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ABSTRACT

Evaluation conducted during the 1975-76 school year of the Experience-Based Career Education (EBCE) program at Northwest Regional Educational Laboratory (NWREL) is reported, focusing on the evaluation findings of the EBCE demonstration project in Tigard, Oregon called Community Experiences for Career Education, (CE)2, and the five NWREL EBCE pilot sites and separate EBCE materials. (EBCE is a comprehensive, individualized career education program that integrates basic skills, life skills, and career development through work and learning experiences in the community.) This report contains a description of the program as it operated in its fourth year and the evaluation results for students who have participated in (CE)2 during the past year and those who have completed two years of program participation. Staff interview results related to the demonstration site's role in EBCE training and demonstration are also reported. The evaluation of the efforts to implement EBCE in NWREL pilot sites and participant outcome results are summarized. Summary and discussion of findings related to the use of separate EBCE packets and the EBCE handbooks are included. Appendixes contain the tabulated responses to various questionnaires and the narrative reports of the demonstration site and second-year pilot site. (TA)

FY 76

FINAL EVALUATION REPORT

of the NWREL

EXPERIENCE-BASED CAREER EDUCATION PROGRAM

Submitted to the

National Institute of Education
of the
Department of Health, Education and Welfare

Prepared by

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EXECUTIVE SUMMARY

Introduction

This report describes the evaluation conducted during the 1975-76 school year by the evaluation unit of the Experience-Based Career Education (EBCE) program at Northwest Regional Educational Laboratory (NWREL). EBCE is a comprehensive, individualized career education program that integrates a high school student's learning of Basic Skills, Life Skills and Career Development through work and learning experiences in the community. This report focuses on findings from the evaluation of the EBCE demonstration project in Tigard, Oregon, called Community Experiences for Career Education--$(CE)_2$, the five NWREL EBCE pilot sites and separate EBCE materials.

Audiences

Audiences for whom this report is intended include the National Institute of Education, sponsor of EBCE research and development; educators in districts that have recently adopted EBCE; personnel associated with $(CE)_2$ and the pilot sites from whom data were collected; educational researchers; and persons interested in career education and alternative educational programs.

Demonstration Site Findings

The 1975-76 school year marked the fourth year of operation for $(CE)_2$, which is operated in Tigard, Oregon, by a nonprofit community corporation as NWREL's demonstration site. $(CE)_2$ enrolled approximately 60 high school juniors and seniors from Tigard High School and had a professional staff of 7 members. Over 120 employers and community people cooperated with $(CE)_2$ in providing learning experiences for students in the community.

The $(CE)_2$ data contained in this report center around the 1975-76 school year findings for first-year and second-year students in the program and on the second-year effects on students participating in EBCE. An indepth evaluation of the $(CE)_2$ demonstration project occurred in the 1974-75 school year. However, one evaluation question that was considered important by the National Institute of Education and other audiences dealt with the cumulative effects that EBCE might have on students who participated in the program for two complete years. The 1975-76 evaluation of $(CE)_2$ undertook to address that question.

Fourteen $(CE)_2$ two-year students entered the program in September 1974 and completed pretests at that time, first-year posttests in May, 1975 and second-year posttests in May 1976. The reading comprehension, arithmetic concepts and arithmetic applications subtests of the Comprehensive Test

of Basic Skills were used to estimate growth in their basic skills. These students demonstrated two year's growth in reading comprehension during the first year of program participation and an additional year of growth during the second year. Very little growth was detected on either of the arithmetic subtests.

Growth on some of the Life Skills goals was assessed indirectly through use of the Psychosocial Maturity Scale developed by Ellen Greenberger and associates at the Center for Social Organization of Schools at Johns Hopkins University. No significant gains for two-year students were registered on this instrument nor on the Self Directed Search which assessed the career preferences of students.

An evaluation of first-year and second-year participants in $(CE)_2$ during the 1975-76 school year was conducted using data for 17 first-year students and 14 second-year students. The major findings can be summarized in ten statements:

1. In Basic Skills, students showed an average of one month's growth in reading comprehension for each month of program participation even though their pretest scores were at a high level. Students also demonstrated marginal growth on arithmetic subtests.

2. Both first-year and second-year $(CE)_2$ student groups demonstrated significant growth on attitude scales measuring "openness to change" and "tolerance," but the second-year student change was negative, resulting in a significant difference between the two groups. In addition, second-year students exhibited positive growth on "work and roles" and negative growth on "social commitment."

3. First-year students demonstrated a positive significant increase in educational aspirations with a slight decrease in occupational aspirations. Data were not available for second-year students.

4. By the end of the school year all students had some idea of what they would be doing one year after high school, while over one-quarter did not know at the beginning of the year. Over 90 percent plan to continue their education beyond high school. Less than 7 percent of the students were interested in unskilled occupations.

5. Almost all of the students reported working or observing at one or both occupations of primary interest. Every student reported knowledge of how to enter these careers of interest.

6. Students rated $(CE)_2$ highest in helping them understand more about themselves, fit one's interests and abilities with potential careers, and accept adult responsibilities. All students, except four who were unsure, said that if they

had it to do over again they would decide to participate in EBCE.

7. Greatest program strengths noted by students were overall quality of the program, opportunity to learn about occupations and motivation to learn. Although almost a third of the students indicated no program weaknesses, six mentioned a lack of adequate basic skills development and five mentioned a perceived need for improved staff communications.

8. Staff members perceived that greatest student growth occurred in the areas of self-esteem, individual responsibility, learning how to learn, ability to communicate with adults including parents, oral and written communications, basic skills, willingness to try new things and coping skills. Moderate growth, as viewed by the staff, occurred in awareness of nontraditional careers, knowledge about the job market and career decision-making skills.

9. In comparison to the previous year the staff saw the program becoming more stable, having a greater proportion of self-directed students, implementing the student accountability system more effectively and coordinating the student tutoring system better. Problem areas noted by the staff included less feeling of a student community than the prior year and less than desired progress in integrating basic skills at employer sites.

10. Each staff member indicated a willingness to participate in EBCE training and demonstration activities in the coming year and indicated areas in which they felt they could help most effectively.

Pilot Site Findings

During the 1975-76 school year there were five districts that agreed to use the NWREL version of EBCE. These districts agreed to use EBCE as a full program and to cooperate with NWREL in collecting evaluation data. In return the districts received free training and technical assistance from NWREL in planning and operating EBCE. These five projects are called pilot sites. Of the five pilot sites, Hillsboro, Oregon, was in its second year of operation, while the others were all first-year sites. The average number of students in each project ranged between 20 in Colville, Washington, and 55 in Hillsboro. The majority of students at each site were in the eleventh or twelfth grades with Billings, Montana, including several tenth graders and Hillsboro including ninth and tenth graders. The remaining two sites were in Kodiak, Alaska, and Kennewick, Washington. The number of project staff per site ranged between two and six. Each project had between 50 and 90 employer sites participating in

the program. The median cost of operating the NWREL EBCE pilot sites was $1,160 per pupil for the 1975-76 school year.

Since four of the five pilot sites were in their first year of operation, the major emphasis in the evaluation was in assessing the degree of fidelity with which each pilot site was operating. Less emphasis was placed on a uniform assessment of student outcomes and the perceptions of staff, students, employers and parents regarding program operations. Therefore some evaluation instruments were used only at two or three pilot sites while others were used at all five sites.

The major evaluation findings for the pilot sites during 1975-76 are summarized below:

1. Based on the use of a NWREL EBCE Essential Characteristics Checklist and an EBCE Process Checklist, four of the five sites were judged by the evaluators to be high fidelity sites. The fifth site used many of the EBCE components and had moderate fidelity to the NWREL model of EBCE.

2. In May 1976 students at each pilot site completed an end-of-year questionnaire. On this questionnaire students were asked to list two careers that they would like to enter after completing their education. Almost all of the students reported working at or observing one or both of the careers of interest to them. The EBCE career explorations and learning level experiences at community sites were the primary influences on student career choices. These experiences were also reported by students to be the most important factor in changing their career preferences.

3. By the end of the school year, almost all of the students had an idea of what they would be doing after high school and the steps necessary to reach their career aspirations.

4. While student growth on the Comprehensive Test of Basic Skills was generally positive, the gains in reading comprehension were statistically significant for only one of the four pilot sites.

5. Holland's Self-Directed Search is used to aid students in educational and vocational planning and to measure change in vocational preferences at two pilot sites. A statistically significant increase over the year was noted in both pilot sites on students' consistency scores. This score measures correspondence of a student's primary and secondary occupational preferences with Holland's theory of careers.

6. The Psychosocial Maturity Scale revealed at least small positive gains by students in each of the three pilot sites using this instrument. The positive gains were statistically significant on all three summary scales for the second-year pilot site. These scales were individual accuracy, interpersonal communications

and social adequacy. At both the demonstration site and at two of the three pilot sites, students showed a significant gain in scores related to an "openness to change" scale and to a "tolerance" scale.

7. The EBCE students rated the program high in helping them attain the program goals. The goal areas in which they reported the program least effective were in understanding the role of science in our society, understanding the democratic process and improving reading and math skills. Students rated EBCE highest in helping them learn to solve problems logically, understand more about themselves, get along with others, fit one's interests and abilities with potential careers, identify what to look at in considering a job and feel prepared to accept adult responsibilities. In response to a question asking students, "How would you rate the overall quality of your EBCE program?," students at two pilot sites gave it a high rating while those at the other sites gave it a very high rating. In summary, the students felt well satisfied with their EBCE experience.

8. A Parent Opinion Survey was used with parents in three pilot sites. In comparison with past experiences in regular classes, 85 percent of the parents felt that their daughter or son was more motivated to learn in the EBCE program and only one parent out of 46 felt his or her child was less motivated to learn. One of the most interesting results of the parent survey is the effect the program appears to have on increasing the communication between young people and their parents. A significant increase was found in the frequency with which young people talked with their parents about EBCE as compared with how often they talked about what was going on in regular classes the year prior to entering EBCE.

9. Many parents at the pilot sites saw positive changes in their son or daughter that they felt might be a result of participating in EBCE. Changes identified by over half the parents in each of three pilot sites were greater maturity or self-direction, improved self-confidence and a better understanding of jobs. No negative changes were reported by parents at one site. Several parents at the other two sites felt that EBCE might have caused their son or daughter to become less interested in education.

10. The Employer Opinion Survey was completed by 111 EBCE employer instructors in three pilot sites in May 1976. Employer instructors reported spending about 8 hours a week working with students on exploration levels and approximately 13 hours a week with students on learning levels. While students were on exploration levels, employers most frequently indicated that they spent time talking about job opportunities or activities at their site and evaluating individual student's assignments. These same activities continued during learning levels. Over 90 percent of the employers responding

to the survey at each of the three projects felt the program staff was providing them with enough information to help them direct student activities at their sites.

11. Approximately 95 percent of the employers indicated that they would be willing to recommend to a potential employer or resource person that he or she also become involved with the EBCE program. Over half of the employers felt that employees at their site benefited from participation with EBCE by their increased awareness of youth. About 20 percent of the surveyed employers also felt that participation in EBCE increased their interest in their own work.

12. Employers at pilot sites saw as the greatest strengths of EBCE that students learn about a variety of careers and about real life situations and that they gain experience in working with adults. A weakness identified (by approximately 30 percent of the employers at each of the three sites) was that some students cannot handle the freedom provided by the program. In summary, the cooperating employers were extremely supportive of EBCE.

Evaluation of Separate EBCE Materials

Three sets of EBCE materials were packaged and sold separately by NWREL. These stand-alone packages of staff and student materials are available without NWREL training and describe how individual EBCE strategies can be used in situations where the entire program is not adopted. The packets tested this year were the Career Exploration Process, Student Competencies and Student Career Journal.

Questionnaires were sent to all districts receiving awareness sets of these materials to assess the perception of users toward these materials. Questionnaires dealing with the Student Competencies packet were returned by 25 districts, those with the Career Exploration Process by 27 districts and those with the Student Career Journal by 28 districts. These districts represented 16 states. Three-quarters of the respondents rated the three packets as useful or very useful to their students. Over half of the respondents felt it would be easy to implement each of the packets and two-thirds felt the packets fit in well with their instructional activities. Only four percent of the respondents, after receiving an awareness set of materials, indicated that they did not plan to use the Student Career Journal or the Student Career Exploration Process. Seventeen percent indicated they did not plan to use the Competencies. Suggestions for improving the three packets will be used by the NWREL writers in any revisions to these materials.

CHAPTER I. INTRODUCTION

A. Purposes and Content of Report

This FY 76 final evaluation report has been prepared primarily to describe and summarize the evaluation findings for the 1975-76 school year of the Northwest Regional Educational Laboratory (NWREL) Experience-Based Career Education (EBCE) Project[1] demonstration site[2] in Tigard, Oregon, and of the five pilot sites.[3] This report also summarizes the evaluation findings related to the use of separate EBCE materials.

As a year-end report, this document is intended to serve four audiences. First, the EBCE operations staff may use portions of this report as feedback to continually improve their programs and to answer questions visitors might pose. Second, the NWREL EBCE implementation staff and practitioners considering the adoption of an EBCE program may use this information in making decisions about implementing the EBCE program in other settings. Third, school district personnel in districts where EBCE is now operational may use the evaluation report to become more aware of the program's effects. And finally, NIE, the U.S. Office of Education and the research and general education audience may use the report to help them examine the program's effectiveness.

The report is organized into four chapters plus a separate volume of appendices. Chapter I--"Introduction"--contains a summary of the purposes and contents of this report and a description of EBCE. Chapter II--"Evaluation of the Demonstration Site"--contains a description of the program as it operated in its fourth year and the evaluation results for students who have participated in $(CE)_2$ during the past year and those who have completed two years of program participation. Staff interview results related to the demonstration site's role in EBCE training and demonstration are also reported. The evaluation of the efforts to implement EBCE in

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[1] The EBCE Project is described briefly on the following page.

[2] The demonstration site is the original EBCE project developed by NWREL in Tigard, Oregon, entitled Community Experiences for Career Education--$(CE)_2$.

[3] Pilot sites are districts that have agreed to use the NWREL EBCE program at their own expense and receive some technical assistance and training from NWREL. Pilot sites are located in Billings, Montana; Colville, Washington; Hillsboro, Oregon; Kennewick, Washington; and Kodiak, Alaska.

NWREL pilot sites and participant/outcome results are summarized in Chapter III--"Evaluation of Pilot Sites." Chapter IV contains a summary and discussion of findings related to the use of separate EBCE packets and the EBCE handbooks. The appendices contain the tabulated responses to various questionnaires and the narrative reports of the demonstration site and second-year pilot site.

B. Description of EBCE

Experience-Based Career Education (EBCE) is "an operational expression of the conviction that a comprehensive curriculum exists outside the walls of the school. It assumes that the educational environment can be restructured to take maximum advantage of both the value of direct experience and the special capabilities of community institutions in helping young people prepare for adult responsibilities."[1]

A primary goal of the EBCE program has been to integrate a student's knowledge of a variety of careers with the acquisition of cognitive, interpersonal and affective skills through a series of planned experiences with identified learning outcomes.[2] Emphasis is placed on the assumption of responsibility by the individual student for his or her own learning.

Four characteristics, taken together, make EBCE different from other alternative or career education programs:

1. The learning program evolves from adult activities in the community. It is reasoned that if the learning activities are based directly on adult tasks and roles in the community, learning will be recognized as more relevant by youth in preparing for the transition to adulthood.

2. The program is based on experiential learning, actively involving students in the daily work of community life. This "hands-on" approach to learning has long been recognized as an effective learning strategy and EBCE is attempting to implement this approach in a comprehensive program.

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[1] Hagans, Rex W. "What is Experience-Based Career Education?" Illinois Career Education Journal, Spring 1976, 33:6-10.

[2] A 12-page program overview of EBCE is available by writing to Career Education Program Director, NWREL, 710 S.W. Second Avenue, Portland, Oregon 97204. This overview describes what is unique about EBCE, what students learn, how they learn and how EBCE relates to the employers and the community.

3. The curriculum of EBCE is fully integrated. Just as salespersons do not think of their interactions with people strictly in terms of grammar, vocabulary or psychology, the EBCE curriculum also applies no artificial distinction among the "disciplines."

4. EBCE is a fully individualized program. The learning goals as well as the learning strategies are varied to meet the needs, interests and abilities of each student.

CHAPTER II. EVALUATION OF THE DEMONSTRATION SITE

A. Description of the Program and Students

Community Experiences for Career Education, $(CE)_2$, is one of four Experience-Based Career Education (EBCE) programs being demonstrated under the auspices of the National Institute of Education. Operated in Tigard, Oregon, by a nonprofit community corporation, the program is directed by the Northwest Regional Educational Laboratory (NWREL). Completing its fourth year of operation in 1975-76, $(CE)_2$ was composed of approximately 60 high school juniors and seniors and 7 professional staff members providing a comprehensive high school education through experiences in the community.

Students in $(CE)_2$ spend approximately half their time at a learning center in a one-story professional office complex; the remaining time is spent at various employer and community sites. Upon completing the program's graduation requirements, $(CE)_2$ students are granted a Tigard High School diploma. A description of EBCE program components is available on request from NWREL.[1]

B. Second-Year Effects

Twenty-three students entered the $(CE)_2$ program last year as juniors and continued in the program this year. All but one of these students were pretested in September 1974 and posttested in May 1975 with the following instruments:

1. Comprehensive Test of Basic Skills (selected subtests)
2. Psychosocial Maturity Scale (Student Opinion Scale)
3. Self-Directed Search
4. NWREL EBCE Semantic Differential
5. Student Application/Background Questionnaire (pretest only)
6. Student End-of-Year Questionnaire (posttest only)

During the past year, 14 of the students were posttested again in May with all of the instruments except for the NWREL EBCE Semantic

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[1] Five separate handbooks have been developed: Management and Organization, Curriculum and Instruction, Employer/Community Resources, Student Services and Program Evaluation.

Differential and the Student Application/Background Questionnaire. Of the other eight students, one returned to the high school at midyear and graduated from high school, two left the program early and received their high school diploma through the community college, one moved out of state and graduated from high school, one got married and eventually took a job through her experiences at a $(CE)_2$ employer site, and three students did not complete all of the posttesting (one of these students had graduated early). Complete data were available for the remaining 14 students and will be the basis of analysis.

These students were tested during the first, eighth and twentieth months of program participation. Since test publishers usually attribute one month of growth during the three summer months, the metric of 1, 8 and 18 were used in a repeated measures analysis of variance utilizing the MULTIVARIANCE program.[1]

The reading comprehension, arithmetic concepts and arithmetic applications subtests of the Comprehensive Test of Basic Skills (CTBS) were used to estimate growth in basic skills. Means and standard deviations (S.D.) for the CTBS are given in Table 1. Data are reported as expanded standard scores and as grade equivalents (G.E.).

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[1] Univariate F tests of the growth effects were used for most variables since the small number of subjects limited the multivariate analysis. Previous analyses were run with sex and grade level as additional covariates to pretest scores. However, since these additional covariates added little, if anything, to the model and the degrees of freedom were limited due to small sample sizes, age and grade level were dropped from further analyses. Finn, J. MULTIVARIANCE: A generalized univariate and multivariate analysis of variance, covariance and regression. Version V. Chicago: National Educational Resources, Inc., March 1972.

TABLE 1

CTBS Growth Scores for Two-Year $(CE)_2$ Students
(N=14)

CTBS Subject	Test Time	Mean	S.D.	G.E.
Reading Comprehension	10/74	615.21	95.28	10.6
	5/75	660.14	88.93	12.6
	5/76	673.36	102.96	13.5
Arithmetic Concepts	10/74	598.36	110.91	10.0
	5/75	609.00	126.33	10.4
	5/76	610.36	135.09	10.5
Arithmetic Applications	10/74	580.57	106.20	9.4
	5/75	579.21	97.34	9.4
	5/76	587.29	109.88	9.6

Students demonstrated two years' growth in reading comprehension during the first year of program participation with one year of growth during the second year. This linear growth approached statistical significance ($F=2.39$, $dF=1$ and 39, $p<.13$) and was certainly educationally significant. No growth was demonstrated on either of the arithmetic subtests.

The Student Opinion Scale is a local name applied to the Psychosocial Maturity Scale developed by Ellen Greenberger. The instrument is used to assess growth in nine different areas, many of which are related to the EBCE Life Skills goals. The results from this instrument are presented in Table 2.

TABLE 2

Student Opinion Survey Scores for Two-Year $(CE)_2$ Students
(N=13)

Individual Subscales	Sept. '74 Mean	Sept. '74 S.D.	May '75 Mean	May '75 S.D.	May '76 Mean	May '76 S.D.
Self Reliance	33.00	3.61	30.77	5.69	34.08	4.92
Work	29.00	4.90	26.31	6.63	30.08	4.73
Identity	30.62	5.52	26.92	7.80	31.77	6.87
Communications	27.23	7.70	25.46	5.87	29.54	6.45
Roles	34.15	3.51	34.23	3.37	35.54	2.60
Trust	30.23	3.56	30.38	3.71	30.92	3.90
Social Commitment	36.31	3.43	35.15	4.12	35.00	2.96
Change	37.77	3.06	37.92	3.93	37.85	3.02
Tolerance	36.15	3.02	37.23	2.68	36.62	2.29
Social Desirability	21.54	3.45	19.77	4.49	20.23	4.17
Summary Scales						
Individual Adequacy	92.62	11.96	84.00	19.27	95.92	15.27
Interpersonal Communications	90.85	9.83	90.08	10.25	96.00	9.19
Social Adequacy	110.23	7.15	110.31	7.71	109.46	5.92

None of the changes on the individual subscales were significant although three scales approached significance on a quadratic effect: "self reliance" ($F=2.64$, df=1 and 36, $p<.12$), "work" ($F=2.80$, df=1 and 36, $p<.11$) and "identity" ($F=3.23$, df=1 and 36, $p<.08$). This means that the scores decreased from September to May of last year but reversed and showed an increase this school year.

