, Mike again focused on animals for a $(CE)_2$ project. He used the local zoo as a resource, interviewing the zoo manager and doing a thorough study of the Alaskan Brown Bear. Mike also joined an Explorer Scouting Club of volunteers to help at the zoo on a regular basis.

In evaluating the zoo project, the learning manager commented to Mike, "You are getting your projects done faster, and I think you are taking more time than you did at first to do a better job."

Accomplishments. Mike got off to a slow start in the Life Skills area. Removed from the more rigid structure normally experienced in a typical school setting, Mike tended to avoid his responsibility to the more "academic" side of his learning program.

Through the weekly writing required to maintain his journal, however, Mike demonstrated significant improvement both in presenting ideas and feelings and in the mechanics of writing. Mike himself noted an interesting change in his behavior. "I used to watch a lot of TV and never did any reading," Mike said at the beginning of the following school year. "I read two books last year and have completed eight more this summer. Now I go to the book instead of to the television," he added.

Mike's favorite reading material is science fiction.

Mike also observed a change in his attitude about homework. "After going to (traditional) school for six hours I wouldn't sit down and do homework. But in $(CE)_2$ I wasn't sitting in a classroom, so I didn't mind going home with some more work on my journal or projects."

Mike's personal development was undergoing change, too. Much of this change was attributed to his employer instructor, an elementary school teacher who told him how important it is in the work world to wash and wear clean clothes. Both she and the project staff gave Mike much positive reinforcement when his dress improved. She also told Mike that she was really interested in what he had to say and therefore wanted him to speak slower so he could be understood.

At the end of three months in his first learning level experience -- the elementary school -- Mike's employer instructors indicated concern about attendance, punctuality, initiative in learning and the amount of supervision needed to see that Mike's time was used constructively. Mike did show significant improvement in appropriate dress, personal grooming and quality of work on assignments.

Reports from the second learning level experience -- at the computer department at Firstbank Services -- showed a marked improvement. The employer instructor there rated Mike satisfactory in all aspects, and, by the time of the final evaluation, he gave Mike excellent ratings in 10 categories.

To improve his communications skills, Mike also worked on an inter-group relations project. This project grew out of an awareness by the staff that Mike liked other students but seemed to avoid social interaction with his peers and the staff.

Mike's attendance improved at $(CE)_2$. During the year he missed only six days. This was better than the average absence for others in the program, which was found to be 12.3 days missed during the year.

By April of his first year, Mike was working simultaneously on eight different projects and pursuing a learning level experience at Firstbank. And by the time he completed his junior year, he had finished nine of 13 required competencies, explored nine business sites, completed two learning levels and carried through on nine projects. Specifically, Mike's competencies included transacting business on a credit basis, maintaining a checking account, designing a comprehensive insurance program, filing taxes, budgeting, developing physical fitness, learning to cope with emergency situations, studying public agencies and operating an automobile.

Mike's learning manager negotiated project objectives and activities with him that would help improve his communications skills and help him solve some of his interpersonal problems. By the end of the year Mike noted a positive change related to his communications skills. "I can now speak up in groups," he said.

An unfinished project related to Mike's own experiences and interests. He had moved to the Portland area from Canada 10 years earlier and frequently returns to see relatives. The project, on immigration laws and regulations, will increase Mike's knowledge in the functional citizenship area.

The first year in $(CE)_2$, Mike said, "turned out even better than I thought." Things he liked best about the new experience at $(CE)_2$ were working at his own speed, going to a job and having more freedom.

Progress. By year's end, Mike's tests showed significant increases in

both reading and language skills. In the math and study skill areas, only slight increases were indicated.

Tests on attitudes, given both at the beginning and the end of the year, indicated positive gains in self-reliance, understanding of roles in society, tolerance for people with differences in background and ideas than his, and openness to change.

Aspirations did not change for Mike. He still wants to go into computer programming after finishing college. "When I started the year I really didn't know too much about computers. I feel now that I know a lot and want even more to make it my career."

Program Components: Content

Designers of the $(CE)_2$-EBCE program identified three broad content categories: Basic Skills, including reading, communications and mathematics; Life Skills, such as the survival skills, critical thinking, functional citizenship, personal-social development, creative development, and science; Career Development, information about self and the world of work, general and specific career skills and lifetime career development.

Students in the program work directly with adults in the community to develop skills in the following areas:

Direct Outcomes

Life Skills

1. Critical Thinking: Students become more adept at gathering, analyzing and interpreting information, and at solving problems.
2. Science: Students increase their ability to recognize and apply scientific procedures and methods, and to analyze the impact of technology on the natural environment and cultural values.

3. Personal-Social Development: Students are better able to learn "who they are," "what they are" and "where they are going," and to accept responsibility for the effects of their behavior and attitudes on themselves and others.
4. Functional Citizenship: Students better understand democratic processes in the private sector and in local, state and federal governments by applying those processes in their own actions and relationships.
5. Creative Development: Students become better at identifying the effects of and participating in the blending of new and/or existing materials, ideas or concepts into unique forms or experience.
6. Competencies: Students demonstrate survival skills in the economic, planning, legal-political, health-safety, property maintenance, recreational and occupational aspects of living.

Thirteen competencies, identified and developed by students, employers and parents of the Tigard community, represent skills needed for a responsible adulthood:

1. Transact business on a credit basis.
2. Maintain a checking account in good order.
3. Provide adequate insurance for self, family and possessions.
4. File state and federal income tax reports.
5. Budget time and money effectively.
6. Maintain the best possible physical and mental health.
7. Participate in the electoral process.
8. Respond appropriately to fire and police and health emergencies.
9. Understand the basic structure and function of local government.
10. Explain own legal rights and responsibilities.

11. Make appropriate use of public agencies.

12. Make application for employment and successfully hold a job.

13. Operate and maintain an automobile.

Career Development

1. Students learn more about their own aptitudes, interests and abilities, and apply these to understanding their potential career interests.

2. Students increase their knowledge of social, governmental and economic issues and trends in the world of work.

3. Students develop skills in job finding, job application, on-the-job negotiation and dependability.

4. Students analyze potential careers for financial and psychological rewards, preparation needs and preparation programs available.

Basic Skills

1. Students can perform applied skill tasks related to careers that interest them.

2. Students improve their performance of the basic skills (reading, writing, oral communications and mathematics).

3. Students learn more about the basic skills needed to enter careers that interest them and understand the relationship of those skills to their current basic skills proficiency.

4. Students are increasingly willing to apply basic skills to both work and avocational interests.

Indirect Outcomes

1. Students broaden the range of sources they use (people, events, institutions, laws, books, etc.) to gather information for work and decision-making.

2. Students are able to converse with an adult in a way that reveals the student's self-confidence and understanding of the other person's message and feelings.
3. Students demonstrate more initiative and more responsibility for carrying out and evaluating tasks that they agree to complete.
4. Students demonstrate more behaviors that reveal: a tolerance for people and institutions who have values, ideas or background different than theirs; an openness to change; and a willingness to trust others when circumstances warrant.
5. Students use all their senses in making decisions.
6. Students are and feel better prepared to assume imminent adult responsibilities and relationships.

