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# Assessment of Kalamazoo County's Education for Employment (EFE) Programs Using 2000 Survey Data

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by

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## 1. EFE Programs

The Kalamazoo Regional Educational Service Agency (K/RESA), which is the intermediate school district for Kalamazoo County, 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 students, 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 for teachers are "Why Math?" and "Why English?", which are 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 course offerings are fully articulated with KVCC and with Davenport College, a local private postsecondary institution, 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 17 occupational clusters–agri-science; auto body; automotive technology; business services and technology; child care; commercial design; computer technology; construction trades; drafting technology; electro-mechanical technology; graphic arts/printing technology; heating and air conditioning; machine tool technology; marketing; 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.[1] Approximately 20 percent of the students enrolled in these school-based programs come from a high school other than the one where the course is offered. However, this statistic is skewed by two programs–business services technology and marketing. These programs are, by far, the largest programs in terms of enrollment and have enough students to be offered at most of the county high schools.[2] Because of the wide availability of these two programs, less than one percent of their students come from other high schools. On the other hand, over 50 percent of the students in the other 16 classroom programs leave their home high schools to attend the EFE class at another high school.

EFE offers four types of work-based programs. The first type, referred to here as **worksite-based classroom programs**, involves formal class work at worksite settings. EFE has established programs in eight 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 program offered at a local hospital; a two-year hotel, restaurant, and travel management 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; an entertainment industry technician program at a community auditorium facility; a one-year television production and broadcasting program at a community cable access center; a one-year veterinarian science program at a veterinarian office; and a cosmetology program that is offered at three different local beauty

[1]A few students from parochial high schools and high schools outside the intermediate school district attend programs as well.

[2]BST was offered at 10 high schools in Fall 1999 and marketing was offered at 8.

academies. In all cases, these innovative programs extend beyond classroom instruction to actual experiential learning. As with other 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. A total of 343 students were enrolled in these programs in Fall 1999; that is, left their home high schools each day to take classes at worksites.

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 1999, about 215 students from all 11 high schools in the county were engaged in workforce entry experiences in marketing, office, trade and industrial, or home economics co-op programs. The intent of these experiences is to supplement and contextualize the school-based 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 are 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. In Fall 1999, all of the business/industry worksite training was in the teacher externship program to explore teaching as an occupation. Clearly, this is an occupational area that is not traditionally taught in secondary schools. However, EFE has found these externships to be an excellent way for students to gauge their interest in

teaching as a career. A total of 99 students were enrolled in teacher externships in Fall 1999. In past years, EFE has placed students in paralegal, aviation, and a few other occupational areas where there was not enough enrollment to fill a class.

EFE staff are usually quite 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 that EFE has operated in past years is **apprenticeships**. 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 1999, EFE had 5 students in formal apprenticeships. Typically, the consortium will have a small number (always less than 10) of students in such apprenticeships.

In Spring 2000, EFE contracted with the Upjohn Institute to conduct data collection activities that provided information from three key stakeholder groups: students enrolled in EFE programs as of the second semester of the 1999-2000 school year, parents of students 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.[3] Consequently, surveys were designed and conducted rather than focus groups or personal interviews.

The first survey was administered in May 2000 to all students 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 and use of transferable college credits, and their career and postsecondary plans. There were approximately 2,500 students enrolled at the time of the survey, and 1,842 usable responses were received (a response rate of about 74 percent).

Loss in response came from classes or work-based situations where the instructor or coordinator was unable to administer the survey because they could not afford to or would not use instructional time. 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 second survey was a sample survey of parents/guardians of current EFE students that was conducted through the mail. A random sample of 500 parents were selected to receive the survey. Responses were received from 151. This is a 30 percent response rate, which seems low, but is substantially above average for a mail survey. The subjects covered in this brief survey

[3]Hollenbeck (1996) provides an in depth examination of EFE students' perspectives.

included information that parents have about enrollment in the EFE class or program, opinions about the class/program, and general reactions to the EFE consortium.