The "social desirability" scale is a "lie" scale designed to estimate the "fake factor" of response. Higher scores indicate a tendency to respond in a socially desirable manner. There was no significant change on this scale and the low scores indicate a general tendency for students to have been honest in their responses to this instrument.

These subscale scores can also be combined to form three summary scales: individual adequacy, interpersonal communications and social adequacy (Table 2). The interpersonal communications linear growth approached significance ($F=2.08$, df=1 and 36, $p<.16$) as did quadratic growth on individual adequacy ($F=3.43$, df=1 and 36, $p<.08$). The quadratic change refers to scores decreasing significantly over the first year and increasing again over the second year.

Studies were undertaken with data at two of the pilot sites to investigate which instruments were the best predictors of program success. When investigating percent of projects and competencies

completed, percent of learning center and job site attendance and number of credits earned, subscales from the Student Opinion Survey were consistently among the best predictors of success. Thus, although this instrument did not reveal much student growth, it does appear to be an excellent predictor of program success.

The Self-Directed Search developed by John Holland[1] was used to identify "occupational personality" characteristics of each student. These six areas are realistic (e.g., skilled trades, technical and some service occupations); investigative (e.g., scientific and some technical occupations); artistic; social (e.g., educational and social welfare occupations); enterprising (e.g., managerial and sales occupations); and conventional (e.g., office and clerical occupations).

It is also possible to calculate six other scores from this instrument: self estimates, activities, competencies, occupations, differentiation and consistency. The self estimates scores represent the student's total self rating score (on a seven-point scale) across 12 traits such as mechanical ability, artistic ability and office skills. Two of these traits reflect each of the six occupational categories. Students rate themselves as compared with other persons of the same age. The activities score represents the student's total number of activities across the six occupational categories that the student says he or she likes to do. The competencies score represents the total number of activities across the six occupational categories that the student feels he or she can do well or competently. The occupation score represents the total number of occupations that are of interest or appeal to the student. The differentiation score describes the degree to which a person represents a "pure" personality type. A person with very strong "social" interests and competencies, for example, is more of a "pure" type than a person with moderate "social," "enterprising," and "conventional" interests and competencies. This differentiation score is computed by subtracting the numerical weight of the tertiary code from the weight of the primary code. The consistency score is an index of the internal consistency of the personality. Operationally, it describes the degree of compatibility between the primary and secondary code. For example, a person with an "artistic" primary code and a "conventional" secondary code will probably exhibit contradictory behavior patterns and interests and receive a low consistency score.

Pretest and posttest means and standard deviations (S.D.) for subscores on the Self-Directed Search are shown in Table 3.

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[1] Holland, John L. Making Vocational Choices: A Theory of Careers. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1973.

TABLE 3

Self-Directed Search Scores for Two-Year $(CE)_2$ Students
(N=14)

Occupational Area	Sept. '74 Mean	Sept. '74 S.D.	May '75 Mean	May '75 S.D.	May '76 Mean	May '76 S.D.
Realistic	6.07	4.63	5.86	4.44	5.00	4.17
Investigative	6.43	3.84	6.50	3.18	6.29	4.07
Artistic	8.14	3.42	7.36	3.13	6.71	4.05
Social	10.50	3.37	10.50	2.98	10.29	3.12
Enterprising	4.93	2.59	5.36	2.92	5.21	3.06
Conventional	4.00	2.22	4.36	2.27	5.79	4.69
SDS Summary Scores						
Self Estimates	20.76	3.51	21.93	5.53	21.57	3.92
Activities	34.57	13.78	33.29	11.47	34.07	12.45
Competencies	27.00	10.56	26.43	12.96	28.36	11.36
Occupations	17.21	9.77	14.21	6.96	14.36	7.38
Differentiation Score	5.86	2.44	4.71	2.67	5.71	3.77
Consistency Score	2.79	0.43	2.50	0.65	2.50	0.65

Significant changes were not expected in scores for the six occupational areas since these factors usually remain stable and an increase in interest in one occupational area often leads to a decrease in another. However, the linear growth in "realistic occupations" did approach significance ($F=2.21$, $df=1$ and 39, $p<.15$).

The total self-estimates, activities, competencies and occupations scores were anticipated to increase over the year as students gained a variety of work experiences and perhaps came to view themselves in a more positive light. All F ratios were minimal ($F<1$).

Increases in differentiation and consistency were hypothesized as a result of students observing and trying out a variety of jobs and learning to discriminate more in what activities they like and dislike. There were no significant changes on these scores.

Growth in educational aspirations were estimated by asking the highest level of education aspired to at the beginning and end of the program year. The mean increased from 3.57 to 4.00 during the first year but dropped to 3.79 after the second year. This growth was not significant.

Growth in occupational aspirations was estimated by asking for the two primary occupational goals of each student at the beginning of the first year and at the end of each program year. These occupational

goals were converted to Hollingshead occupational codes which were then averaged to get an average socioeconomic status level for each time period. The mean decreased from 3.14 to 2.68 during the first year and then increased to 3.21 during the second year. These changes were not significant.

C. Evaluation Findings for 1975-76

The following section summarizes the evaluation results for the demonstration site located in Tigard, Oregon. A more complete report covering these findings is included in Appendix G.

Sixty-two students began the program year, of which 23 were seniors returning for their second year of program participation. Results for these second-year (SY) students were analyzed separately from the newly entering first-year (FY) students. On the average, first-year students completed more than the required number of career exploration activities and more than two learning levels. FY students completed more career explorations than SY students while SY students completed more projects and competencies.

In the area of basic skills, SY students completed more than one month's growth in reading comprehension for each month in the program while FY students gained two months for each month of program participation. These gains were reinforced by self reports by FY students who reported dramatic increases in the amount of reading after program participation. Minimal growth occurred in mathematics.

Both $(CE)_2$ student groups demonstrated significant growth on attitude scales measuring openness to change and tolerance, but the SY change was negative resulting in a significant difference between the two groups. In addition, SY students exhibited growth on the scales of work and roles and a decrease on social commitment scores.

FY students demonstrated positive significant growth during the year in educational aspirations with a slight decrease in occupational aspirations.

There were no demonstrated gains on an instrument used to assess career interests and preferences. However, almost all of the students in each group reported that their program participation permitted them to work at or observe one or both occupations of primary interest. Every student reported knowledge relating to the necessary steps for how to enter these careers.

By the end of the school year all students had some idea of what they would be doing one year after high school, while over one-quarter did not know at the beginning of the year. Nine out of every ten $(CE)_2$ students plan to continue their education beyond

high school. Less than seven percent of the students were interested in unskilled occupations.

Students rated $(CE)_2$ highest in helping them understand more about themselves, fit their interests and abilities with potential careers and accept adult responsibilities. All students--except three FY and one SY student who were unsure--said that if they had it to do over again, they would decide to participate in $(CE)_2$.

Greatest program strengths, as rated by students, were overall quality of the program opportunity to learn about occupations and motivation to learn. No single weakness was identified by more than ten percent of the students.

Staff members perceive that greatest student growth occurred in the areas of self-esteem, individual responsibility, learning how to learn, ability to communicate with adults including parents, oral and written communication, basic skills, willingness to try new things and coping skills. Moderate growth, as viewed by the staff, occurred in awareness of nontraditional careers, knowledge about the job market and career decision-making skills.

In comparison to the previous year the staff saw further stabilization of the program, a higher proportion of self-directed students in the program, more effective implementation of the accountability system and better coordination by the student tutoring system. Staff indicated their perception that there was less feeling of a student community and less than desired progress in integrating basic skills at employer sites.

Each staff member indicated a willingness to participate in EBCE training and demonstration activities during the coming year and indicated areas in which they felt they could help most effectively.

CHAPTER III. EVALUATION OF PILOT SITES

A. Description of Pilot Sites

During the 1975-76 school year there were five pilot sites using the NWREL model of EBCE. A several-page description of each site in terms of the community, school, students and staff appears in the individual pilot site reports. Table 4 summarizes some important characteristics of the five sites. A comparative description is given in terms of the community, student population, staffing pattern, number and types of participating community/employer sites and location of program facility. Of the five pilot sites, Hillsboro was in its second year of operation in FY 76 while the others were all first-year sites. The average number of students in each project ranged between 20 in Colville and 55 in Hillsboro. Most students were in the eleventh or twelfth grades except in Billings, which included some tenth graders, and Hillsboro, which included ninth and tenth graders. The number of project staff per site ranged between two and six persons. Each project had between 50 and 90 employer sites that participated in the program. The median cost of operating the NWREL EBCE pilot site was $1,160 per pupil.

B. Evaluation Design for Pilot Sites

During the spring of 1975 a preliminary evaluation plan for 1975-76 pilot sites was prepared by the NWREL EBCE evaluation unit and sent to the pilot sites for their reactions. Based on responses from several sites, the plan was revised and agreed on by the districts. The plan discussed the purposes for the evaluation, types of comparison groups that could be used, recommended data to be collected and a table displaying the functional responsitilities of NWREL and of the districts in the pilot site evaluation. The data proposed for collection across sites were an EBCE Student Application/Background Questionnaire, Reading and Arithmetic subsections of the Comprehensive Test of Basic Skills (CTBS), the Student Opinion Scale, Self-Directed Search, EBCE Student End-of-Year Questionnaire, Parent Questionnaire, Employer Questionnaire, Staff Questionnaire and Interview, Student Update Sheets, written projects and products produced by a random sample of five students from each site, an EBCE Essential Characteristics Checklist and an EBCE Process Checklist. The CTBS, Student Opinion Scale and Self-Directed Search were proposed for use on a pretest-posttest basis. Not all instruments proposed were used by all five sites since the individual sites had the freedom to determine which instruments they would use. These omissions will be noted in the next section which analyzes findings across the pilot sites.

TABLE 4

Pilot Site Description	Student Numbers Grades, Abilities, Sex	Professional Staffing	Numbers/Types of Community Sites	Location of Program Facility
Billings City of 65,000 located in south-central part of Montana Using many of the essential components of the EBCE model	25 students, Grades 10, 11 and 12 Equal male/female distribution Students admitted by self-referral or by referral by parents, counselors or administrators	1 project director/ employer relations specialist 1 learning manager/ learning resource specialist	Approximately 50	Part of Career Education Center, a facility separate from the two high schools from which EBCE students are drawn
Colville Town of 4,500 in northeastern Washington--Rural, isolated High degree of fidelity to model	20 students Grades 11 and 12 Cross section Equal male/female distribution	1 half-time staff person combining roles of program director, learning manager, employer relations specialist 1 full-time aide functioning as learning manager	Approximately 65 employer/community sites Broad range (including forestry service and Spokane airport) offers nearly 300 careers from sheepshearing to mortician	1 room in junior high school building
Hillsboro Town of 19,000 approximately 30 miles west of Portland High degree of fidelity to model	55 students, Grades 9 to 12, Some potential drop-outs Three-quarters were males	20% project director time 1 learning manager 1 community coordinator 1 student coordinator 2 aides	Approximately 50 employer/community sites--broad range	2 rooms in senior high school building
Kennewick City of 20,000 located in Mid-Columbia Basin of southeast Washington High degree of fidelity to model	30 students Grades 11 and 12 Cross section Equal male/female distribution	1 part-time director 2 learning manager/ employer relations specialists 1 learning resource specialist	Approximately 90--broad range including agriculture, transportation, food processing, Hanford Atomic Plant, construction industries	Office space in downtown professional office building (program draws from two high schools)
Kodiak Borough of 8,400 located on an island off the southwest coast of Alaska High degree of fidelity to model	30 students Grades 11 and 12 Cross section Equal male/female distribution Ethnic mix	1 project director/ employer relations specialist 1 employer relations specialist/student coordinator 2 learning managers/ learning resource specialists 1 secretary 1 tutor	Approximately 70 with 120 employer instructors Broad range including Coast Guard	Separate building on high school campus

The major emphasis in the evaluation of pilot sites for 1975-76 was in assessing the degree of fidelity with which each pilot site was operating in comparison with the model described in the NWREL EBCE handbooks.

Two checklists were used by NWREL at the beginning and end of the 1975-76 school year to determine the extent to which pilot sites were operating in a manner consistent with the NWREL model of EBCE. One checklist, the EBCE Essential Characteristics Checklist, covers five component areas of the program. These components are that EBCE 1) is an individualized program, 2) is a community-based program, 3) is an experience-based program and is built from the career activities of adults, 4) must have its own identity and be comprehensive and integrated and 5) places a major emphasis on the career development of students. Each component area contains from four to six essential characteristics. These characteristics are rated on a scale of 1 to 5 with the anchor points prespecified. A second checklist, the EBCE Process Checklist, is intended to complement the EBCE Essential Characteristics Checklist and was also used at the beginning and end of the 1975-76 school year.

While the Essential Characteristics Checklist identifies basic policy and philosophical characteristics of an EBCE site, the process checklist is designed to identify variations from the NWREL EBCE handbooks in procedures used in operating an EBCE program. This process checklist consists of four sections: 1) EBCE objectives, 2) management and organization processes, 3) curriculum and instruction processes and 4) student services processes. Each section in turn contains separate items. For example, on the item dealing with student projects the project director and evaluator are asked to check those Life Skills project areas that are a part of the program, to identify whether each project area is required or optional for students and to determine whether each particular project area is designed like that in the EBCE handbook or whether it operates differently. In cases where a process operates differently from the NWREL model a description of the differences and rationale for these differences is obtained.

C. Implementation Findings

The following sections C and D will present an analysis of the pilot site findings across sites organized by the evaluation instruments used. Information about the pilot site implementation of EBCE (Section C) will be followed in Section D by tables displaying 1) the average number of student process outcomes and days absent per pilot site, 2) educational and occupational aspirations of students, 3) Self-Directed Search results, 4) Student Opinion Scale data, 5) analysis of student written projects and products, 6) findings from the Comprehensive Test of Basic Skills and 7) questionnaire results from students, employers, parents and staff. Throughout these two sections of the report the designation of each site has

been disguised to protect the confidentiality of findings by omitting the site names and substituting sequential letters of the alphabet. The same letter represents a different site in different tables. This has been done since the purpose of these tables is not to rate one site in comparison with others but rather to describe certain patterns that may exist across sites.

Ratings by the evaluators on the EBCE Essential Characteristics Checklist for each of the five pilot sites are displayed in Appendix A to this report. The ratings are consistently high for four of the five sites while the fifth site received four low ratings (below 3 on a 5-point scale). The pilot sites rated particularly high on the following dimensions: 1) EBCE is an experience-based program and is built from the career activities of adults, 2) the EBCE programs have their own identity and are comprehensive and integrated and 3) the EBCE programs place a major emphasis on the career development of students. In comparison with the NWREL EBCE model the pilot sites were generally rated lower in providing regularly scheduled employer instructor training/development activities.

The EBCE Process Checklist was completed by each pilot site project director. A tabulated summary of their responses is located in Appendix B. All of the EBCE student outcome objectives contained in the NWREL EBCE handbook were considered appropriate for all students at each of the five pilot sites with only a few exceptions. Two sites felt that a "knowledge of social, governmental and economic issues and trends in the world of work" were applicable only to some but not all of their students. One site felt that the outcome related to students becoming "aware of the level of Basic Skills needed to enter careers of interest and understanding the relationship of that level to their current Basic Skills proficiency" was applicable only to some students.

The staff roles of project director, learning manager and employer relations specialist were used at each of the five sites. Aides were used at four sites, the student coordinator role at three sites, the learning resource specialist at two sites and learning assistant at two sites.

The 13 competencies identified as examples in the NWREL EBCE handbook were used with some or all students in all sites with only a few exceptions. One site had dropped the competencies dealing with "budgeting time and money effectively" "responding appropriately to fire, police and physical health emergencies"; and "operating and maintaining an automobile." New competencies introduced at sites were cooking, basic swimming, basic first aid, using a newspaper, parliamentary procedures, ability to make funeral arrangements and survival swimming.

All ten student projects were used with some or all students at each of the five sites except for one site which did not use the

science preprepared project. That same site required only the critical thinking preprepared project for all students. Four of the five sites expected students to complete ten projects per year while the fifth site required five completed projects. Students and staff at all five sites cooperated in selecting project topics, determining the objectives and activities and evaluating the results.

Career exploration packages were required of all students at all five sites. Each site required students to complete a mimimum of five career explorations per year. Sites were selected jointly by students and staff. The average length of these career explorations at job sites was eight hours for one district, nine hours for three districts and ten hours for one district.

Learning levels at three sites were required of all students and were optional at the other two sites. Students generally spent between four and six weeks on a learning level at employer sites.

Student-written journals were required of students at all five sites. Four of the five sites used them primarily to help students know themselves better and to develop trusting relationships with an adult. Students were required to write journal entries daily at one site and weekly at the other four sites. For a summary of other EBCE processes used by the pilot sites refer to Appendix B.

D. Participant Outcome Findings

In this section student outcome findings across sites will be presented first, followed by questionnaire results from students, employers, parents and staff. Table 5 displays the average number of student explorations, learning levels, skill building levels, projects and competencies completed plus the average number of days absent. For comparison purposes data are also presented for the first-year and second-year project students at the NWREL demonstration site in Tigard, Oregon. Data displayed in Table 5 are based on only those students per site for whom complete pretest and posttest data were available. Except for Site D which had only five students with complete data, the number of students for whom data were analyzed ranged from 14 at one site to 26 at another site. Cross site comparisons are not appropriate because of the differences in student characteristics at the different sites.

Students in all but two sites averaged completing five or more career explorations, which were the minimal target level for the year. The average number of learning levels successfully completed at each site ranged from 0.4 to 3.0. All but Site D and first-year students at Tigard had at least one student successfully complete a skill building level. Students averaged completing over eight projects at each site except for Site B where students were expected to complete only five projects. The average number of days absent

TABLE 5

Average Number of Student Process Outcomes Completed and Days Absent Per Pilot and Demonstration Site

	SITE A		SITE B		SITE C		SITE D		SITE E		TIGARD FIRST YEAR STUDENTS		TIGARD SECOND YEAR STUDENTS	
	MEAN	*S.D.*	*MEAN*	*S.D.*	*MEAN*	*S.D.*	*MEAN*	*S.D.*	*MEAN*	*S.D.*	*MEAN*	*S.D.*	*MEAN*	*S.D.*
Career Explorations	5.32	1.43	10.08	3.10	3.47	1.06	1.20	2.68	5.43	1.09	8.12	3.37	6.43	2.59
Learning Levels	3.00	1.48	2.50	.99	1.20	.56	.40	.89	1.36	1.08	2.24	.90	2.29	.91
Skill Building Levels	.05	.21	.54	.76	.93	.26	0	0	.07	.27	0	0	.29	.47
Projects	8.77	2.52	2.77	1.63	9.20	1.32	8.20	4.60	9.00	1.47	8.65	2.64	10.64	2.56
Competencies	7.50	3.29	2.35	1.52	9.07	4.15	9.20	5.17	6.93	1.00	8.82	3.28	5.43	2.82
Days Absent	10.47	8.71	18.27	12.23	14.33	10.99	11.00	11.38	10.07	4.53	15.35	11.19	16.36	12.80

per site indicated an average attendance rate of 90 to 95 percent.

In Table 6 the expanded standard scores and grade equivalents are shown for the four pilot sites that used the Comprehensive Test of Basic Skills (CTBS). While the growth on the CTBS was generally positive, the gains in reading comprehension were statistically significant for only one pilot site. Educationally significant gains in reading comprehension (at least one month's growth for each month of program participation) were evident for three of the four pilot sites and were evident on arithmetic concepts for one pilot site and on arithmetic applications for two pilot sites. Low test scores for Site B are attributable to the lower grade levels and ability of students enrolled in that project.

Table 7 shows the results of the Self-Directed Search (SDS) for the the two pilot sites that used that instrument on a pretest-posttest basis and for the demonstration site. This standardized instrument was developed by John Holland and his associates at Johns Hopkins University. The SDS is designed to aid in educational and vocational planning. Based on the student's self-perceptions, abilities, background and interests, this instrument assigns the student a summary SDS code. Each student is assigned a primary, secondary and tertiary code, plus scores on other areas. Except for Site A, students showed the greatest interest in occupational characteristics described as social. This profile is described by the test author as a "general preference for activities that entail the manipulation of others to inform, train, develop, cure or enlighten; a dislike of explicit, ordered, systematic activities involving materials, tools or machines." Data collected by Research for Better Schools on students in other EBCE programs and in regular school programs indicate that most high school students score high in this preference area. Students in Site A, which covered grades 9 to 12 and involved many students who were unsuccessful in a regular school program, showed a much stronger preference for the realistic category. This category is described by Holland as a "general preference for activities that entail the explicit, ordered or systematic manipulation of objects, tools, machines and animals; a dislike of educational or therapeutic activities." The SDS results tend to reflect well the general nature of the students at each site.

Significant differences in pre and posttest scores were not expected for the six occupational areas since these factors usually remain stable and an increase in interest in one occupational area often leads to a decrease in another. None of these differences were statistically significant at the .05 level in a multivariate analysis of covariance (using pretests as the covariate) except for an increase in artistic preference at Site A.