Program Components: Instructional System

Students in $(CE)_2$ have chosen an educational program that is not only experience based, but which demands that they assume extensive decision-making and self-direction. Students negotiate with staff to set their schedules, appointments and learning activities (projects), and they help develop their own learning objectives and where they will accomplish them.

Instead of confronting the usual lectures, discussions, term papers and tests, those in $(CE)_2$ learn by setting their own learning goals and then working toward them. Specific tasks include: (1) completing a series of specially written projects and single objectives; (2) taking part in personal or group tutoring sessions, employer-led seminars dealing with career issues, and special activities utilizing community resources; (3) participating in Basic Skills activities; and (4) performing job tasks and acquiring job skills.

Goal Setting: Meeting Individual Needs

Analyzing individual needs and setting student goals is one of the first activities each year. Together, the student and a learning manager decide where the student stands in the Basic Skills (reading, mathematics and communications) and what kind of Basic Skills work the student should do.

Setting student goals is a process of negotiation. Each student's own perception of needs, interest, style, capacity and rates of learning is balanced by the learning manager's assessment, based on standardized and diagnostic test results, and on professional judgment.

To help students and learning managers diagnose student needs and interests the following strategies and procedures are usually followed:

a. Self Analysis -- Students describe themselves in terms of their preference of learning environments, favorite subjects, learning alternatives and materials, career interests, learning rate and degree of self-direction.

b. Learning Manager Analysis -- The learning manager interviews and gets to know the student, and identifies overall strengths and weaknesses as they relate to the student coordinator's interpretation of test results and other data.

c. Basic Skills -- Basic Skills are assessed through the CTBS (Comprehensive Test of Basic Skills). Some $(CE)_2$ students will be given Individualized Learning for Adults (ILA) prescription tests and are encouraged to use the materials on their Basic Skills program.

d. Life Skills -- Assessment in the Life Skills area is an ongoing process.

e. Career Development -- At the beginning of each year, students complete Holland's Self-Directed Search, which identifies career areas to reflect the student's interests and strengths. Students also complete the Psychological Maturity Scale and have access to the Career Information System that, via a teletype terminal at the Learning Center, provides information on: (1) specific work available in the Pacific Northwest; (2) jobs suitable to the student; (3) job preparation requirements; and (4) details about available preparation programs.

Employer Site Experiences: Learning by Doing in Community Classrooms

Students in $(CE)_2$ have a wide variety of opportunities for community participation. At the beginning of the school year, students can select at least three employment exploration sites where they get to examine a variety of occupations and careers available in their area of interest. In each case, a $(CE)_2$ employer relations specialist works closely with a student to select sites and to plan experiences. At least five exploration experiences are required during a program year.

Students complete an Exploration Package at each site, and then decide which jobs they want to explore further. Then begins a learning level experience, characterized by an involvement in learning that continues until students complete all learning objectives for a specific site.

Staff attitude as well as other program requirements encourage students to spend a significant portion of their program year on learning level sites. Each stay may last from three weeks to several months.

Students on learning level experiences usually spend several days completing learning objectives that become part of a final project. The

project objectives include general and specific job skills to be mastered, plus activities in the Basic Skills and Life Skills. These tasks are identified through the Learning Site Analysis Form.

Some placements emphasize skill building, similar to pre-apprenticeship occupational training. In addition, special placements occur when a community learning site is utilized by students to complete Life Skills projects written for other than specific career or skill learning.

Projects: Pre-prepared and Individually Written

Students are required to complete two projects in each of the five Life Skills areas -- critical thinking, personal/social development, functional citizenship, science, and creative development. One project in each area is pre-prepared and one is individually written, except for the second critical thinking project.

The five pre-prepared projects are highly process-oriented. Their activities, resources, products and criteria can be individualized for each student and personalized for a specific site. Activities correspond to the learning objectives in each Life Skills area, so that the pre-prepared projects also serve as Life Skills assessments. The final product of the pre-prepared critical thinking project is a project written by the student.

All projects, both pre-prepared and individually written, must meet the following basic requirements:

1. Have a title;
2. Contain a statement of learning manager rationale;
3. Include a student rationale statement in which the student states how he or she perceives the project relating to his or her interests and goals;

4. Specify a starting date and target completion date for each activity;
5. Be composed of activities, resources, products and criteria that
   a. Specify performance level criteria -- how well it is to be done;
   b. Specify who is responsible for judging the quality of products and/or activities;
   c. Cover Basic Skills in a way that builds on assessed needs and relates to specified learning goals;
   d. Present a coherent set of learning activities in one of the six Life Skills areas;
   e. Specify activities that are to take place at employer or community sites;
   f. Include both "doing" ("hands on") types of activities and "analytic" (observing, describing, analyzing kinds of activities.)

Utilizing Community Resources

Individual tutoring is used when students lack fundamental skills and need intensive instruction beyond what they receive "on the job." When the students request tutoring, the learning resource specialist finds a subject matter specialist from the community who can give it.

To help students understand the broad world of work issues, employers have volunteered to design and conduct seminars at the Learning Center. $(CE)_2$ staff have also tried to help students meet with groups and individuals whose activities might be of interest or relate to students' learning goals. One example is the meeting which students have

with representatives from the Public Defender's Office and the Mayor's Office of Portland.

Student Time Allocations

Because of the wide variety of activities and experiences available to them, students devote varying amounts of time to particular portions of the program. Average approximate time devoted to various learning activities, however, is:

Employer sites	56.8%
Learning Center activities	43.2%
Projects done at Learning Center	16.0%
Break	6.0%
Tutoring	5.5%
Write-up of Exploration Packages	5.2%
Journals	3.5%
Competencies	3.0%
Other	4.0%
Meetings	2.5%
Computer terminal	1.0%
Questionnaire	.5%

Records and Reports

$(CE)_2$ staff monitor student learning progress in a number of ways. Student activities and performance are recorded and kept by the $(CE)_2$ learning manager, copies of all projects written are kept as part of the program's documentation, and the products of student projects are evaluated and returned. Records are maintained in a Master Record Book, which contains summaries of each individual student's progress in each of the program elements, and in a Student's Individual Record Book, which contains the results of all the interactions between students and staff.

"Keeping up" with different students with different activities has been managed through informal conferences between the learning manager and the student. Feedback sessions are held between individual students

and the employer relations specialists. Visits to the employer are made by the employer relations specialists. A sign-in, sign-out procedure at the Learning Center and at employer sites, and the daily student journal for recording appointments are used.

Reporting to Parents

Every two weeks each student and a staff member discuss the student's progress and difficulties. Following this contact, the staff member telephones the student's parents to discuss with them the student's progress and any concerns or questions they may have. Eight progress reports are mailed at regular intervals. In mid-fall and mid-spring conferences are held with all parents.

High School Graduation

On meeting the following requirements, $(CE)_2$ students are granted a standard high school diploma*:

Projects: Ten per program year; two in each Life Skills area and including Basic Skills activities. Credit for one of the critical thinking projects is obtained through activities in other projects.

Competencies: All the competencies must be completed by each student.

Employer Site Utilization: Minimum of five explorations per program year. Adequate employer resource utilization as judged by employer instructors and staff.

