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Assessment of Kalamazoo County's Education for Employment (EFE) Programs Using 1998 Survey Data

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Assessment of Kalamazoo County's Education for Employment (EFE) Programs Using 1998 Survey Data

August 1998

by

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1. EFE Programs

The Kalamazoo Regional Educational Service Agency (K/RESA) administers a career and technical education consortium titled Education for Employment (EFE). The consortium members include all nine local school districts in Kalamazoo County, the Intermediate School District, and Kalamazoo Valley Community College (KVCC). EFE offers programs and activities to students from a wide range of grade levels, and it supports professional development activities for teachers. For example, the consortium presents a career introductory program to districts' first graders using puppets; a career exploration day for all 8th graders in the county; job shadowing experiences for 10th graders; a variety of career and technical education programs for high school students; and services for community college students (through the Tech Prep program). Examples of its professional development activities are "Why Math?" and "Why English?", which are teacher inservice programs in which secondary school math and English teachers visit local businesses to observe and learn how their subjects are used in the workplace. The largest share of EFE's mission, however, is the coursework for high school students, and those activities are the subject of this study. Note that most of course offerings are fully articulated with KVCC and with Davenport College allowing students to obtain transferable college credits.

EFE classifies programs as either (1) school-based programs or (2) work-based programs. But this simple dichotomy does not do justice to the wide variety of offerings. The school-based programs comprise 19 occupational clusters—accounting/computing; agriscience; automotive collision repair; automotive technology; business services technology; child care; commercial design; construction trades; drafting technology; electro-mechanical technology; graphic and printing communications; heating, air conditioning, and refrigeration; machine tool technology; manufacturing cluster; marketing; paper technology; photography; radio broadcasting; and welding. Each of the 11 high schools in the county plus KVCC and Western Michigan University (WMU) offer courses in one or more of these clusters and students from any of the high schools may enroll in them. Approximately 18 percent of the students enrolled in these school-based programs come from another high school.

EFE offers four types of work-based programs. The first type, referred to as worksite-based classroom programs, involves formal classwork at worksite settings. EFE has established programs in nine occupational areas. In each of these occupational areas, local businesses, nonprofit organizations, or government agencies have provided classroom space and have worked with EFE on developing curriculum and on-the-job experiences. These programs include a two-year allied health & science technology program and a one-year health careers program offered at a local hospital, a two-year hospitality program offered at a hotel, a two-year law enforcement program offered at a community probation facility, a one-year opticianry program at an optical manufacturer, a two-year plastics program at a plastics manufacturer, a two- or three-year theater technician program at a community auditorium facility, a one-year television production and broadcasting program at a community cable access center, and a cosmetology program that is offered at three different local beauty academies. In all cases, these innovative programs extend beyond classroom instruction to actual experiential learning. As with all EFE course offerings, these programs are open to and attended by students from all 11 high schools in the consortium. For most of the programs, the facilities are able to accommodate all the students who are interested in enrolling. In one or two, however, space and instructor availability constrain the programs, so that "slots" are allocated across districts.

The second type of work-based program is called **workforce entry**, or **co-op**. These are paid work experiences in students' occupational areas of interest. In all cases, students are enrolled in a school-based program simultaneously with the co-op experience and the workforce entry activity is meant to enhance the school-based program. In Fall 1997, about 137 students from all 11 high schools in the county were engaged in workforce entry experiences in marketing, office, or trade and industrial programs. The intent of these experiences is to supplement and contextualize the schoolbased program by providing actual employment in the occupational cluster that is being taught.

The third type of work-based program is called **business/industry worksite training**. This program provides students with experiences that are like workforce entry (or co-op). They may be paid or unpaid positions that are offered to students interested either in (1) occupational areas that do not have sufficient student interest to fill a (school-based program) class or (2) occupational areas that are not traditionally taught at the high school level. For example in Fall 1997, 108 students engaged in a teacher externship program to explore teaching as an occupation. Clearly, this is an occupational area that is not traditionally taught in secondary schools, but these externships allowed students to begin to gauge their interest in teaching as a career. An additional 20 students had training in veterinarian assistance, paralegal, aviation, and a few other occupational areas where there was not enough enrollment to fill a class.

EFE staff are proactive in establishing content guidelines for the employer/supervisors of students in business/industry worksite training to follow. The EFE staff members who develop these positions collaborate with employers to determine objectives, content, and assessment standards. The workforce entry (co-op) experiences supplement existing courses, so the objectives and content have been developed. The business/industry worksite training positions are offered precisely because there are no related courses, so the objectives and content need to be developed.

The final type of work-based program is **apprenticeship**. Individuals with apprenticeships are working for pay outside of school just as the co-op students are. However, in this case, the employers have agreed to provide the students with the experience and postsecondary education requirements of a formal U.S. Department of Labor-approved apprenticeship leading to journeyperson status. In Fall 1997, EFE had 12 students in formal apprenticeships.

In Spring 1998, EFE contracted with the Upjohn Institute to conduct data collection activities that provided information from three key stakeholder groups: students currently enrolled in EFE programs, parents of students currently enrolled in EFE programs, and high school graduates who had participated in EFE programs. The latter were surveyed approximately one year after graduation.

The next section of the paper provides detail about the survey design and methods that were used to collect the data. This is followed by a section that presents findings from the survey of current students. Next, data from the parent survey are discussed. Then, findings from the follow-up survey of high school graduates are analyzed. The final section of the paper summarizes the major findings from the data collection activities and offers some recommendations for the EFE program to consider.

2. Methods

The intent of the data collection efforts conducted through this study was to obtain a statistically valid, broad "snapshot" of the various stakeholder groups rather than an in depth analysis of a few individuals.¹ Consequently, surveys were designed and conducted rather than focus groups or personal interviews.

The survey of current EFE students was administered in May 1998 to all students enrolled in EFE classes or work-based programs. The survey collected data about the students' high school experiences, the information that they used to decide to enroll in the EFE class or program, their experiences in and opinions about the class/program, their knowledge of and intended use of transferable college credit, and their career and postsecondary plans. We estimate that there were approximately 2,500 students enrolled at the time of the survey, and we received 1,361 usable responses (a response rate of about 54 percent).

The biggest loss in response came from classes where the instructor was unable to administer the survey because they could not afford to or would not use instructional time. We estimate that perhaps half of the nonresponse came from these situations, i.e., no responses were received from that particular class offering. Other reasons for nonresponse included student absences on the day that the survey was administered, student refusal to respond, or unusable responses.

The survey of parents/guardians of current EFE students was conducted through the mail. A random sample of 500 parents was selected to receive the survey. Responses were received from 130. This represents a 26 percent response rate, which is reasonable for a mail survey. The subjects

¹K. Hollenbeck, "In Their Own Words: Student Perspectives on School-to-Work Opportunities," National Institute for Work and Learning, Washington, DC, 1996, provides an in depth examination of EFE students' perspectives.

covered in this brief survey included information about enrollment in the EFE class or program, opinions about the class/program, and general reactions to the EFE activities.

The follow-up survey of students who were in 12th grade and who had completed their EFE class during the second semester of 1996-97 was conducted by a computer-assisted telephone interview. The interviews were conducted by staff at the Kercher Center of WMU. The State of Michigan mandates and regulates this survey because funding for career and technical education in the State is partially determined from its data. The main purpose of the survey is to measure postsecondary and employment outcomes. We took the opportunity to add a few questions to the State's survey that were aimed at gauging satisfaction with the EFE classes/programs and use of college credits that had been earned while in high school.

The response rate for this survey was around 55 percent. Attempts to contact just under 923 students were made, and we received usable data from 477. The main reasons for nonresponse were students who were not reachable because the data system had recorded wrong telephone numbers or students had moved and could not be traced. We estimate that these problems were encountered for over 250 students. Refusals and inability to contact students within the timeframe of the survey were the primary reasons for the remainder of the nonresponse.

3. EFE Students

This section of the report presents characteristics about the high school students who are currently enrolled in EFE programs. Data were collected about the students' high school experiences, factors that influenced enrollment into EFE classes, opinions about EFE programs, experiences with work-based programs, knowledge of and planned use of college credit, postsecondary and career plans, and current employment. For most of these data, we have disaggregated the information to examine differences between males and females, whites and nonwhites, and whether or not the students were in a work-based program. As noted in the previous chapter, all students enrolled in EFE classes in May 1998 were surveyed and responses were received from about 60 percent of the students. The percentages for the characteristics used to disaggregate the sample are as follows: 55 percent males and 45 percent females, about 82 percent whites and 18 percent nonwhites, and about 26 percent in a work-based program and 74 percent not participating in such an experience. (These percentages are similar to the characteristics of last year's sample, which had 53 percent males, 80 percent whites, and 22 percent in a work-based program experience.)

High School Experiences

Table 3.1 provides summary data about the students' overall experiences in high school. Note that all of the data were self-reported. That is, we did not use official transcripts to confirm grade point averages, class standing, tardiness or absences.

The table shows that about 15 percent of the survey respondents were freshmen or sophomores, and the remainder were split approximately in half between juniors and seniors. This

	Se	ex	Ra	Work-based Race program			
Characteristics	М	F	W	NW	Yes	No	Total
Class standing:							
Freshman	6.1%*	2.3%*	3.4%*	7.8%*	0.9%*	5.4%*	4.1%
Sophomore	10.1	12.5	11.9*	7.3*	3.0*	14.2*	11.2
Junior	43.2	38.6	41.2	42.4	29.6*	45.3*	41.3
Senior	40.6*	46.6*	43.5	42.4	66.5*	35.1*	43.3
Homework (average hours/week)	2.2*	3.1*	2.5*	3.1*	2.4	2.6	2.5
High school grade (gpa)	2.75*	3.10*	2.96*	2.66*	2.84	2.89	2.86 (B-)
High school activities (average no. of)	2.4*	3.0*	2.6	2.8	2.6	2.7	2.6
Tardies (average no. of)	6.4*	5.6*	5.8	6.6	6.8	6.2	6.3
Absences (average no. of)	6.4	5.9	6.0*	7.1*	7.7*	6.0*	6.4
Total percentage	55.4%	44.6	81.9%	18.1	26.0%	74.0	100.0%

 Table 3.1

 High School Experiences and Characteristics of EFE Students

*Difference from other population group is statistically significant at the .05 level. Sample size is 1,361.

distribution approximately holds for males and females, and for whites and nonwhites. As might be expected, the percentage of students who were participating in work-based program experiences who were freshmen or sophomores was significantly smaller than their overall share of students. Only about four percent of the students participating in work-based program experiences were in 9th or 10th grade. However, the percentage of all EFE students who were freshmen or sophomores—over 15 percent is slightly larger than last year, when it was just under 14 percent.