The total self-estimates, activities, competencies and occupations scores were anticipated to increase over the year as students

TABLE 6

Pretest and Posttest Means and Grade Equivalents on Subtests of the Comprehensive Test of Basic Skills for Students in NWREL EBCE Pilot and Demonstration Sites

		SITE A		SITE B		SITE C		SITE D		TIGARD FY		TIGARD SY	
CTBS SUBTEST		*MEAN*	*G.E.*	*MEAN*	*G.E.*	*MEAN*	*G.E.*	*MEAN*	*G.E.*	*MEAN*	*G.E.*	*MEAN*	*G.E.*
Reading Comprehension	Pre	592.00	9.8	513.42	7.0	661.2	12.2	690.67	13.6+	599.41	10.0	660.14	12.6
	Post	585.00	9.6	537.15*	7.8	679.4	13.1	702.00	13.6+	644.53	11.8	673.36	13.5
Arithmetic Concepts	Pre	555.00	8.9	508.35	7.6	589.6	10.1	603.87	10.2	611.71	10.5	609.00	10.4
	Post	562.00	9.0	534.88	8.1	573.4	9.6	643.20	12.0	620.24	10.9	610.36	10.5
Arithmetic Applications	Pre	568.00	9.1	516.58	7.4	566.0	9.8	575.33	9.3	601.41	10.1	579.21	9.4
	Post	562.00	8.9	539.08	8.2	564.6	9.8	630.00	11.1	613.24	10.5	587.29	9.6
Language Expression	Pre					641.8	12.5	629.07	11.4				
	Post					647.8	13.0	647.73	12.6				

*=p<.05

TABLE 7

Pretest and Posttest Means and Standard Deviations for Students in NWREL EBCE Pilot and Demonstration Sites on the Self-Directed Search

		SITE A		SITE B		TIGARD FY		TIGARD SY	
OCCUPATIONAL AREAS		*MEAN*	*S.D.*	*MEAN*	*S.D.*	*MEAN*	*S.D.*	*MEAN*	*S.D.*
Realistic	Pre	10.73	4.53	7.18	4.08	6.82	4.69	5.86	4.43
	Post	10.50	4.29	7.09	4.71	5.88	4.91	5.00	4.17
Investigative	Pre	6.65	2.81	4.73	2.64	6.24	2.70	6.50	3.18
	Post	6.92°	3.07	5.82°	2.99	5.29	2.82	6.20	4.07
Artistic	Pre	6.50	2.97	7.82	3.49	8.12	3.22	7.36	3.13
	Post	6.58*	2.98	8.32	3.75	6.76	4.09	6.71	4.05
Social	Pre	8.42	3.62	10.55	3.14	11.53	2.62	10.50	2.98
	Post	8.00	3.68	10.77	3.09	10.24	3.42	10.29	3.12
Enterprising	Pre	5.77	2.52	5.91	2.79	6.00	2.42	5.37	2.92
	Post	5.19	2.91	6.64	4.05	5.29	2.14	5.21	3.07
Conventional	Pre	4.00	2.84	5.73	3.31	6.00	3.57	4.36	2.27
	Post	3.50	2.60	5.68	3.64	4.41	4.33	5.79	4.69
SDS SUMMARY SCORES									
Self-Estimates	Pre	21.31	7.70	24.36	5.72	25.53	6.07	24.43	6.01
	Post	24.23	4.40	26.55	6.69	24.88°	5.16	24.50	5.21
Activities	Pre	25.23	12.70	28.77	10.38	31.76	15.81	33.29	11.47
	Post	25.77	12.97	35.59	12.92	36.88	15.05	34.07	12.45
Competencies	Pre	23.46	12.18	25.27	9.10	28.82	12.90	26.43	12.97
	Post	24.27	13.52	31.36	11.73	33.00	10.66	28.38	11.36
Occupations	Pre	15.85	12.85	15.09	8.53	18.35	10.94	14.21	6.96
	Post	11.46	10.11	23.55	16.27	20.12	14.10	14.36	7.38
Differentiation	Pre	6.27	2.60	5.36	2.57	5.00	2.35	4.71	2.67
	Post	6.19	2.56	5.13**	2.55	6.24°	2.41	5.71	3.77
Consistency	Pre	2.31	.79	2.31	.65	2.06	.83	2.50	.65
	Post	2.46*	.81	2.55*	.60	2.29*	.77	2.50	.65

°=p<.10, *=p<.05, **=p<.01

gained a variety of work experiences and perhaps came to view themselves in a more positive light. Posttest results generally showed an increase in these areas but the changes were not statistically significant.

Increases in differentiation and consistency were hypothesized as a result of students observing and trying out a variety of jobs and learning to discriminate more in what activities they like and dislike.

Students at one pilot site showed a significant decrease in differentiation thus indicating less willingness to discriminate in their preferences among various activities and a stronger interest in multiple occupational areas. At the demonstration site, however, students tended to discriminate better at the end of the school year in their preferences for different occupation-related activities. A statistically significant increase was noted in both pilot sites and in first-year students at the demonstration site in students' preference for occupations and activities that showed consistency according to Holland's model of career preferences. It is likely that second-year students did not demonstrate significant growth on this dimension because their vocational preferences were already high in consistency at the beginning of their second year in EBCE.

Pre and posttest data on the Student Opinion Scale were collected from three pilot sites and from the demonstration site. The Student Opinion Scale is a local name applied to the Psychosocial Maturity Scale (PMS) used to assess growth in nine different areas, many of which are related to the EBCE Life Skills goals. Developed by Dr. Ellen Greenberger and associates at Johns Hopkins University, the PMS is based on biological, psychological and sociological models of maturity. The scale measures ten variables contributing to psychosocial "maturity" and yields ten subscores, a total test score and a measure of the validity of the responses. Individuals respond on a four-point scale from strongly agree to strongly disagree to statements such as, "I believe in working only as hard as I have to." Paraphrased descriptions of the ten variables of psychosocial maturity and the validity scale are given below together with examples of questionnaire items.

1. Work. An individual's standards of competent task performance and capacity to experience pleasure in work are encompassed by the concept of work. (Example: "I can't think of any kind of job that I would like a lot.")

2. Self-Reliance. Items pertaining to the concept of self-reliance may address one or more of three factors: an absence of excessive dependence on others, a sense

of control over one's life and initiative. (Example: "You are probably wrong if your friends are against what you decide.")

3. Identity. The four components of identity are increasing clarity of self-concept, consideration of life goals, internalization of values and self-esteem. (Example: "I change the way I feel and act so often that I sometimes wonder who the 'real' me is.")

4. Communications. Communications involves skills in "sending" or encoding verbal and nonverbal messages, skills in "receiving" or decoding verbal and nonverbal messages and empathy. (Example: "People find it hard to figure me out from what I say.")

5. Role. Knowledge of roles involves both an awareness of obligations inherent in current definitions of major roles and an awareness of priorities that govern the resolution of role conflicts. (Example: "Teachers should not expect as much homework from athletes who have to spend a lot of time at practice.")

6. Trust. Three basic attitudes characterize "enlightened" (credible) trust: general belief in the acceptability of reliance or dependency on others, rejection of simplistic views of the "goodness" or "badness" of human nature and recognition of individual and situational factors that limit trustworthiness. (Example: "If people are picked in a fair way to be on a trial jury, they are sure to reach a fair decision.")

7. Social Commitment. The dimensions of social commitment are feelings of "community" with others, willingness to modify or relinquish personal goals in the interest of social goals, readiness to form alliances with others to promote social goals and investment of long-term goals. (Example: "It's not really my problem if my neighbors are in trouble and need help.")

8. Tolerance. Tolerance involves the person's willingness to interact with individuals and groups who differ from the norm and an ability to be sensitive to their rights. It also involves an awareness of the costs and benefits of tolerance. (Example: "If I had a choice, I would prefer a blood transfusion from a person of the same skin color as mine.")

9. Change. The change variable includes general openness to sociopolitical change and recognition of the costs of both the status quo and change. (Example: "If everyone is to be really equal, some people will have fewer advantages than they have now.")

10. Social Desirability. (Validity Scale) This variable reflects the tendency to respond in the socially acceptable way. It is not a factor of "maturity" but serves instead as a validity check on responses to other items on the instrument. (Example: "I have never told a lie.")

Through the use of a factor analysis, the developers of the PMS have designed a way of combining the scale scores to arrive at three intermediate scales. These intermediate scales, more reliable than the original scales, provide a useful level of analysis to detect gross attitudinal changes. These scales include:

1. Individual Adequacy. Consists of the work, self-reliance and identity scales.

2. Interpersonal Communications. Consists of the communication, role and trust scales.

3. Social Adequacy. Consists of the social commitment, tolerance and change scales.

Pre and posttest means and standard deviations for students in three pilot sites using this instrument and for students in the demonstration site are shown in Table 8.

Small positive gains were generally shown by students in each group. The positive gains were statistically significant at the .05 level on four of the nine basic subscales for Pilot Site A. Second-year students at the demonstration site showed a statistically significant increase in scores on the work and the roles scales and a significant decrease on the social commitment, change and tolerance scales. Part of these changes may be attributable to the fact that students at Site A were generally low in each of these areas at pretest time whereas those in their second year at the demonstration site were generally high already at pretest time. It is also interesting to note in Table 8 that three of the five groups showed a significant gain on the openness to change and on the tolerance scales.

Changes were recorded in educational aspirations and in occupational aspirations of students over the year in two pilot sites and for first year students at the demonstration site. Changes in educational aspirations were obtained by asking students on the background questionnaire and end-of-year questionnaire to select the highest level of education to which they aspired. These were coded on a six-point scale with "1" indicating "don't plan to finish high school" and "6" indicating "graduate or professional training beyond college." Changes in occupational aspirations were determined by asking for the two primary occupational goals of each student at the beginning and end of the program year. These occupational goals were converted to Hollingshead occupational codes which were then

TABLE 8

Prestest and Posttest Means and Standard Deviations for Students in NWREL EBCE Pilot and Demonstration Sites on the Student Opinion Scale

		SITE A		SITE B		SITE C		TIGARD FY		TIGARD SY	
INDIVIDUAL SUBSCALES		*MEAN*	*S.D.*	*MEAN*	*S.D.*	*MEAN*	*S.D.*	*MEAN*	*S.D.*	*MEAN*	*S.D.*
Self Reliance	Pre	26.81	4.42	32.68	5.38	30.87	4.16	31.00	6.03	31.00	5.63
	Post	28.31**	3.40	31.77	6.09	32.27	4.38	32.47	6.19	34.00°	4.74
Work	Pre	25.73	5.58	27.91	5.50	29.00	4.38	26.24	5.68	25.57	6.94
	Post	24.92°	5.27	28.32	5.91	27.60	4.39	28.59	5.14	29.07*	5.90
Identity	Pre	24.35	6.20	29.82	5.47	28.93	4.51	27.65	5.43	26.57	7.61
	Post	25.54	5.00	29.91	7.28	29.87	4.82	29.94	6.66	31.50	6.68
Communications	Pre	21.08	5.10	25.59	3.78	24.93	3.67	27.59	5.85	25.50	5.63
	Post	22.2	4.90	27.13	6.38	26.87	5.80	29.18	6.55	29.36	6.23
Roles	Pre	31.46	5.54	33.09	4.72	33.27	4.17	31.24	4.85	34.36	3.27
	Post	31.50	5.59	29.55	6.49	33.27	4.77	32.41	4.95	35.14*	2.91
Trust	Pre	27.04	4.10	28.32	4.25	24.40	4.72	28.29	3.51	30.64	3.69
	Post	27.46**	3.87	28.18	3.66	26.53	6.03	29.88	3.89	30.86°	3.46
Social Commitment	Pre	30.27	5.40	33.59	3.49	32.60	5.05	33.00	5.00	35.43	4.08
	Post	31.15	5.08	32.86	5.51	32.27	4.74	34.59	4.62	33.86*	5.14
Change	Pre	32.04	5.35	32.55	4.98	36.60	3.83	34.06	5.88	38.14	3.86
	Post	32.12*	4.87	32.41	5.96	35.07*	5.46	36.00**	3.67	37.57*	3.08
Tolerance	Pre	34.62	5.63	35.64	6.02	36.60	4.78	36.24	5.54	37.71	3.15
	Post	34.77*	5.08	34.32	6.45	37.53*	4.76	37.76*	3.70	36.64*	2.21
Social Desirability	Pre	18.73	3.82	21.05	3.61	21.40	3.54	22.35	3.14	19.65	4.34
	Post	19.31°	4.04	22.18*	3.26	20.87*	3.31	21.29	4.13	20.07	4.04
SUMMARY SCALES											
Individual Adequacy	Pre	76.88	12.38	90.41	14.61	88.80	9.54	84.88	13.07	83.14	18.79
	Post	78.77*	9.98	90.00	17.76	89.73	11.08	91.00	14.43	94.57°	15.52
Interpersonal Communications	Pre	79.58	10.18	87.00	10.32	85.60	9.76	87.12	11.38	90.50	9.98
	Post	81.23**	7.09	84.86	14.02	86.67°	11.79	91.47	11.23	95.36	9.15
Social Adequacy	Pre	96.92	14.10	101.77	10.14	105.80	10.53	103.29	14.49	111.29	8.26
	Post	98.04*	12.34	99.59	15.68	105.87	13.43	108.35**	8.63	108:07**	7.71

°=p<.10, *=p<.05, **=p<.01

averaged to get an average occupational status level for each time period.

Results of the pre and post classifications of educational and occupational aspiration levels are displayed in Table 9. Students in their first year at the demonstration site showed a statistically significant change indicating an increased interest in obtaining more advanced training. Students in both pilot sites showed a significant change indicating an increased interest in occupations that were lower in socioeconomic status. Scores were relatively homogeneous across sites.

Student-Written Projects and Products

In addition to the evaluation data collected and reported for all project students, the NWREL EBCE evaluation unit also requested that EBCE sites send copies of all student-written Life Skills projects and resulting products (reports) for a random sample of five students. The selection of these five students was done at NWREL using the total program roster and a table of random numbers. Several of the initially selected students dropped out of the program and alternate student names drawn by NWREL were used as replacements. Student projects and written products were collected and analyzed because these projects are one of the major learning strategies used in EBCE to help integrate student activities at the learning center with those at employer and community sites. The evaluators felt that a close evaluation of these student projects and products, while time-consuming, could be one of the best ways to assess the curriculum aspects of EBCE.

The student Life Skills projects produced by the sampled students were read and rated by a NWREL staff member using a Student Projects Evaluation Form. The form contained twelve categories for rating the projects and five categories for rating the written products. Each rating category contained a nine-point scale and a place for written evaluator comments. A tabulated copy of the individual and combined project evaluation forms is located in Appendix D.

Prior to a final rating of each of these projects and products the reviewer examined the test scores of these students and the evaluator's interview results to get a feeling for the ability level of each student.

Before rating these projects the reviewer, an evaluator and a recent Tigard $(CE)_2$ learning manager independently reviewed and rated four student projects from another EBCE pilot site and then discussed their findings. In cases where a discrepancy of more than two points on an item occurred, the raters described the rationale for their choices and their interpretation of what was meant by each scale. The discussion helped to clarify the meaning of each scale.

TABLE 9

Pretest and Posttest Means and Standard Deviations for Students in NWREL EBCE Pilot and Demonstration Sites on Educational Aspirations and Occupational Aspirations

		Site A		Site B		Tigard FY	
		M	S.D.	M	S.D.	M	S.D.
Educational Aspirations	Pre	3.00	1.23	3.47	1.73	3.35	1.27
	Post	3.45	1.53	3.33	1.29	3.71*	.92
Occupational Aspirations	Pre	3.14	.93	3.30	1.05	3.76	1.90
	Post	3.34*	1.08	3.60*	1.56	2.97	1.48

*=$p < .05$

A total of 39 preprepared projects and 42 individually negotiated projects were rated by the NWREL rater. The ratings for most scales varied widely across student projects. Student projects were rated the highest in 1) capitalizing on student interest, 2) productive use of the employer or community resource site (although these sites were not used for 23 student projects), 3) containing activities appropriate to the student's ability, 4) the way in which the project activities were connected in a logical manner and 5) the experience-based nature of the activities. Student projects were rated the lowest in 1) meeting the specific objectives of the particular Life Skills area in which they were written, 2) relationship with career development objectives and, 3) comprehensiveness. In evaluating the students' products (generally written reports resulting from the projects), it was judged that most products communicated well and had at least adequate technical quality (e.g., legibility and grammar) relative to the student's ability.

Student End-of-Year Questionnaire

A student questionnaire developed by NWREL was completed by students at the demonstration site and at all five pilot sites in May 1976. The purpose of the instrument was to obtain end-of-year data on certain questions asked of the same students at the beginning of the year, to assess student knowledge of job trends and related information and to collect data on student reflections about their school/(CE)$_2$ experiences. A tabulation of responses to the questionnaires is displayed in Appendix C. Since the number of completed responses from the Billings pilot site was small, the percentage of students selecting each response is not shown in Appendix C for that site.

Approximately 30 to 60 percent of the students using the NWREL model of EBCE plan to work full time one year after completing high school. Except for one site which included ninth and tenth grade students in the program, seven percent or less of the students at any site indicated that they had no idea what they planned to do one year after completing high school. The percentage of students planning to pursue some form of postsecondary education ranged from 46 for two groups to 94 for another group.

Students were asked to identify two jobs that they might like to hold after completing their education. Approximately 97 percent of the EBCE students across the sites indicated they had either worked or observed at one or both of the two preferred jobs that they listed. All but two percent of the students indicated they had at least some idea of the steps necessary to prepare for and enter the job they most preferred and a third of the students indicated the steps were quite clear in their mind.

When asked what influenced their choice of potential careers the most frequent responses selected by students in each of the EBCE

sites was their experience in observing or trying out jobs. The second most frequent response selected was talking with people who work at the jobs. Reading about jobs or talking with teachers, relatives and friends about career choices were far less important in influencing these students' career preferences.

Approximately 65 percent of the EBCE students were able to identify jobs on the end-of-year questionnaire that seemed interesting last year but no longer matched their interests or abilities. Experience in observing or trying out the job(s) was again the most frequent reason selected for changing career plans.

The EBCE students rated the program high in helping them attain the program goals. The goal areas in which they reported the program least effective (a mean rating of between 3 and 4 on each site on a 5-point scale) were in understanding the role of science in our society, understanding the democratic process and improving reading and math skills. Students rated EBCE highest in helping them learn to solve problems logically, understand more about themselves, get along with others, fit their interests and abilities with potential careers, identify what to look at when considering a job and feel prepared to accept adult responsibilities (each received a mean rating of more than 4 by each site on a 5-point scale). In response to a question asking students, "How would you rate the overall quality of your EBCE program?" students in two sites gave it a mean rating of between 4 and 4.5 (on a 5-point scale) while those at the demonstration site and in two other sites gave it a mean rating of over 4.5. In summary, the students felt well satisfied with their EBCE experience.

Parent Questionnaire

The Parent Opinion Survey was used with parents in three NWREL pilot sites. The results are reported separately in each of the pilot site reports. Since the number of parents responding to the survey at each site was small (9, 20 and 17) no separate tabulation by pilot site is contained in this report. Because they surveys were administered at the end of the program year, no formal followup was made to obtain responses from those parents who did not respond to the first request from the pilot sites. Across the three sites the average response rate was 40 percent.

Responses to some of the key questions on the survey are discussed here. Parents were asked how well they felt the EBCE program compares overall with the past school experiences of their daughter or son. On a 5-point rating scale from much worse (1) to much better (5) only one of the 46 parents indicated EBCE was much worse, 5 indicated the experiences were about the same, 13 indicated EBCE was better and 27 indicated EBCE was much better. In comparison with past experiences in regular classes 85 percent of the parents felt

that their daughter or son was more motivated to learn in the EBCE program and only one parent felt his or her child was less motivated to learn.

One of the most interesting results of the parent survey was the effect the program appears to have on increasing the communication between young people and their parents. Eleven parents reported that before their son or daughter entered EBCE their child almost never talked with them about what was going on in regular classes and nine parents said their child talked with them almost daily. After their children were in EBCE for a year, 22 of the parents reported that their children talked almost daily about what was going on in the EBCE program and none of the parents reported that their children almost never talked about EBCE. The same five-point scale and bipolar statements were used in each of these questions. A statistically significant increase was found in children talking with their parents about EBCE as compared with talking about what was going on in regular classes the prior year ($x^2 = 22.62$, $df = 4$, $p. < .01$).

Many parents saw positive changes in their son or daughter that they felt might be a result of participating in EBCE. Changes identified by over half the parents in each of the three pilot sites were greater maturity or self direction, improved self confidence and/or better understanding of jobs. No negative changes were reported by parents at one site. Several parents at the other two sites felt that EBCE might have caused their son or daughter to become less interested in education.

Employer Questionnaire

The Employer Opinion Survey was used with EBCE employer instructors in three pilot sites in May 1976. Questionnaires were completed by 41, 32 and 38 employers respectively for an average response rate of 57 percent. Employer instructors reported spending about eight hours a week working with students on exploration levels and approximately 13 hours a week with students on learning levels. While students were on exploration levels, employers most frequently indicated that they spent time talking about job opportunities, talking about activities at their site and evaluating individual students' assignments. These same activities continued during learning levels. Over 90 percent of the employers responding to the survey at each of the three projects felt the program staff was providing them with enough information to help them direct student activities at their site.