Waiver Clause: Program requirements may be modified or waived on written recommendation of the learning manager and approved by the project director. The project director's decision may be appealed to the Board of Directors.

*Diploma granted by Tigard High School, District 23J, Tigard, Oregon, cooperating public school district.

Personnel Resources

$(CE)_2$ relies heavily on both professional staff and a wide variety of community personnel. Professional personnel need unique skills to assume the nontraditional roles of learning manager, consultant, facilitator, coordinator, resource specialist, etc.

Eight staff members operate the program directly with students and help design the instructional system. A curriculum designer and other support staff are required by the research and development aspects of the program.

Project Director: Handles total design of the instructional system and organization of the operating program in cooperation with NWREL and the $(CE)_2$ Board of Directors. Serves as executive officer of $(CE)_2$; coordinates contacts with employers, community groups and local schools; maintains financial records and reports.

Two Learning Managers: Identify learning content and objectives with students and develop learning plans. Coordinate learning activities and site experiences with learning resource specialist and employer relations specialists.

Two Employer Relations Specialists: Identify potential employer sites and employer instructors. Maintain close contact with students and site instructors during exploration, learning, skill building and special placement level experiences, and assist in counseling and evaluating student progress.

Learning Resource Specialist: Identifies and evaluates appropriate human and material resources for learning. Recruits tutors, coordinates competency certification and suggests learning resources to learning managers.

Student Coordinator: Handles design and description of the guidance system and the supervision of its installation and maintenance. Provides limited guidance and counseling to students and parents; primarily facilitates the delivery of such services by other staff members, employer instructors and significant others.

Learning Aide: Provides secretarial and support services to the learning managers and maintains the student record-keeping system.

Employers serve on the Board of Directors, and more than 90 separate businesses and agencies are used as learning sites. About 80 more are ready to be pressed into service if student interest requires it.

Student Selection and Recruitment

Students were initially recruited for the $(CE)_2$ program through individual class assemblies at the cooperating high school. Interested students received applications and were encouraged to visit the center and set up personal interviews with the $(CE)_2$ student coordinator. The $(CE)_2$ staff, with selected employers and Board members, also presented the program at an evening orientation to interested students and their parents.

Students submitting applications were selected on the basis of: school ability tests, GPA, counselor ratings, previous educational experiences, attendance, and staff/teacher evaluations.

Approximately 10 students with an above average rating were automatically selected to join the program. The remaining applications were placed in alphabetical order and selected randomly to assure a student body with a range of abilities and needs. This also offered the potential of a career education program for a wide range of students.

Evaluation Findings

Based on pre- and postadministration of the Comprehensive Test of Basic Skills (CTBS), students in the $(CE)_2$ program showed a statistically significant gain in reading, mathematics and study skills during the 1973-74 year. This is particularly impressive since $(CE)_2$ students the prior year averaged no growth on this instrument. No significant gain was registered by $(CE)_2$ students on the Language Mechanics section of the CTBS. When converted to grade-level equivalent scores, $(CE)_2$ students gained five months in reading, six months in language, seven months in arithmetic and a year and a half in study skills. This compares to a gain by the regular high school sample of two months in reading, a loss of four months in language and one month in arithmetic, and a gain of seven months in study skills.

A semantic differential instrument, designed to measure attitudes toward the concepts of "me," "school," "adults," "learning," "work," and "decision-making" was administered to $(CE)_2$ students in September 1973, at midyear, and again in May 1974. Students demonstrated a statistically significant growth in all six areas during the first half of the year. From midyear to May, however, either the rate of change decreased or a slight drop was indicated. Over the course of the full year, however, statistically significant growth was still maintained for the concepts of "me," "school," "learning," and "decision-making."

The Psychosocial Maturity Scale (PSM) was administered to all the $(CE)_2$ students and to three comparison groups in the fall 1973. In January 1974, a random half of these groups completed the instrument again. The remaining students responsed to the instrument in May 1974. This instrument measures the student's self-rating on the following scales:

work, self-reliance, identity, communication, role, trust, social commitment, tolerance, openness to change and social desirability (which serves as an internal validity scale). The first semester change in PSM scores for $(CE)_2$ students was dramatic. Scores on all PSM subscales increased significantly with the exception of the work, identity, communication and social desirability subscales. The general pattern of change on the PSM follows that noted on the Semantic Differential. The rather dramatic positive change during the first semester was in part tempered by a slow-down or slight decrease in the second semester. Positive change over the entire year (pretest-posttest) was significant for the work, self-reliance, communication and trust scales. The comparative growth over the year for $(CE)_2$ students was not significantly greater, however, than that made by several comparison groups.

The Career Maturity Inventory Attitude Scale was administered to all $(CE)_2$ students in September 1973, and then to a random half in February and a random half in May. Change between pretest and posttest was statistically significant. Nevertheless, the staff and evaluators feel that this instrument is not valid for measuring an EBCE program and do not plan to use it next year.

Attendance data for $(CE)_2$ students indicated that this year they were absent slightly less often than when they attended Tigard High School the year prior to their entrance into $(CE)_2$.

In the Life Skills area, students completed most of their learning through work on individual projects. Seventy projects were completed in critical thinking, 56 in science, 45 in creative development, 47 in functional citizenship and 57 in personal-social development. Each project had individual objectives and criteria that were applied by the

learning managers in evaluating these projects. The percentage of favorable comments by learning managers ranged from an average of 56 percent for science projects to 36 percent for functional citizenship projects.

The percentage of all $(CE)_2$ students completing the 13 previously listed competencies ranged from 94 percent who showed the ability to transact business on a credit basis to 10 percent who completed a competency requiring them to explain their own legal rights and responsibilities. This indicates student perceptions of the interest, difficulty level or importance of each competency. Students averaged completing 5.6 competencies in 1973-74, compared with three competencies the first year.

$(CE)_2$ staff reported observing that many students have grown substantially in assuming responsibility for their actions and in cooperating with program staff and employer instructors. Substantial growth has been noted also in students' ability to communicate effectively with adults and with fellow students.

At the end of the school year $(CE)_2$ students and those from three comparison groups completed a questionnaire containing some items related to their feelings about their year's educational experience. The three comparison groups were from Tigard High, the Occupational Skills Center (OSC), and the high school's Cooperative Work Experience Program (CWE). Students were asked to rate how helpful they felt their school/$(CE)_2$ experiences this year had been in allowing them to understand more about themselves. On a scale ranging from 1 (of little or no help) to 5 (very helpful), 46 percent of the $(CE)_2$ students said "very helpful," compared with 11 percent from THS, 29 percent from OSC and 7 percent from CWE. When rating how well their school/$(CE)_2$ experiences this year had helped

them to think about their future work plans, 65 percent of the $(CE)_2$ students said "very helpful," compared with 11 percent from THS, 42 percent from OSC and 13 percent from CWE. When rating the usefulness of their school/$(CE)_2$ experiences in helping prepare for future learning whether in school or on a job, 42 percent of the $(CE)_2$ students said "very helpful" as compared with 6 percent from THS, 32 percent from OSC and 7 percent from CWE. In rating the relevance of their school/$(CE)_2$ experiences to their personal interests and skills, almost identical figures were obtained as for the prior question. The last two items in this section of the questionnaire asked students to judge the amount of control they felt they had in planning and carrying out their school/$(CE)_2$ experiences, and how much thinking they had done about their school/$(CE)_2$ experiences. In both cases, the $(CE)_2$ students ranked about the same as those in the THS and OSC groups and higher than the CWE group.