Respondents reported that they averaged about 2.5 hours of homework per week. Females averaged almost an hour more per week than males (3.1 to 2.2), which was statistically significant. Nonwhites also reported that they averaged more homework than whites, and this difference—3.1 to 2.5—was also significant. The students were asked to identify the extracurricular activities they engaged in during the year. On average, the students indicated that they had participated in about 2.6 activities. Females reported being engaged in more activities than males (3.0 to 2.4). There were

not statistically significant differences in the average number of activities between racial groups or between work-based program participants or nonparticipants. The average (self-reported) grade point average in the sample was 2.86 (B-). Among the groups, females and whites had higher grade point averages than males and nonwhites, respectively. These averages and differences across groups were similar to previous years' data.

The last items in the table are average number of absences and tardiness during the school year. The overall averages for the entire sample were 6.3 tardies and 6.4 days of absence. (Assuming there were about 180 days of instruction, these averages work out to about 3.5 percent.) Females had less tardiness than males (5.6 instances on average as compared to 6.4). Nonwhites had more absences than whites, and individuals with work-based program experiences had more absences than individuals who did not have a work-based program experience as part of their EFE program. Assuming that the samples are representative of all EFE students in each year, the trend in tardiness and absences is downward. The average level of tardiness has dropped over the last three years from 7.8 to 6.9 to 6.3 incidents, and the average level of absences has dropped from 7.1 to 6.7 to 6.4 days.

EFE Enrollment Decisionmaking

Students were asked two things about how they came to be enrolled in their EFE class or program: sources of information about the class/program and individuals who assisted them in their decision to enroll. Table 3.2 presents summary data for these issues. The entries in the table are composed of two numbers. The first represents the proportion of the respondents who reported that they used each of the information sources or got assistance from particular individuals. The second number, after the slash, is the proportion of students who said that each source of information or

	1 7		<u> </u>		L		
	S	ex	Ka	ice	Work-base	ed program	
Source/Individual	М	F	w	NW	Yes	No	Total
Information source used/most important							
Guidance counselor advice	.53*/.25*	.65*/.32*	.59/.29	.58/.26	.72*/.36*	.53*/.26*	57/27
Poster	.04/.00	.04/.01	.04/.01	.04/.00	.04/.01	.04/.00	04/00
Academic subject teacher	.11*/.03	.16*/.03	.13/.03	.14/.04	.13/.05*	.13/.02*	.13/.03
Technical education teacher	.20*/.07*	.26*/.12*	.22/.09	.26/.10	.31*/.12	.21*/.08	.24/.09
Brochure	.08/.02	.10/.02	.07*/.02	.13*/.04	.09/.01	.08/.02	.08/.02
High school handbook	.54*/.27	.64*/.27	.59*/.28	.53*/.25	.55/.20*	.58/.28*	.56/.25
Friends/acquaintances	.46*/.26	.52*/.27	.51*/.28*	.41*/.18*	.49/.27	.49/.26	.48/.25
Brother/sister - family	.12/.07	.12/.07	.12/.07	.10/.04	.08*/.04*	.14*/.08*	.13/.07
EFE staff presentation	.08/.03*	.11/.05*	.09/.04	.10/.06	.15*/.07*	.07*/.03*	.09/.04
Employer	.05/.03*	.04/.01	.04/.02	.06/.03	.05/.02	.04/.02	.05/.02
Other	.06/.02	.05/.01	.05/.01	.09/.03	.07/.02	.05/.02	.06/.02
Individual who assisted/most important							
Guidance counselor	.53*/.27	.64*/.31	.58/.29	.59/.30	.68*/.33*	.55*/.27*	.57/.28
Academic subject teacher	.08/.04	.10/.05	.09/.04	.08/.04	.10/.05	.09/.04	.09/.04
Technical education teacher	.09*/.03	.14*/.07*	.11/.05	.13/.07	.17*/.07	.10*/.05	.12/.05
Other school administrator	.02/.01	.02/.00	.02/.01	.03/0	.02/.02	.02/.00	.02/.01
Parent/guardian	.33*/.22*	.46*/.29*	.39/.25	.36/.26	.35/.22	.39/.25	.37/.23
Friends	.36*/.20	.45*/.24	.41*/.23	.34*/.18	.38/.19	.40/.22	.39/.21
Brother/sister	.14/.07	.10/.07	.10/.07	.09/.05	.08/.05	.11/.07	.10/.07
Employer	.03/.02	.02/.01	.02/.01	.03/.02	.05*/.02	.02*/.01	.03/.02

 Table 3.2

 Sources of Information and Individuals Who Assisted in Decisionmaking about EFE Class

Note: Table entries are the proportion of the sample who used the information source (top panel) or who got assistance from the individual (bottom panel) followed by the proportion of the sample who reported that the information source or individual was among the most important. Sample size is 1,361.

* Difference from other population group is statistically significant at the .05 level.

individual was among the most important. For example the first entry in the table is .53*/.25*. This means that 53 percent of the males reported that guidance counselor advice was a source of information about their EFE class, and that 25 percent of the males indicated that guidance counselor advice was among the most important sources of information. (The asterisks indicate that the 53 percent and 25 percent for males are statistically significant differences from the 65 percent and 32 percent for females.)

The data in the top panel of the table indicate that about half of the students received information about their EFE classes/programs from guidance counselors, from high school handbooks, and from friends/acquaintances. Around a quarter of the students received information from a technical education teacher, and about 10-15 percent of the students received information from an academic subject matter teacher, a sibling, or EFE staff presentations. The most important sources closely aligned with the overall reliance. Guidance counselor advice, high school handbooks, and friends were the most important information sources. Note that posters and brochures were reported to be a source of information by very few students.

A number of differences in proportions among the sex, race, and work-based program groups were significant. Females reported more information sources than males, and in particular, a greater reliance on guidance counselors, high school handbooks, teachers—both academic and technical education—and friends/acquaintances. There were only a few differences between minorities and whites. The former reported a lower reliance on friends/acquaintances and high school handbooks, and a greater reliance on brochures. Students who were in work-based programs tended to rely more heavily on guidance counselor advice, technical education teachers, and EFE presentations than did other EFE students.

The bottom panel of the table reports data concerning which individuals were influential in the students' decisions to enroll in EFE. Guidance counselors were mentioned most often by respondents both as individuals who assisted and the most helpful individuals. Friends were next, followed closely by parents/guardians. Among the subpopulation groups, females reported that they tended to be assisted by guidance counselors, parents/guardians, technical education teachers, and friends more than did males. The only statistically significant difference between nonwhites and whites was a much higher reliance on friends for whites. Students in work-based programs were assisted more often by guidance counselors, technical education teachers, and employers.

An interesting finding from this year's student data in comparison to the last two years is a substantial decline in reliance on information from *all* sources. Virtually every number in table 3.2 is smaller than the entries in the same table from last year's report. For example, last year the proportion of students who received information from guidance counselors was 64 percent. This year, it is 57 percent. Last year, the percentage of students who received some information from posters was 25 percent; this year it is 4 percent. The percentages for family members and for employers as sources of information and enrollment decisionmakers also dropped from around 20 percent to less than 5 percent. One possible explanation is that EFE classes are more well-known by students, and so the students are less reliant on external sources of information.

Opinions about EFE Classes

The students were presented with a number of survey items to gauge their opinions about, and satisfaction with, their EFE classes. Specifically, they were asked for their level of agreement or disagreement with several statements of opinion about different aspects of the course, they were asked to assign a letter grade (from A to F) to assess the course, and they were asked open-ended questions about the best and worst things about the class. Table 3.3 provides summary information about the statements of opinion and the letter grade; the next table provides summary data about the students' responses to the open-ended questions. The first eight rows of the table present the percentage of students who agreed or strongly agreed with various statements about their EFE class. (Note that some of the questions were worded negatively, so that we have tabulated these for respondents who disagreed or strongly disagreed.) The entries in the columns can be interpreted as

					Work	-based	
	Se	ex	R	ace	prog	gram	
Indicator	Μ	F	W	NW	Yes	No	Total
Agree/strongly agree with "This course is one of the best"	64	63	65*	54*	72*	60*	63
Disagree/strongly disagree with "This course is too hard"	77*	83*	82*	70*	81	80	79
Agree/strongly agree with "I get along with other students and we work together"	83	84	85	82	81	83	82
Agree/strongly agree with "The equipment and facilities meet the needs"	75*	81*	78	77	75	76	76
Disagree/strongly disagree with "Not enough information"	66	71	70*	5 9*	72	66	68
Agree/strongly agree with "This course treats everybody fairly"	69*	75*	74*	64*	73	71	71
Agree/strongly agree with "I can get questions answered"	73	71	74*	60*	69	71	70
Disagree/strongly disagree with "This course is disorganized."	71	69	71	67	69	70	69
Average grade for course quality (converted to 4.0 scale)	3.21	3.25	3.29*	2.93*	3.28	3.19	3.20(B+)

Table 3.3EFE Class Satisfaction Indicator

Note: Table entries for the first eight rows are percentage of the sample who gave a favorable rating of 1 or 2 (or 4 or 5) on a 5-point Likert scale. Item nonresponses are not included in the denominator. However, response of "Neither agree or disagree" is included. Overall sample size is 1,361. Approximately 70 cases are missing for each item. Sample size for average letter grade is 1,274.

*Difference from other population group is statistically significant at the .05 level.

indicators of student satisfaction with their EFE class/program.

In general, the levels of satisfaction for the various items are medium to high—all having sample means between 63 and 82 percent. The first opinion question asked students to agree or disagree with the statement that the EFE course "…is one of the best courses that I have had in high school." Approximately three-fifths of the students agreed, with the highest level of agreement from students who were in work-based programs. Seventy-two percent of them agreed, which his statistically significantly different from the 60 percent of nonparticipants. Minorities had a significantly lower agreement level on this item than did whites. But the responses across gender groups were virtually identical. The next item asked for agreement or disagreement with the

statement, "This class is too hard." Here, around 80 percent of the students disagreed. A higher proportion of females disagreed than did males, and a higher proportion of whites disagreed than nonwhites. It should be recognized that students would disagree with this statement if they felt that the class was too easy, so we cannot interpret all of the responses as positive indicators.

The third statement was, "I get along well with other students and we work together well in the class." Overall, more than 80 percent of the students agreed with this statement, and there were no statistically significant differences between the groups. The next item asked for the students' opinion about the equipment and facilities in the classrooms. The item was phrased, "The equipment and facilities meet the needs of the course." Overall, about three-quarters of the students agreed with this statement, but male students were in less agreement than females.

The next survey question asked students whether enough information about the course had been given to students and families. Overall, about two-thirds of the students were satisfied, although here the level of agreement for nonwhite students was much lower than for whites. Only 59 percent of nonwhites felt that enough information had been supplied compared to 70 percent of whites. The next item asked whether everyone was treated fairly in the course. The results showed that, overall, about 70 percent of the respondents were satisfied, but the level of agreement was much lower for minorities, and for males than for whites and females.