Approximately 95 percent of the employers indicated that they would be willing to recommend to a potential employer or resource person that he or she also become involved with the EBCE program. Over half of the employers felt that employees at their site

benefited from participation with EBCE by their increased awareness of youth. About 20 percent of the surveyed employers also felt that participation in EBCE increased their interest in their own work.

Employers saw as the greatest strengths of EBCE that students learn about a variety of careers and about real life situations and that they gain experience in working with adults. A weakness identified (by approximately 30 percent of the employers at each of the three employer sites) was that some students cannot handle the freedom provided by the program. For a tabulation of responses to each question on the Employer Opinion Survey, see Appendix E.

CHAPTER V. EVALUATION OF SEPARATE EBCE MATERIALS

A. Description of the Materials

Stand-alone packages of staff and student materials have been developed and pilot tested. These materials are available without training and describe how individual EBCE strategies can be used in non-EBCE settings. Three such packages were tested this year:

- The Career Exploration Process. Staff and student guides for implementing the career exploration process EBCE used to organize each student's first experiences at community sites into a logical process of investigation.
- Student Competencies. Staff and student guides describing the major coping skills identified by Tigard, Oregon, citizens as necessary for adult living in their community and how volunteer community certifiers assess student competence in these areas. The staff guide specifies a process for developing competencies appropriate in any community.
- Student Career Journal. Staff and student guides designed to help secondary students integrate life experiences into a career context with the help of a staff correspondent.

In addition to these stand-alone packages, the EBCE evaluation unit also evaluated four completed EBCE Handbooks and the draft of the fifth handbook on Program Evaluation.

The four completed handbooks describe from start to finish the processes for planning and operating the total EBCE program, with practical suggestions on procedures to follow and adaptations to make. The four handbooks are:

- Management & Organization. Suggestions for program planning, staffing, management and community relations.
- Curriculum & Instruction. Explanations of the content and processes of student learning in EBCE and the resources a community-based program makes available to students.
- Employer/Community Resources. Suggestions for recruiting, developing and using community sites to support student learning.
- Student Services. Considerations and procedures for recruiting students, orienting them to the program,

Responses to a questionnaire about the NWREL EBCE handbooks as completed by the project directors from the five NWREL EBCE pilot sites were tabulated. According to these responses project directors used the handbooks anywhere from daily to only once or twice while employer resource specialists used them from 3-6 times to daily. Learning managers tended to use the handbooks either weekly or monthly while the one learning resource specialist used the handbooks 3-6 times.

For training purposes, the Employer/Community Resources Handbook was seen as the most effective with the Student Services Handbook as least effective. For reference purposes, both the Curriculum and Instruction and Employer/Community Resources Handbooks were seen as "Very Effective," with the Student Services Handbook again least effective. However, no handbook received a mean rating higher than 2 on a reversed scale of 1 to 5 with 1 as the highest score. This means that all handbooks were viewed as effective tools for training and reference.

As for handbook uses, reference and implementation were the most common uses with staff orientation and inservice training receiving less usage. The handbooks were used heavily at the beginning of the year, on a weekly basis during the year and somewhat more heavily at the end of the year. All users found the single index to be "extremely useful" except one who "didn't know it existed."

It was generally felt that the project director should have the Management and Organization Handbook, the employer resource specialist should have the Employer/Community Resources Handbook and the learning manager should have the Curriculum and Instruction Handbook. It was also felt that these latter two handbooks should be available for general staff usage.

recording their progress and supporting and guiding their growth.

B. Evaluation Procedures

An EBCE Materials Packet Questionnaire was developed for each of the three stand-alone packets and mailed to each of 113 districts that had purchased one or more sets of materials in March 1976. A followup questionnaire and letter were sent in May to those districts that had not returned the initial questionnaire. The Student Competencies Packet questionnaires were returned by 25 districts, the Career Exploration Process questionnaires by 27 districts and the Student Career Journal questionnaires by 28 districts. These districts represented 16 states for each category of questionnaire.

The completed EBCE handbooks had been critiqued as draft copies during the 1974-75 school year by the Tigard $(CE)_2$ staff and other reviewers around the country. A revised copy of these handbooks was produced based on the critiques of the draft copies. In June 1976 an EBCE Handbooks Questionnaire was completed by the project directors of each of the NWREL EBCE pilot sites to evaluate the revised handbooks.

C. Evaluation Results

The tabulations of the three stand-alone packet questionnaires are contained in Appendix F. Of the 24 to 28 persons responding to each questionnaire, only 12 percent were teachers. About 40 percent were career/vocational education directors and 25 percent were other types of administrators. The staff guides for all three packets were rated high. Between 96 and 100 percent of the respondents to each questionnaire felt that the packaging allowed for an appropriate quantity of materials.

Three-quarters of the respondents rated the three packets as useful or very useful to their students. Over half of the respondents felt it would be easy to implement each of the packets, and two-thirds felt the packets fit in well with their other instructional activities. When asked if they have already modified or plan to modify the materials, 27 percent indicated modifications to the Career Journal, 32 percent to the Competencies, and 41 percent to the Career Exploration Process. This supports the notion that when such materials are made available to educators, there is often a desire to modify them to fit their local needs. Only four percent of the respondents indicated that they did not plan to use the Student Career Journal or the Student Career Exploration Process. Seventeen percent indicated they did not plan to use the Competencies.

APPENDICES

FY 76 Final Evaluation Report

NWREL Experience-Based Career Education Program

APPENDIX A

Pilot Site Ratings on the EBCE Essential Characteristics Checklist

(Ratings in the left hand margin are those given by the evaluators for each pilot site A to E. Ratings are on a five-point scale with the anchor points indicated for each scale.)

Site Ratings (for sites A to E)

A B C D E

I. EBCE is an individualized program:

A. Ongoing assessment of student needs, interests and abilities in Basic Skills, Life Skills and Career Development:

4 5 4 4 4

1 There is no ongoing assessment in two or more of these areas.

5 Student needs, interests and abilities are continually assessed.

B. Participation in assessment:

4 5 4 4 2

1 Students play a passive role in the assessment process.

5 Students play an active and involved role in the assessment process.

C. Individual negotiation:

4 4 4 3 5

1 All projects are preassigned and not subject to negotiation.

5 All projects allow for negotiation between student and staff.

D. Integration

4 5 4 4 5

1 There is no formalized, individual assessment and/or accountability.

5 Individual assessment and accountability are integrated with program learning strategies when learning plans are negotiated.

Site Ratings

A B C D E

E. Accountability standards ("a set of learning and behavioral expectations for students as members of the EBCE 'community'"):

4 4 4 4 3

1 There are few accountability standards.

5 Accountability standards give the student the necessary flexibility to meet basic program expectations.

II. EBCE is a community-based program.

A. Community input into program planning and operation:

4 3 4 4 2

1 No mechanism currently exists.

5 A systematic mechanism exists for procuring and utilizing community input.

B. Role of the program advisory board:

5 3 5 3 2

1 There is no program advisory board.

5 The program advisory board takes an active role in direction of the program by providing program input.

C. Community members and student learning:

5 5 5 5 4

1 Community members are not involved in student learning activities.

5 Community members serve as resource instructors and certifiers of student learning.

D. Provision for community instructor training/development activities:

2 2 3 5 3

1 There are no community instructor training/development activities

5 There are at least four, regularly scheduled community instructor training/development activities.

Site Ratings

A B C D E

III. EBCE is an experience-based program and is built from the career activities of adults.

A. Mode of learning:

1 Students are instructed in a passive or school-like mode.

5 Active, realistic lifelike learning activities are provided for all students.

5 5 5 5 5

B. Student activity:

1 Students are assigned activities and schedules.

5 Students have the responsibility for budgeting their time and managing their daily activities.

5 5 4 5 1

C. Utilization of resources:

1 Secondary resources (textbooks, courses) are given priority.

5 Primary resources (people, institutions such as libraries and museums, events) are given priority.

4 5 4 4 4

D. Community-learning activities:

1 Adult activities in the community are not utilized in student learning.

5 Adult activities in the community serve as the primary context for student learning.

5 5 5 4 5

E. Reference population:

1 Adolescent peers and school work are the primary referent.

5 Adults in the world of work are the primary referent.

4 5 5 3 5

Site Ratings

A B C D E

F. Community learning potential:

1 No analysis is made of the learning potential of the local community.

5 5 5 4 5

5 There is systematic analysis that enables staff and students to take full advantage of the learning potential of the local community.

IV. EBCE must have its own identity and must be comprehensive and integrated.

A. Program requirements and processes:

1 Regular high school requirements and processes are used to determine student learning plans.

4 5 5 5 5

5 EBCE program requirements and processes determine student learning plans.

B. Program completion requirements:

1 Program completion requirements are vague, unspecified or not differentiated from the regular high school requirements.

4 5 4 5 5

5 Program completion requirements are clearly defined, differentiated from and consistent with program goals and local requirements.

C. Curriculum:

1 The curriculum structure includes experiences in either one or none of the following areas: Basic Skills, Life Skills, Career Development.

5 5 5 5 5

5 The curriculum structure includes experiences in all of the above areas.

Site Ratings

A B C D E

D. Survival competencies:

1 There are no performance-based survival competencies.

5 There are at least ten performance-based survival competencies necessary for coping in life and modern society.

5 5 5 5 5

E. Interrelatedness of curriculum areas and student learning:

1 Disciplines are emphasized separately.

5 Emphasis is on interrelated curriculum areas and this is demonstrated by the student learning activities.

5 5 4 4 5

V. The EBCE program places a major emphasis on the career development of students.

A. Types of community learning situations:

1 There are no employer/community learning sites.

5 Provision is made for different types and levels of learning situations at employer/community sites.

5 5 5 5 5

B. Emphasis at learning sites:

1 Students are paid for their contributions on employer/community sites.

5 Students are on employer/community sites for learning about careers, not earning money.

5 5 5 5 4

Site Ratings

A B C D E

C. Career decision making:

4 5 4 4 5

1 Students are not encouraged to improve their career decision-making process.

5 Students are required to gather information about themselves and the world of work and apply this information in career decision making.

D. Reflections on student experiences:

3 5 3 4 3

1 There are no requirements towards self-evaluation.

5 Students are encouraged to reflect on experiences and evaluate their own strengths and weaknesses and progress.

APPENDIX B

NWREL EBCE Process Checklist Findings for Pilot Sites

This checklist is intended as an instrument to identify areas in which pilot sites and market demand sites are consistent with or different from the NWREL EBCE operational model. Deviations from NWREL procedures are viewed here from a neutral perspective in that certain deviations may produce different results than those described in the NWREL EBCE handbooks. A description of what deviations occur, their reasons and their results is essential for an understanding of the EBCE implementation effort.

This process checklist is designed to identify deviations in procedures used in operating an EBCE program and complements the EBCE Essential Characteristics Checklist, which identifies basic philosophical and policy characteristics of EBCE sites. The checklist has four sections:

1. EBCE objectives
2. Management and organization processes
3. Curriculum and instruction processes
4. Student service processes

For each item in the checklist, the project administrator is requested to identify whether the item applies to all students (or staff, employers, etc.), some or none, and also to identify any ways in which the process operates differently than at the demonstration site.

EBCE PROCESS CHECKLIST

Site _____

Respondent _____

Observer _____ Date _____

I. OBJECTIVES

For each objective listed below please check whether it applies to all of your EBCE students, some or none. Also list any additional student outcomes that your project may have. (Please note that the Life Skills curriculum area is not included here because it is addressed in Section III B.)

	USED WITH:		
	All Students	*Some Students*	*No Students*
Career Development			
1. Students will increase their knowledge of their own aptitudes, interests and abilities and apply this understanding to their potential career interests.	5*		
2. Students will increase their knowledge of social, governmental and economic issues and trends in the world of work.	3	2	
3. Students will develop the general skills of job finding, job application, on-the-job negotiation and dependability necessary in daily work interactions.	5		
4. Students will analyze potential careers for financial and psychological inducements, preparation needs and preparation programs available.	5		

*Numbers shown refer to the number of pilot sites (out of 5) responding in each category.

	USED WITH: All Students	Some Students	No Students
Basic Skills			
5. Students will be able to perform applied skills tasks related to careers of interest to them.	5		
6. Students will improve in their performance level of Basic Skills (reading, writing, oral communication and mathematics).	5		
7. Students will become aware of the level of Basic Skills needed to enter careers of interest to them and will understand the relationship of that level to their current Basic Skills proficiency.	4	1	
8. Students will demonstrate an increased willingness to apply Basic Skills to work tasks and to avocational interests.	5		
Other Outcomes			
9. Students will broaden the range of sources they use (people, events, institutions, laws, books, etc.) in gathering information for work and decision making.	5		
10. Students will demonstrate the ability to conduct conversation with an adult that reveals the student's self-confidence and understanding of the other person's message and feelings.	5		

	USED WITH: All Students	Some Students	No Students
11. Students will demonstrate an increase in self-initiated behaviors and in assuming responsibility for carrying out and evaluating tasks which they agree to complete.			
12. Students will demonstrate an increase in behaviors that reveal a tolerance for people and institutions having different values, ideas or background than themselves; an openness to change and a willingness to trust others when circumstances warrant.	4		1
13. Students will include data from their total sensory system as part of their input into their decision-making processes.	5		
14. Students will be and feel better prepared to assume imminent adult responsibilities and relationships.	5		
15. Students who select a career area to pursue will acquire specific job skills while at employer sites related to their career areas.	5		
16. Other outcomes *(please list)*			

II. MANAGEMENT AND ORGANIZATION PROCESSES

Please check the appropriate response that describes the current status of your project on each of the following dimensions.

1. Has the district school board approved the project?

   Approved in writing 5 . Verbally approved Not approved

2. Has the state department of education approved the project?

   Approved in writing 5 . Verbally approved Not approved

3. Does the project meet all legal and fair labor practice requirements?

   Yes 5 Meets most requirements No

   (If you select "meets most requirements" or "no," please explain.)

4. Are the following staff roles being used? *(Check those roles actually defined and used.)*

Project director	5	Student coordinator	3
Learning manager	5	Learning assistant	2
Employer relations specialist	5	Aides	4
Learning resource	2	Others *(list)*	

III. CURRICULUM AND INSTRUCTION PROCESSES

A. Competencies

Of the following competencies check those, if any, that are part of your program and indicate if they are being certified in the same manner as at the demonstration site. List any competencies your site may have added. If your site uses competencies differently than as described on pages 331-407 of the NWREL EBCE Curriculum & Instruction handbook, please explain the differences.

	Required	Optional	Used Differently Than in Handbooks	Not Used
1. Transact business on a credit basis	5			
2. Maintain a checking account	5			
3. Provide adequate insurance for self, family and possessions	5			
4. File state and federal income tax	4	1		
5. Budget time and money effectively	4			1
6. Maintain the best physical health and make appropriate use of leisure time	4	1		
7. Respond appropriately to fire, police and physical health emergencies	4			1
8. Participate in the electoral process	5			
9. Understand the basic structure and function of local, state and federal government	5			
10. Explain own legal rights and responsibilities	5			
11. Make appropriate use of public agencies	5			
12. M[illegible] application for [illegible]oyment and s[illegible]ssfully hold j[illegible]	5			

	Required	Optional	Used Differently Than in Handbooks	Not Used
13. Operate and maintain an automobile	3	1		1
14. Other competencies (please list)				
Cooking	1			
Obtain basic swimming certificate	1			
Demonstrate basic first aid	1			
Read and use a newspaper	1			
Parliamentary procedures		1		
Funeral arrangements		1		
Survival swimming		1		

B. Student Projects

1. *Check those projects, if any, that are part of your program. List any student projects your site may have added. If your site uses student projects differently than described on pages 189-273 of the NWREL EBCE Curriculum & Instruction handbook, please explain the differences.*

	Required	Optional	Used Differently Than in Handbooks	Not Used
1. Critical thinking preprepared project	5			
2. Critical thinking individual project	4	1		
3. Science preprepared project	3	1		1
4. Science individual project	4	1		
5. Personal/social development preprepared project	3	2		

	Required	Optional	Used Differently Than in Handbooks	Not Used
6. Personal/social development individual project	4	1		
7. Functional citizenship preprepared project	3	2		
8. Functional citizenship individual project	4	1		
9. Creative development preprepared project	3	2		
10. Creative development individual project	4	1		
11. Others _____ _____ _____				

2. How many projects is each student expected to complete each year?
(Four sites require ten projects; one site requires five projects)

3. On individually prepared Life Skills projects, who generally does the following? *(Circle responses that apply).*:

1. Selects the topics	Students	Staff (Both)	5
2. Determines the objectives and activities	Students	Staff (Both)	5
3. Evaluates the results	Students	Staff (Both)	5

C. Exploration Package

1. Are the exploration packages--

Required of all students 5

Required of some students

Used differently than described on pages 108-185 of the NWREL EBCE Curriculum & Instruction handbook. If so, please explain the differences.

2. How many explorations, if any, are required of students in your program?

(All five sites require five explorations)

3. Who selects the exploration sites for an individual student?

EBCE staff

The student

Staff and student jointly 5

Other *(please specify)*

4. What is the average length of each exploration in hours?

(One site listed eight hours; three sites listed nine hours and one site listed ten hours)

D. Learning Level Process

1. Are learning levels--

Required of all students 3

Required of some students

Used differently than described on pages 277-327 of the NWREL EBCE Curriculum & Instruction handbook. If so, please explain the differences.

Not required 1

(One site did not respond to this question

2. How many learning level experiences, if any, are required of students in your program?

(Two sites reported no specific number, two sites reported no learning level experience required, one site reported one learning level experience required)

3. Approximately what proportion of time do students spend working on learning levels at employer sites?

(Three sites reported 50%, one site reported 4 weeks (2-3 hours per day), one site reported six weeks and one site reported two-thirds of the program year)

E. Student Journals

1. What are the primary purposes served by the journals?

   Analyzing and integrating career awareness information 1

   Developing communication skills 1

   Helping students know themselves better 4

   Developing trust relationships with an adult 4

2. Are student journals--

   Required of all students 5

   Required of some students

   Used differently than described on pages 411-451 of the Curriculum & Instruction handbook. If so, please explain the differences.

3. How often are students required to write journal entries?

   (Four sites reported weekly; one site reported daily)

4. How often are students required to turn in their journals?

   (All five sites reported weekly)

F. Employer Seminars

1. Approximately how many seminars with employers or community resource people have you held for students or do you plan to hold this school year?

   (One site reported one, one site reported two, one site reported three, one site reported four and one site reported nine)

G. Specific Curriculum Materials

Do students in your program use the following materials?

	USED BY: All Students	Some Students	No Students
1. Individualized Learning for Adults (ILA) Basic Skills materials			5
2. Career Information System (CIS)		2	3

	USED BY: All Students	Some Students	No Students
3. Other materials (please specify)			
SRA Basic Skills materials			1
Locally created Basic Skills materials	1		
Spectrum math series			1
Sounder reading program			1
Competencies package			1
VAST			1
District Career Education materials			1
Occupational Outlook Handbook			1

H. Program Completion Requirements

1. Does your project have written program completion requirements that are clearly defined? Yes 5 No 0

2. If yes, are the requirements like those described on pages 52-53 of the NWREL EBCE Curriculum & Instruction handbook?

Yes 4 No 1

IV. STUDENT SERVICES

A. Student Recruitment

1. Has student recruitment been aimed at a cross section of local high school students? Yes 4 No 1

2. What recruitment strategies were used?

- *Class meeting*
- *Programs at the high school*
- *A recruiter table was set up in the school library*
- *Using students, carefully selected, is the only really effective strategy*
- *Referrals from high school counselors*

3. What types of students actually entered the program? *(Indicate only if different from type of student recruited.)*

- Students with the widest possible range of ability and attitudes
- School dropouts

B. Classes

1. Are students allowed to take classes at the local school?

Yes *5* No *0*

At community colleges or other institutions?

Yes *2* No *2*

(One site did not respond to this question)

2. Approximately how many students, if any, are currently taking classes?

(One site reported eleven, one site reported nine, two sites reported six and one site reported three)

What types of classes?

(Sites reported classes in English literature, band, drill team, French, history, art, chorus and agriculture)

C. Guidance

1. Is the guidance function shared by all professional staff members?

Yes *5* No *0*

2. Do staff members conduct student staffing sessions regularly to discuss the progress of each student? Yes *5* No *0*

D. Accountability System

1. Does your project utilize a student accountability system with clearly defined expectations and consequences?

   Yes 5 No ___

2. If yes, does your accountability system work like that described on pages 77-91 of the Curriculum & Instruction handbook?

   Yes 4 No 1

   If no, please describe the differences.

   - *Somewhat different because of individual interpretation*
   - *We consider individual needs and problems*

E. Program Year Action Zones

1. How many program year action zones for students are utilized by your project?

   (Two sites reported ten, two sites reported eight and one site does not use program year action zones).

2. If you have action zones, are they organized like those described on pages 81-84 of the NWREL EBCE Curriculum & Instruction handbook?

   Yes 3 No 2

F. Assessment Forms

Listed below are a number of EBCE forms or instruments sometimes used. Please indicate which forms are required, optional or not used. Also indicate if they are revised or different from those developed or used by NWREL.