Students, staff, parents and employers were asked on different questionnaires to rate the importance and, separately, the effectivenss of the program in accomplishing 15 student learning outcomes. Each learning outcome was given an average rating of three or higher (on a five-point scale) by students, staff, parents and employers -- indicating a support for the goals of the program. All four groups considered the following student learning outcomes to be especially important: assuming responsibility for themselves, making decisions and following through, communicating with others in a mature way, working with others, thinking through and solving problems, having a realistic attitude toward self, having a positive attitude toward work and learning, and improving interpersonal and social skills.

Students, staff, parents and employers gave an average rating of three or higher (on a five-point scale) for 11 of 15 student learning outcomes listed. These groups felt the following student outcomes were being accomplished most effectively: performing specific occupational skills, assuming responsibility for themselves, communicating with others in a mature way, working with others and having a realistic attitude toward self.

A major strength noted by the program staff has been the growth made by many $(CE)_2$ students in such social skills as assuming more responsibility and enhancing their communication ability. Last year's (1972-73) $(CE)_2$ graduates said that the program helped them to improve their communication ability. This year's $(CE)_2$ students see program strength as lying primarily in its provision of many opportunities to explore various careers, learn some meaningful skills and be in an environment that is friendly and supportive. They also said that they have had no problem locating and obtaining necessary resource materials. Parents, employers, students and visitors have all remarked that the $(CE)_2$ staff's competence, enthusiasm and concern have been major factors in the program's success. Many parents also indicated that their sons or daughters in $(CE)_2$ had grown in interpersonal relations skills, knowledge about different vocations and interest in education.

Interviews with a stratified random sample of 14 $(CE)_2$ students revealed that all but one thought that knowledge or skills acquired in $(CE)_2$ would be directly helpful for gaining or holding future jobs. All but one of the 14 students were able to describe specific job skills mastered through $(CE)_2$. When asked to rank the usefulness of the learning procedures used in $(CE)_2$, students listed actual work on an employer

site, working on projects, use of tutors, counseling groups and the student retreat. The staff saw student projects, competencies and student orientation sessions as particularly effective in helping students.

Ninety-four percent of the employer instructors completing the Employer Opinion Survey stated that they plan to continue participating with $(CE)_2$. Many view this program as a good alternative to regular high school and as an opportunity for students to learn about a variety of careers and see what the "real world" is like.

While most of the evaluation findings this year were positive, some weaknesses were uncovered. Many $(CE)_2$ students were behind schedule in completing program requirements, especially student projects. $(CE)_2$ staff members have been acutely aware of this problem and in the summer of 1974 they designed an improved student accountability system that will divide the year into time zones of various lengths with student expectations clearly laid out for each zone.

Of the 27 seniors in $(CE)_2$ as of April 25, 1974, 17 graduated, five dropped out, two planned to return the next year to complete program requirements and three more may return to complete program requirements. Perhaps the greatest proof of the competency-based nature of the program is that not all students enrolled in $(CE)_2$ automatically graduate but instead are held accountable for successfully completing the program's learning requirements.

Concluding Statements

The $(CE)_2$ -- EBCE (Community Experiences for Career Education -- Experience-Based Career Education) suburban-rural model is a major effort to bring together numerous contemporary educational ideas. Its emphasis on individual learner goals and on functional skills through community

experiences is consistent with many goals of American public education.

Operating through a consortium of private and public efforts, $(CE)_2$ demonstrates a vitality that may lead to major educational reform in public education. Few would suggest the $(CE)_2$ program has all the answers. Student growth in Basic Skills needs further development, and the instructional system needs additional refinement. Probably most critical, however, is the need for students to be able to cope with their new-found freedom and its accompanying responsibilities.

$(CE)_2$ represents an impressive start. Eventually, responsible educators and the community (private and public) will have to determine how these concepts and instructional elements can be put to use in local communities.

The Product Development staff at the Northwest Regional Educational Laboratory (NWREL) is currently working on five descriptive handbooks that are designed to help communities adopt or adapt all or parts of EBCE using the $(CE)_2$ experience as the model. These handbooks should help ease the transition from EBCE as a theory to actual practice in the community.

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Chapter V

EBCE IN A FORMAL HIGH SCHOOL: THE ACADEMY FOR CAREER EDUCATION*

Introduction

The Academy for Career Education opened in September, 1972, to some 100 eleventh-graders from Philadelphia's public and parochial schools, with the participation of 40 different employers. At its inception, the Academy was a private, comprehensive high school licensed by the State Board of Education to provide an experience-based alternative to regular high school programs. Two years later -- with about 250 students from Olney High School and with more than 85 employers -- the Academy became a program within Olney High School, directly within the Philadelphia Public Schools.

Olney High School is located in North Philadelphia and has more than 5,000 students in grades 9-12. Its integrated student body is 65 percent black, 30 percent white and 5 percent Spanish surnamed. Olney has been described as a "traditional" American high school in organization and scheduling, and it has a reputation for having one of the better programs in Philadelphia.

A total of 464 students from Olney and its feeder schools applied for admission to the Academy program for 1974-75, and 339 appeared for an orientation and testing session. From these, an experimental group numbering about 200 was randomly selected. In addition to these 1974-75 recruits, 69 students from the group which entered the program in September, 1973, expressed interest in returning for a second year.

*Because of the recent changes in this program, a meaningful student "walk through" of the program is not yet possible.

The Program

The Academy for Career Education is a continuously evolving model where changes result from the experiences of the student participants. The program has tried to develop, test and disseminate an individualized and humanized system of instruction through community experiences, a strong academic component, and an extensive guidance and counseling program.

Research for Better Schools (RBS), one of the network of federally supported research and development laboratories, is located in Philadelphia and has developed and given guidance to the Academy. The project has focused on helping students become better equipped with skills and learning, more discriminating and more confident members of the community. Through participation in the Academy, students are expected to:

1. Give evidence of increased maturity and self-development.
2. Show a significant increase in their knowledge of the community.
3. Have more relationships with community agencies, employers and their personnel.
4. Be able to gain employment skills.
5. Be able to deal more effectively and more positively with others.
6. Improve their communications and mathematics skills.

To help meet these goals, RBS has enlisted the support of the Greater Philadelphia Chamber of Commerce, employers, the city's School Board, and the administrative staff of Olney High School.

Students in the program participate in three instructional components provided by the Academy for Career Education and through supplementary courses offered to all students of Olney High School. Academy students may drop two regular Olney-offered courses and take the same subject

matter in a different format through the Academy. They still take their other courses at Olney.

The Academy has three components: Career Guidance, Basic Skills and Career Development.

Career Guidance

Following their introduction to the Career Guidance unit during an orientation program, new Academy students participate in group guidance sessions totaling three hours a week. They are also assigned to counselor-coordinators for individual sessions. (Each counselor-coordinator is responsible for about 25 students for the individual portion of the program.)