Students were asked for their agreement with the statement, "I can get questions answered easily in this class." Again, minorities were in less agreement than whites on this item suggesting that they may have perceived less access to instructors. Overall, about 70 percent of all respondents in the sample were satisfied with this indicator, though. The last satisfaction indicator was the level of disagreement with the statement that, "This course is disorganized." Around two-thirds of all of the population groups disagreed with the statement; there were no statistically significant differences among the groups.

The average grade for course quality is given in the bottom row of the table. The sample average of 3.20 indicates that, all in all, students were quite satisfied with their classes. A significant differences in this average exists between white students and minorities, however. The average grade that was assigned was much lower for minorities, about 2.9, than for any of the other groups. These data suggest that nonwhites did not achieve as much comfort in the EFE classes as their white classmates.

Noteworthy is the fact that many of the EFE class satisfaction indicators are lower than in 1996 or 1997. Virtually all of the overall levels of agreement or disagreement with the opinion items are less than equivalent statistics from the previous two years, and the assigned grade level is slightly lower. In 1997, there was a significant discrepancy in the levels of satisfaction between whites and nonwhites, and that discrepancy has widened in this year's data.

Table 3.4 provides data about the students' responses to the open-ended questions about the best and worst aspects of their EFE classes. About 1,350 students responded to the survey, so the potential number of best aspects and worst aspects that could have been named was 4,050. In fact, a little over 2,800 positive aspects were named and about 1,650 negative comments. This, in itself, is a good sign. Respondents could more easily name positive characteristics than negative ones. Among the best aspects, students were most appreciative of the skills they were learning and the "real world" experiences they were having. The next most often-mentioned factor was a specific teacher or other staff person. The books/software and the pace of instruction were next highest.

On the other side of the ledger, the item that was mentioned most often as among the three worst aspects was that the course required too much work. Of the total number of responses to this question, this type of response was received almost twenty percent of the time. About one-eighth of the respondents singled out a specific teacher or other staff person as one of their three worst aspects. Finally, books/software and course was "too easy" were the next most often-mentioned complaints. These responses and their relative distribution are quite similar to those received in 1997.

Work-Based Program Experiences

Table 3.5 shows that a little over one-quarter of the sample participated in work-based program experiences. The percentages were higher for females than

••••••••••••••••••••••••••••••••••••••	Number of times	
Aspect	mentioned	Percent
Best aspects		
Equipment	108	3.8
Books/software	295	10.4
No homework/tests	42	15
Pace	233	8.2
Specific teacher	350	12.3
Work-based learning	161	5.7
Skills, experience	754	26.6
College usefulness	32	1.1
Hands-on	141	5.0
Other students	221	7.8
Other	476	16.8
Nothing	26	0.9
Total	2,839	100.0
Worst aspects		
Equipment problems	86	4.8
Books/software	208	11.6
Too difficult	80	4.5
Too easy, boring	202	11.3
Too much work	331	18.5
Student: teacher ratio	28	1.6
Specific teacher/staff	225	12.6
Schedule problems	100	5.6
Class environment	57	3.2
Classmates	95	5.3
Other	243	13.6
No worst comments	136	7.6
Total	1,791	100.0

Table 3.4
EFE Class Best and Worst Aspects

Note: Columns may not add to 100.0 due to rounding.

males (as they were in 1997) and were equal for whites and nonwhites (not true in 1997, when a higher percentage of whites participated in work-based experiences). About three-fifths of the students who participated in a work-based experience received pay, and on average, the pay was \$6.14 per hour. The proportion of males who were paid for their work-based experience is quite a bit higher than the proportion of females, and the proportion of nonwhites who were paid exceeded the proportion of whites, although the latter difference was not statistically significant.

The hourly pay differential of almost \$0.70 per hour between males and females was significant (\$6.32 for males and \$5.66 for females). The work-based experiences averaged almost 17 hours per week. Males worked more than females (19 hours to 14 hours), but there were no other significant differences among groups. The work-based program experiences for this year were similar to last year. Slightly more

	S	ex	Ra		
Characteristic	М	F	w	NW	Tota
<u>Participation</u> ($n = 1,283$)	22*	30*	26	23	26
If Participated:					
Paid? $(n = 322)$	69*	50*	57	69	62
Average wage $(n = 180)$	\$6.32*	\$5.66*	\$6.11	\$5.77	\$6.14
Average hours $(n = 293)$	18.9*	14.2*	16.5	15.8	16.8
Strongly disagree/disagree with "Work is unrelated to course" (n = 318)	63	70	70*	50*	68
Agree/strongly agree with "Mentors are supportive and answer questions" (n = 319)	77*	93*	87	80	83

Table 3.5 Work-Based Program Experiences

Note: Table entries are percentages, except for average wage and average hours. *Difference from other population group is statistically significant at

the .05 level.

respondents had them—about 26 percent to 22—and the same proportion of students received pay. The hours per week were about the same. The actual hourly wage earned was higher this year by about 7 percent, undoubtedly caused by changes in the minimum wage.

We asked the students who were participating in work-based programs two questions to gauge their satisfaction with their experiences. The first item dealt with the extent to which the work experience was related to the content of the EFE class that the student was taking. Approximately two-thirds of the students disagreed or strongly disagreed with the statement that the work experience was "…unrelated to their EFE class." The level of disagreement, which in this case is the positive indicator, was much lower for nonwhites than whites. The second item asked for agreement with the statement that "…workplace mentors are supportive and willing to answer

questions." Over 83 percent of the sample agreed with this statement. A large and significant difference holds between males and females, with the latter reporting a much higher level of agreement. Apparently, young women are being matched with supportive mentors who are willing to help them in their assignments. This large gender difference occurred in the 1996 data, but did not show up in the 1997 data.

Postsecondary and Career Plans

The next general topic that we examined in the survey of students were postsecondary and career plans. Table 3.6 presents summary data about postsecondary plans. A surprisingly high proportion of students reported that they planned to pursue an apprenticeship program after high school. About a quarter of the entire sample reported this plan. Males were significantly more likely

		Sex		Race	Work pro	Τ	
Plan/Relevance	М	F	w	NW	Yes	No	Total
Apprenticeship program after school? (n=1,187)	26*	17*	21	27	23	23	23
Postsecondary college, university (including community college) (n=1,250)							
Yes, right away	66*	82*	74	71	76	72	73
Yes, after work	14*	9*	11	14	9	12	11
Don't know	10*	6*	9	7	9	8	9
No	10*	3*	6	9	6	7	7
Agree/strongly agree with "EFE class helped me to decide"	43*	36*	39	42	47*	38*	40
Agree/Strongly agree with "EFE class was helpful in choosing program"	45	46	45	47	51*	42*	45

Table 3.6Postsecondary Plans and Relevance of EFE Class

Note: Table entries are percentages of the overall sample, except for item nonresponse.

* Difference from other population group is statistically significant at the .05 level.

to indicate that they planned to pursue a formal apprenticeship than females. It is not clear why such a high percentage of students had this aspiration; apparently there is misunderstanding about what apprenticeships mean and/or how readily accessible they are.

A substantial percentage of students indicated that they were planning to attend a postsecondary institution (including community colleges and four-year colleges or universities). All together, 84 percent of the sample indicated that they were planning to attend either right after high school or in the future after a few years of work. Females reported a much higher rate of college attendance right after high school—82 percent compared to 66 percent for males. However, this difference was offset somewhat by respondents who indicated that they intended to work first, and then go to a postsecondary program. About 14 percent of males indicated this plan as opposed to 9 percent of females. Putting these two statistics together shows that a greater percentage of females than males had postsecondary aspirations. Just over 20 percent of the males indicated that they did not plan to go on to postsecondary or that they did not know whether they would or not. Less than 9 percent of females did not know or reported that they did not plan to go. There were no racial differences in postsecondary plans that were statistically significant. About 85 percent of whites and nonwhites planned to attend a postsecondary program either right after high school, or after working for a few years. Similarly, there were no differences in postsecondary plans for students who had participated in a work-based program from those who hadn't.

The students' EFE experiences had an impact on their postsecondary plans. About forty percent of students reported that they agreed or strongly agreed with the statement that "EFE classes helped me to decide whether or not to attend postsecondary schooling." While this seems like a modest impact, it should be noted that the majority of students reported that they were college bound prior to their enrollment in EFE classes. Apparently work-based program experiences had an impact

on students' postsecondary decisions. About 47 percent of students participating in work-based experiences agreed that EFE classes helped them to decide whether to attend a postsecondary institution, whereas only 38 percent of the remainder of students were influenced.

We also asked whether EFE classes had been influential in choosing a particular institution or postsecondary program. Just under half of the respondents indicated agreement with the statement that "EFE classes had been helpful in choosing a particular college or program." Again, students in work-based experiences were more likely to agree or strongly agree with this statement than were students who had not participated in a work-based program—51 percent to 42 percent.

The apprenticeship and postsecondary plan data has remained remarkably unchanged over the last three years. The percentage of students who plan to go on to postsecondary schooling right after high school was 74 in 1996, and 73 in 1997 and 1998. The percentage of students who plan to go on to postsecondary schooling after working for awhile has been 11 in all three years. The extent to which EFE influenced postsecondary plans declined slightly this year, however.

We added a number of questions to the survey this year to determine the importance of articulated or direct college credits to the students currently enrolled in EFE courses in high school. Table 3.7 presents a summary of these data. Overall, about 46 percent of the respondents indicated that they believed that they could receive college credit for their high school EFE class. About 23 percent indicated that they believed that they believed that they would not be able to receive college credit for this class, and the other 31 percent indicated that they did not know.² Females and students who participated in work-based program experiences were more likely to have believed that they could receive college credit than males and students without work-site experiences. The difference by race was not significant.

²Again, these are self-reported data with no verification.

	Sex		Race		Work-based program			
Characteristic	М	F	w	NW	Yes	No	Total	
Can student receive postsecondary credit for this class? (n=	=1,276)						•	
Yes	39*	53*	46	43	54*	43*	46	
No	25	21	24	21	21	24	23	
Don't know	36*	26*	30	36	25*	33*	31	
<u>If yes</u> : (n=584)								
Average college credits earned for this class (n=335)	2.9*	3.4*	3.2	3.0	3.0	3.2	3.1	
College credit was important in decision to take this class (n=564)	39	43	37*	56*	49*	37*	42	
Sources of information on college credit								
Guidance counselor advice	33	36	34	42	42*	30*	34	
Poster	2*	0*	0	0	1	1	1	
Academic subject teacher	32	30	32	28	27	32	30	
Technical education teacher	39*	50*	45	38	51*	42*	44	
Brochure	6	3	3	9	7*	3*	4	
High school handbook	16	16	16	15	17	17	16	
Friends/acquaintances	13	13	11*	22*	13	12	13	
Brother/sister - family	2	3	2	4	2	3	2	
EFE staff presentation	11	9	9	11	12	8	9	
Employer	1	2	1	2	1	1	1	
Other	2	3	3	1	3	4	3	
Total college credits earned by end of this year (average) $(n=563)$	3.4*	4.5*	4.0	3.3	5.0*	3.4*	3.9	

Table 3.7 Availability and Importance of College Credit

* Difference from other population group is statistically significant at .05 level.