	Used by All	*Used by Some*	*Not Used*	*Revised or Different from the Handbook*
1. CTBS Reading & Arithmetic Subtests (C:27,54)*	4		1	

*This form is shown or discussed in the designated NWREL EBCE handbook on these pages. (C = Curriculum & Instruction; S = Student Services)

		Used by All	Used by Some	Not Used	Revised or Different from the Handbook
2.	Basic Skills Prescription Pad (C:635)	1	1	3	
3.	Self Directed Search (C:116,145,640-41)	2	2	1	
4.	PSM (Student Opinion Scale)	3		2	
5.	Semantic Differential	2		3	
6.	Goal-Directed Student Ratings (by staff)	1		2	1
7.	Parent Opinion Survey	3		1	1
8.	Employer Opinion Survey	3		1	1
9.	Student Application Form (S:69-75)	5			2
10.	Staff Questionnaire	4		1	
11.	End-of-Year Student Questionnaire	5			
12.	Learning Site Analysis Form (C:72-75)	3	1		2
13.	Skill Development Records (S:108-109)	2	1	2	
14.	Student Performance Review (by employers) (S:112-113)	3		2	
15.	Student Evaluation of Learning Site (S:110-111)	2	1	2	
16.	EBCE Record of Student Performance (S:265-297) (Portfolio)	3	1		1
17.	EBCE Student Experience Record (S:102-104)	4			1

	Used by All	Used by Some	Not Used	Revised or Different from the Handbook
18. Weekly Time Reports (S:90-91)	4			1
19. Student Profile Sheet (S:98-99)	3		1	1
20. Accountability Write-Up Form (S:118-119)	3	1	1	
21. Learning Site Utilization Form (S:106-107)			2	3
22. Maintenance Visit Record (S:130-131)	1		2	2
23. Zone Debriefing Form (S:116-117)	1		3	
24. Predesigned Projects (C:196)	4	1		

2. *Please list any additional forms or instruments your project uses. We would also appreciate receiving a copy of any of these forms.*

G. Skill Building Level

1. Will skill building levels at employer sites be--

   Required of all students?
   Required of some students?
   Available as an option? 5
   Used differently than described on pages 277-327 of the Curriculum & Instruction handbook? If so, please explain the differences.

2. If skill building levels are an intended part of your program, have any students begun them yet?

   Yes 4 No 1

H. Special Placements

1. Are "special placements" of students at employer sites for Life Skills or Basic Skills an option within your program?

   Yes 4 No ___

   (Not answered at one site)

2. If "special placements" are a part of your program, have any students begun them yet?

Yes 3 No 1

(Not answered at one site)

APPENDIX C

Tabulated Responses to the EBCE Student End-Of-Year Questionnaire

You are ready to complete a year of participation in your Experience-Based Career Education (EBCE) program. This questionnaire asks some of the same questions that you may have been asked in September and adds some new ones that cover your career plans, personal experiences and knowledge about the world of work. If you have any questions while you are completing the survey, please ask for assistance.

Site Ratings*

A	B	C	D	TF	TS	
						1. What do you expect to be doing one year after completing high school?
36	44	59	47	41	29	1. Working full-time
0	8	5	0	6	0	2. Entering an apprenticeship or one-the-job training program
7	8	0	0	6	0	3. Going into regular military service or to a service academy
21	4	5	20	6	14	4. Attending a vocational, technical, trade or business school
0	16	14	20	24	14	5. Attending a junior or community college
14	0	14	7	18	36	6. Attending a four-year college or university
7	0	0	0	0	0	7. Working part-time
7	8	0	7	0	0	8. Other (travel, take a break)
7	12	5	0	0	7	9. I have no idea what I'll be doing

*Sites A to D represent pilot sites, TF represents first-year students at the EBCE demonstration site in Tigard and TS represents second-year EBCE students at Tigard.

Site Ratings					
A	B	C	D	TF	TS
0	8	5	0	0	8
50	48	23	27	6	48
29	28	41	47	41	28
7	8	5	0	29	8
14	0	9	20	24	0
0	8	18	7	0	8
14	0	5	7	12	14
36	8	14	33	35	36
7	12	33	13	12	7
29	8	5	7	18	24
7	48	33	20	18	7
0	16	10	7	0	0
7	8	0	13	6	7
56	56	55	73	29	50
43	36	41	27	65	50
0	8	5	0	6	0

2. How far do you plan to pursue your formal education?

1. Don't plan to finish high school
2. High school graduate
3. High school plus one or two years of college, community college or special training
4. High school plus three or more years of college, community college or special training
5. Four year college graduate
6. Graduate or professional training beyond college

3. Please list two jobs that you feel you might like to hold after completing your education. Give the vocation rather than location. *(For example, say a "draftsman" rather than "working at General Motors.")*

Jobs were coded according to Hollingshead's socioeconomic status system into the following categories:

1) *Higher executives and major professionals*
2) *Business managers and lesser professionals*
3) *Administrative personnel and minor professionals*
4) *Clerical, sales workers*
5) *Skilled manual employees*
6) *Semiskilled employees*
7) *Unskilled*

4. Have you observed or directly worked at either or both of the two preferred jobs listed for question 3?

1. I observed and worked at both jobs
2. I observed or worked at one of these two jobs
3. I did not observe or work at either job

Site Ratings						
A	B	C	D	TF	TS	
						5. How sure are you of steps to prepare for and enter the job which you would most like to hold after graduation?
7	4	0	0	0	0	1. Do not know where to begin
21	48	18	20	12	7	2. Have some idea
29	24	41	60	59	43	3. Steps pretty clear
43	24	41	20	29	50	4. Steps quite clear
						6. Do you feel you will be able to complete the necessary steps for this job?
79	64	91	93	76	93	1. Yes
21	36	5	7	24	7	2. Not sure
0	9	5	0	0	0	3. Probably not
						7. What aspects of your learning experience this year, if any, influenced your choice of potential careers? *(Check as many as apply.)*
7	12	0	7	0	7	1. None
21	2	27	20	29	50	2. I talked to teachers or a counselor about my choices
57	48	64	60	71	10	3. I talked to people who work at the jobs
36	28	32	7	47	43	4. I talked with relatives or friends about my choices
57	72	82	93	82	93	5. I had experience in observing or trying out the jobs
14	20	36	13	47	43	6. I read about the jobs
7	4	14	0	6	7	7. Other *(Please write in)*
						8. Are there any jobs that last year seemed interesting that you now feel do not match your interests or abilities?
57	80	68	60	65	71	1. Yes
36	16	32	33	29	24	2. No

Site Ratings						What caused you to change your mind about the job(s)? *(Check one or more of the following.)*
A	B	C	D	TF	TS	
0	0	5	0	6	14	1. Advice from teachers or a counselor
0	0	5	0	12	21	2. Advice from relatives or friends
7	0	18	7	18	0	3. Advice from someone who works at the job(s)
0	0	18	13	41	43	4. Information I have read about the job(s)
64	16	64	33	65	79	5. Experience in observing or trying out the job(s)
7	4	32	27	35	50	6. My interests have changed
0	0	9	0	0	0	7. I don't know
7	0	0	0	0	0	8. Other *(please state your reason)*

On the grid below please circle a number from 1 to 5 to indicate how helpful you feel EBCE has been to you in reaching each objective. (For example, if you feel EBCE was very helpful circle 5, if moderately helpful circle 3 and if little or no help circle 1.)

How helpful do you feel your EBCE experiences this year have been in helping you--

Site Ratings*

A	B	C	D	TF	TS		
4.57	*4.00*	*4.77*	*4.27*	*4.35*	*4.21*	9.	solve problems logically
3.64	*3.08*	*3.82*	*3.60*	*3.83*	*3.93*	10.	understand the role of science in our society today
4.36	*3.64*	*4.82*	*4.00*	*4.65*	*4.50*	11.	understand more about yourself
4.57	*4.28*	*4.86*	*4.07*	*4.35*	*4.57*	12.	get along with others
3.57	*3.12*	*3.90*	*3.27*	*3.59*	*3.79*	13.	understand the democratic process
4.29	*3.76*	*3.36*	*3.87*	*4.06*	*4.00*	14.	develop your own creativity
4.57	*4.04*	*4.82*	*4.60*	*4.59*	*4.57*	15.	learn how your interests and abilities fit into potential careers
4.21	*3.52*	*4.32*	*4.00*	*4.06*	*4.36*	16.	learn how society's values, the government and the economy affect the world of work
4.71	*4.12*	*4.59*	*4.53*	*4.29*	*4.71*	17.	learn what to look at in considering a job
4.36	*3.84*	*4.09*	*4.20*	*4.00*	*4.07*	18.	learn how to find and keep a job
4.43	*3.92*	*4.27*	*4.00*	*4.29*	*4.43*	19.	learn the basic skills necessary for the careers that interest you

*Figures listed for each item represent the mean responses for each site.

Site Ratings

A	B	C	D	TF	TS		
3.79	3.44	3.73	3.06	3.59	3.07	20.	improve your reading skills
3.57	4.04	3.59	3.20	3.53	3.14	21.	improve your math skills
4.43	3.28	4.50	3.73	4.35	4.43	22.	improve your oral communication skills
4.14	2.88	4.00	3.67	3.82	4.14	23.	improve your writing skills
4.29	3.40	4.50	4.27	4.18	4.07	24.	know what level of basic skills proficiency is required in the jobs of interest to you
4.21	3.52	4.27	3.53	4.29	4.00	25.	gain confidence in your ability to apply basic skills to complete tasks and to solve problems around you
4.21	3.56	4.41	3.87	4.18	4.64	26.	become acquainted with a broad range of resources to use in gathering information for work and decision making
4.21	3.68	4.55	4.53	4.24	4.29	27.	communicate comfortably with adults
4.21	3.88	4.41	4.40	4.41	4.07	28.	take responsibility for your own actions
4.36	3.72	4.46	4.07	4.53	4.21	29.	become more open to ideas and values different from your own
4.29	3.52	4.32	3.93	4.35	4.36	30.	use information obtained through direct experiences in making decisions
4.43	4.08	4.59	4.20	4.47	4.71	31.	feel prepared to accept adult responsibilities
4.57	4.32	4.64	4.13	4.53	4.64	32.	How would you rate the overall quality of your EBCE program? *(Rated on an excellent to poor scale)*
	4.24	4.86	4.47	4.65	4.43	33.	If you had it to do over again, do you think you would decide to participate in EBCE? *(Rated on a definitely yes to definitely no scale)*

Site Ratings						
A	B	C	D	TF	TS	
4.86	3.96	4.64	4.13	4.18	4.50	34. In EBCE have you felt that you could progress at your own rate? *(Rated on a definitely yes to definitely no scale)*
5.00	4.28	4.68	4.73	4.29	5.00	35. In comparison with regular high school, how much opportunity did EBCE provide you for learning about occupations? *(Rated on a much more to much less scale)*
4.64	4.28	4.36	3.87	4.35	4.07	36. In comparison with regular high school, how much opportunity did EBCE provide you for general learning? *(Rated on a much more to much less scale)*
4.57	4.04	4.57	4.00	4.53	4.71	37. In comparison with past experiences in regular high school, how motivated are you to learn in EBCE? *(Rated on a much more to much less scale)*

Site Ratings					
A	B	C	D	TF	TS
*36	56	64	40	65	57
29	32	9	33	18	0
21	8	27	20	12	36
14	4	0	7	6	7
70	0	0	0	0	0
7	24	9	0	0	0
21	20	14	13	6	14
29	4	9	0	18	36
21	20	14	13	18	21
14	28	55	73	59	29
7	0	5	0	0	0
21	20	18	7	6	7
21	28	27	20	47	43
7	24	23	20	18	7
14	8	18	13	12	21
29	20	9	33	18	21

38. What courses, if any, have you taken at the regular high school, a community college, employer site or elsewhere? *(Please list any courses and where they were taken.)*

1. None
2. One
3. Two
4. Three

39. This year, approximately how many pamphlets, brochures, manuals or magazine articles did you read?

1. None
2. 1 to 5
3. 6 to 10
4. 11 to 20
5. 21 to 30
6. More than 30

40. This year, approximately how many books (not counting textbooks) did you read?

1. None
2. 1 or 2
3. 3 to 5
4. Between 6 and 10
5. Between 11 and 20
6. More than 20

*Figures listed in the remainder of this appendix represent the percentage of students giving that response at each site.

Site Ratings						
A	B	C	D	TF	TS	
						41. Do you read the newspaper?
29	16	10	13	6	7	1. No, or almost never
36	64	29	47	47	21	2. Yes, at least once or twice a week
36	20	62	40	47	71	3. Yes, almost every day
						42. If you read the newspaper at least once a week, what sections do you usually read? *(Check one or as many as applicable.)*
0	28	14	7	6	14	1. Sports
21	16	27	13	12	0	2. Fashions
29	24	14	47	47	21	3. Front page news
21	8	23	13	24	36	4. Comics
7	12	5	7	0	21	5. Editorial
0	8	18	7	0	7	6. News columnists, such as Art Buchwald
0	0	0	0	6	0	7. Other *(please list)*
						43. During the school year, approximately how many visits did you make to the following community resources? *(Check the appropriate response for each resource.)*
42	4	14	7	6	14	1. Public libraries
0	12	23	7	12	14	2. Museums
21	60	14	13	29	21	3. Courts
14	16	23	20	18	21	4. Public meetings
0	8	32	27	24	7	5. Local colleges or universities
0	8	41	0	12	7	6. State Legislature

Listed below are ten statements about career planning. For each statement check either the Agree or Disagree column.

	Site Ratings						
	A	B	C	D	TF	TS	
Agree	49	36	41	NA	18	42	44. Most persons remain in the same job throughout their adult lives.[1]
Disagree*	51	64	59	NA	82	58	
Agree	28	16	23	13	6	14	45. Few women work outside of the home after marriage.
Disagree*	72	84	77	87	94	86	
Agree*	35	52	45	67	41	42	46. Less than one-third of all job openings require a college degree.
Disagree	65	48	55	33	59	58	
Agree	86	88	91	87	76	100	47. Most people have the ability to do well in any job if they set their minds to it.
Disagree*	14	12	9	13	24	0	
Agree	21	48	23	13	18	0	48. There is only one "right job" for a person in terms of his/her abilities.
Disagree*	79	52	77	87	82	100	
Agree	42	32	45	53	41	28	49. The unemployment rate of 20-year-olds in the labor market is usually less than the rate for other adults.
Disagree*	58	68	55	47	59	72	
Agree*	70	92	82	100	94	86	50. The State Employment Service Office provides free information about job openings and job training programs.
Disagree	30	8	18	0	6	14	

[1] Questions 44 to 53 were taken from the Assessment of Career Development test developed by Prediger, Roth and Westbrook. Questions 46, 50 and 51 were considered true by the test developers while the remaining items were considered false. A * has been used to designate whether agree or disagree is considered correct for each item.

	Site Ratings						
	A	B	C	D	TF	TS	
Agree*	77	80	77	87	71	70	51. Apprentices are paid while they learn.
Disagree	23	20	23	13	29	30	
Agree	28	28	64	47	29	35	52. The English and math skills of freshmen are about the same from one college to another.
Disagree*	72	72	37	53	71	65	
Agree	42	56	27	20	35	28	53. Ten years from now most jobs will require four or more years of college.
Disagree*	58	44	73	80	65	72	

APPENDIX D

Tabulated Individual Student Project Evaluation Form for a Random Sample of Students from the Five EBCE Pilot Sites

Project Evaluation

1. Are the project activities designed to help the student meet the specific objectives of this Life Skills area? (Individualized projects only)

Definitely No			Undecided					Definitely Yes
1	2	3	4	5	6	7	8	9
10*	7	13	7	2	4	2	2	11

2. Do the project activities meaningfully incorporate the use of Basic Skills in a way to promote growth in communications, reading and/or mathematics? (Individualized projects only)

Definitely No				Undecided				Definitely Yes
1	2	3	4	5	6	7	8	9
2	9	9	7	0	7	5	6	16

3. Is there a relationship between project activities and Career Development outcome objectives? (Individualized projects only)

Definitely No				Undecided				Definitely Yes
1	2	3	4	5	6	7	8	9
26	6	3	6	0	5		3	3

4. Was the employer or community site used productively? (Check if employer or community site is not used--[23]) (Individualized projects only)

Definitely No				Undecided				Definitely Yes
1	2	3	4	5	6	7	8	9
0	1	1	0	0	4	4	5	21

*Numbers below each nine-point scale represent the number of student projects receiving that particular rating. In cases where information did not exist to make a reasonable judgment, the project or product was not rated on that particular scale.

5. Do the project activities utilize a variety of resources in an integrated and meaningful way? (Individualized projects only)

Definitely No			Undecided					Definitely Yes
1	2	3	4	5	6	7	8	9
6	9	7	6	1	9	10	7	11

6. Is the project designed to capitalize on student interests?

Definitely No				Undecided				Definitely Yes
1	2	3	4	5	6	7	8	9
0	0	0	1	5	3	22	19	31

7. Are the performance criteria specified adequately?

Definitely No				Undecided				Definitely Yes
1	2	3	4	5	6	7	8	9
3	4	3	13	0	12	22	15	18

8. Are the activities appropriate for the student's abilities?

Definitely No				Undecided				Definitely Yes
1	2	3	4	5	6	7	8	9
2	0	1	5	0	4	13	15	51

9. Is the project sufficiently comprehensive and complete? (Individualized projects only)

Definitely No				Undecided				Definitely Yes
1	2	3	4	5	6	7	8	9
10	2	8	9	3	2	7	7	13

10. What is the quality of the learning manager's written evaluation? (Check if there were no written comments--[14])

Low Quality			Undecided				High Quality	
1	2	3	4	5	6	7	8	9
3	5	1	7	3	4	12	14	13

11. To what extent are the project's activities connected in a logical manner? (Individualized projects only)

No Logic			Undecided				Highly Logical	
1	2	3	4	5	6	7	8	9
1	2	0	2	0	4	6	14	33

12. To what extent is the project experience based (i.e., involving the student directly in the learning process)? (Individualized projects only)

No Experience Base			Undecided				Highly Experiential	
1	2	3	4	5	6	7	8	9
1	2	2	6	1	7	4	7	32

13. Does the student product have the technical quality (e.g., legibility, grammar, etc.) that you would expect of a student of his/her ability?

Definitely No			Undecided				Definitely Yes	
1	2	3	4	5	6	7	8	9
1	1	5	1	0	8	16	23	28

14. Does the student product communicate as clearly as you would expect for a student of his/her ability?

Definitely No			Undecided				Definitely Yes	
1	2	3	4	5	6	7	8	9
0	2	0	6	2	7	14	17	36

15. Does the student product indicate that he/she completed each activity?

Definitely No			Undecided					Definitely Yes
1	2	3	4	5	6	7	8	9
3	1	3	10	6	7	14	22	18

16. How would you rate this product in terms of the student's demonstrated ability to integrate his/her experience?

Definitely Negative				Undecided				Definitely Positive
1	2	3	4	5	6	7	8	9
0	1	0	5	2	5	15	12	12

17. Given this student's ability, what is your overall evaluation of the product?

Definitely Negative				Undecided				Definitely Positive
1	2	3	4	5	6	7	8	9
0	0	0	6	5	4	17	11	12

APPENDIX E

EBCE Employer Opinion Survey Summary for Three EBCE Pilot Sites

Approximate number of employees at your site

Mean 11, Median 4, Range 1 to 87

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

1. When the student is on an exploration or learning level at your site, approximately how many hours per week do you typically spend with the student?

   a. Number of hours per week for exploration level:

	Mean	*Median*	*Range*
Site A	*8.2*	*6.0*	*1-40*
Site B	*8.7*	*9.5*	*2-25*
Site C	*6.8*	*5.4*	*2-20*

   b. Number of hours per week for learning level:

	Mean	*Median*	*Range*
Site A	*9.1*	*6.0*	*2-50*
Site B	*15.9*	*12.0*	*1-70*
Site C	*15.1*	*8.5*	*2-60*

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

	Exploration Level*			Learning Level		
	A	B	C	A	B	C
Talk about job opportunities?	*81	88	45	44	46	42

*Figures shown here, and in the remainder of this appendix refer to percentages based on responses from 32, 41 and 38 employers at each site. Not all employers completed each item.

	Exploration Level			Learning Level		
	A	B	C	A	B	C
Talk about the student's personal problems?	13	17	68	16	32	58
Talk about activities at your site?	84	88	32	50	51	27
Tutor in academic area?	13	10	90	16	22	82
Evaluate individual student's assignments?	25	51	50	25	46	32
Assist students in non-job-related assignments?	9	12	82	6	22	71
Supervise students to perform a specific job-related task at your site?	56	44	37	41	56	37
Help plan student assignments?	22	32	61	22	44	45
Other *(please write in)*	3	0	95		2	95

	Site Ratings		
	A	B	C
3. How did you become involved with the program? Check appropriate response(s).			
1. Program personnel contacted me about the program.	75	78	84
2. A student talked to me about the program.	13	7	0
3. Another employer talked to me about the program.	6	2	5
4. Company personnel talked to me about the program.	3	12	8
5. Other *(please write in)*	3		3
4. Did the program staff provide you with enough information to help you direct student activities at your site?			
1. Yes	91	93	95
2. No	6	7	5

	Site Ratings		
	A	B	C
5. Would you recommend to a potential employer or resource person that he/she also become involved with the program?			
1. Yes	97	88	100
2. No	3	12	0

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

	Definitely No				Definitely Yes
	1	2	3	4	5
Site A	-	6	41	16	34
Site B	5	12	22	12	29
Site C	-	3	32	32	34

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

	Definitely No				Definitely Yes
	1	2	3	4	5
Site A	-	3	16	45	37
Site B	-	3	19	25	50
Site C	-	7	29	29	39

8. Do you receive adequate feedback about what happens to the students after they leave your site? Circle a number from 1 (never) to 5 (always).