This close participant-counselor relationship is essential. It has been accomplished by integrating the normally separate responsibilities of counselor and coordinator of community programs into a single role. In the Academy program, the counselor-coordinators staff reflect diverse professional backgrounds. Four of the 10 counselor-coordinators have had public school counseling experience.

The Career Guidance component is personalized to develop students' self-evaluation, problem-solving and decision-making skills, and to help them apply these skills to academic and career choices. The component combines individual guidance with counseling activities and group instruction. Its 10 counselor-coordinators also handle one other instructional component (career development) and provide liaison between the two activities.

New students in the Academy face many new and challenging situations, so the aim of the orientation program is to ease their adjustment. The orientation is designed to establish a rapport and feeling of group identity between staff and students. It also tries to lay the groundwork

of support for the program and its goals.

The orientation uses a contract system -- a relationship among students, staff and participating employers patterned after that of a legal partnership. The program contract and a legal partnership both share the following elements:

1. Partners have a common purpose.
2. This common purpose serves individual interests.
3. Partners commit themselves to certain contributions.
4. Both partners are committed to keep current in terms of information relative to his sphere of contribution.
5. Both evaluate the contribution of their partners on a continuing basis.
6. Both evaluate the importance of the contract to their personal goals on a continuing basis.
7. The partners share both the risks and rewards involved in their activity and have access to information regarding their association.
8. Rights, rewards and risks are part of the negotiated agreement based on the investment and contribution of the parties.
9. Major changes in the contract require the consent of all partners. The contract may be cancelled if any partner fails to live up to his or her obligations.

The counselor-coordinator team is responsible for the following activities: (4, p. 6)

1. Individual counseling
2. Group counseling
3. Organization of volunteer work in the community
4. Scheduling

5. Referral services
6. Parental contact and involvement activities
7. Administration of various tests
8. Maintenance of a career information center
9. Academic and vocational placement
10. Cumulative student records
11. College entrance testing
12. Cooperative planning and evaluation of Career Development programs.

Basic Skill Component

An Academic Resource Center (ARC) promotes student growth in mathematics and communications skills through a knowledgeable staff (six teachers and three aides), a wide range of instructional materials and a centrally located work space. Students have access to the ARC as they sort, sequence and integrate academic skills suited to their career goals.

Presently, the ARC focuses on English and mathematics, but as time goes on, that focus is expected to broaden to include additional subjects as needed. Two assumptions underlie the instructional efforts in the ARC:

1. The quality of life is enhanced for the indivudal who is internally motivated to learn and continues to learn throughout his life.
2. A learning environment that assists each student to identify his own academic goals, to plan and engage in a course of action designed to lead to the attainment of those goals will encourage learning as a life-long habit.

Each student's goal is to achieve measurable personal growth through purposeful self-directed experiences. Students move toward this goal

by working to attain one or more of the following shorter range objectives:

1. Master communication skills (reading, writing, listening, speaking) to ninth grade level.
2. Master the concepts and operations of basic mathematics to ninth grade level.
3. Select and complete specific secondary English courses.
4. Select and complete specific seondary mathematics courses.
5. Specify and complete individual projects in English and/or mathematics through independent study.

Instruction in the ARC is tailored to each individual's needs as perceived by the learner, the teacher, or anyone else who has a legitimate contribution to make to the assessment process. It is expected that clearer and different perceptions of the needs of students will develop as their education progresses. To accommodate these new perceptions, learning prescriptions must constantly change.

Individualized instruction does not mean the use of only one instructional setting. Learner/instructional material/instructor interactions can be infinitely varied, provided they are planned to meet the learner's identified need. Large and small group instruction, self-learning and other technological media, and tutorials are employed.

This essentially individualized instruction involves five operations:

1. The student's educational needs are assessed and some aspect of communication skills and/or mathematics are designated for study.
2. Appropriate instructional materials and/or activities are selected.
3. An instructional program plan is constructed with and for the student.

4. Periodically throughout the learning process, students and teachers confer to evaluate what has been accomplished and to adjust the plan.
5. At the close of the instructional sequence, some assessment technique comparable to the means employed before instruction is used to evaluate the learning that has taken place.

Both professionals and nonprofessionals are needed to staff the ARC. Each member of the professional staff must possess: knowledge (through teaching) of adolescent psychology; philosophical orientation to individualized instruction; sufficient flexibility to work effectively as a member of an instructional team; and thorough preparation in one's area of specialization.

The teacher is seen as a facilitator of student learning rather than an individual performer. As the teacher assumes the supportive posture of learning counselor and facilitator, he or she will seek to identify and develop techniques that can move students even closer to becoming self-motivated, active learners.

Aides must possess adequate clerical skill, plus sufficient maturity to maintain courteous, objective, nonjudgmental relationships with students.

Career Development

Through career development activities, students explore and specialize in careers that interest them. The Academy staff has developed 23 clusters of occupations from which the student may select. The actual number of clusters varies from time to time, since student interests and the availability of experience sites in Greater Philadelphia are the two factors necessary for the addition or deletion of a cluster.

Exploring Careers. Each student is required to engage in one exploration per term and one specialization per year. The first exploratory experience acquaints the student with the world of work. Career exploration provides information, and develops knowledge and basic skills related to work and the careers which exist within a cluster. Students -- either individually or in groups up to 25 -- spend six hours, one day per week, at an experience site learning about occupations within that cluster.

The Academy program gives students the opportunity to explore and to participate actively in a wide range of occupational fields. Learning is individualized when it is appropriate to and correlated with the readiness of the learner. It is personalized when the learners are actively involved in making choices relative to the learning experience in terms of their values, preferences, and goals.

Career Specialization. This component provides a reality-based relationship with a segment of the economic sector. Programs tailored to meet the participant's needs, interests, and abilities are offered, based on results from the guidance activities. Participants are able to grow in knowledge of self, to contribute to a responsible partnership in community problem-solving and to develop occupational skills.

Instrumental to career specialization is the negotiated contract, whose basic features include:

1. The participant, the site representative and the counselor-coordinator decide together on the activity to be covered during the term of the contract.
2. The parties agree on the method to evaluate how well the contract has been fulfilled in terms of the grade desired by the participant.

3. The contracting parties agree upon dates for the completion of segments of the contract or the contract as a whole.
4. The participant and agency representative draw up the terms of the contract and sign it.
5. The participant proceeds to fulfill the terms of the contract. The counselor-coordinator acts as a resource person and checks on the participant's progress through regular conferences.
6. At the end of the contract period all evaluations are assembled. When the participants have successfully fulfilled the contract, they are assigned the grade for which they have contracted.
7. If the participant has not fulfilled the contract, he or she may be granted additional time, be assigned a lower grade, or simply not receive credit for the activity.

Participants contract for one or more career specializations per year with advice from the counselor-coordinator. Each activity must clearly identify instructional objectives and evaulation strategies developed and negotiated by the participant and the agency representative in consultation with the counselor-coordinator. The following procedure is used to place participants in their career specializations:

1. The counselor-coordinator compiles and classifies the interest areas of the participants. Community agencies representing these interests are contacted.
2. The identified agencies are measured for the extent of commitment and quality of potential experience they can offer participants.
3. Participants indicating an interest in an agency arrange for

an appointment. The interview permits the student to gain deeper knowledge of the agency, and the agency gets to interview the participant.