The final survey was a telephone follow-up of students who had completed their EFE class during the second semester of 1998-99. For the most part, they were individuals who had graduated from high school at the end of the 1998-99 school year and who had been enrolled in an EFE class or program at the end of that year. The State of Michigan mandates and regulates this survey because funding decisions for career and technical education in the State are partially determined by its data. The main purpose of the survey is to measure postsecondary and employment outcomes. As in prior years, EFE chose to add a few questions to the State's survey that were aimed at gauging satisfaction with the EFE classes/programs.

The response rate for the survey was quite satisfactory. The number of respondents exceeded the samples that resulted from the previous follow-up survey. The universe for the sample was 1,176 (this is the number of unique student names that was supplied to EFE by the state data information system VEDS). However, 368 of the students could not be reached because of incorrect telephone numbers, disconnected telephone numbers, or missing telephone numbers in VEDS. Furthermore, there was not enough identifying information to find current telephone numbers for the students. Of the remaining 808 students, interviews were completed with 532 students. This represents a response rate of approximately 66 percent. There were 129 refusals or terminations (about 16 percent), and the remaining 147 nonrespondents were simply not reached within ten calls.

## 3. EFE Students

This section of the report presents characteristics about the students 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-site programs, knowledge of and planned use of transferable college credits, postsecondary and career plans, and current employment. For most of these data, the information has been disaggregated in order to examine differences between males and females, whites and nonwhites, and whether or not the students were in a work-based program. The sample percentages for these characteristics are as follows: about 52 percent males and 48 percent females, about 82 percent whites and 18 percent nonwhites, and about 21 percent in a work-based program and 79 percent not participating in such an experience. (These percentages compare closely to last year's sample that had 52 percent males, 82 percent whites, and 23 percent in a work-based program experience.) The appendix to this chapter has time series graphs for a number of the statistics presented in this report. Figures 3.A.1-3.A.3 show the trends in gender, race, and work-based program participation.

### 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, and as the previous section of the report pointed out, about 66 percent of the students responded to the survey.

About 22 percent of the survey respondents were freshmen or sophomores; about 35 percent were juniors; and the remaining 42 percent were seniors. This percentage distribution is approximately the same for males and females. Whites and students with work-based experiences

**Table 3.1**
**High School Experiences and Characteristics of EFE Students**

| Characteristics | Sex | | Race | | Work-based program | | Total |
|---|---|---|---|---|---|---|---|
| | M | F | W | NW | Yes | No | |
| Class standing: | | | | | | | |
| Freshman | 6.6% | 6.2% | 4.9%* | 12.5%* | 2.1%* | 7.8%* | 7.0% |
| Sophomore | 14.7 | 14.5 | 14.7 | 14.9 | 2.6* | 18.6* | 15.4 |
| Junior | 37.9 | 34.2 | 36.2 | 38.4 | 19.7* | 40.0* | 35.4 |
| Senior | 40.8 | 45.1 | 44.2* | 34.3* | 75.5* | 33.5* | 42.3 |
| Homework (avg. hours) | 2.1* | 3.1* | 2.5* | 3.1* | 2.1* | 2.7* | 2.6 |
| High school grade (gpa) | 2.81* | 3.10* | 2.98* | 2.81* | 2.99 | 2.94 | 2.94(B) |
| High school activities (avg. no. of) | 2.5* | 2.9* | 2.6* | 3.0* | 2.6 | 2.7 | 2.7 |
| Tardies (avg. no. of) | 7.3* | 5.6* | 6.3 | 7.1 | 6.4 | 6.6 | 6.6 |
| Absences (avg. no. of) | 5.2 | 4.8 | 5.1 | 4.7 | 5.2 | 5.1 | 5.2 |
| Total percentage | 52.2% | 47.8 | 82.3 | 17.7 | 21.4 | 78.6 | 100% |

*Note*: Sample size is 1,842.
*Difference from other population group is statistically significant at the .05 level.

have a larger percentage of seniors and a lower percentage of freshman compared to their counterparts. The overall percentage of EFE students who were freshmen or sophomores is larger than last year, when it was just over 19 percent. Figure 3.A.4 shows the growth in the enrollment of students in grades 9 and 10. As might be expected, the percentage of students who were participating in work-based experiences who were freshmen or sophomores was significantly smaller than their overall share of students. Less than 5 percent of the students with work-based experiences were in $9^{th}$ or $10^{th}$ grade.