We asked the students who indicated that they could earn college credits (1) how many credits they could earn for this course and (2) whether the potential to earn college credit was an important factor in deciding to enroll in the program. A substantial share-about 40 percent-reported that earning potential college credits had been an important factor in their program enrollment decision in high school. This percentage varied substantially across student characteristics. Nonwhite students and students who had participated in work-based program experiences were more likely to indicate that the ability to earn college credits was a deciding factor

for taking this course. On average, the students believed they could be eligible for over three college credits for this course. They also indicated that they would earn, on average, about four college credits by the end of the academic year.

The respondents were also asked to indicate what their sources of information were about college credit in their EFE course. Technical education teachers were the source of information that was mentioned most often, by 44 percent of the students. Guidance counselors and academic subject teachers were the next two most often-mentioned sources.

Table 3.8 presents data on occupational/career aspirations of the students when they reach 30 years of age. The student responses showed a predominant preference for white collar/professional positions. Over 60 percent of the sample saw themselves in the following occupations: manager/administrator, professional, proprietor/owner, or school teacher. Females and minorities, particularly, have set their aspirations in these directions. Almost 44 percent of the females in the sample reported that they would like to be in a professional occupation when they reach 30. Less than 30 percent of males share that aspiration. On the other hand, almost one-in-six males want to be craftspersons, whereas less than one percent of women reported this aspiration.

As we did with postsecondary plans, we asked about the influence of EFE on the students' career aspirations. This information is displayed in the bottom row of table 3.8. The survey question asked the students to agree or disagree with the statement that the "My participation in this class or other EFE classes helped me to decide what job or career I would like to have when I'm 30." A little over 40 percent of the students agreed or strongly agreed with this statement, that is, indicated that their EFE class had had a strong influence on their career choice. Students in a work-based experience were more likely to agree with the statement than other EFE students. The career plans

	S	Sex	R	ace	Work-base	ed program	
Plan/Relevance	М	F	W	NW	Yes	No	Total
Occupation aspirations at age 30							
Clerical	2*	6*	3	2	2	3	3
Craftsperson	16*	1*	10*	5*	9	9	9
Farmer	2	1	1	1	1	1	1
Manager/administrator	8	10	9	9	12	8	9
Military	3*	0*	2	2	1	2	2
Operative	4*	0*	2	1	2	2	2
Professional	29*	44*	36	37	31	37	36
Proprietor/owner	11	8	9	13	10	9	9
Protective services	4	2	3	3	4	2	3
Sales	4	3	3	3	2*	4*	4
School teacher	5*	15*	10	8	13*	8*	10
Service	2*	7*	4	5	3	4	4
Technical	11*	4*	8	9	8	9	8
Not working	1	1	1	2	1	1	1
Relevance of EFE Class							
Agree/strongly agree with "EFE class helped me to decide on job at 30"	41	42	42	41	50*	38*	41

 Table 3.8

 Career Plans and Relevance of EFE Class

Note: Table entries are sample percentages. Sample size for occupational aspiration is 1,159. Sample size for relevance is 1,162. Columns may not add to 100 due to rounding.

* Difference from other population group is statistically significant at the .05 level.

data are almost identical to the occupational aspiration data of last year's sample of students. The ratings of the relevance of EFE classes toward helping choose careers are slightly lower.

Current Employment

The last topic covered by the survey was current employment experiences. As table 3.9 indicates, about 54 percent of the students indicated that they were currently working for pay apart from any work-based program experience that they were having through EFE. Males and whites had a higher employment rate than females and nonwhites, respectively. Not surprisingly, students without a work-based program experience were more likely to be employed than those with a work-

	Sex		R	ace	Work-base		
Characteristic	М	F	w	NW	Yes	No	Total
$\underline{Currently\ employed?}\ (n = 1, 149)$	57*	50*	55*	47*	47*	56*	54
If yes:							
Average hours $(n = 568)$	19.0*	15.9*	17.7	17.4	18.6	17.4	17.7
Average pay $(n = 560)$	\$6.62 *	\$5.75*	\$6.27	\$6.00	\$6.75	\$6.15	\$6.26
Use training from EFE class? $(n = 729)$							
A lot	11	16	12	19	20*	12*	13
Some	29	32	30	31	26	31	30
Hardly any	25	24	24	28	32*	23*	24
Never	36*	28*	35*	22*	22*	35*	33

 Table 3.9

 Current Employment Characteristics

Note: Table entries for rows 1 and 4-7 are sample percentages.

*Difference from other population group is statistically significant at .05 level.

based program experience. For those with jobs, the average hours of work per week was around 18, and the average wage was \$6.26. Males worked more hours per week than females—19 to 16—and they earned a higher hourly wage—\$6.60 to \$5.75. Otherwise there were no statistically significant differences.

Since 1996, the percentage of students who were employed has declined, from 60 percent to 56 percent to 54 percent. The average hours per week for employed students has also declined—from 18.7 to 18.2 to 17.7. On the other hand, hourly wages have risen—from \$5.35 to \$5.67 to \$6.26.

We asked students whether or not they were using the training that they had received through their EFE course in their current job. Approximately 43 percent of students who were working indicated that the skills and training they had received in their EFE class were somewhat useful or useful a lot. The other students reported that they used hardly any of the EFE skills and training or none at all. Indeed, almost one-third of the students indicated that they never use their EFE training. Males, whites, and students who had not participated in a work-based program were more likely to

report that they never used their EFE training in their classes than their population counterparts.

Summary and Trends

- The data about the characteristics of the current students and their high school experiences show that the average EFE student has about a 2.80 (B-) grade point average, participates in 2.5 extracurricular activities per year, and does about 2.5 hours of homework per week. There is a slight trend toward more freshman and sophomore enrollment. There have been significant declines in tardiness and unexcused absences.
- The EFE students who responded to the 1998 survey reported that they received much less information about EFE courses and involved fewer people in making their enrollment decisions than in the prior two years. This may mean that EFE classes are more well-known to students.
- In general, the levels of indicators of student satisfaction with EFE classes fell around 5 percent from the previous two years. Similar to data from 1997, males and nonwhites gave EFE lower satisfaction ratings than did females and whites. The spread between whites' and nonwhites' ratings increased significantly.
- There has been an upward trend in the percentage of students who participate in work-based programs. In 1998, this percentage was 26 compared to 22 percent in 1997 and 1996. There has been a slight decrease in the percentage of students who participate in work-based programs who get paid, but for those who do get paid, the wage rates are higher. The hours per week for these activities have remained the same-around 16.5 hours on average.
- The students who participate in work-based programs generally agree that there is a connection to their course work in EFE, and they strongly agree that workplace mentors are "supportive and answer questions." These opinions are quite similar to last year's data. There was a significant decline in the favorable opinions of workplace mentors held by males, but that was offset by a very high rating for females.
- The percentage of students who aspire to attend a postsecondary institution either right after high school, or after working for a few years, has remained at 85 percent for all three years of the survey. It is higher for females, and lower for males. EFE influences the decision to attend a postsecondary institution and the decision about which institution to attend for about 40 percent of the students.
- Just under half of the students indicated that they could receive direct or articulated college credit for their EFE class. The other half of the students was about split in half between not knowing and believing that they could not get credit. Among the students who believed that

they would be eligible for college credit, about 40 percent indicated that such potential credit was an important reason for enrolling in the EFE class. On average, the students thought they could earn three college credits for the class that they were in.

- Career plans are heavily skewed toward white collar/professional occupations. As with the previous two years of data, over 60 percent of the students (much higher for females) planned to be in a white collar occupation when they reached age 30. EFE influenced career choices for about 40 percent of the students.
- Current employment, other than in work-based programs affiliated with EFE, has gone down over time from 60 to 56 to 54 percent. (Note that part of the decline might be caused by an increase in work-based program participation.) Hours per week have also declined over time, while wages have increased. Among the students that work, a larger percentage indicated that they never or hardly ever used their EFE training in their current job than in the previous years.

4. Parents

Parents are an important stakeholder group in EFE programs and services. To gauge their level of satisfaction with EFE classes, we conducted a brief mail survey of a random sample of parents. Note that the student and follow-up surveys were administered to the entire universe of existing and completing students. The parent survey was sent to a random sample of 500 parents/guardians of current students. We received 130 completed surveys, so the overall completion rate was about 26 percent, which is reasonable for a mail survey, although it was smaller than the 32 percent response rate that we received last year.

Topics that we measured included parent involvement in and information about the decision to enroll in the EFE class, knowledge of and opinions about the curriculum and instruction, and general opinions about the EFE consortium.

Involvement in and Information about Enrollment in EFE Class

We asked parents/guardians how much they were involved in their child's decision to enroll in the EFE class. We allowed one of four responses: a great deal, some, little, and none. For those parents who responded that they had at least a little involvement, we asked what sources of information did they use, how adequate was the information, and what additional information would have been helpful. Table 4.1 provides the frequency distributions for these questions.

Almost three-quarters of the respondents indicated that they had had some involvement in their student's decision to enroll. However, most of the respondents indicated that their involvement could be characterized as "little" or "some." Only about one in six parents indicated that they had had "a great deal" of involvement. The reported level of parent/guardian involvement in the

enrollment decision has stayed approximately the same over the three last three years. In 1996, about 80 percent of the respondents indicated some involvement, and about 14 percent indicated "a great deal" of involvement. In 1997, these percentages were 68 and 12, and in 1998, they are 74 and 14.

The sources of information that parents used most were what their child told them about the class or teacher (73 percent of parents) and their own knowledge about the

Table 4.1
Parent Involvement in and Information about Enrollment Decision

Involvement/Information	Percentage
How much involvement did you have? (n = 128)	
A great deal	14
Some	41
Little	19
None	26
Sources of information used $(n = 94)$	
Student's knowledge/opinion of class/teacher	73
Own knowledge of class/teacher	31
High school handbook	23
Written information (brochure)	18
Guidance counselor	19
Adequacy of information $(n = 95)$	
Very adequate	39
Adequate	47
Inadequate	14
What additional information would have been	
<u>helpful?</u> $(n = 109)$	
Percentage of students who took this class and	
went on to college	42
Career ladders	5 6
Starting salaries in occupation	41
Description of course content	62

Note: Percentages may not add to 100.0 due to rounding.

class/teacher (31 percent). The other sources of information were each used by approximately 20-25 percent of parents who got involved. These included the high school handbooks, written information such as a brochure, and information from guidance counselors.