4. Based upon mutual agreement between the participant and the agency, a program is planned and contract developed.

Major Program Goals

The Academy for Career Education has developed a system to organize and utilize many community learning resources, including those of the public school system itself. Schooling now provides a variety of learning experiences both productive and meaningful to individual development. A basic problem facing the Academy is devising ways to make the best use of available community resources to achieve educational objectives. It is not a replacement for either the public school system or its practices and programs.

The basic assumptions of the Academy's experience-based, self-learning process are:

-- The student is accepted as a valuable and unique individual, capable of growth toward self-initiated learning and achievement.
-- The student assumes active responsibility for his/her own learning.
-- The needs of the student are significant in defining the learning activities and materials.
-- The significance of the learning activities and materials is defined cooperatively by the student and others.
-- The student learns through active involvement in problem-solving.
-- The exploration of alternatives and the search for new interpretations, ideas and solutions are inherent in the learning process.

-- Self-evaluation is fundamental; evaluation by others should be growth-, not grade-oriented, descriptive not judgmental.

Some characteristics of the Academy for Career Education's experience-based, self-learning process are:

-- The model is student-centered. It focuses on learning and not teaching; the concern is meeting the student's needs.

-- A central theme is individualized learning. The system serves the individual.

-- Problem-solving is emphasized, and it concerns real-life, individually oriented situations.

-- The focus is on exploration and discovery. The learning of facts is defined by problem relevancy and solution.

-- Individual responsibility is paramount. The student's readiness defines in many ways what is needed, and he/she assumes the basic responsibility for acquiring it. The structure of the experiential model facilitates assumptions of this responsibility but does not preempt it.

-- Resources are available to assist the student in the problem-solving process. A transactional learning/teaching mode facilitates the discovery and definition of problems, aids information seeking, and encourages decision-making.

-- Learning how to learn is inherent in the model. Self-initiated learning is a potential mediator of the impact of change.

-- Since knowledge per se does not necessarily lead to desirable behavior, an integrative process linking the affective and cognitive functions is relevant program content. (3, p. 5)

The Academy for Career Education is an attempt to translate the con-

cerns for individualization, educational innovations, career education and experience-based learning and put them into a program that will serve a growing number of students. It is intended to provide students with an educational program unavailable to them in the traditional public school, to insure them of the quality and certification desired from public education, and to stimulate further development and extension of EBCE approaches in education.

Student Characteristics

Seventy students who began in the Academy in 1972 and completed two years were drawn at random from volunteer applicants from public, private and parochial schools throughout Philadelphia. The group was 70 percent black and 20 percent white. Students who enrolled in the program for the first time in 1973 were enrolled in the 10th and 11th grade at Olney High School. The 85 students in this group were predominantly female and black.

Data on new and returning students for 1974-75 follow:

1974-75 Academy Students

DISTRIBUTION BY SEX

	New Students		Returning Students		Total Students	
	#	%	#	%	#	%
Male	75	31	41	59	116	57
Female	168	69	28	41	196	63
Total	243	100	69	100	312	100

DISTRIBUTION BY RACE

	New Students		Returning Students		Total Students	
	#	%	#	%	#	%
Black	151	62	54	78	205	66
White	82	34	15	22	97	31
Other	10	4	0	0	10	3
Total	243	100	69	100	312	100

DISTRIBUTION BY GRADE LEVEL

	New Students		Returning Students		Total Students	
	#	%	#	%	#	%
9	48	20	0	0	48	16
10	35	14	0	0	35	11
11	126	52	34	49	160	51
12	34	14	35	51	69	22
Total	243	100	69	100	312	100

Management and Governance

Many groups have had an effect upon the destiny of EBCE in Philadelphia, including NIE, the Greater Philadelphia Chamber of Commerce and the Board of Education. The Chamber of Commerce, operating under a subcontract with Research for Better Schools, provided resources and a world of work seminar during the first year of the Academy's operation. During the second year, guidance and counseling services were provided through the subcontract with the Chamber. The Chamber has provided continuous liaison between experience sites and the counselor-coordinator.

The Academy Board of Directors has served as the project's main policy-making body. The first 10 members were selected by the director of Research for Better Schools in concert with the Chamber of Commerce. The board numbers 19 and now selects all its new members. The Board is represented by employers, labor unions, community and education. Although the Academy has moved from a private entity to a program within a public school, the Board of Directors continues to serve as the major policy-making body.

The program director for Research for Better Schools serves as the executive director of the Academy. He is responsible for overall program operation. He established and maintains cooperative relationships with the school district, the Chamber of Commerce and project staff. Reporting to the executive director is the academy administrative head. Eighteen staff members report to the administrative head.

External Relationships

The Greater Philadelphia Chamber of Commerce has been principally involved in getting community support for and understanding of the Academy program. It has helped identify and orient employers for possible partic-

ipation in the exploration or specialization programs. Employer sites needed for the program are identified by the Academy staff. The Chamber then makes the necessary contacts and relays pertinent information back to the counselor-coordinators. Through the Chamber, employer groups have continued to participate in the program and to maintain their interest.

Although less involved than the Chamber, some groups from organized labor have also maintained interest in and support for the program. They are represented on the governing board and their members participate as resource persons at various sites in the career exploration and specialization activities.

Most interaction with the general community has been targeted to parents of current students until this year. The Academy sponsored three open houses in which it reported to parents on the Academy's status and secured feedback through individual and small group discussions. The open houses were followed with a newsletter to parents.

Program Outcomes

When compared with control groups, Academy students showed excellent gains in most basic skill areas. Academy students gained more in reading comprehension, arithmetic computation, concepts and applications than the control groups. In other academic areas, the achievement of Academy students matched that of nonproject students.

Academy students showed gains in personal career awareness and certain affective areas. They also evidence a more positive attitude about learning environments than did the control groups. In general, Academy students demonstrated a very positive attitude toward the program and the employers involved. They reported that the Academy program was superior to their previous program in providing learning about occupations, learn-

ing in general, and motivation to learn.

Both students and staff have said that diagnosis of individual career interests and aptitudes has been a problem area. Career exploration has been described as a process of taking groups of students through employer-oriented tours. Frequently, students were assigned to sites in which they had a little interest because preferred sites were full. The staff of RBS can now assure students that they will be able to participate in one of their top three exploratory choices each term. Students are required to take one specialization each year. They are also required to take a different specialization each year, even though they may have made a tentative occupational choice after their first or second year in the Academy.

Students rated the group guidance activities lowest of all project activities.

Parents of Academy students have been positive about the quality of the experiences RBS provides for their sons and daughters. Parents appear to view maturity and the ability to communicate on important issues as identifiable behavior improvements in the students. They said that the Academy is more responsive and more effective than the program from which their children came.

Employers tend to look upon the program as successful, although with some qualifications. Two complaints have been made. One referred to a lack of feedback from the Academy regarding employer program development, implementation and effectiveness. The second employer concern was what they saw as a lack of interest shown by Academy students. Less than 20 percent of the employers dropped from the program between 1973-74 and the following school year.