	Never				Always
	1	2	3	4	5
Site A	37	26	5	13	11
Site B	13	19	19	19	22
Site C	17	34	24	7	5

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

	Never				Always
	1	2	3	4	5
Site A	29	34	8	13	11
Site B	9	19	31	9	19
Site C	7	29	34	12	12

		Site Ratings A	B	C
10.	How have employees at your site reacted to participation with the program? Check one.			
	1. Positive reaction	44	73	53
	2. Negative reaction	0	2	0
	3. Mixed reaction	25	20	32
	4. No reaction	13	0	0
	5. Not applicable	9	0	0
	6. Don't know	6	5	11
11.	In what ways (if any) have the employees at your site benefited? Check one or more appropriate responses.			
	1. They haven't benefited.	16	12	8
	2. Increased their awareness of youth.	41	61	58
	3. Motivated the regular employees to further training.	3	12	11
	4. Reduced their workload.	19	5	34
	5. Increased interest in their own work.	19	24	24
	6. I don't know.	16	15	13
	7. Other *(please write in)*	3	5	0
12.	Do you plan to continue participating with the program next year?			
	1. Yes	84	76	84
	2. No	16	10	11
	Why? *(Check one or more reasons below)*			
	1. Program is worthwhile	84	73	79
	2. I like the people involved	47	34	32
	3. My participation is a community service	47	59	45
	4. It is challenging to me	38	29	26
	5. I have had problems with the staff	0	0	0
	6. I have had problems with the students	0	0	0
	7. The program is not effective	0	2	0
	8. I don't have time	13	0	11
	9. Other *(please write in)*	9	12	8

	Site Ratings		
	A	B	C
13. What do you think are the greatest strengths of the program? *(check one or more)*			
1. Good alternative to a regular high school program	47	37	53
2. Quality of the staff	25	10	11
3. Students learn about a variety of careers	81	68	79
4. Students learn about real life situations	78	76	87
5. Good way of getting students to learn	53	29	32
6. Experience in working with adults	66	63	61
7. Other *(please write in)*	3	2	0
14. What do you think are the greatest weaknesses of the program? *(check one or more)*			
1. Some students can't handle the freedom	28	39	32
2. Problems in the organization of the program	3	7	3
3. Students not receiving sufficient training	9	20	8
4. Inadequate supervision of students on job sites	9	2	8
5. Too much paperwork	3	7	5
6. Other: Maybe too difficult for some students	22	7	5
15. How many students would your site be able to handle at one time for an exploration level?			
1. One student	56	54	61
2. Two students	31	32	29
3. Three to five students	3	12	8
4. Six to eight students	0	0	0
5. More than eight students	0	0	0

		Site Ratings		
		A	B	C
16.	What do you feel students are able to learn on job sites that they could not learn as well in a regular school classroom? *(Check one or more)*			
	1. Firsthand knowledge of demands in a real world	84	83	79
	2. Working with other people	78	73	58
	3. On-the-job skills	81	68	68
	4. Self-discipline	50	46	37
	5. Motivation to learn	47	42	53
	6. Nothing	0	2	3
	7. Other *(please write in)*	3	7	0

APPENDIX F

EBCE Materials Packet Questionnaire Summary
Student Career Exploration

Your Position *(check one)*:

*11**	1.	teacher
7	2.	counselor
29	3.	administrator
39	4.	career/vocational education director
14	5.	other; specify:

1. Please rate how well the Career Exploration Staff Guide prepared you to understand the following areas. *(Circle a number from 1 to 5 with 5 meaning very well, 3 meaning fair and 1 meaning very poorly.)*

	Very Well 5	4	*Fair* 3	2	*Very Poorly* 1
a. What the Career Exploration process involves	*61*	*36*	*3*	-	-
b. Rationale for using the Career Exploration process	*61*	*36*	*3*	-	-
c. What is expected of staff members	*46*	*46*	*7*	-	-
d. What is expected of students	*61*	*36*	*4*	-	-
e. With what students the Career Exploration process is most appropriate	*39*	*43*	*14*	*4*	-

2. Did the packaging of these materials in sets (i.e., Awareness, Implementation and Replacement Sets) allow you to obtain the quantities of materials appropriate for your purposes? *(check one)*

96	1.	Yes *(Only Awareness sets are currently available.)*
4	2.	No

*Figures shown in this Appendix represent percentages of responses based on an N of 28.

3. How useful will the Student Career Exploration process be to your students? *(circle one number)*

Very Useful				*Not Useful*
5	4	3	2	1
48	*37*	*11*	*4*	–

4. How easy will it be (is it) to implement the Student Career Exploration process? *(circle one number)*

Very Easy				*Very Difficult*
5	4	3	2	1
19	*37*	*37*	*7*	–

5. How well will (does) the Student Exploration process fit in with your other instructional activities? *(circle one number)*

Very Well				*Very Poorly*
5	4	3	2	1
30	*37*	*30*	*4*	–

6. Have you already modified (or do you plan to modify) the Student Guide or the Career Exploration process? *(check one)*

41 1. Yes
56 2. No
4 3. I do not plan to use them.

7. What best describes your plans for using the Student Career Exploration process? *(check one response)*

18 1. The Student Career Exploration process is already being used with students by me or other staff members.

43 2. Plans are underway to use the Student Career Exploration process in the near future.

27 3. A decision has not been made yet on whether or not the Student Career Exploration process will be used.

4 4. I do not plan to use the Student Career Exploration process because _____

14 5. Other *(please specify)*

8. If the Student Career Exploration process is presently being used or will be used in your school/program, please describe the groups of students with whom it is being or will be used. *(Please fill in a row for each class or group who are or will be using the Career Exploration process. Use the bottom of this sheet if more space is needed.)*

Number of Students	*Grade Level*	*How Often Used*
11-30 students - 5	*7th & 8th grade - 1*	*Daily for a year - 4*
31-60 students - 6	*7 to 12 - 1*	*Daily for 2-3 months - 1*
61-150 students - 5	*8 to 10 - 3*	*Daily for 2-3 weeks - 1*
151-400 students - 3	*10 to 12 - 11*	*5-10 time a year - 2*
Not reported - 9	*Not reported - 9*	*3-4 times a semester - 2*
		Not reported - 18

EBCE Materials Packet Questionnaire Summary

The Competencies

Your Position *(check one)*:

12 *1. teacher
4 2. counselor
25 3. administrator
46 4. career/vocational education director
13 5. other; specify:

1. Please rate how well the Competencies Staff Guide prepared you to understand the following areas. *(Circle a number from 1 to 5 with 5 meaning very well, 3 meaning fair and 1 meaning very poorly.)*

	Very Well 5	4	Fair 3	2	Very Poorly 1
a. What the Competencies involves	83	13	4	-	-
b. Rationale for using the Competencies	71	25	4	-	-
c. What is expected of staff members	50	46	4	-	-
d. What is expected of students	58	42	-	-	-
e. With what students the Competencies are most appropriate	44	30	17	9	-

2. Did the packaging of these materials in sets (i.e., Awareness, Implementation and Replacement Sets) allow you to obtain the quantities of materials appropriate for your purposes? *(check one)*

100 1. Yes *(Only Awareness sets are currently available.)*
0 2. No

3. How useful will the Competencies be to your students? *(circle one number)*

Very Useful 5	4	3	2	Not Useful 1
52	30	17	-	-

*Figures shown in this appendix represent percentages of responses based on an N of 24.

4. How easy will it be (is it) to implement the Competencies? *(circle one number)*

Very Easy				*Very Difficult*
5	4	3	2	1
17	*48*	*22*	*13*	-

5. How well will (do) the Competencies fit in with your other instructional activities? *(circle one number)*

Very Well				*Very Poorly*
5	4	3	2	1
30	*35*	*30*	*4*	-

6. Have you already modified (or do you plan to modify) the Student Guide or the use of the Competencies? *(check one)*

32 1. Yes
41 2. No
27 3. I do not plan to use them.

7. What best describes your plans for using the Competencies? *(check one response)*

8 1. The Competencies are already being used with students by me or other staff members.

54 2. Plans are underway to use the Competencies in the near future.

21 3. A decision has not been made yet on whether or not the Competencies will be used.

17 4. I do not plan to use the Competencies because _____

0 5. Other *(please specify)*

8. If the Competencies are presently being used or will be used in your school/program, please describe the groups of students with whom they are being or will be used. *(Please fill in a row for each class or group who is or will be using the Competencies. Use the bottom of this sheet if more space is needed.)*

Number of Students	*Grade Level*	*How Often Used*
11-30 students - 4	*8th & 9th, grade - 1*	*Daily for a year - 3*
31-60 students - 2	*9th & 10th - 4*	*Daily for 2-3 months - 1*
61-150 students - 5	*11th & 12th - 8*	*Daily for one month - 2*
151-400 students - 2	*Not reported - 12*	*5-20 times a year - 1*
Not reported - 12		*Not reported - 18*

EBCE Materials Packet Questionnaire Summary

Student Career Journal

Your Position *(check one)*:

12	*1.	teacher
8	2.	counselor
13	3.	administrator
42	4.	career/vocational education director
15	5.	other; specify:

1. Please rate how well the Career Journal Staff Guide prepared you to understand the following areas. *(Circle a number from 1 to 5 with 5 meaning very well, 3 meaning fair and 1 meaning very poorly.)*

	Very Well 5	4	*Fair* 3	2	*Very Poorly* 1
a. What the Career Journal process involves	*46*	*54*	-	-	-
b. Rationale for using the Career Journal process	*62*	*31*	*7*	-	-
c. What is expected of staff members	*58*	*39*	*4*	-	-
d. What is expected of students	*58*	*42*	-	-	-
e. With what students the Career Journal process is most appropriate	*35*	*46*	*19*	-	-

2. Did the packaging of these materials in sets (i.e., Awareness, Implementation and Replacement Sets) allow you to obtain the quantities of materials appropriate for your purposes? *(check one)*

96	1.	Yes *(Only Awareness sets are currently available.)*
4	2.	No

3. How useful will the Student Career Journal process be to your students? *(circle one number)*

Very Useful 5	4	3	2	*Not Useful* 1
23	*54*	*15*	*4*	*4*

*Figures shown in this appendix represent percentages of responses based on an N of 26.

4. How easy will it be (is it) to implement the Student Career Journal process? *(circle one number)*

Very Easy				*Very Difficult*
5	4	3	2	1
24	*32*	*28*	*12*	*4*

5. How well will (does) the Student Career Journal process fit in with your other instructional activities? *(circle one number)*

Very Well				*Very Poorly*
5	4	3	2	1
39	*35*	*15*	*8*	*4*

6. Have you already modified (or do you plan to modify) the Student Guide or the Career Journal process? *(check one)*

27 1. Yes
59 2. No
14 3. I do not plan to use them

7. What best describes your plans for using the Student Career Journal process?

15 1. The Student Career Journal process is already being used with students by me or other staff members.

42 2. Plans are underway to use the Student Career Journal process in the near future.

27 3. A decision has not been made yet on whether or not the Student Career Journal process will be used.

4 4. I do not plan to use the Student Career Journal process because _____

12 5. Other *(please specify)*

8. If the Student Career Journal process is presently being used or will be used in your school/program, please describe the groups of students with whom it is being or will be used. *(Please fill in a row for each class or group who are or will be using the Career Journal process. Use the bottom of this sheet if more space is needed.)*

Number of Students	*Grade Level*	*How Often Used*
11-30 students - 4	*7th-9th grade - 5*	*Daily for a year - 1*
31-60 students - 4	*10th grade - 3*	*Daily for 2-3 months - 3*
61-150 students - 6	*11th & 12th - 7*	*Daily for one week - 1*
150-400 students - 2	*College freshmen - 1*	*Weekly - 2*
Not reported - 11	*Not reported - 11*	*3-4 times a semester - 4*
		2 times a semester - 1
		Not reported - 17

APPENDIX G

EVALUATION REPORT

FOR

$(CE)_2$ - TIGARD

TIGARD, OREGON

Prepared by

Joseph F. Haenn and

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Evaluation Unit, Career Education Program

September 1976

Northwest Regional Educational Laboratory
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TABLE OF CONTENTS

INTRODUCTION

This report presents a summary of evaluation data analyzed by the evaluation unit of the Career Education Program (CEP) at the Northwest Regional Educational Laboratory (NWREL) for $(CE)_2$ - Tigard. This program has completed its fourth year as a NWREL demonstration site of the Experience-Based Career Education (EBCE) program. The evaluation for the 1975-76 school year has been conducted by the evaluation unit of CEP. NWREL staff have proposed an evaluation design, developed some evaluation instruments; administered, collected and coded most of the data; interviewed staff and analyzed the data. Since the NWREL staff have not conducted systematic observations of $(CE)_2$ - Tigard or been on site frequently during the year, this present report will summarize the evaluation data that have been analyzed, but interpretation of these findings and any recommendations for program modification should more appropriately come from the project staff.

This report contains the evaluation findings of program outcomes. A description of each of the following instruments and related findings is presented: the Comprehensive Test of Basic Skills (CTBS), Self-Directed Search, Student Opinion Survey, Student End-of-Year Questionnaire and Staff Interview.

EVALUATION FINDINGS

Staff Interviews

An interview form was developed especially for use with the $(CE)_2$ - Tigard project staff. Interviews were conducted about two weeks after the end of the school year with each of the $(CE)_2$ professional staff with the exception of the project director, who was out of town. The primary intent of the interview was to assess the perceptions of the $(CE)_2$ staff regarding their role in EBCE training and demonstration activities.

Two of the questions covered during the interview were presented in written form since they involved a rating scale. A tabulation of staff responses to these two items appears in Appendix A. The type of training and demonstration activities most frequently engaged in during the year by $(CE)_2$ staff involved discussions of $(CE)_2$ operations (an average of 12 hours per staff member) and question and answer sessions (an average of 7 hours per staff). Each area of involvement was rated by the $(CE)_2$ staff as either high or moderate in perceived effectiveness.

Of the five $(CE)_2$ staff interviewed, three felt their involvement in the EBCE training and demonstration activities this year contributed in a minor way to their regular work and two felt that such activities neither contributed to nor interfered with their regular work. None of the staff interviewed felt that their participation in EBCE training and demonstration activities interfered with their regular work. Those who expressed the view that such participation contributed to their regular work stated that it gave them insight into how EBCE might work in other settings and caused them to feel they were making a professional contribution. The third person added that it helped the students to be observed by visitors and to feel that what they were doing was of importance and interest to people from many parts of the country.

Each of the five staff members said that they would be interested in participating in EBCE training and demonstration activities next year. They felt they could share their EBCE experiences with others, answer questions and describe things they have done to improve or streamline EBCE. Several staff added that they would be willing to have a trainee follow them around, for example, when they went to visit an employer site. The staff indicated that they, individually, should be allowed to decide how much time they could commit at any given time to EBCE training and demonstration since they best know their own work loads. One staff member also indicated past experience in writing TV scripts and a willingness to apply this skill to EBCE. Several indicated a willingness, on occasion, to visit new EBCE sites to serve as consultants regarding implementation problems. The suggestion of involving staff from $(CE)_2$ and those from adoption sites in a training retreat was proposed by one staff member. The advantage of this strategy would be to create a relaxed atmosphere in which role play and other techniques could be used to communicate the EBCE experiences.

One staff person expressed a desire to find out what the essential differences are among the four EBCE versions. For example, how do their delivery systems differ? Such information would have been helpful in responding to some visitors' questions.

The $(CE)_2$ staff members were also asked to comment on the perceived strengths and weaknesses of $(CE)_2$. Areas in which students were seen to have made the greatest growth were self-esteem, individual responsibility, learning how to learn, ability to communicate with adults, oral and written communication, basic skills, willingness to try new things, coping skills, handling dissatisfactions and failures, and improved communications with parents. Areas in which students were seen by three of the staff to have made only moderate growth this year were awareness of nontraditional careers, knowledge about the job market and career decision-making skills.

In comparing the 1975-76 school year with the prior year, $(CE)_2$ staff saw the program becoming more stable, having a greater proportion of self-directed students, implementing the student accountability system more effectively and coordinating the student tutoring system better. Problem areas cited this year by some staff included the lack of staff cohesion, less feeling of a student community and less progress than desired in integrating basic skills at the employer sites.

Student Description

Sixty-two students began the program year. Of these students, 23 were seniors who had attended $(CE)_2$ the previous year as juniors. These second-year (SY) students consisted of 14 females and 9 males. The remaining 39 students were students entering the $(CE)_2$ program for the first time. These first-year (FY) students consisted of 27 females and 12 males with 13 seniors, 25 juniors and 1 sophomore.

Since there may be differential effects between the FY and SY students, each group of students has been analyzed separately. By midyear, eight students had left the program. Of these students, only three were from the SY group--one moved from the area, one voluntarily withdrew from high school and one voluntarily returned to the high school. The remaining five students dropped out of the FY group--two students voluntarily withdrew from high school, one student ran away, one student moved from the district and one student voluntarily returned to the high school. Seven new students entered the program at midyear.

During the remainder of the school year 15 additional students dropped out of the program. Two of these students were from the SY group--one ran away and another voluntarily withdrew from school. Of the 13 new students who dropped out during the second semester, eight voluntarily withdrew from school, one student voluntarily returned to the high school, one student ran away and one student subsequently withdrew from high school after being dropped from the program for nonprogram performance. Three of these students who dropped out during the second semester had entered at midyear.

At the end of the year there were 52 students in the program, of which 34 were new students. Of the FY group, 26 had completed the entire year and two were graduating early. Of the 18 students in the SY group, four were graduating early. Complete data were available on 17 students from the FY group and 14 students from the SY group. Subsequent analyses in this report are based only on those students for whom complete data were available.

The 17 FY students consisted of 5 males and 12 females. Six of these students were seniors with the other 11 being juniors. These students completed an average of 8.12 career explorations and 2.24 learning levels with no students completing any skill building levels. They also averaged 8.65 projects and 8.82 competencies each and had an average of 15.35 days absent from the program.

The 14 SY students consisted of 5 males and 9 females. All, of course, were seniors. These students completed an average of 6.43 explorations and 2.29 learning levels. They also averaged 10.64 projects and 5.43 competencies and had an average of 16.36 days absent from the program. Notice that these returning seniors completed significantly fewer competencies than the new students ($F=9.30$, $df=1$ and 29, $p<.01$). However, second-year students only had to complete those competencies which they had not done previously. However, four returning seniors did complete a skill building level as compared to no FY students. First-year students also completed significantly more projects than SY students ($F=4.50$, $df=1$ and 29, $p<.05$). There were no significant differences on number of career explorations or days absent.

First-year students in $(CE)_2$ completed a Student Application form (contained in Appendix B). Second-year students had completed this questionnaire the previous year upon program application, but their responses are considered too remote and will not be considered here. Based on responses of the FY students in $(CE)_2$ for the entire year, 77 percent had been involved in work experience for pay on a regular basis prior to entering $(CE)_2$. All of these students had held unskilled jobs and worked to earn money for things they wanted to buy or for work experience. At the beginning of the school year only 18 percent of the students indicated that one year after completing high school they expected to be working full-time, while 33 percent expected to be working part-time. Over three-fourths of the students expected to enter a school for postsecondary education the year after completing high school. All of the students planned to complete high school and 71 percent planned eventually to get additional education, although only 7 percent intended to complete four years of college or more.

Over half of the students had not participated in high school extracurricular activities the year prior to entering EBCE, while the rest engaged in from one to four such activities. The most frequently cited reasons for joining $(CE)_2$ were to learn about careers, prepare for a job and choose one's own learning style. Over one-half of the students indicated that being bored with regular school also influenced them to join $(CE)_2$.

Growth Data

The MULTIVARIANCE[1] program was used to analyze growth data.

Growth data collected at Tigard consisted of scores for the reading comprehension, arithmetic concepts and arithmetic applications subtests of the Comprehensive Test of Basic Skills (CTBS), the Self-Directed Search, the Student Opinion Survey and changes in occupational and educational aspirations. Pretest and posttest means and standard deviations (S.D.) for the CTBS are given for FY and SY students in Tables 1 and 2 respectively. Data are reported as expanded standard scores and as grade equivalents (G.E.).

TABLE 1

Pretest and Posttest Scores on the CTBS for First-Year Tigard (CE)$_2$ Students

(N=17)

	Pretest			*Posttest*		
CTBS Subtest	*Mean*	*S.D.*	*G.E.*	*Mean*	*S.D.*	*G.E.*
Reading Comprehension	599.41	87.51	10.0	644.53	94.03	11.8
Arithmetic Concepts	611.71	83.13	10.5	620.24	80.84	10.9
Arithmetic Applications	601.41	88.98	10.1	613.24	96.04	10.5

[1] The pretest scores were used as independent variables in a one-factor analysis of covariance of the posttest scores for each instrument. Univariate F tests of the growth effects on each variable were used for most variables since the small number of subjects limited the multivariate analysis. Finn, J. MULTIVARIANCE: A generalized univariate and multivariate analysis of variance, covariance, and regression, Version V. Chicago: National Educational Resources, Inc., March 1972.