The parents who responded to the survey felt that the information that they had consulted was adequate or very adequate. Forty-seven percent of the parents felt it was adequate, 39 percent felt it was very adequate, and only 14 percent felt it was inadequate. We asked what additional information would have been helpful to them in the enrollment decision. The most frequent responses were "description of course content" and "career ladders in the occupation." About 60 percent of parents/guardians who were involved in their student's enrollment decision would have

liked additional information about these matters. Around 40 percent wanted more information about starting salaries in the occupation and would have liked information on the percentage of students who enrolled in this class and went on to college.

Knowledge of and Opinions about their Student's EFE Class

Table 4.2 provides data concerning parents' knowledge of and opinions about their student's

Table 4.2 Parent Knowledge of/Opinions about Instruction in Class						
Characteristic/Opinion	F	Percentage				
<u>Met teacher</u> (n = 129)		70				
<u>Observed class period</u> $(n = 127)$		14				
<u>Amount of information about instructional</u> content (n = 127)						
A great deal		15				
Some		40				
Only a little		26				
None		19				
Opinion about amount of information given						
<u>about student expectations</u> $(n = 126)$		0				
Too much		53				
Just right		22				
Not enough		25				
No information given						
<u>Approve/greatly approve of</u> : $(n = 98)$		Don't know				
Pace of instruction	61	7				
Equipment/materials	68	9				
Textbook	46	25				
Class size	52	14				
Subject matter	82	2				
Amount of time on projects	73	10				
Chance to learn employability skills	86	0				
Student expectations	67	9				

EFE class. About two- thirds of the parents/guardians reported that they had met the teacher. Just under 15 percent had actually observed a class period, though. Most parents (about 80 percent) felt that they had some information about the instructional content in the EFE class. They did not claim to have a great deal of knowledge, however. The parents indicated that they had "only a little" or "some" information most of the time. Only one out of six individuals who said that they knew something about the

instructional content of the class indicated that they knew "a great deal."

We asked parents/guardians for their opinions about the amount of information they had been given about student expectations in the EFE class. Almost half of the parents indicated that they had no information or not enough information about what was expected of their students. All of the other parents reported that the amount of information they had been given about student expectations was "just right." These data closely parallel the data from last year's survey of parents/guardians, although there is just a slight increase in the percentage of parents/guardians who reported no information or not enough information compared to the last two years.

The bottom panel of the table provides indicators about how parents perceived the quality of various characteristics of the class. The respondents were asked how well they approved of eight class characteristics: instruction, equipment/materials, textbook, class size, subject matter, amount of time spent on projects, chance to learn employability skills, and student expectations. The data show that the parents were generally quite pleased. Eighty percent or more of the parents approved or greatly approved of the EFE content (subject matter) and the chance to learn employability skills. Around 70 percent approved or greatly approved of the EFE equipment and materials, amount of time on projects, and student expectations. The approval ratings for the class textbook appears low, but a significant share (25 percent) of parents indicated that they did not know about them. If we adjust the data to account for the "don't know's," then the approval ratings would be much higher and would be consistent with the other class characteristics. The "lowest rated" class characteristics were pace of instruction and class size. However, even for these characteristics, about two-thirds of parents who had knowledge about them approved or greatly approved.

This section of the questionnaire also asked parents/guardians open-ended questions which asked for three positive aspects about their students' class and three recommendations for improvement. Table 4.3 presents the responses to this question. The positive aspects that were mentioned most often included specific projects, activities, or skills learned; emphases on workplace know-how skills; and affective gains. Note that among the recommendations for improvement, the comment "None (everything was positive)," was received often. Aside from that positive result, there were a few complaints. A total of 24 parents mentioned a logistical problem -either "a

transportation problem" or "not enough communication with parents," and 10 indicated that they felt that there were not enough workbased learning opportunities. Ten parents also suggested that the pace of instruction or relevance of the course material was problematic. These comments were similar to those received in the 1997 survey, although there was more emphasis in the positive comments this year on self-esteem or affective gains for students and on specific workplace know-how skills.

Opinions about EFE

The last two questions in the parent survey asked for opinions about the Education

Improvement from Parents							
Aspect	Number of times mentioned						
Positive aspects							
Introduction to work/real world	14						
Helpful for postsecondary plans	3						
Hands-on instruction	12						
Learn useful skills	41						
Supplemental opportunities	13						
Specific teacher/staff person	15						
Enjoyed class/learned a lot	10						
Individual attention	5						
Equipment/environment	2						
Affective gains	28						
Workplace know-how skills	28						
Helpful for getting current job	5						
Introduction to the "real world"	16						
Other	31						
Recommendations for improvement							
None (everything was positive)	10						
Pace or relevance	10						
Specific teacher/staff person	9						
Logistics, organization	24						
(e.g. communication							
w/parents, transportation)							
Not enough individual attention	6						
Facilities	1						
Classroom management	9						
Not enough WBL opportunities	10						
Other	15						

Table 4.3 Positive Aspects and Recommendations for

for Employment consortium. Data from these questions are displayed in table 4.4. First parents were asked for how well they approved of the way EFE prepares students for employment, college, learning technical skills, learning academic skills, work environments, and productive careers. For

Table 4.4 Percent Opinions About EFE

Opinion	Percenta	age/Number
Approve/greatly approve of way EFE prepares		Don't know
$\frac{\text{Students 101}}{\text{Employment } (n = 123)}$	Q 1	10
College $(n = 123)$	01	10
$L_{\text{communication}} = L_{\text{communication}} = L_{\text{communication}}$	75	11
Learning technical skills $(n = 122)$	/8	11
Learning academic skills $(n = 122)$	71	12
Work environments $(n = 121)$	83	8
Productive careers $(n = 122)$	81	9
Comments about EFE	Number of t	imes mentioned
Very positive		15
More information needed for parents		2
Counselors were a problem		4
More programs suggested/needed		2
Negative comment about specific individual		5
Positive comment about specific individual		7
Transportation problems		3
Career awareness		5
Reach more students		2
Other		6

each of these items, around 10 percent of the respondents were noncommittal: they indicated that they didn't know. However, for the remainder of the respondents, EFE was viewed very favorably. Around 80 to 90 percent of the respondents who gave an opinion approved or greatly approved of EFE's preparation of

students for these outcomes. As might be expected, the lowest ratings of approval were for learning academic skills. The highest rating was for learning about work environments and preparing students for productive careers. These positive comments about EFE are in line with the responses received in the 1996 and 1997 surveys.

Finally, the survey asked parents if they had any comment for EFE administrators to consider. Virtually all of these comments were positive. Some of the comments even indicated that EFE needs to provide more programs or more publicity so that it can reach more students, however.

All in all, from the parent survey, we learned the following:

• The respondents were not particularly active participants in the decision to enroll in the EFE class. They mostly relied on student information or their own knowledge about a program or teacher. In general, the sources of information were felt to be adequate.

- Two areas in which the parents/guardians would have liked more information were descriptive content of the course and potential career ladders.
- Many of the parents/guardians had met their student's teacher, but few had observed a class period.
- Parents/guardians approved or greatly approved of all aspects of the EFE class. They were less knowledgeable about textbooks and equipment/materials, however.
- Parents/guardians particularly like the EFE classes for the technical skills that are being learned and for introducing their students to the work world and real-life experiences.

5. EFE Completers

In addition to current students and parents of current students, this assessment also included a survey of former EFE students. The Kercher Center for Social Research of Western Michigan University conducted the survey. The population for this survey was students who were classified as seniors in 1996/97 and who were enrolled in an EFE class at the end of that school year. These students were surveyed by telephone in May 1998, which was a little less than a year after they graduated from high school. As noted in a table below, about two percent of the students did not graduate in 1997, and reported that they had just completed high school in 1998.

The completion rate for the survey was quite satisfactory and was a considerable improvement over our experience in 1997. The sample of students was 923. However, 250 (approximately 27 percent of the sample) were not reachable because the source list of names and telephone numbers either did not have a phone number or listed an incorrect number, a disconnected number, or a business number that could not be tracked to the individual. Out of the remaining 670 potential contacts, 478 completed interviews were conducted (just over 70 percent). There were 134 refusals or terminations (about 20 percent), and 68 nonresponses within ten calls. The 478 responses compare favorably to the number of completed interviews in 1997, which was 322.

Note that the data we collected from EFE completers is different from what the population for the student survey would look like if we interviewed them one year later (for seniors) or two years later (for juniors). First of all, some of the current students may drop out and not graduate. Second, some of the juniors may not continue with an EFE class in grade 12. Finally, we may have response bias for the follow-up survey if there are systematic characteristics that explain who responded and who didn't. The main subjects of the follow-up survey include the postsecondary experiences of the students, the importance and use of college credits earned while in high school, the current employment status of the students, and high school experiences and opinions about EFE classes as recalled by the students. The analyses presented in this chapter examine these subjects for all respondents, and by sex, race, postsecondary attendance status, and by whether or not the students participated in a work-based program while in EFE.

Postsecondary Experiences

Table 5.1 summarizes the postsecondary experience data for the EFE completers. The respondents were divided 40-30-30 among three groups: attending a two-year institution, attending a four-year institution, or not attending school (including just graduated from high school). Just under 40 percent of the students were attending a two-year institution, whereas about 30 percent were attending a four-year institution or not attending school. The difference in the postsecondary attendance rates between whites and minorities is statistically significant. Almost 40 percent of minority EFE completers were not attending school, whereas only a quarter of whites were not attending. Among the students who were attending a postsecondary institution, males were more likely to be enrolled in a two-year institution than females, and statistically less likely to be in a four-year institution.