Respondents averaged about 2.6 hours of (self-reported) homework per week. Females averaged a full hour more per week than males (3.1 to 2.1), 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 about how many extracurricular activities they engaged in. On average, the students indicated that they were involved in 2.7 activities. Females

reported being engaged in more activities than males (2.9 to 2.5), nonwhites also reported more activities than whites (3.0 to 2.6), and students without a work-based experiences reported more activities than those with a work-based experiences (2.7 to 2.4) . The average (self-reported) grade point average in the sample was 2.94 (B). Among the groups, females and whites reported a higher average than males and nonwhites, respectively. These averages were identical to last year but higher than previous years, particularly for minorities and for males. Figure 3.A.5 displays the trends in grade point average for EFE students, by race and sex.

The last items in the table are average number of unexcused absences and tardiness during the school year. The overall averages for the entire sample were 6.6 tardies and 5.2 days of absence. Both tardies (6.8 to 6.6) and absences (6.1 to 5.2) are lower compared to last year. (Assuming there were about 180 days of instruction, these averages work out to about 3 percent.) Females had less tardiness than males (5.6 instances on average as compared to 7.3), whites had less tardiness than nonwhites (6.3 versus 7.1). Nonwhites had more absences than whites, and males had more absences than females, though these differences are not statistically significant.

This year's average level of tardiness (6.6) shows a downward trend compared to last year (6.8) but it is still above the low of 6.3 in 1998. The (self-reported) instances of tardiness had decreased from 7.8 to 6.9 to 6.3 between 1996 to 1998, but it went back up to 6.8 in 1999. On the other hand, the mean level of absences continued a healthy downward trend. The average level of absences has dropped from 7.1 to 6.7 to 6.4 to 6.1 to 5.2 between 1996 and 2000. (See figure 3.A.6.)

**Table 3.2**
**Sources of Information and Individuals Who Assisted in Decisionmaking About EFE Class**

| Source/Individual | Sex | | Race | | Work-based program | | Total |
|---|---|---|---|---|---|---|---|
| | M | F | W | NW | Yes | No | |
| Information Source Used/Most Important | | | | | | | |
| Guidance counselor advice | .57*/.26* | .69*/.38* | .63/.31 | .64/.33 | .67/.31 | .61/.31 | .62/.30 |
| Poster | .05/.01 | .05/.01 | .04*/.01* | .08*/.03* | .06/.01 | .04/.02 | .05/.01 |
| Academic subject teacher | .23/.05* | .24/.09* | .24/.07 | .24/.09 | .33*/.11* | .20*/.06* | .22/.07 |
| Technical ed. teacher | .12/.03 | .11/.04 | .11/.03 | .13/.05 | .11/.03 | .11/.03 | .11/.03 |
| Brochure | .39*/.14 | .45*/.16 | .41/.15 | .45/.17 | .38/.12 | .42/.16 | .41/.15 |
| High school handbook | .21/.08 | .24/.09 | .23/.10 | .20/.06 | .32/.11 | .19*/.08 | .22/.08 |
| Friends/acquaintances | .49/.28 | .52/.28 | .53*/.30* | .42*/.20* | .49/.26 | .50/.27 | .49/.26 |
| Brother/sister - family | .11*/.06* | .18*/.09* | .15/.08 | .13/.07 | .11/.06 | .15/.08 | .14/.07 |
| EFE staff presentation | .08/.03 | .08/.04 | .09/.04 | .09/.03 | .14*/.06* | .06*/.03* | .08/.03 |
| Employer | .03/.01 | .02/.01 | .02*/.01 | .04*/.02 | .04/.03* | .02/.01* | .03/.01 |
| Other | .06*/.03 | .03*/.02 | .05/.02 | .07/.03 | .07/.03 | .05/.02 | .06/.02 |
| Individual Who Assisted/Most Important | | | | | | | |
| Guidance counselor | .56*/.30* | .65*/.36* | .60/.33 | .64/.35 | .60/.32 | .60/.33 | .59/.32 |
| Academic subject teacher | .11/.05 | .12/.06 | .11/.05 | .13/.06 | .16*/.08* | .10*/.05* | .11/.05 |
| Technical ed. teacher | .10/.04 | .10/.03 | .09/.04 | .09/.02 | .11/.02 | .09/.04 | .10/.04 |
| Other school administrator | .02/.01 | .03/.01 | .02/.01 | .02/.01 | .02/.01 | .02/.01 | .02/.01 |
| Parent/guardian | .31*/.19* | .45*/.29* | .37/.23 | .40/.28 | .35/.24 | .37/.23 | .37/.23 |
| Friends | .39*/.24 | .44*/.22 | .44*/.24* | .33*/.15* | .38/.21 | .41/.23 | .40/.22 |
| Brother/sister - family | .10*/.05 | .13*/.07 | .12/.06 | .10/.06 | .09/.05 | .12/.06 | .11/.06 |
| Employer | .02/.01 | .01/.01 | .03/.01 | .01/.01 | .05*/.03* | .01*/.00* | .02/.01 |