TABLE 2

Pretest and Posttest Scores on the CTBS for Second-Year Tigard $(CE)_2$ Students
(N=14)

CTBS Subtest	Pretest Mean	Pretest S.D.	Pretest G.E.	Posttest Mean	Posttest S.D.	Posttest G.E.
Reading Comprehension	660.14	88.93	12.6	673.36	102.96	13.5
Arithmetic Concepts	609.00	126.33	10.4	610.36	135.09	10.5
Arithmetic Applications	579.21	94.34	9.4	587.29	109.88	9.6

None of the gains were significant although students gained more than one month's grade equivalent on reading comprehension for each month in the $(CE)_2$ program. This gain also is reflected by students reporting at the beginning of the year that none of them had read more than 30 pamphlets, brochures, manuals or magazine articles while at the end of the year 59 percent reported doing at least this much reading. There were no significant differences between FY and SY students on basic skills.

The Self-Directed Search, developed by John Holland, was used to identify "occupational personality" characteristics of each student. These six areas are: realistic (e.g., skilled trades, technical and some service occupations); investigative (e.g., scientific and some technical occupations); artistic; social (e.g., educational and social welfare occupations); enterprising (e.g., managerial and sales occupations); and conventional (e.g., office and clerical occupations).

It is also possible to calculate six other scores from this instrument: self-estimates, activities, competencies, occupations, differentiation and consistency. The self-estimates score represents the student's total self rating score (on a seven-point scale) across 12 traits such as mechanical ability, artistic ability and office skills. Two of these traits reflect each of the six occupational categories. Students rate themselves in comparison with other persons of the same age. The activities score represents the student's total number of activities across the six occupational categories that the student says he or she likes to do. The competencies score represents the total number of activities across the six occupational categories that the student feels he or she can do well or competently. The occupations score represents the total number of occupations that are of interest or appeal to the student. The differentiation score describes the degree to which a person represents a "pure" personality type. A person with very strong "Social" interests and competencies, for example, is more

of a "pure" type than a person with moderate "Social," "Enterprising" and "Conventional" interests and competencies. The differentiation score is computed by subtracting the numerical weight of the tertiary code from the weight of the primary code. The consistency score is an index of the internal consistency of the personality. Operationally, it describes the degree of compatibility between the primary and secondary code. For example, a person with an "Artistic" primary code and a "Conventional" secondary code will probably exhibit contradictory behavior patterns and interests and receive a low consistency score.

Pretest and posttest means and standard deviations (S.D.) for subscores on the Self-Directed Search are shown for FY and SY students in Tables 3 and 4, respectively.

TABLE 3

Pretest and Posttest Scores on the Self-Directed Search for First-Year Tigard $(CE)_2$ Students

(N=17)

	Pretest		*Posttest*	
Occupational Area	*Mean*	*S.D.*	*Mean*	*S.D.*
Realistic	6.82	4.69	5.88	4.91
Investigative	6.24	2.70	5.29	2.82
Artistic	8.12	3.22	6.76	4.09
Social	11.53	2.62	10.24	3.42
Enterprising	6.00	2.42	5.29	2.14
Conventional	6.00	3.57	4.41	4.33
SDS Summary Scores				
Self-Estimates	25.53	6.07	24.88	5.16
Activities	31.76	15.81	36.88	15.05
Competencies	28.82	12.90	33.00	10.66
Occupations	18.35	10.94	20.12	14.10
Differentiation Score	5.00	2.35	6.24	2.41
Consistency Score	2.06	.83	2.29	.77

TABLE 4

Pretest and Posttest Scores on the Self-Directed Search for Second-Year Tigard $(CE)_2$ Students

(N=14)

	Pretest		Posttest	
Occupational Area	*Mean*	*S.D.*	*Mean*	*S.D.*
Realistic	5.86	4.43	5.00	4.17
Investigative	6.50	3.18	6.29	4.07
Artistic	7.36	3.13	6.71	4.05
Social	10.50	2.98	10.29	3.12
Enterprising	5.36	2.92	5.21	3.07
Conventional	4.36	2.27	5.79	4.69
SDS Summary Scores				
Self-Estimates	24.43	6.01	24.50	5.21
Activities	33.29	11.47	34.07	12.45
Competencies	26.43	12.97	28.36	11.36
Occupations	14.21	6.96	14.36	7.38
Differentiation Score	4.71	2.67	5.71	3.77
Consistency Score	2.50	.65	2.50	.65

Significant differences in pre and posttest scores were not expected for the six occupational areas, since these factors usually remain stable and an increase in interest in one occupational area often leads to a decrease in another. None of these differences were significant although declines in the Social ($F=2.29$, $df=1$ and 10, $p<.17$) scale for SY students and the Investigative ($F=2.60$, $df=1$ and 13, $p<.14$) scale for FY students approached significance. In addition, only the difference between FY and SY students on the Conventional scale approached significance ($F=3.86$, $df=1$ and 6, $p<.07$).

The total self-estimates, activities, competencies and occupations scores were anticipated to increase over the year as students gained a variety of work experiences and perhaps came to view themselves in a more positive light. All F ratios were minimal (<2) for the SY students while the self-estimate decrease approached significance for the FY students ($F=3.44$, $df=1$ and 11, $p<.09$). The only difference between FY and SY students that approached significance was on occupations ($F=3.11$, $df=1$ and 24, $p<.10$).

Increases in differentiation and consistency were hypothesized as a result of students observing and trying out a variety of jobs and learning to discriminate more in what activities they like and dislike. Although the differentiation scores did increase, the difference was not significant. There was little change on consistency scores and no significant differences between FY and SY students.

The Student Opinion Scale is a local name applied to the Psychosocial Maturity Scale developed by Ellen Greenberger. The instrument is used to assess growth in nine different areas, many of which are related to the EBCE Life Skills goals. The results from this instrument are presented in Tables 5 and 6 for the FY and SY groups, respectively.

TABLE 5

Pretest and Posttest Scores on the Student Opinion Scale for First-Year Tigard ($CE)_2$ Students
(N=17)

	Pretest		*Posttest*	
Individual Subscales	*Mean*	*S.D.*	*Mean*	*S.D.*
Self Reliance	31.00	6.03	32.47	6.19
Work	26.24	5.68	28.59	5.14
Identity	27.65	5.43	29.94	6.66
Communications	27.59	5.85	29.18	6.55
Roles	31.24	4.85	32.41	4.95
Trust	28.29	3.51	29.88	3.89
Social Commitment	33.00	5.00	34.59	4.62
Change	34.06	5.88	36.00	3.67
Tolerance	36.24	5.54	37.76	3.70
Social Desirability	22.35	3.14	21.29	4.13
Summary Scales				
Individual Adequacy	84.88	13.07	91.00	14.43
Interpersonal Communications	87.12	11.38	91.47	11.23
Social Adequacy	103.29	14.49	108.35	8.63

TABLE 6

Pretest and Posttest Scores on the Student Opinion Scale for Second-Year Tigard $(CE)_2$ Students

(N=14)

	Pretest		Posttest	
Individual Subscales	*Mean*	*S.D.*	*Mean*	*S.D.*
Self Reliance	31.00	5.53	34.00	4.74
Work	25.57	6.94	29.07	5.90
Identity	26.57	7.61	31.50	6.68
Communications	25.50	5.63	29.36	6.23
Roles	34.36	3.27	35.14	2.91
Trust	30.64	3.69	30.86	3.76
Social Commitment	35.43	4.08	33.86	5.14
Change	38.14	3.86	37.57	3.08
Tolerance	37.71	3.15	36.64	2.21
Social Desirability	19.64	4.34	20.07	4.04
Summary Scales				
Individual Adequacy	83.14	18.79	94.57	15.52
Interpersonal Communications	90.50	9.98	95.36	9.15
Social Adequacy	111.29	8.26	108.07	7.71

First-year students demonstrated significant growth on the Openness to Change ($F=11.67$, $df=1$ and 12, $p<.01$) and Tolerance ($F=5.98$, $df=1$ and 12, $p<.04$) subscales. Second-year students demonstrated negative growth on both of these subscales (F's=8.71 and 9.65, respectively, with $df=1$ and 9 each, and $p<.02$) as well as on Social Commitment ($F=7.13$, $df=1$ and 9, $p<.03$). However, SY students exhibited positive growth on Work ($F=6.94$, $df=1$ and 9, $p<.03$) and Roles ($F=8.17$, $df=1$ and 9, $p<.02$) and approached significance on the Trust and Self Reliance subscales (F's=4.18 and 4.04, respectively, with $df=1$ and 9 each, and $p<.08$). There were significant differences in change between FY and SY students on the subscales of Social Commitment ($F=8.73$, $df=1$ and 25, $p<.01$), Openness to Change ($F=24.80$, $df=1$ and 25, $p<.001$) and Tolerance ($F=19.96$, $df=1$ and 25, $p<.001$).

The Social Desirability scale is a "lie" scale designed to estimate the "fake factor" of response. Higher scores indicate a tendency to respond in a socially desirable manner. There was no significant change on this scale. The low score indicates generally honest responses.

These subscale scores can also be combined to form three summary scales: Individual Adequacy, Interpersonal Communications and Social Adequacy (Tables 5 and 6). First-year students demonstrated significant positive growth on the Social Adequacy summary scale ($F=12.41$, $df=1$ and 12, $p<.01$), while the SY students showed a significant decline ($F=17.22$, $df=1$ and 9, $p<.01$). This difference between the two groups was highly significant ($F=5.99$, $df=1$ and 25, $p<.03$). The SY students also approached significant increases on the Individual Adequacy ($F=4.01$, $df=1$ and 9, $p<.08$) and Interpersonal Communications ($F=4.69$, $df=1$ and 9, $p<.06$) summary scales.

Growth in educational aspirations was estimated by asking students the highest level of education to which they aspired at the beginning and end of the program year. These data were available only for FY students. The mean increased significantly from 3.35 to 3.71 during the year ($F=11.81$, $df=1$ and 14, $p<.01$), demonstrating positive growth in educational aspirations.

Growth in occupational aspirations was estimated by asking for the two primary occupational goals of each student at the beginning and end of the program year. These occupational goals were converted to Hollingshead occupational codes, which were then averaged to get an average socioeconomic status level for each time period. These data were also available only for FY students. The mean decreased from 3.76 to 2.97, but this difference was not significant. However, this reflects a move towards occupations higher on the occupational scale since the most desirable occupations are rated "1" with the least rewarding as "7". Thus, occupational aspirations increased for FY students.

Student End-of-Year Questionnaire

A student questionnaire developed by NWREL was completed by each of the students in May. The purpose of the instrument was to obtain end-of-year data on certain questions asked of the same students at the beginning of the year, to assess student knowledge of job trends and related information and to collect data on student reflections about the school/(CE)$_2$ experiences. A tabulation of responses to the questionnaire is displayed in Appendix C.

In response to a question on future plans, 41 percent of the FY students and only 29 percent of the SY students reported plans to be working full-time one year after high school. In comparison with the responses to this question for FY students at the beginning of the school year, no students rather than 29 percent indicated they had no idea what they would be doing one year after high school.

Most of the FY students (94 percent) and SY students (86 percent) plan to continue their formal education beyond high school. Seven percent of the SY students but none of the FY students plan to go to a graduate or professional school beyond college while another 24 percent of the FY students and 36 percent of the SY students plan to graduate from a four-year institution. At the beginning of the year 18 percent of the FY students planned to graduate from college and another 6 percent wanted to receive graduate or professional training.

Fifty-nine percent of the FY students and 71 percent of the SY students reported being interested in professional, administrative or proprietary careers as their first occupational choice. Thirty-six percent of the SY students and only 24 percent of the FY students were interested in skilled jobs, and seven percent of the SY students were interested in semiskilled jobs. Only six percent of the FY students and seven percent of the SY students were interested in unskilled occupations.

Twenty-nine percent of the FY students and half of the SY students reported that they had worked and/or observed at both of the jobs they listed as career choices. Only five students, all FY students, reported having neither worked nor observed at either of the careers he/she was interested in.

There were no students in either group reporting that they did not know the steps necessary to prepare for and enter each of the two jobs, and 77 percent of the FY students and 93 percent of the SY students felt they would be able to complete the necessary steps for preparation and entry into at least one of the jobs.

Many of the FY students (53 percent) and most of the SY students (93 percent) indicated that their (CE)$_2$ experience in observing or trying out jobs influenced their choice of potential careers. Other factors that influenced career choice were talking with people who work at the jobs (71 percent for both FY and SY students), reading about the jobs or talking with relatives or friends about choices (47 percent on each for FY students and 43 percent for SY students) and talking with teachers or counselors about choices (29 percent of the FY students and 50 percent of the SY students). At least two-thirds of each group of students were able to identify jobs that seemed interesting last year but now do not match their interests or abilities. Experience in observing or trying out the job(s) was the most frequent reason selected for changing career plans (65 percent for FY students and 79 percent for SY students); other reasons cited included reading about the job (41 percent FY students, 43 percent SY students), receiving advice from relatives or friends (12 percent FY students, 21 percent SY students) and receiving advice from teachers or a counselor (6 percent FY students, 14 percent SY students).

The (CE)$_2$ students rated the program high in helping them attain the program goals. The only goal areas rated negatively (less than 3 on a 5-point scale) by more than two students were improving reading and math skills. Students rated the program highest in helping them learn to understand more about themselves, fit their interests and abilities with potential careers and accept adult responsibilities. First-year students also felt the program helped them become more open to different ideas and values, while SY students felt the program also helped them (a) become acquainted with a broad range of resources to use in gathering information for work and decision-making and (b) know what to look at when considering a job. Only three SY students and one FY student were unsure whether, if they had it to do over again, they would decide to participate in EBCE. No students in either group had decided or were leaning toward not re-entering.

The greatest strengths of the EBCE program in the opinion of the students were overall quality of the program, opportunity to learn about occupations and motivation to learn. First-year students also noted responsibility for their own learning and learning about adults and the community as other program strengths, while SY students indicated their experience with adults and the real world as program strengths. About 30 percent of the students said there were no program weaknesses. Of those FY students expressing weaknesses, the only weakness mentioned by more than one student was lack of communication between staff and students (24 percent). The weaknesses most often mentioned by SY students were lack of adequate basic skills development (21 percent) and nonnegotiable time periods (14 percent).

SUMMARY OF FINDINGS

The major findings from the 1975-76 evaluation of the demonstration $(CE)_2$ - Tigard program are listed below:

1. Students completed an average of more than the required number of career exploration activities during the year and averaged more than two learning levels. First-year (FY) students completed fewer projects and competencies than required while second-year (SY) students completed more projects than required.

2. In basic skills, students showed an average of one month's growth in reading comprehension for each month of program participation even though their pretest scores were at a high level. Students also demonstrated marginal growth on arithmetic subtests.

3. Both $(CE)_2$ student groups demonstrated significant growth on attitude scales measuring Openness to Change and Tolerance, but the SY growth was negative resulting in a significant difference between the two groups. In addition SY students exhibited positive growth on Work and Roles and negative growth on Social Commitment.

4. FY students demonstrated positive significant growth in educational aspirations with a slight increase in occupational aspirations.

5. By the end of the school year every student had some idea of what they would be doing one year after high school, while over one-quarter did not know at the beginning of the year. Over 90 percent plan to continue their education beyond high school. Less than seven percent of the students were interested in unskilled occupations.

6. Almost all of the students reported working at or observing one or both occupations of primary interest. Every student reported knowledge of how to enter those careers.

7. Students rated the program highest in helping them understand more about themselves, fit their interests and abilities with potential careers and accept adult responsibilities. All students, except three who were unsure, said that if they had it to do over again they would decide to participate in EBCE.

8. Greatest program strengths noted by students were overall quality of the program, opportunity to learn about occupations and motivation to learn. Although almost one-third of the students indicated no program weaknesses, six mentioned a perceived lack of adequate basic skills development and five mentioned a need for better staff communication.

9. Staff members perceived that greatest student growth occurred in the areas of self-esteem, individual responsibility, learning how to learn, ability to communicate with adults (including parents), oral and written communication, basic skills, willingness to try new things and coping skills. Moderate growth as viewed by the staff, occurred in awareness of nontraditional careers, knowledge about the job market and career decision-making skills.

10. In comparison to the previous year the staff saw the program becoming more stable, having a greater proportion of self-directed students, implementing the student accountability system more effectively and coordinating the student tutoring system better. Problem areas noted by the staff included less feeling of a student community and less than desired progress in integrating basic skills at employer sites.

11. All staff members indicated a willingness to participate in EBCE training and demonstration activities in the coming year and indicated areas in which they felt they could help most effectively.

APPENDIX H

EVALUATION REPORT

FOR

HILLSBORO PROJECT TOTAL

(TOTAL OPPORTUNITIES THROUGH ACTION LEARNING)

, HILLSBORO, OREGON

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August 1976

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INTRODUCTION

This report presents a summary of evaluation data analyzed by the Evaluation Unit of the Career Education Program (CEP) at the Northwest Regional Educational Laboratory (NWREL) for Project TOTAL. Project TOTAL (Total Opportunities Through Action Learning), operating in the Hillsboro School District in Oregon, has completed its second year as a NWREL pilot site of the Experience-Based Career Education (EBCE) program. The evaluation of Project TOTAL for the 1975-76 school year has been a cooperative endeavor by the Project TOTAL staff and the evaluation unit of CEP. The NWREL staff has proposed an evaluation design, developed some evaluation instruments, interviewed staff and a sample of students and analyzed the data. The Project TOTAL staff have administered or collected most of the data, coded them and provided these data to NWREL for analysis and reporting. Since the NWREL staff has not conducted systematic observations of Project TOTAL or been on site frequently during the year, this present report will summarize the evaluation data that have been analyzed but interpretation of these findings and recommendations for program modification should more appropriately come from the project staff.

Two sections comprise this report. The first section contains a description of the community, the program, staff, employer network, costs and participating students. The second section contains the evaluation findings of program outcomes. A description of each of the following instruments and related findings is presented: the Comprehensive Test of Basic Skills, Psychosocial Maturity Scale, Self-Directed Search, Student Opinion Survey, Student Project Evaluation Form, Student End-of-Year Questionnaire, Sample Student Interview, Staff Questionnaire and Interview, Parent Opinion Survey and Employer Opinion Survey.

DESCRIPTION OF PROJECT

Hillsboro, Oregon, located approximately 20 miles west of Portland, is the county seat for Washington County. Hillsboro covers approximately ten square miles and had a population in 1975 of 19,160. Between 1960 and 1975, Hillsboro has had an annual growth rate of six percent. It functions as a service center in an agricultural area and has increasingly expanded as a suburban community to Portland. County government, food processing and retailing are some of its major sources of revenue.

The TOTAL program is based primarily on the EBCE concept piloted by four regional educational research laboratories under the auspices and funding of the National Institute of Education (NIE). Most of the materials and strategies employed in the TOTAL program were adopted or adapted from the Community Experiences for Career Education, $(CE)_2$, as developed and directed in Tigard, Oregon, by NWREL.

TOTAL is a pilot alternative education program which was developed to help students in grades 9 to 12 who have not succeeded and progressed in the regular school programs. TOTAL was funded by the Hillsboro Union High School District and received supplementary funding from the state. As an alternative education program; TOTAL focuses on learning through real occupational experiences in the working community. Reading, writing, communicating, computing, coping, choosing and working skills are acquired through experiences in a wide variety of occupational situations. Students may utilize these learning opportunities primarily to identify and prepare for an occupational area of their choice or additionally to acquire basic learning skills and the important personal and social skills needed in today's society.

The first year (1974-75) of the TOTAL program was spent developing and testing an individual learning management system with emphasis on vocational and life skills. A special learning management team consisting of a learning manager, community coordinator, student coordinator and peer aides helped each student select and complete those learning objectives and activities which were best suited to the interest and ability of each student in the program. During the first year the primary goal was to develop the learning management system and, therefore, the enrollment was limited to a maximum of 30 students.

During the second year of operation Project TOTAL refined many of its instructional strategies, added some new competencies and expanded enrollment to between 50 and 60 students while adding only an educational assistant to the staff. By December, 1975, TOTAL had 54 active employer sites participating in the program with an average of two employer instructors per site.

Project TOTAL operates out of two former classrooms in one wing of Hillsboro Union High School. These two rooms provide offices for the staff, student working space, and storage for project resource materials. The project operated at a cost of $64,000 which included student transportation but excluded overhead such as facilities costs and the salary of the part-time director. Of the $64,000 budget, $17,000 came through special state funds and the remainder out of the regular school district funds.

EVALUATION FINDINGS

Program Fidelity

Two checklists were used by NWREL at the beginning and end of the 1975-76 school year to determine the extent to which each of the pilot sites was operating in a manner consistent with the NWREL model of EBCE. One checklist, the EBCE Essential Characteristics Checklist, covers five component areas of the program. These components are that EBCE: 1) is an individualized program, 2) is a community-based program, 3) is an experience-based program and is built from the career activities of adults, 4) must have its own identity and be comprehensive and integrated, and 5) places a major emphasis on the career development of students. Each component area is rated separately on from four to six essential characteristics on a scale of one to five with the anchor points prespecified.

A second checklist, the EBCE Process Checklist, is intended to complement the EBCE Essential Characteristics Checklist and was also used at the beginning and end of the 1975-76 school year. While the Essential Characteristics Checklist identifies basic policy and philosophical characteristics of an EBCE site, the process checklist is designed to identify deviations in procedures used in operating an EBCE program. This process and checklist consists of four sections: 1) EBCE objectives, 2) management and organization processes, 3) curriculum and instruction processes, 4) student service processes. Each section in turn contains separate items.

For example, on the item dealing with student projects, the project director and the evaluator are asked to check those Life Skill project areas that are a part of the program, to identify whether each project area is required or optional for students and to determine whether the particular project is designed like that in the EBCE handbook or operates differently. In cases where a process operates differently from the NWREL model, a description of the differences and a rationale for these differences is obtained.