Some problems in implementing the RBS model have shown a need for continual refinement. But the principal EBCE constituent groups -- students, parents, employers and public school representatives -- were positive about the program's value as an educational contribution. Students gained substantially in knowledge, personal career awareness and effective dimensions during their experience in the program. In many cases, student development in the program was superior to that apparent in the public schools. Nowhere was the development of public school students superior to that of the students in the program.

There has been evidence that some teachers in Olney High are not aware of the Academy's program and goals. Some have visited the Academy to better understand it, but others see it as an "easy" alternative to the basics at the regular high school, and they have expressed this view to Academy students.

The Future of the Academy

The initial goals of EBCE were to develop, implement and test a prototype of experience-based career education which could provide an acceptable alternative to formal school experiences.

As the Academy program matured, RBS added another critical goal: The program should be transportable. With that goal in mind, the Academy program has been modified through its three years of operation. The management of RBS looks forward to the time when the Academy is supported and governed by the Philadelphia Public Schools.

Per student costs, exhorbitant at the start of the program when compared to per student costs in a traditional setting, have been brought in line during the current operation. Services which were originally provided in four different locations are now provided in a high school

and on an experience site. A public school system which originally co-existed with the Academy now approaches the possibility of a cooperative relationship. The ultimate test will be accomplished when and if the Academy is adopted and operated within the public schools of Philadelphia.

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Chapter VI

THE POTENTIAL OF EBCE

Introduction

Experience-Based Career Education is an educational plan to accomplish certain specific objectives. Whether it is a "good" plan depends upon many factors which cannot be readily answered and which do not make for precise measurement. An educational strategy that may be "good" under certain circumstances for some communities and students may seem ineffective and inappropriate for others. Educational systems are not mechanical systems which always operate in a precise, predictable fashion. They are not "people proof." Administrators and teachers who serve effectively under one system may be ineffective under another.

We never obtain complete proof that an educational system works. Human beings must take some risks in the hope that they can develop systems and strategies to achieve desired goals through human institutions. Recognizing these limitations, this chapter will attempt to indicate what in the minds of these writers has been accomplished through EBCE and to suggest some of the conditions under which EBCE can be successfully replicated.

What Has Been Accomplished

First, and perhaps most significantly, EBCE has generated enthusiasm from the various groups who have been closely associated with it: students who have engaged in EBCE experiences; their parents; teachers and administrators; the professional and skilled operators who have worked with students; employers; cooperating community leaders; and educators who have reviewed various aspects of EBCE. This enthusiastic reception has helped to create a climate in each EBCE school that promotes healthy

growth and accomplishment by the students. The climate is infectious and carries over into other endeavors within the community. It stands in sharp contrast to other educational environments that have not achieved a nearly comparable esprit in their activities.

Second, professionals at four separate sites have designed and refined four different programs, and all appear ready for replication in other situations. National Institute of Education guidelines have required a close, practical relationship of operations, development, and evaluation activities. As a result, all of the EBCE components have been or are being tested in action under the guidance of well-prepared professional personnel. And they are being revised continuously, not in relation to theories, but upon the practical basis of whether they are helping students. Not only can the systems be replicated in toto, but they can be adapted to varying situations, and selected features from different models can be merged. Although the results of the overall evaluation are not as yet available, the continuing evaluation conducted by the various educational research and development laboratories on their own models provides sufficient evidence upon which effective replication can be achieved.

Third, it is now possible to prepare people to operate the various EBCE systems, since their roles have already been described and tested. Well designed, in-service education programs can be installed, and they can draw from individuals and materials available through the four research and development laboratories.

Fourth, a significant percentage of the students involved have accomplished or are moving toward their stated goals. Evaluation data clearly indicate that most students are doing at least as well in their

cognitive development as they would in the traditional educational system. But in other domains -- particularly their self-image, their career development, and their discovery of ultimate life roles -- they are probably doing better than their counterparts in traditional settings.

Fifth, EBCE is proving relevant for coping with some of the problems of adolescents. Long-term studies of EBCE students are obviously not yet possible. But on the basis of current evaluation evidence, EBCE seems to have helped students substantially to identify their career aspirations, and make decisions on the basis of knowledge about themselves, the nature of society, and the world of work. It is helping students know more about their roles as citizens in the community and participants in its affairs. It is helping them develop the skills and the attitudes necessary for rational decision-making for their futures, and to define purpose and values in their lives.

Conditions for the Replication of EBCE

Since early in 1974, the four educational research and development laboratories have been developing plans for the replication of their EBCE models. These plans include the preparation of materials so they can be used in settings different from those in which they are now employed, the development of training modules for the preparation of personnel who will operate in diverse roles within EBCE, and the development of procedures that can be used with diverse publics to introduce them to EBCE and to secure their cooperation, among other things. By the time the four educational laboratories have completed their work on the problems of replicating their EBCE models, local school districts should have fairly complete materials and procedures for introducing EBCE.

In contemplating introduction of EBCE programs into their own school

systems, school officials should give careful consideration to some basic issues.

First, as pointed out earlier, EBCE should be viewed as an alternative or a different route to graduation within the normal high school program. EBCE has not been designed as a complete educational system to replace the regular high school. This is primarily because many students will want to remain in the general and college preparatory programs of the normal high school, and some who enroll in the EBCE will want to take courses offered in the regular high school curriculum.

Two patterns have emerged, and each should be carefully considered. The first, which prevails in the Far West School in Oakland, in $(CE)_2$ in Oregon, and in part of the Appalachian Educational Laboratory in Charleston, provides an EBCE school as a separate entity, but with close connections with the existing high school. Through these, students can still engage in some activities at their former high schools while involved in the range of activities provided through EBCE. The existing high schools have worked out systems of credit determination with the EBCE models and accept the credit analyses provided by the EBCE programs.

In the other model, such as the Academy for Career Education in Philadelphia, and that part of AEL located in Charleston High School, EBCE has become integrated within the regular high school, although remaining a distinct part. It is not yet possible to analyze all the problems and accomplishments of this arrangement, but EBCE appears to be a forward step in providing an alternative route to graduation within the regular high school.

Second, for EBCE to be successfully replicated, a range of opportunities must be available for experiences both in employment and diverse

community functions. EBCE students need a broad range of opportunities for their learning experiences. The environment in which the students live should provide an opportunity for them to explore all their choices. The metropolitan area is the ideal setting for the EBCE, since it has almost limitless opportunities for student exploration. The smallest possible size for the community is not yet known, but certainly EBCE, as it has been developed by the four regional educational laboratories, would have to undergo very significant changes to be successful in remote, rural areas.

Third, the staff of the schools and those in the community must be ready to develop and maintain on open and informal educational situation for their high school students. An EBCE school provides greater freedom than the traditional high school. Students have more opportunity to select their own learning experiences. Standardized curricula, textbooks, learning sequences, and so forth, have been eliminated. There is less attention to authority and control (although concern is not entirely eliminated) and more emphasis on student self-direction. This means tolerating a broader range of student behaviors, more understanding and discussions between students and teachers, and less restriction than exists in the regular high school. Students involved in EBCE, in particular, feel that the maintenance of this open, informal climate is essential to the success of EBCE.