*Notes*: 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 1,842.
*Difference from other population group is statistically significant at the .05 level.

## EFE Enrollment Decisionmaking

Students were asked about how they learned about the EFE class that they were enrolled in: sources of information and individuals. 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 individual was among the most important. For example the first entry

in the table is .57*/.26*. This means that 57 percent of the males reported that guidance counselor advice was a source of information about their EFE class, and that 26 percent of the males indicated that guidance counselor advice was among the most important sources of information. (The asterisks indicate that the 57 percent and 26 percent for males are statistically significant differences from the 69 percent and 38 percent for females.)

The data show that about half of the students relied on guidance counselor advice, brochures, and friends or acquaintances as sources of information about the EFE classes. Around one-fifth of the students relied on advice from an academic subject teacher and high school handbook, and about 10 percent of the students received information from a technical education teacher, a sibling, or EFE staff presentations. The most important sources closely aligned with overall reliance. Guidance counselor advice, friends, and brochures were the most important information sources. Note that posters and employers were reported to be a source of information by very few students.

A number of the differences in the proportions among the sex, race, and work-based experience groups were significant. Females reported more information sources than males, and in particular, a greater reliance on guidance counselors, brochure, and siblings. 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 employers and posters. Students who were in work-based programs tended to rely more heavily on academic subject teacher, high school handbook, EFE presentations, and employers 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 groups, females reported that they tended to be

assisted by guidance counselors, parents/guardians, friends, and siblings more than did males. The only statistically significant difference between nonwhites and whites was a much higher reliance on friends for whites. Students with work-based program experiences reported a higher reliance on academic subject teacher and employers than those without such experiences.

Last year's report noted that there had been a substantial decline in reliance on information from all sources relative to the preceding two years. The percentage of students who reported gaining information from each of the sources and the percentage of students for whom the source had been among the most important had gotten considerably smaller than comparable percentages from the 1996, 1997, and 1998 data. The data reported in table 3.2 are very similar to last year's data, i.e., they continue to be much smaller than the earlier years. This is consistent with the hypothesis that EFE classes have become familiar to students, and so the students are less reliant on external sources for information or decisionmaking.