Each of these two checklists was completed by the project director and separately by the NWREL evaluator. The results of the two checklists together provide an excellent profile description of the program. The ratings given by the project director and by the evaluator were highly consistent. On the checklist ratings made during the first semester, a high rating (4 or 5 on a 5-point scale) was given to 21 of the 24 essential characteristics rating scales.

The only scales receiving low or middle ratings (2 or 3) were related to the use of community input into program planning and operation, the role of the program advisory board and provision for employer instructor training activities. These ratings were somewhat lower than the rest because the project does not have a separate program advisory board but instead uses the district's career education central advisory committee and because no group employer training sessions had been planned. At the end of the year, the ratings regarding community input into program planning and operation had improved because community members were involved more intensively with the program during the year and had input into a related career education Part D proposal. An employer training seminar was also held during the year. In summary, the two program checklists indicate that Project TOTAL is operating as a high fidelity EBCE pilot site. A copy of the two checklists from June, 1976, is located in Appendices A and B to this report.

Staff Questionnaire and Interview

The three operations staff rated each of the EBCE learning strategies on a 5-point scale as to their importance and effectiveness. All of these strategies were rated high as a "4" or "5" on importance for each scale by all four staff members except for the predesigned projects which were rated as "3". The mean level of perceived effectiveness for each of these strategies was highest for competencies and for learning level activities. The lowest ratings in perceived effectiveness were for predesigned projects and for student negotiation.

In response to a series of questions concerning the extent to which EBCE experiences help students in 23 areas, only one mean response was below 3.0 on a 5-point scale. This area was in helping students understand the role of science in society today. Highest ratings were in helping students understand more about themselves, learn how their interests and abilities fit into potential careers, learn how to find and keep a job, learn basic skills necessary for careers that interest them, improve oral communications, take responsibility for their actions and communicate comfortably with adults.

Greatest student growth was perceived by the staff in the area of personal/social development, self-awareness and relationships with adults. Least growth, according to staff responses, was made in basic skills and in student accountability.

Factors seen by the staff as contributing to the success of the EBCE program include clinical staff support, a strong project director, a year's experience, more structure for the learning center activities, the cooperation of the employers and the packaging of competencies materials. Obstacles seen as limiting the program's success included teacher mistrust of EBCE, student transportation, students with behavior and remedial problems not receiving adequate help and too many students per staff member.

For next year, staff recommended admitting fewer students with emotional problems, more structure, an improved basic skills program, less paperwork and better use of tutors and aides. For a complete listing of responses to all questionnaire items, see Appendix C.

A 12-question individual staff interview was conducted by the evaluator in April, 1976, to determine in more detail the staff's perceptions of the project's second-year operations. A tabulation of responses to this interview is located in Appendix D. Of special interest to readers may be the question asking the staff what changes they made in EBCE. New activities described were in the use of volunteer high school students as tutors in basic skills, daily group feedback sessions to enable students to share their job site experiences with staff and fellow students, development of a more structured time schedule for students, use of a learning assistant and the starting of a part-time EBCE program for nine students in seventh and eighth grades.

Student Description

Throughout the year, approximately 60 students participated in Project TOTAL. Twenty-four percent of the students were girls. In terms of grade level, approximately 20 percent were in grade 9, 41 percent in grade 10, 29 percent in grade 11 and 10 percent in grade 12. At least ten students were terminated from the program over the course of the year. Of the remaining students, 26 had complete pre and posttest data and were used for statistical analysis. Of this number 92 percent indicated on an end-of-year questionnaire that they planned to graduate from high school and 44 percent indicated intentions to pursue postsecondary education. Eight percent planned to complete a four-year college program. Forty-four percent of the students expected to be working full time one year after completing high school.

The average number of student process outcomes completed by these students and average number of days absent are displayed in Table 1 below where the mean and standard deviation (S.D.) are shown.

TABLE 1

Average Number of Student Process Outcomes Completed and Days Absent Per Student in

PROJECT TOTAL
(N=26)

	Mean	S.D.
Career Explorations	10.08	3.10
Learning Levels	2.50	.99
Skill Building Levels	.54	.76
Projects	2.77	1.63
Competencies	2.35	1.52
Days Absent	18.27	12.23

Students in Project TOTAL completed more than twice the number of career explorations required by the program design but fewer student projects and competencies than were expected. In terms of attendance, they averaged more days absent than any other sites, which would be expected considering the fact that many of the students were recommended for the program based on past failure in the regular school program. Data collected in 1974-75 indicated that the average percent of time in attendance at school prior to entering TOTAL was 35.7 percent for last year's TOTAL students. While in TOTAL, students' average attendance rate last year was 87 percent and this year was 90 percent.

Growth Data

The MULTIVARIANCE[1] program was used to analyze growth data.

Growth data collected at Hillsboro consisted of scores for the reading comprehension, arithmetic concepts and arithmetic applications subtests of the Comprehensive Test of Basic Skills (CTBS); the Self-Directed Search; the Student Opinion Survey; and changes in occupational and educational aspirations. Pretest and posttest means and standard deviations (S.D.) for the CTBS are given below in Table 2. Data are reported as expanded standard scores and as grade equivalents (G.E.). Changes in the CTBS scores were statistically significant for reading comprehension ($F=5.62$, $df=1, 22$, $p<.03$) and approached significance for arithmetic applications ($F=3.54$, $df=1, 22$ $p<.08$).

TABLE 2

Pretest and Posttest Scores on the CTBS for Project TOTAL Students (N=26)

CTBS Subtest	Pretest			Posttest		
	Mean	S.D.	G.E.	Mean	S.D.	G.E.
Reading Comprehension	513.42	103.44	7.0	537.15	82.15	7.8
Arithmetic Concepts	508.35	71.89	7.6	534.88	75.25	8.1
Arithmetic Applications	516.58	104.77	7.4	539.08	78.60	8.2

[1] Pretest scores were used as independent variables in a one-factor analysis of covariance of the posttest scores for each instrument. Univariate F tests of the growth effects on each variable were used since the small number of subjects limited the multivariate analysis. Finn, J. MULTIVARIANCE: A generalized univariate and multivariate analysis of variance, covariance and regression. Version V. Chicago: National Educational Resources, Inc., March, 1972.

The Self-Directed Search, developed by John Holland, was used to identify "occupational personality" characteristics of each student. These six areas are: realistic (e.g., skilled trades, technical and some service occupations); investigative (e.g., scientific and some technical occupations); artistic; social (e.g., educational and social welfare occupations); enterprising (e.g., managerial and sales occupations); and conventional (e.g., office and clerical occupations).

It is also possible to calculate six other scores from this instrument: self estimates, activities, competencies, occupations, differentiation and consistency. The self-estimates score represents the student's total self rating (on a seven-point scale) score across 12 traits such as mechanical ability, artistic ability and office skills. Two of these traits reflect each of the six occupational categories. Students rate themselves in comparison with other persons of the same age. The activities score represents the student's total number of activities across the six occupational categories that the student says he or she likes to do. The competencies score represents the total number of activities across the six occupational categories that the student feels he or she can do well or competently. The occupations score represents the total number of occupations that are of interest or appeal to the student. The differentiation score describes the degree to which a person represents a "pure" personality type. A person with very strong "Social" interests and competencies, for example, is more of a "pure" type than a person with moderate "Social," "Enterprising" and "Conventional" interests and competencies. The differentiation code is computed by subtracting the numerical weight of the tertiary score from the weight of the primary code. The consistency score is an index of the internal consistency of the personality. Operationally, it describes the degree of compatability between the primary and secondary code. For example, a person with an "Artistic" primary code and a "Conventional" secondary code will probably exhibit contradictory behavior patterns and interests and receive a low consistency code.

Pretest and posttest means and standard deviations (S.D.) for subscores on the Self-Directed Search are shown on the following page in Table 3.

TABLE 3

Pretest and Posttest Scores on the Self-Directed Search for Project TOTAL Students (N=26)

Occupational Area	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.
Realistic	10.73	4.53	10.50	4.29
Investigative	6.65	2.81	6.92	3.07
Artistic	6.50	2.97	6.58	2.98
Social	8.42	3.62	8.00	3.68
Enterprising	5.77	2.52	5.19	2.91
Conventional	4.00	2.84	3.50	2.60
SDS Summary Scores				
Self-Estimates	22.31	7.70	24.23	4.40
Activities	25.23	12.70	25.77	12.97
Competencies	23.46	12.18	24.27	13.52
Occupations	15.85	12.85	11.46	10.11
Differentiation Score	6.27	2.60	6.19	2.56
Consistency Score	2.31	.79	2.46	.81

Significant differences in pre and posttest scores were not expected for the six occupational areas since these factors usually remain stable and an increase in interest in one occupational area often leads to a decrease in another. However, there was a near significant increase in investigative occupations ($F=3.11$, $df=1, 22$, $p<.05$).

The total self-estimates, activities, competencies and occupations scores were anticipated to increase over the year as students gained a variety of work experiences and perhaps came to view themselves in a more positive light. However, although there were increases on most of these scores, they were nonsignificant changes.

Increases in differentiation and consistency were hypothesized as a result of students observing and trying out a variety of jobs and learning to discriminate more in what activities they like and dislike. The differentiation score showed little change but TOTAL students did demonstrate significant growth in the consistency of their occupational selections ($F=5.33$, $df=1, 23$, $p<.04$).

The Student Opinion Scale is a local name applied to the Psychosocial Maturity Scale developed by Ellen Greenberger. The instrument is used to assess growth in nine different areas, many of which are related to the EBCE Life Skills goals. The results from this instrument are presented in Table 4.

TABLE 4

Pretest and Posttest Scores on the Student Opinion Scale for Project TOTAL Students (N=26)

	Pretest		Posttest	
Individual Subscales	Mean	S.D.	Mean	S.D.
Self Reliance	26.81	4.42	28.31	3.40
Work	25.73	5.59	24.92	5.27
Identity	24.35	6.20	25.54	5.00
Communications	21.08	5.10	22.27	4.90
Roles	31.46	5.54	31.50	5.59
Trust	27.04	4.10	27.46	3.87
Social Commitment	30.27	5.40	31.15	5.08
Change	32.04	5.35	32.12	4.87
Tolerance	34.62	5.63	34.77	5.08
Social Desirability	18.73	3.82	19.31	4.04
Summary Scales				
Individual Adequacy	76.88	12.38	78.77	9.98
Interpersonal Communication	79.58	10.18	81.23	7.09
Social Adequacy	96.92	14.10	98.04	12.34

The Social Desirability scale is a "lie" scale designed to estimate the "fake factor" of response. Higher scores indicate a tendency to respond in a socially desirable manner. The TOTAL scores on this scale indicate that students were responding in an honest manner but tended toward the more socially desired responses at the end of the year.

These subscale scores can also be combined to form three summary scales: Individual Adequacy, Interpersonal Communications and Social Adequacy (Table 4).

Results of the multivariate analysis of change scores indicate that Project TOTAL students demonstrated statistically significant growth in self-reliance ($F=22.44$, $df=1, 21$, $p<.001$), trust ($F=10.97$, $df=1, 21$, $p<.01$), change ($F=6.16$, $df=1, 21$, $p<.03$) and tolerance ($F=4.82$, $df=1, 21$, $p<.04$) scales and approached significance on the work scale ($F=4.13$, $df=1, 21$, $p<.06$). TOTAL students also demonstrated significant growth on the summary scales of individual adequacy ($F=5.66$, $df=1, 21$, $p<.03$), interpersonal communications ($F=14.27$, $df=1, 21$, $p<.01$) and social adequacy ($F=5.53$, $df=1, 21$, $p<.03$). These results are particularly impressive since little significant growth on this instrument was detected at the other two NWREL EBCE pilot sites using this instrument on a pre and posttest basis.

Student End-of-Year Questionnaire

A student questionnaire developed by NWREL was completed by TOTAL students in May. The purpose of the instrument was to obtain end-of-year data on certain questions asked of the same students at the beginning of the year, to assess student knowledge of job trends and related information and to collect data on student reflections about their school EBCE experiences. A tabulation of responses to the questionnaire is displayed in Appendix E and is based on the 25 students who were in TOTAL for the entire year and who completed the pre and posttest.

Over half of the TOTAL students reported that they had worked and/or observed at both jobs they listed as career choices on the questionnaire. Only two students reported having neither worked nor observed at careers they were interested in.

Only one of the TOTAL students reported that he or she did not know the steps necessary to prepare for and enter each of the two jobs, and two-thirds felt they would be able to complete the necessary steps for preparation and entry into at least one of the jobs. The remaining one-third indicated they were unsure.

Most of the students (72 percent) indicated that their EBCE experience in observing or trying out the jobs influenced their choice of potential careers. Other factors that influenced career choice were talking with people who work at the jobs (48 percent), reading about the jobs (20 percent), talking with relatives or friends about one's choices (28 percent) and talking with teachers or counselors about choices (2 percent). Eighty percent of the students were able to identify jobs that seemed interesting last year but no longer match their interests or abilities. Experience in observing or trying out the job(s) was the most frequent reason selected for changing career plans (16 percent).

The TOTAL students rated the program high in helping them attain the program goals. The goal areas in which they reported the program least effective were in understanding the role of science in our society, understanding the democratic process and improving writing skills. Students rated the program highest in helping them learn to get along with others.

In comparison with the regular high school program, 80 percent of the TOTAL students felt EBCE provided them with more opportunity for learning about occupations, 88 percent felt it provided them with more opportunity for general learning and 76 percent felt it motivated them to learn more than did their past experiences in the regular high school.

On an open-ended question, students were asked to identify the perceived strengths and weaknesses of Project TOTAL. Strengths most frequently listed were job site training and opportunities (45 percent), ability to choose what to learn (17 percent), ability to work at your own rate (15 percent), learning what is important in the outside world (12 percent), job site explorations (10 percent) and a helpful and trusting staff (10 percent). Twenty percent of the students indicated they saw no weaknesses. Of the weaknesses listed, the most common were students misbehaving or acting silly (8 percent), not being able to get preferred job site (5 percent), not enough staff help (5 percent), projects (5 percent) and completing daily plans (5 percent).

Sampled Student Projects

In addition to the evaluation data collected and reported for all project sites, the NWREL EBCE evaluation unit also requested that EBCE sites send copies of all student written Life Skills projects and resulting products (reports) for a random sample of five students. The selection of these five students was done at NWREL using the TOTAL program roster and a table of random numbers. Student projects and written products were collected and analyzed because these projects are one of the major learning strategies used in EBCE to help integrate student activities at the learning center with those at employer and community sites. The evaluators feel that a close evaluation of these student projects and products, while time consuming, can be one of the best ways to assess the curriculum aspects of EBCE.

All student Life Skills projects and products produced by four of the five sampled students were received, read and rated by a NWREL staff member using a Student Projects Evaluation Form. The form contained twelve categories for rating the projects and five categories for rating the written products. Each rating category contained

a nine-point scale and a place for written evaluator comments. A tabulated copy of the Individual and Combined Project Evaluation forms is located in Appendix G.

Of the four students whose projects and products were reviewed, two had completed two individually negotiated projects and one predesigned project and the other two students had each completed only an individualized critical thinking project. Prior to rating each of these eight projects and products, the reviewer reviewed the test scores of these students to get a feeling for the ability level of each student.

Prior to rating these projects, the NWREL staff member, an evaluator and a recent Tigard (CE)$_2$ learning manager independently reviewed and rated four student projects from another EBCE pilot site and then discussed their findings. In cases where a discrepancy of more than two points on an item occurred, the raters described the rationale for their choices and their interpretation of what was meant by each scale. The discussion helped to clarify the meaning of each scale. Reliability levels among the raters will be calculated and reported to NWREL in September, 1976.

Student projects were rated highest in regard to incorporating basic skills, capitalizing on student interests, containing adequate performance criteria, appropriateness of project activities for the student's abilities and the logical relationship of activities. Student projects were rated lowest in meeting the specific objectives of the Life Skills area and in using a variety of resources. In evaluating the students' products, (generally, written reports resulting from the projects), it was judged that most products communicated well and had at least adequate technical quality (e.g., legibility and grammar) relative to the student's ability.

Employer Opinion Survey

In May, a NWREL developed opinion survey was mailed by the TOTAL staff to 75 participating employers. Thirty-eight questionnaires were returned for a response rate of 51 percent. Timing at the end of the school year did not allow for a followup mailing to nonrespondents. A tabulated copy of the employer survey is located in Appendix H.

Employers reported a median of 5.4 hours per week that they spent working with students on exploration levels and 8.5 hours per week on learning levels. During exploration levels, the most

frequent employer activities were talking about site activities (68 percent), supervising students in performing specific job related tasks (63 percent), talking about job opportunities (55 percent) and evaluating individual students' assignments (50 percent). These same activities occurred at learning levels usually with a greater frequency. Probably the single best evidence of strong employer support for TOTAL is that 100 percent of the employers completing the survey indicated that they would recommend to a potential employer or resource person that he or she also become involved with the program. Eighty-four percent of the employers stated they plan to continue participating with the program next year. Of those who do not plan to continue, the reason stated was lack of time. None of them indicated that they felt the program was ineffective or that they were not continuing because of problems with the students or staff.

The four strengths of TOTAL checked most frequently by employers are that students learn about real life situations (87 percent), learn about a variety of careers (79 percent) and gain experience in working with adults (61 percent), and the program is a good alternative to a regular high school program (53 percent). The only weakness of the program selected by more than three employers was that some students cannot handle the freedom (32 percent).

Parent Opinion Survey

In May, a NWREL developed opinion survey was mailed by the TOTAL staff to parents of 50 TOTAL students. Twenty questionnaires were returned for a response rate of 40 percent. A tabulated copy of the parent survey is located in Appendix I. One of the most dramatic results from the questionnaire is the effect the program appears to have on increasing the communication between young people and their parents. Before entering the TOTAL program, only 15 percent of the parents reported that their son or daughter talked with them frequently or almost daily about what was going on in the regular school. After being in TOTAL for one or more years, 60 percent of the parents reported that their son or daughter talked to them frequently or almost daily about what was going on in the TOTAL program.

Several questions on the parent survey help to reveal the parents' overall impression of TOTAL. Eighty-five percent of the parents felt that the TOTAL program experiences for their son or daughter were better than past school experiences and ten percent felt the experiences were about the same.

Many parents saw positive changes in their son or daughter that they felt might be a result of participating in the TOTAL program. Changes identified by at least half the parents were greater self-confidence (75 percent of the parents checked this), better understanding of jobs (70 percent), greater maturity or self-direction (65 percent) and improvement in basic skills (55 percent). Very few negative effects of participating in TOTAL were noticed. Fifteen percent of the parents felt their son or daughter had become less interested in education and seven percent felt their son or daughter had become more critical of others.

SUMMARY OF FINDINGS

The major findings from the NWREL evaluation of TOTAL are listed below:

1. The TOTAL program is operating as a high fidelity NWREL EBCE pilot site.

2. Students selected for Project TOTAL were often those who had not succeeded in the regular high school program. They completed more than twice the number of career explorations required by the program design but fewer student projects and competencies were expected.

3. In terms of school attendance, students enrolled in TOTAL in 1974-75 averaged 36 percent school attendance the year prior to entering this program. Last year students in TOTAL averaged 87 percent attendance for that year and this year student attendance averaged 90 percent.

4. Students in TOTAL showed a significant increase in reading comprehension, approached significance in growth in arithmetic applications and demonstrated nonsignificant growth in arithmetic concepts.

5. On the Self-Directed Search, students demonstrated a significant increase in consistency of occupational selection. This meant that their career preferences became more focused.

6. Project TOTAL students made statistically significant growth on measures of self-reliance, change, tolerance and trust scales plus all three summary scales. These results are particularly impressive since significant growth on these measures was not detected in the other two NWREL EBCE pilot sites.

7. Only one of the TOTAL students reported that he or she did not know the steps necessary to prepare for and enter each of two careers of interest. Two-thirds of the students felt they would be able to complete the necessary steps for preparation and entry into at least one of their two top careers of interest. The remaining third indicated that they were unsure.

8. In comparison with the regular high school program, 80 percent of the TOTAL students felt EBCE provided them with more opportunity for learning about occupations, 88 percent felt TOTAL provided them with more opportunity for general learning and 76 percent felt it motivated them to learn more than did their past experiences in the regular high school.

9. Probably the single best evidence of strong employer support for TOTAL is that 100 percent of the employers completing an employer opinion survey in May, 1976, indicated that they would recommend to a potential employer or resource person that she or he also become involved with TOTAL.

10. One of the most interesting results from the parent survey is the effect the program appears to have on increasing the communications between young people and their parents. Before entering the TOTAL program, only 15 percent of the parents reported that their son or daughter talked with them frequently or almost daily about what was going on in the regular school. After being in TOTAL for one or more years, 60 percent of the parents reported that their son or daughter talked to them frequently or almost daily about what was going on in the TOTAL program.

11. Several questions on the parent survey help to reveal the parents' overall impression of TOTAL. Eighty-five percent of the parents felt that the TOTAL program experience for their son or daughter was better than past school experiences and ten percent felt the experiences were about the same.

Many parents saw positive changes in their son or daughter that they felt might be a result of participating in the TOTAL program. Changes identified by at least half the parents were greater self-confidence (75 percent of the parents checked this), better understanding of jobs (70 percent), greater maturity or self-direction (65 percent) and improvement in basic skills (55 percent). Very few negative effects of participating in TOTAL were noticed. Fifteen percent of the parents felt their son or daughter had become less interested in education and seven percent felt their son or daughter had become more critical of others.