The trend in postsecondary attendance rate is upward—about 67 percent in 1996 and 1997 and 70 percent in 1998. All of the increase has been in enrollment in two-year institutions. In fact, the enrollment percentages in four-year institutions have declined slightly over the past two years, from 34 to 33 to 31 percent. The nonattendance of minority students has increased drastically over

	S	ex	R	ace	Work-bas	ed program		
Characteristic	M	F	w	NW	Y	N	Total	
Postsecondary Status								
Not attending school	29	26	26*	40*	29	25	28	
Full time active duty military	4*	1*	2	3	3	2	3	
Just completed high school	1	3	2	2	1	3	2	
2 year institution	43	35	40	35	42	37	39	
4 year institution	27*	36*	32	24	28	35	31	
For those in 2- or 4-year postsecondary								
Accounting/Finance	3	3	3	3	1	4	3	
Business related	18	18	17	27	19	18	18	
Communications	2	2	3	0	2	2	2	
Computers	7	4	5	6	5	6.	5	
Cosmetology	0	1	0	0	0	0	0	
Criminal justice	7	4	6	6	8	4	6	
Education	7*	16*	12*	3*	15	10	12	
Engineering	6	3	3	18	4	6	4	
Graphic/Fine Arts	4	4	4	3	4	4	4	
Marketing	4	4	4	3	2	5	4	
Medical	4	9	7	0	6	6	6	
Agriculture	1	1	1	0	1	1	1	
Liberal Arts	10	16	13	9	10	16	13	
Trade & Industrial	18*	1*	10	6	13	6	9	
Travel & Tourism	0	1	1	0	1	1	1	
Undecided	10	15	12	15	12	12	12	
Sports/Leisure	1	0	0	0	1	0	0	
Training related to named field								
A lot	35	32	34	32	39	31	34	
Some	33	36	34	32	35	31	34	
Hardly any	21	18	18	29	15	22	19	
None	12	14	14	-7	10	15	13	
Degree working on								
Associate's	23	25	23	29	29	21	24	
Bachelor's	48*	65*	57	50	54	58	56	
Other/none/don't know	29*	11*	20	21	17	21	20	
Sample Size	248	228	417	59	220	234	478	

 Table 5.1

 Postsecondary Experiences of EFE Completers

Note: Table entries are sample percentages. Full-time active duty military is a subset of not attending school. Columns may not add to 100 due to rounding.

* Difference between population groups is statistically significant at the .05 level.

the last two years. In 1996, about 30 percent of the minority EFE completers were not attending further schooling. In 1997, this increased to 35 percent; and in 1998, it is about 40 percent.

The military was chosen by about the same percentage of EFE completers this year as last.

In 1997, full-time military service was reported by about 2.2 percent of the respondents. In 1998,

this percentage increased slightly to about 2.5 percent.

If we compare the postsecondary attendance plans of the current EFE students with the actual postsecondary attendance rates of EFE completers, we find that the latter are slightly lower than the former. In table 3.5, we reported that roughly three-quarters of current students planned to attend a postsecondary institution right after high school. Table 5.1 shows that about 70 percent are attending. The actual rates are lower for all population groups, but the greatest discrepancy is for females. Eighty-two percent plan to go on to postsecondary schooling right after graduation, but only 70 percent of female students in the follow-up survey are in school.

The bottom three items in the table concern the postsecondary experiences of the EFE completers who reported that they are attending a two- or four-year institution. About 12 percent of those students reported that they were undecided about a major or program. For those who named a major or program field, business-related had the highest percentage of students-about 18 percent. In previous years, males had much greater enrollment percentages in business-related fields than did females, but in this year's data, females surpassed males (although the difference is not statistically significant). Other fields with more than 10 percent of the students were education and liberal arts. Relative to last year, there were substantial increases in enrollment percentages in computers, criminal justice, liberal arts, and trade and industrial. There were substantial declines in graphic/fine arts and medical-related fields. Males were much more likely to be in computer-related, criminal justice, engineering, and trade & industrial programs/majors than were females. Conversely, females were more likely to be in education, health-related, and liberal arts fields. Minority students were more likely to be in business-related and engineering fields than whites, but much less likely to be in education. Students with work-based program experience were more likely to be in education (reflecting the teacher externship program) and trade & industrial programs. They were less likely to be in liberal arts fields.

Attention is often focused on the extent to which career and technical education students pursue majors or programs in postsecondary schooling that are related to their courses in high school. About two-thirds of the survey respondents who were in postsecondary programs and who had decided upon a program indicated that it was related to their EFE class "a lot" or "somewhat." There were no statistically significant differences in training-relatedness for males from females, for whites from minorities, and for students who had a work-based program from nonparticipants. The percentage of respondents who reported "a lot" or "some" training-relatedness between their EFE program and their current field/program has not changed dramatically over the three years. However, there has been a dramatic decrease in respondents who said "a lot" and a concomitant increase in the percentage who reported "some." The percentage of students who reported "a lot" of training-relatedness was over 50 percent in 1996, about 42 percent in 1997, and 34 percent in 1998.

About a quarter of the students in a postsecondary institution reported that they were pursuing an associate's degree. About 56 percent, with little variation across the groups, were pursuing a bachelor's degree. (Females were more likely to be pursuing a bachelor's degree than males.) A fifth of the students were pursuing other degrees or were not sure about what degree they were pursuing.

We added a number of questions to the survey this year to determine the importance of and usage of college credits earned while in EFE courses in high school. Table 5.2 presents a summary of these data. Overall, about 40 percent of the respondents indicated that, when they were in high school, they believed that they could have received college credit for their high school EFE class.

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	Sex		R	ace	Work-base		
Characteristic	М	F	W	NW	Y	N	Total
Could student have received credit? (n=344)							
Yes	42	40	42	33	48	37	41
No	38	40	38	50	39	41	39
Don't know	19	20	20	17	14	23	20
<u>If yes</u> :							
Have you arranged to receive credit? (n=131)							
Yes	46	47	45	58	60*	31*	47
No	54	53	55	42	40	69	53
Average credits (n=47)	5.7	4.1	5.2	3.3	4.3	6.3	5.0
Important in program enrollment? (n=137)							
Yes	38	40	38	50	39	38	39
No	63	60	62	50	61	62	61
Important in postsecondary enrollment? (n=135)							
Yes	24	22	21	46	29	16	23
No	77	79	79	55	71	84	7 7

Table 5.2 Importance and Use of College Credits

Note: Except for average credits, table entries are sample percentages.

* Differences between population groups is statistically significant at the .05 level.

A similar percentage indicated that they believed that they would not be able to receive college credit. The other 20 percent indicated that they did not know. Students who participated in work-based experiences were more likely to have believed that they could have received college credit than other former EFE students. Minority students were less likely to believe that they could have received have received college. But, neither of these differences were statistically significant.

We asked those students who believed that they could have received college whether they had actually arranged to do so. A little under half of them had. In other words, we interviewed 61 individuals who said that they had arranged to receive college credit for their EFE course. On average, these students had earned five college credits. Students who had been in work-based experience programs and were aware of the possibility of receiving college credits were statistically

more likely to have arranged for those credits, although on average, they received only 4.3 credits compared to 6.3 for students who had not participated in work-based programs.

We asked the students who indicated that they knew about earning college credits whether that potential was an important factor in deciding to enroll in the program in high school and whether the ability to transfer college credits was an important factor in selecting a postsecondary institution. A substantial share—about 40 percent—reported that this factor had been an important factor in their program enrollment decision in high school. This ratio did not vary greatly across student characteristics. A smaller percentage—around a quarter—indicated that potential college credits influenced their postsecondary institution choice. In this case, minority students and students who had participated in work-based experience programs were more likely to have said yes.

Employment Status

A large share of the survey asked completers about their current employment status. Note that these data represent an amalgam of part-time work experiences of students who might be pursuing summer school, summer jobs for students who are pursuing postsecondary education, and full-time or part-time employment of students who are not attending postsecondary institutions. All together, table 5.3 shows that 87 percent of the survey respondents indicated that they were currently working for pay. This rate was higher than either of the previous two years, which were 82 and 85 percent for 1996 and 1997, respectively. The employment rate of whites was significantly higher than that for minorities–88 percent to 78 percent, but the differences for the other groups were not statistically significant.

The average work week for employed individuals is about 34 hours. It is almost 40 hours per week for respondents who did not go on to college, which is almost 8 hours more per week, on

	Se	ex	Ra	ace	Work-base	d program	Po	stsecond	lary	
Characteristic	М	F	W	NW	Y	N	2-yr	4-yr	No	Total
Employment rate (n=478)	87	87	88	78	88	86	92	79	88	87
If employed:										
Usual hours/week (n=403)	36.6*	31.0*	33.9	34.0	33.9	33.6	31.5*	31.0*	39.8*	33.8
Hourly wage (n=347)	\$7.53*	6.88*	7.27	6.82	7.41	7.03	7.30	7.17	7.18	\$7.22
EFE training - relatedness (n=402)										
A lot	24	30	27	30	36*	20*	29	27	22	27
Some	26	29	29	21	29	26	29	24	30	28
Hardly any	24	18	22	16	19	22	23	19	19	21
None	26	23	24	33	16*	32*	18*	30*	29*	24
Unemployment rate (n=477)	12.6	13.2	11.5*	22.0*	12.3	14.2	7.1*	20.9*	12.1*	12.8

 Table 5.3

 Employment and Unemployment Status of EFE Completers

Note: Table entries, except where noted, are sample percentages. Columns for training-relatedness may not add to 100 due to rounding.

* Difference between population groups is statistically significant at the .05 level.

average, than for individuals who did go on to postsecondary education. Males also averaged more hours per week than females. The trend in average weekly hours in down having decreased by about an hour per week in both of the last two years. We suspect that this is a response to higher wages, which have increased over time. The average hourly wage in the survey was about \$7.20. The average for males was significantly higher than females—\$7.50 to \$6.90 and the average for students who had participated in work-based experience was about \$0.40 per hour higher than nonparticipants, which was also significant. Interestingly, in comparing the data to previous years, we find that the average wage for individuals not pursuing postsecondary education was just equal to or less than the average wage for college attendees. In the previous two years, individuals who were not attending college were receiving wages that were much higher than those were attending. This may be a feature of the labor market where skilled employees' wages have been increasing, but unskilled employees' wages have been stagnant or decreasing.

We also asked respondents about how related the training in their EFE classes was to their current job. Over half of the respondents indicated that it was relevant ("a lot" or "some"); conversely just under half indicated that their EFE training had "hardly any" or "no" relatedness to their current job. These data were much more positive toward EFE than the past two years. Compared to last year, there is an 11 percentage point increase in the share of respondents indicating that their EFE training was related to their current job; and a 14 percentage point decrease in the share of individuals who indicated that there was *no* training-relatedness. Among the population groups, the only significant differences lay between the students who were in work-based experiences and those who were not. The former had much higher rates of training-relatedness.

The unemployment rate is defined as the share of the labor force who are not working for pay and are looking for employment. For the sample as a whole, the unemployment rate is 12.8 percent. Note that it is much higher for minorities, for whom it is 22 percent, and it is much higher for individuals who are attending a four-year college—about 21 percent.