**Opinions About EFE Classes**

The students were presented with a number of survey items to gauge their opinions about 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 three best and three worst things about the class. Table 3.3 provides summary information about the statements of opinion and the letter grade. The top portion of the table presents the proportion of students who agreed or strongly agreed with various statements about their EFE class. (Note that some of the questions were worded negatively; in this case, the indicators represent the percentage

**Table 3.3**
**EFE Class Satisfaction Indicators**

| Indicator | Sex | | Race | | Work-based program | | Total |
|---|---|---|---|---|---|---|---|
| | M | F | W | NW | Yes | No | |
| Agree/strongly agree with "This course is one of the best. . ." | 64 | 65 | 65 | 62 | 70* | 62* | 63 |
| Disagree/strongly disagree with "This course is too hard. . ." | 78* | 83* | 81 | 77 | 82 | 79 | 80 |
| Agree/strongly agree with "I get along with other students and we work together. . ." | 81* | 86* | 85* | 78* | 83 | 83 | 83 |
| Agree/strongly agree with "The equipment and facilities meet the needs. . ." | 72* | 78* | 75 | 73 | 71 | 75 | 74 |
| Disagree/strongly disagree with "Not enough information. . ." | 68* | 77* | 74* | 66* | 72 | 72 | 72 |
| Agree/strongly agree with "This course treats everybody fairly. . ." | 71* | 78* | 75 | 71 | 70 | 75 | 73 |
| Agree/strongly agree with "I can get questions answered. . ." | 72* | 77* | 75 | 73 | 74 | 73 | 73 |
| Disagree/strongly disagree with "This course is disorganized." | 68* | 75* | 72 | 70 | 68 | 72 | 71 |
| Average grade for course quality (converted to 4.0 scale) | 3.16* | 3.35* | 3.28* | 3.16* | 3.27 | 3.21 | 3.23 |

*Notes*: Table entries for the first eight rows are proportion 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 1,842. Approximately 50 to 80 cases are missing for each item. Sample size for average letter grade is 1,757.
*Difference from other population group is statistically significant at the .05 level.

of respondents who disagreed or strongly disagreed.) The entries in the columns can be interpreted as indicators of student satisfaction.

Note that the levels of satisfaction are medium to high–all ranging between 63 and 83 for the total sample. The first opinion item 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 63 % of the students agreed, with the highest level of agreement from students who were in work-based program experiences. 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. It should be recognized that students would disagree with this statement if they felt that the class was too easy or if they felt that the pace and level were appropriate. Consequently, the indicator is somewhat difficult to interpret.

The third statement was, "I get along well with other students and we work together well in the class." Overall, more than 80 percent, about five out of six, of the students agreed with this statement. No follow-up questions to explore the students' reasons for answering the items one way or another were asked, so we can't explain differences with certainty. Females and whites seemed to have more positive comments than their counterparts. The next item was intended to measure student opinion about the equipment and facilities in the classrooms and worksites. 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 males and students with work-based program experiences were in less agreement.

The next survey item asked students whether they thought enough information about the course had been given to students and families. Overall, about 70 percent of the students were satisfied, but as with the previous item, males and students with work-based program experiences were in less agreement. Next, the battery of opinion items asked about whether everyone was treated fairly in the course. Seventy percent of the respondents were satisfied, but the level of agreement was much lower for males.

Students were asked for their agreement with the statement, "I can get questions answered easily in this class." The results were quite similar to the previous question; overall, just over 73 percent of all respondents in the sample were satisfied, but the level of agreement was again lower for male students. The last indicator was disagreement with the statement that, "This course is disorganized." Around 70 percent of all of the population groups disagreed with the statement; and

again the group that had significantly lower levels of satisfaction were males and students with a work-based program experience.

The average grade for course quality is given in the bottom row of the table. The sample average of 3.23 indicates that, all in all, students were quite satisfied with their classes. A significant differences in this average exists between males and females, however. The assigned grades are lower for males and minorities, 3.16, than for any of the other groups. These data suggest that males, particularly those with work-based program experiences, may not have achieved as much comfort in the EFE classes as their classmates.

In general, the EFE class satisfaction indicators are somewhat higher that those in 1999, but lower than in 1996 or 1997. In 1997 and 1998, there was a significant discrepancy between whites and nonwhites that had disappeared entirely in last year's data. This year once again we see these differences, especially in "not enough information." Figure 3.A.7 displays the trends in satisfaction indicators for current students, and figure 3.A.8 shows the averages for course quality grades, by race and sex.