Fourth, as already implied, EBCE contains more ambiguities than does the traditional school. Programs are individually prescribed rather than pre-determined. The professional staff, students, and parents need to tolerate these ambiguities and live without the restrictive rules generally maintained in the normal school situation. Teachers

need to use a broad range of resources effectively and to improvise to meet the needs of specific students. The security of regular time schedules, sequential learning prescriptions, specific textbooks, and specific content are incompatible with the EBCE model. But a necessary substitution for these items appears to be emerging in the EBCE pattern of monitoring the growth and development of individuals in their demonstrated ability to deal with their own problems.

Fifth, the varying success of the different EBCE models seems to be almost in direct proportion to the broad involvement of community, students and parents in decision-making roles. Decision-making has been viewed largely as something to be shared with the need for everyone involved o respond to the problems of adolescents as they move into adult roles. Non-certificated personnel work alongside certificated personnel, and together they help to chart the educational progress and direction of the students. The ideal of intensive community involvement in educational decision-making is not only possible through EBCE, but may also be a condition for its survival.

Sixth, regardless of the level of training of the professional staff, EBCE requires some retraining so that staff members can properly use the components and materials contained in the program. In-service preparation for employers as well as teachers, parents as well as administrators, students as well as community leaders, is essential for the successful introduction of EBCE into new settings.

Seventh, a host of little details will be amplified in replication materials produced by the regional educational laboratories. Certain legal constraints may vary from state to state or from community to community. Liability factors involving both students, employers, and

school personnel have to be resolved. Differing degrees of precision in applying graduation rules and regulations need to be considered. All these factors require careful planning so that the system is "go" before it is introduced.

The Whole of EBCE or Just Parts?

There is no simple solution to the problems posed by replication. Each of the current EBCE programs is systemic, and the materials were devised specifically for each operation. Each model appears worthy of careful assessment in its whole system, and it would be of most value to the educational profession if each model could be replicated in its entirety. It is apparent, however, that various school agencies may want to replicate parts of EBCE. It can be predicted that in the years ahead, school administrators will choose from different parts of each of the four models. This process will make it difficult to obtain valid evaluation data, but it does allow school districts to adapt EBCE to local requirements.

EBCE is undoubtedly a promising development, and it needs to be considered carefully if for no other reason than for the enthusiasm it has generated among a large number of students who were otherwise disenchanted with their secondary school programs. Its orientation to the real life of the community and its emphasis upon career development and choice are considered necessary by most observers concerned about the reform of secondary education.

There are many problems in the introduction of EBCE, but they do not pose impossible barriers. It can be incorporated into an existing high school but located either as a distinct unit within it or on a separate, nearby site. EBCE units could be located throughout a commu-

nity, having the same relationship to a central high school as a branch bank has to its headquarters. EBCE can probably not be maintained without the funding or the continuing relationships of a legally constituted school organization. Some school districts in the country have already developed in their secondary education programs some of the characteristics essential to EBCE. School districts which have had experience with cooperative work programs, diversified and distributive occupations programs, or other vocational programs using actual work settings have already established part of the necessary foundations for EBCE.

The Costs of EBCE

We have carefully avoided a discussion of cost factors. Obviously, in any replication, installation and operational costs are an important element. Although cost data are available, they have to be carefully interpreted to determine how realistically they can be applied to a local situation. Costs for the program to date have involved heavy expenditures for development and evaluation, and probably for the employment of more operating personnel than would be needed once all the systems have been stabilized. It was the opinion of the External Site Review Team, after careful analysis of cost factors involved in each of the four sites, that replication could probably be accomplished at no greater cost than is spent in other experimental career and vocational education programs.

With a stabilized financing system, EBCE should be successful outside the public school system as well as inside it. It seems to us, however, that EBCE has less chance to survive for the largest number of students if it is outside of the school system. We believe that it can best be developed within school systems, provided they involve a

broad segment of community resources in decision-making, and if regional educational laboratories and other sources of expertise can help the school districts further refine the EBCE strategies and materials.

Some Other Replication Problems

No matter where EBCE is stabilized outside of the four pilot ventures, some additional problem areas must be resolved. To have maximum success, it should be incorporated within a more complete system of career education, and some of its processes should be adapted within that system. EBCE can become part of other career education programs currently being developed by the National Institute of Education, the United States Office of Education, state departments of education, and local school districts. Local school districts which attempt to adapt these systems and integrate all the known elements will have to be ready to allocate funds for development purposes.

The breadth of the career education program and how its elements can be incorporated into an overall educational design need to be resolved. EBCE has emphasized, with some success, the basic skills, since inadequate basic skills may help limit an individual's capability to enter a chosen career. EBCE has also opted for a broad interpretation of career education and tried to blend career development, basic skills, survival skills, and graduation requirements into a unified, individualized, systemic approach to total education. This has generally not been accomplished in other programs. A great deal of developmental effort and resources is needed if this integration is to be perfected.

As now constituted, EBCE comes late in the student's high school career. Some observers think that it comes too late and without adequate preparation. All of the EBCE sites have observed "entry shock" for stu-

dents, which seems particularly related to the transition from the tightly controlled school setting to the more open and individualized EBCE setting. Planning is needed to determine when EBCE best fits into a total K-12 career education program. EBCE has so far not dealt with the question of whether younger children can profit from some of its exploratory programs. Neither has it faced the problem of how it can best coordinate with community colleges for the more specific post secondary vocational training.

Another problem not yet faced is that of EBCE's relationships with occupational and vocational education. The challenge of EBCE to the vocational community is that a sequence of developmental skills and associated attitudes must be achieved in a total career development program. It is still not completely apparent what kinds of experiences, what range of skills, knowledge and understanding are essential at each step of the path as students move from awareness to preparation. Considerable investigation is needed if the system is ultimately to achieve maximum success.

Finally, EBCE, at each of its four sites, has been aimed largely at students for whom the traditional high school program has not been particularly successful. Still to be demonstrated is whether it can work for the larger number of students who will want to use it to select a career and make their education as relevant as possible.

In Conclusion

In Chapter I, we posed the question of how the schools could most effectively respond to the four crises confronting them. These were the crises of relevance; of the human and social problems of youth growing to maturity in a complex, technological society; of youth's values and

aspirations; and of the recognition of human diversities. We think EBCE is an approach to resolving these crises. As it is extended and perfected, it will probably constitute an even better solution.

Students participating in the programs have overwhelmingly indicated that EBCE helped them to cope with these crises and to find ways to achieve their fulfillment as human beings. They have found the program relevant to their needs. They are learning how to cope with the real world through guided participation in learning situations provided in adult, community and work settings. The settings in which they study and work provide them with laboratories for evaluating their aspirations and ideals. Above all, they are finding places for themselves in spite of the many diversities which they exemplify. These conclusions are based upon subjective and partial evaluations to date. We have high hopes that the more objective and thorough evaluations now in process will substantiate these observations.

It is too early to see if EBCE does work and if its results are relevant for the human and social needs of American society today. But evidence gathered so far is affirmative. It is so positively affirmative that EBCE may have more potential than is now realized. It is not posed by the National Institute of Education or the regional educational laboratories as a panacea for all educational ills. It is suggested as some working hypotheses and strategies for dealing with significant educational problems. Its promise should not be ignored!