High School and EFE Program Experiences

The follow-up survey asked the respondents to recall their experiences in high school and in their EFE courses. Table 5.4 presents summary data on (self-reported) grade point averages in high school and on incidents of tardiness and absences. It is interesting to note that these young individuals recall far fewer incidents of tardiness or absences in their senior year of high school than the current students reported. This data, of course, is subject to recall error since it pertains to a time period of over a year prior to the survey date. There is a precipitous upward trend in self-reported tardiness and absences. This year's average is about 6.1 tardies and absences per year. In 1997, these averages were between 5.2 and 5.6. In the year prior to that, both averages were about 4.3. In all

	Sex		Race		Work-based program		Postsecondary			T
Characteristic	М	F	W	NW	Yes	No	2-yr	4-yr	No	Total
Average number of tardies $(n = 449)$	7.2*	4.9*	6.1	6.1	6.0	6.2	5.1*	5.5	8.2*	6.1
<u>Average number of absences</u> $(n = 458)$	6.6	5.9	6.1	7.5	6.1	6.4	5.1*	6.1	8.2*	6.2
Average GPA $(n = 469)$	2.81*	3.10*	2.99*	2.69*	2.99	2.96	2.99*	3.24*	2.61*	2.95 (B)
* Significantly different from other population group at the .10 level.										

 Table 5.4

 High School Experiences as Recalled by EFE Completers

three years, individuals not attending postsecondary schooling and males reported that they had more high school absences and tardies than did individuals attending college and females.

The overall mean high school GPA for the follow-up sample, 2.95 is just slightly greater than the GPA for current students, which suggests some consistency in reporting. Most of the population groups had significant differences in GPA. Males reported lower GPA's in high school than females. Whites had higher GPA's than nonwhites, and as expected, students who went on to four-year colleges/universities had higher GPA's.

Table 5.5 provides identical data on EFE class satisfaction indicators for the completers as table 3.3 does for current students. Of course, the follow-up survey asked respondents to think back about their EFE classes, which they would have been enrolled in over a year before, and to provide their opinions about those classes. The current students were providing assessments of classes they were enrolled in at the time. The completers reported much higher levels of satisfaction than current students.

The first item listed in the table asked for respondents to agree or disagree with the statement that "EFE classes were among the best classes in high school." Almost 80 percent of the respondents agreed with this statement. More than 94 percent of the respondents disagreed with the statement that "these classes were too hard." Almost 93 percent of the sample agreed with the statement, "I got

	S	ex	R	ace	Work-base	d program	Pos	stsecond	lary	
Indicator	М	F	W	NW	Y	N	2-yr	4-yr	No	Total
Agree/strongly agree with "The classes are among the best"	75	80	78	74	76	78	78	75	80	77
Disagree/strongly disagree with "These classes are too hard"	96	93	94	93	93	95	95	96	92	94
Agree/strongly agree with "I got along with other students and we worked together"	92	94	93	95	94	92	93	96	89	93
Agree/strongly agree with "The equipment and facilities were excellent."	77	83	80	79	79	80	81	76	83	80
Disagree/strongly disagree with "not enough information"	79	83	81	80	82	79	83	81	79	81
Agree/strongly agree with "The program treated everybody fairly."	89	92	92	86	88	93	93	92	87	91
Agree/strongly agree with "I could get questions answered"	90	91	91	88	89	92	92	93	87	91
Disagree/strongly disagree with "the program seemed disorganized."	82	84	83	85	80	84	82	82	86	83
Letter grade for program quality	3.28*	3.41*	3.36	3.21	3.38	3.31	3.39	3.41	3.21*	3.35 (B+)

 Table 5.5

 EFE Program Satisfaction Indicators from Completers

Note: Table entries for the first eight rows are percentages of the sample who gave a favorable rating of 1 or 2 (or 4 or 5) on a 5-point Likert scale. Item nonresponses are not included in the denominator. However, response of "Neither agree or disagree" is included. Overall sample size is 478. Approximately 30 cases are missing for each item. Sample size for average letter grade is 452.

*Difference between population groups is statistically significant at the .05 level.

along well with other students and we worked together frequently." Respondents who were attending college at a four-year institution were more likely to agree with this statement than were the individuals who were not attending college.

Responses to the next two items were less enthusiastic, and in closer agreement to the responses of current students. About 80 percent of the sample agreed the "equipment and facilities were excellent," and disagreed with the statement that "not enough information was provided to students or their parents." Females had more positive opinions about the excellence of the equipment and materials than did males.

A little over 90 percent of the respondents agreed that "the program treated everybody fairly," and that they "could get questions answered and problems easily resolved." There were no statistically significant differences among the population groups on these two items. Finally, about 83 percent of the respondents disagreed with the statement that "the program seemed disorganized."

These satisfaction indicators turned out to be slightly less positive than last year's data, although the relative satisfaction among the items was identical. (That is, high levels of satisfaction were garnered for the second, third, sixth, and seventh items, and relatively lower levels of satisfaction were achieved for the other items.) This year's indicators were quite similar to the 1996 data for the follow-up students.

As with the current students, the follow-up survey asked respondents to assign a letter grade to the EFE courses that represented fairly their assessment of quality. The overall average for this grade, converted to a 4.0 scale, was 3.35, which would be a B+. Males and students who were not in college assigned the lowest grades for quality. The trend in the average grade for program quality is downward. This year's average of 3.35 compares to 3.46 and 3.43 in 1996 and 1997, respectively.

Table 5.6 provides tallies of the responses to the questions of what were the best and worst aspects of the EFE classes. Among the best aspects were the skills and experiences that the students indicated that they had learned, the opportunity to participate in work-based learning opportunities, and specific teachers or staff persons. Far fewer negatives were mentioned. Among the complaints, the most often mentioned aspects were that there had been a logistical problem such as transportation or scheduling, the class was too easy, and a particular staff person.

Table 5.6
Best and Worst Aspects about EFE Program
as Recalled by Completers

Aspect	Number of Times Mentioned
Best	22
Equipment	33
Books, software	9
Pace	30
Hands-on	41
Specific teacher	163
Individual attention	14
Skills/experience	307
Work-based	166
College usefulness	9
Interesting/tun	70
Other students	82
Vocational clubs	31
Class structure	49
Everything	26
Other	5.
Nothing, no best thing, don't know	2
Total	1,037
Warst	
Equipment classroom environment	37
Books software	14
Pace: too easy	50
Pace: too fast	18
Pace: too much work	11
Specific teacher	47
Transportation/schedule	76
Classmates	32
Disorganized	28
Unfair treatment	6
Specific activity or project	25
Grading policy	3
Money issues low nav	6
Class size	24
Work experience	24
Other	30
None	17
Total	448

to recall whether they had participated in work-based experiences. As shown in table 5.7, just under half (about 48 percent) indicated that they had participated in a work-based program. (This is higher than the 26 percent of current students who reported that they were participating in work-based programs.) Of those who reported that they had participated in a workbased program, more than 56 percent indicated that it had been a paid experience. The participation rate and the percentage of experiences that were paid continue a strong In 1996 and 1997, upward trend. respectively, the percentage of respondents who reported having participated in workbased programs were 31 and 37. The percentages of experiences that were paid were 49 and 53.

Males and individuals enrolled in

The EFE completers were also asked

four-year postsecondary institutions had statistically lower work-based program participation rates than females or students in 2-year colleges or individuals not pursuing further education. However

Characteristic	Sex		Race		Postsecondary			
	М	F	W	NW	2-yr	4-yr	No	Total
Participation $(n = 454)$	43*	54*	49	42	51	42	51	49
$\frac{\text{If Participated:}}{\text{Paid}?} (n = 214)$	65*	50*	59	42	66*	49*	53*	57
Disagree/strongly disagree with "Work was unrelated"	71	79	75	76	73	77	78	76
Agree/strongly agree with "Mentors were supportive and answered my questions."	85	92	88	96	87	91	89	89

 Table 5.7

 EFE Work Site Experiences as Recalled by Completers

males and students in 2-year colleges were more likely to have had a paid experience if they had participated.

About three-quarters of the respondents who had been in work-based programs disagreed with the opinion question that "the work was unrelated to the EFE class." About 90 percent agreed that "workplace mentors were supportive and answered my questions." There were no differences among population groups on these two opinion items, and they are similar to previous year's data.

EFE Outcomes

Two performance indicators of EFE outcomes are presented in table 5.8. The first indicator measures how many EFE completers were either attending college or were employed one year after completing their high school course(s). Over 96 percent of the sample met these criteria. (It is not meaningful to look at the differences in this outcome measure by the different types of college attendance because all college attenders meet the standard, by definition.) The problem with this standard is that it is not difficult to meet. A summer telephone interview of almost any population of 19-year-old's would yield high percentage of respondents who were either attending college during the academic year or currently working. Nevertheless, it is interesting to note that the 96 percent nicely exceeds the percentages in 1996 and 1997, which were 89 and 92, respectively.

The second indicator is somewhat more rigorous. This standard measures the percentage of individuals who are pursuing a major field or occupational program area in a postsecondary setting that is related to the course work taken in high school or who are employed in a job where their EFE course work is related. The overall standard for this sample is 68 percent. There is no statistical difference in this standard for males from females or whites from minorities. However students who

Indicator	Sex		Race		Work-based program		Postsecondary			
	М	F	W	NW	Y	N	2-yr	4-yr	No	Total
Postsecondary attendance or employed (n=478)	96	97	97	93	96	97	100*	100*	88*	9 6
Training-related postsecondary attendance or employment (n=458)	66	71	70	59	74*	64*	82*	73*	46*	68

Table 5.8 EFE Performance Indicators

* Difference between population groups is statistically significant at the .05 level.

had been in work-based experiences had a 10 percentage point higher level than nonparticipants, and postsecondary students have a higher levels than individuals who did not go to college. Notice that fewer than half of the students who are not attending college are working in a job that is related to their EFE course work. The 1998 outcome exceeds the previous two years, which were 65 and 61 percent, respectively.

Summary and Trends

• Over 70 percent of the students surveyed were in a 2-year or 4-year postsecondary institution. This is an increase over the last two years. All of the increase comes from 2-year postsecondary school attenders, because the percentage of EFE completers who were in 4-year institutions actually decreased.

Males were more likely than females to be attending a 2-year institution and females were more likely to be attending a 4-year institution. There was a large increase in the percentage of minorities who were not attending a postsecondary institution.

- For students who were attending a postsecondary institution, there were substantial increases in students reporting the following major programs or fields: computer-related, criminal justice, liberal arts, and trade & industrial. There were substantial decreases in graphic/fine arts and medical-related fields.
- The percentage of students who report that their EFE training is related "a lot" or "some" to their postsecondary field/program has been stable over three years. However, there has been a substantial decline in those reporting "a lot" that has been exactly offset by those reporting "some."
- Just over 40 percent of the students indicated that they could have received college credit for the EFE classes that they took in high school. Of those, just under half reported that they had arranged to receive such credit. About 40 percent of the students who indicated that they could get college credit for their high school course indicated that it had been an important reason for enrolling in the EFE class, and about one-quarter said that transfer of college credits had been an important consideration in selecting a postsecondary institution.
- The employment rate of 87 percent was higher than either of the previous two years, which were 82 and 85 percent, respectively. The employment rate of whites was significantly higher than that of minorities–88 percent to 78 percent. The average work week is about 34 hours, and this average has decreased by 1 hour per week in each of the last two years. The average wage has increased by about 5 percent in each of the last two years. It is \$7.22 per hour.