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 1852 students responded to the survey, so the potential number of best aspects and worst aspects that could have been named was almost 5,600. In fact, over 4,100 positive aspects were named and just over 2,600 worst aspects were named. 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 books/software. The specific teacher/staff person was the third highest rated positive aspect.

On the other side of the ledger–i.e., worst things about the course–the item that was mentioned most often was books/software. Of the total number of responses to this question, this response was received about 15 percent of the time. Just behind it in terms of percentage frequency was that the course required too much work. Finally, specific teacher and course was "too easy" were the next most often mentioned complaints.

**Table 3.4**
**EFE Class Best and Worst Aspects**

| Aspect | Number of times mentioned | Percent |
|---|---|---|
| Best Aspects | | |
| Equipment | 219 | 5.3 |
| Books/software | 613 | 14.9 |
| No homework/tests | 76 | 1.8 |
| Pace | 303 | 7.4 |
| Specific teacher | 566 | 13.8 |
| Work-based learning | 165 | 4.0 |
| Skills, experience | 932 | 22.7 |
| College usefulness | 58 | 1.4 |
| Hands-on | 160 | 3.9 |
| Other students | 272 | 6.6 |
| Other | 730 | 17.7 |
| Nothing | 19 | 0.5 |
| Total | 4,113 | 100.0 |
| Worst Aspects | | |
| Equipment problems | 145 | 5.5 |
| Books/software | 405 | 15.3 |
| Too difficult | 144 | 5.5 |
| Too easy, boring | 310 | 11.7 |
| Too much work | 381 | 14.4 |
| Student:teacher ratio | 80 | 3.0 |
| Specific teacher/staff | 319 | 12.1 |
| Schedule problems | 140 | 5.3 |
| Class environment | 62 | 2.3 |
| Classmates | 122 | 4.6 |
| Other | 328 | 12.4 |
| Unfair | 18 | 0.7 |
| No worst comments | 188 | 7.1 |
| Total | 2,642 | 100.0 |

*Notes*: Columns may not add to 100.0 due to rounding.

## Work-Based Program Experiences

Table 3.5 shows that just over one-fifth of the sample participated in work-based program experiences. The percentages were higher for females than males (as they were in 1997, 1998, and 1999) and for whites than nonwhites, though the male-female difference was not statistically significant. (See figure 3.A.9 for trends in participation rates by race and sex.) About three-fifths of the students who participated in a work-based experience received pay, and on average, the pay was $7.09 per hour. The proportion of males who were paid for their work-based experience is quite a bit higher than the proportion of females. Figure 3.A.10 shows the trend in the percentage of students in work-based program experiences who received pay, by race.

**Table 3.5**
**Work-Based Program Experiences**

| Characteristic | Sex | | Race | | Total |
|---|---|---|---|---|---|
| | M | F | W | NW | |
| Participation (n = 1,776) | 21 | 22 | 23* | 16* | 21 |
| If Participated: | | | | | |
| Paid? (n = 372)) | 69* | 43* | 57 | 57 | 57 |
| Average wage (n = 180) | $7.11* | $6.56* | $6.89 | $6.87 | $7.09 |
| Average hours (n = 328) | 17.6* | 14.3 | 16.4 | 13.8 | 16.1 |
| Strongly disagree/disagree with "Work is unrelated to course. . ." (n = 363) | 52 | 58 | 55 | 50 | 55 |
| Agree/strongly agree with "Mentors are supportive and answer questions. . ." (n = 362) | 79 | 80 | 79 | 76 | 80 |

*Note*: Table entries are percentages except for wages and average hours.
*Difference from other population group is statistically significant at the .05 level.

The hourly pay differential of almost $0.55 per hour between males and females was significant ($7.11 for males and $6.56 for females). The work-based program experiences averaged just over 16 hours per week. Males worked more than females (18 hours to 14 hours), but there was not a significant difference between racial groups. The work-based program experiences for this year were quite similar to last year. About the same proportion of students received pay and the hours per week were about the same. The actual hourly wage earned was higher this year by about 7 percent, undoubtedly caused by the tight labor market.

Students who were participating in work-based program experiences were asked two opinion questions to measure 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. Less than three-fifths of the students disagreed or strongly disagreed with the statement that the work experience was "...unrelated to their EFE class." This percentage is lower than it was in the last year. (See figure 3.A.11.) Furthermore, the level of disagreement, which in this case is the positive indicator, was much lower for males than females. The second item asked for agreement with the

**Table 3.6**
**Postsecondary Plans and Relevance of EFE Class**

| Plan/Relevance | Sex | | Race | | Work-based program | | Total |
|---|---|---|---|---|---|---|---|
| | M | F | W | NW | Yes | No | |
| Apprenticeship program after school? (n = 1,663) | 24 | 21 | 23 | 25 | 28* | 22* | 23 |
| Postsecondary college, university (including community college) (n = 1,736) | | | | | | | |
| Yes, right away | 71* | 84* | 78 | 74 | 78 | 77 | 77 |
| Yes, after work | 11* | 7* | 9 | 9 | 12* | 8* | 9 |
| Don't know | 11* | 6* | 8 | 9 | 7 | 9 | 9 |
| No | 7* | 3* | 5 | 7 | 3 | 6 | 5 |
| Agree/strongly agree with "EFE class helped me to decide. . ." | 40 | 40 | 40 | 41 | 45* | 38* | 40 |
| Agree/strongly agree with "EFE class was helpful in choosing program. . ." | 44 | 46 | 45 | 44 | 54* | 43* | 45 |

*Note*: Table entries are sample percentages of the overall sample, except for item nonresponse.
*Difference from other population group is statistically significant at the .05 level.

statement that "...workplace mentors are supportive and willing to answer questions." 80 percent of the sample agreed with this statement. Unlike last year there isn't a difference between whites and non-whites in their levels of agreement.

## Postsecondary and Career Plans

The next general topic is 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 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 a misunderstanding about what apprenticeships mean and/or how readily accessible they are.

A large percentage of the students indicated that they were planning to attend a postsecondary institution (including community colleges and four-year colleges or universities). All together, 86 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 planning to attend college right after high school–84 percent to 71 percent for males (this is a smaller differential compared to last year's student data). Figure 3.A.12 shows the trends in planned postsecondary attendance rates, by sex. However, this difference was offset somewhat by respondents who indicated that they intended to work first, and then go to a postsecondary program. About 11 percent of males indicated this plan as opposed to 7 percent of females. Still a greater percentage of females had postsecondary aspirations. About 18 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. Only 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. A higher percentage of students who had participated in a work-based program experience planned on pursuing postsecondary education.

The students' EFE experiences apparently had an impact on their postsecondary plans. 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. Work-based program experiences had an impact on students' postsecondary decisions also. Over 45 percent of students participating in work-based

program experiences agreed that EFE classes helped them to decide whether or not 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." There were no gender or racial differences that were statistically significant. However, students with work-based experiences were more likely to agree or strongly agree than their counterparts (54 percent to 43 percent).

The apprenticeship and postsecondary plan data have remained virtually unchanged over the last two years. The percentage of students who plan to go on to postsecondary schooling right after high school was 74 in 1996; 73 in 1997 and 1998; 76 in 1999 and 77 in 2000. The percentage of students who plan to go on to postsecondary schooling after working for awhile was 11 in 1996-1998,10 in 1999 and 9 in 2000. The extent to which EFE influences postsecondary plans was almost identical to last year's percentage.