In the previous two years, individuals who were not attending college were receiving wages that were much higher than those who were attending. However, in 1998, there was no difference suggesting that unskilled employees' wages have been stagnant or decreasing, while skilled employees' wages have been increasing.

• The completers reported much higher levels of satisfaction with their EFE classes and experiences than the current students. Furthermore, there are no differences between population groups.

• The performance indicators for EFE have increased in each of the last two years. The percentage of follow-up students employed or in a postsecondary program has risen from 89 percent in 1996 to 92 percent in 1997 to 96 percent in 1998.

The percentage of follow-up students who have training-related employment or who are in a training-related postsecondary program has gone from 65 to 61 to 68.

6. Findings and Recommendations

The purpose of this last chapter is to highlight the major findings from the data analyses and to offer recommendations to EFE administrators to consider as they shape their programs and practices. In some cases, these recommendations are based on rigorous analyses of the data. In other cases, the recommendations are based on anecdotal evidence that may have been derived from comments that respondents made. I will try to explain the basis for each recommendation.

Stakeholder Satisfaction

EFE offers excellent programs that result in high levels of customer (stakeholder) satisfaction.

In all of the surveys that were conducted, respondents were asked several questions about their satisfaction with various aspects of EFE classes and programs. As shown in table 3.3, 63 to 82 percent of current students were pleased with various aspects of their EFE classes. The students gave their classes a high letter grade for quality. Tables 4.2 and 4.4 show that parents were happy with their students' EFE classes and with the consortium, respectively. EFE completers were asked for their opinions about the same aspects of their EFE classes as current students were, and table 5.5 shows that their (recalled) levels of satisfaction were even higher than current students'.

Customer (stakeholder) satisfaction decreased slightly in 1998 compared to 1997 or 1996.

While substantial percentages of EFE students, parents, and graduates were quite satisfied with the programs and experiences they had been involved in, the indicators of satisfaction were roughly 5 to 10 percent lower than in the last two years. Some of this difference may be caused by sample differences because of different response rates. However, the differences were systematic.

As EFE reaches more and more students, it will be harder and harder for it to continually increase the level of satisfaction of students. Students who otherwise would not have taken EFE classes are now enrolling. Therefore, EFE has to work harder just to maintain the same level of satisfaction.

EFE has some excellent teachers who are impacting students. Even many EFE completers report one year after their enrollment that their favorite aspect of the EFE class was their instructor. But EFE also has some teachers that are not liked or impacting students. Thus, like any organization, EFE needs to have rewards/ incentives and sanctions/correctives.

This assessment is based on the responses of students and completers to the opportunity to list the best and worst aspects of their EFE classes. Parents also sometimes referred to staff members in their comments and suggestions. By far and away, more positive comments were received about staff than negative comments. And it was usually the case that multiple comments were received about teachers, either positive or negative.

EFE's attention to workplace know-how skills may be having a payoff.

The data in table 3.1 on (self-reported) tardiness and unexcused absences show that there has been a trend in decreased incidents of tardiness and unexcused absences.

Student/Parent Outreach

Parents' role in enrollment decisions is passive, but should not be overlooked. EFE should send them information that includes course content and student expectations as well as economic outcomes such as expected employment and wage rates.

The parents' roles in enrollment decisionmaking were, for the most part, passive. Less than half of the students indicated that they relied on parents'/guardians' advice and about two-thirds of the parents indicated that they played some role. However, only about one-eighth of parents indicated that they take an active role, and table 3.2 shows that only a quarter of the students reported that

parents were among the most important individuals involved in their decisions to take the EFE class. Table 4.1 shows that parents relied on their students' knowledge and opinions, but that among types of information that they wished they might have were more information about the content of the EFE courses and information about career ladders and starting salaries in the occupation.

Guidance counselors are key gatekeepers to EFE enrollment, but the extent to which students are listening to them and taking their advice is declining. EFE should keep them well informed about classes and opportunities.

Table 3.2 presents data that show the reliance of students on guidance counselors for advice about whether or not to enroll in EFE classes. The extent to which students relied on counselors for information and advice has declined (about 5 percent per year) between 1996 and 1998. Still, counselors are the most-often mentioned source of information and individuals in the decisionmaking process. Almost 60 percent of the EFE students received information from counselors. It thus behooves EFE to make sure that counselors are well-informed about class offerings and opportunities for work-based experiences. Note that table 4.4 shows that some parents had negative comments about the role of counselors vis-a-vis EFE.

A high share of the students who enroll in EFE classes pursued postsecondary education at two- and four-year institutions.

About 85 percent of EFE students indicate that they plan to enroll in a postsecondary institution either right after high school or after working for a few years. This percentage has remained quite stable over three years. The follow-up survey (table 5.1) shows that 70 percent of completers actually enrolled in postsecondary education right after high school. Oftentimes, parents and students misperceive EFE as being for non-college bound students. Thus it is important to provide them this evidence to show that such a stereotype is not correct.

Work-Based Experiences

A large share of EFE students hold part-time jobs which could be a significant learning resource, if an appropriate mechanism to integrate these experiences into the curriculum could be devised.

Around 55 percent of current EFE students work in part-time (or full-time) jobs according to the survey data. Given the apparent advantages that work-based experiences provide to EFE students who participate in them, it would seem that there would be some benefit to try to integrate some of the workplace learning that must be taking place in part-time jobs into the curriculum. It is not clear how such integration could occur, however. At a minimum, both EFE and other subject matter teachers should be asking students about their out-of-school activities, including employment, and tailoring instruction to those activities as appropriate situations arise. However, there may be more formal mechanisms for integration.

Work-based experiences are matching students with caring and supportive workplace mentors. Little priority should be placed on mentor training since the status quo seems to be working very well.

Over 80 percent of the current students engaged in work-based experiences (table 3.5) and over 95 percent of completers who had participated in work-based experiences (table 6.6) "strongly agreed" or "agreed" with the statement that their mentors were "supportive and answered questions." Among the current students, the satisfaction with mentors was even higher for female students who otherwise expressed some concerns about access to their EFE instructors. Thus the data suggest that the mentors may be overcoming some equity problems.

In reviewing the literature about school-to-work programs, mentor training is an issue that sometimes gets raised. It would appear to be low priority in the EFE service area, although there certainly may be circumstances where it would be important.

Equity Issues

Minorities are less satisfied with their EFE experiences and have much lower rates of positive outcomes than whites. Two recommendations are that EFE consider (1) whether and how they could play a role in placement for ex-students and (2) an ombudsman staff person who could advocate for minorities or other students with problems.

In table 3.3, we see that the average grade that white students assign to the quality of their EFE class is 3.29. For minorities, the average is 2.93. Sixty-five percent of the white students agree with the statement, "This course is one of the best I have taken in high school." Only 54 percent of minority students agreed. Seventy-four percent of white students felt "This course treats everyone fairly." Only 64 percent of minorities agreed. In table 5.5, we see that a similar, but much smaller, racial gap exists among the EFE completers. But, perhaps of more concern, is the significant racial gap in postsecondary and employment outcomes shown in tables 5.1 and 5.2. Over 70 percent of whites are attending postsecondary schooling; less than 60 percent of minorities are. Almost 90 percent of whites were employed; only 78 percent of nonwhites were employed. The unemployment rate for persons of color was 22 percent.

Two recommendations, if followed, may help EFE achieve more equitable outcomes. First, perhaps EFE could assist former students with part-time, summer, or permanent job placement or encourage students who are having difficulty finding work to contact EFE staff for referrals to agencies that could help with placement. Such placement assistance could be used in conjunction with an EFE skill certificate. Students who complete EFE and have a skill certificate could be entitled to the placement assistance. Second, perhaps EFE could establish a staff ombudsman position. The duties of this job would be to advocate for students and try to resolve problems that may arise.

Outcomes

The career aspirations of EFE students seem skewed toward white collar, professional occupations. EFE might consider an effort to inform students and parents about the employment and earnings payoffs to clerical, craftsperson, and technician occupations.

As shown in table 3.7, the career plans of EFE students are skewed toward professional and managerial occupations. Only about one-fifth of the current students see themselves in clerical, crafts, or technician jobs when they are 30 years old. Over 60 percent aspire to manager, professional, school teacher, or ownership occupations. The occupational distribution in the labor force is almost exactly opposite—only one-fifth of jobs are in professional or managerial occupations. Thus there is probably a mismatch between the aspirations of EFE students and where they will end up in their careers. Some of this mismatch might be ameliorated by better information or more widely disseminated information on the employment and earnings prospects of certain occupations. In particular, many analysts are forecasting dire shortages and consequent wage growth in jobs that require less than a baccalaureate degree, such as technicians.

The EFE performance indicators for outcomes have increased. The percentage of follow-up survey respondents who were employed or in school has increased from year to year. The percentage of respondents who are in a training-related postsecondary program or training-related job has also increased.

The bottom-line for EFE is the extent to which it improves the career prospects of its students. A one-year follow-up survey is problematic for drawing conclusions about students' ultimate careers and education choices. But despite its problems, it has shown that EFE has done better and better each year of the survey.

<u>Caveats</u>

This assessment does not examine the important issue of student academic achievement.

Finally, it should be recognized that ultimately EFE is part of the educational system in the county, and that the primary outcome of this system is academic achievement. All students need to be educated to their full potential. The data that indicate that EFE students have high planned and actual rates of postsecondary attendance suggest that academic achievement is being reached. But, EFE needs to evaluate the performance of its students on assessments that measure academic achievement. EFE might consider an assessment system that documents pre- and post-learning. Under the competitive pressures that are being thrust upon education, the future of EFE will ultimately depend on its ability to enhance student learning.

The data collection efforts for this study did not include any 'control' group. All of the statistics refer only to students who were affiliated with EFE. It is unknown how these students and graduates would compare to non-EFE students and graduates.

This report has documented substantial satisfaction with EFE classes, a substantial difference in the level of satisfaction and outcomes between whites and minorities, and high rates of postsecondary attendance and employment. In order to fully understand and evaluate these results, we should have some benchmark or measure of how well students who are not in EFE do in the labor market and in postsecondary settings. The results for the EFE students and completers look good, so we have a tendency to conclude that EFE is a prime contributor to these outcomes. However, we cannot rigorously attribute the positive outcomes to EFE without some context of how these students would be doing in the absence of EFE. Consequently, I would recommend that EFE administrators consider broadening their data collection efforts in future years to include non-EFE student outcomes.

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