Most of the items on the student survey have not changed since 1996; however, in 1998 we added a number of questions to determine the importance of and usage of transferable college credits earned while in EFE courses in high school. These items were repeated this year, and table 3.7 presents a summary of these data. Overall, just under half of the respondents (49 percent) indicated that they believed that they could receive college credit for their high school EFE class. Twenty-one percent believed that they would not be able to receive college credit for this class, and the remaining 30 percent indicated that they did not know. This is very close to last year's data with those believing that they can receive credit having stayed identical. Students with work-based experiences

**Table 3.7**
**Availability and Importance of Transferable College Credit**

| Characteristic | Sex | | Race | | Work-based programs | | Total |
|---|---|---|---|---|---|---|---|
| | M | F | W | NW | Yes | No | |
| Can student receive postsecondary credit for this class? (n = 1,769) | | | | | | | |
| Yes | 49 | 50 | 51 | 47 | 60* | 46* | 49 |
| No | 21 | 20 | 21 | 16 | 24 | 20 | 21 |
| Don't Know | 30 | 29 | 28 | 37 | 16* | 34* | 30 |
| If yes: (n = 868) | | | | | | | |
| College credits earned for this class (average) (n = 478) | 2.8* | 3.3* | 3.0 | 3.4 | 2.9 | 3.0 | 2.6 |
| College credit was important in decision to take this class (n = 844) | 36 | 41 | 37 | 43 | 47* | 36* | 39 |
| Sources of information on college credit (n = 792) | | | | | | | |
| Guidance counselor advice | 37 | 36 | 35 | 39 | 41 | 35 | 36 |
| Poster | 2 | 1 | 1 | 2 | 2* | 1* | 1 |
| Academic subject teacher | 54 | 57 | 57 | 50 | 60 | 54 | 55 |
| Technical education teacher | 10 | 9 | 8* | 15* | 7 | 10 | 9 |
| Brochure | 8 | 9 | 9 | 10 | 10 | 8 | 9 |
| High school handbook | 9 | 12 | 11 | 7 | 8 | 11 | 11 |
| Friends/acquaintances | 13 | 15 | 15 | 11 | 13 | 14 | 14 |
| Brother/sister - family | 2* | 5* | 4 | 2 | 2 | 4 | 4 |
| EFE staff presentation | 9 | 8 | 9 | 6 | 10 | 9 | 8 |
| Employer | 1 | 1 | 9 | 8 | 1 | 1 | 1 |
| Other | 5 | 6 | 6 | 4 | 5 | 6 | 6 |
| Total college credits earned by end of this year (average) (n = 722) | 3.13 | 3.20 | 3.17 | 3.09 | 3.38 | 3.04 | 3.11 |

*Note*: Table entries are sample percentages, except for average number of college credits.
* Difference from other population group is statistically significant at .05 level.

were more likely to have believed that they could receive college credit than those without work-based experiences. The differences by gender and by race were not significant.

We asked the students who indicated that they knew they could earn college credits how many credits they thought they could earn for this course and whether the potential to earn college credit was an important factor in deciding to enroll in the program. A substantial share–just under 40 percent–reported that this factor had been important in their program enrollment decision in high school. This share 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. Note that the difference between nonwhites and whites was 43 percent versus 37 percent. The students believed they would be able to earn about three college credits for this course.

The respondents were also asked to indicate sources of information about the ability to earn transferable college credits in their EFE course. Academic subject teachers were the predominant sources followed by guidance counselors. Friends/acquaintances and high school handbook 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 students are clearly aspiring to "white collar" positions. Around 60 percent of the sample aspire to the following occupations: manager/administrator, professional, technical, or school teacher. Females, particularly, have set their aspirations in these directions. Forty-three percent of the females in the sample reported that they would like to be in a professional occupation when they reach 30 and another 13 percent wanted to be a school teacher. Less than a 25 percent and 3 percent of males shared those aspirations. On the other hand, 9 percent of males aspired to be craftspersons, whereas only 1 percent of women reported this aspiration. Figure 3.A.13 shows the trends in the males' and females' aspirations to "white collar" and "blue collar" occupations.

As we did for postsecondary plans, we asked about the influence of EFE on the students' career aspirations. This indicator 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." Overall, 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. These data mirror closely the

**Table 3.8**
**Career Plans and Relevance of EFE Class**

| Plan/Relevance | Sex | | Race | | Work-based program | | Total |
|---|---|---|---|---|---|---|---|
| | M | F | W | NW | Yes | No | |
| Occupational aspiration at age 30 | | | | | | | |
| Clerical | 1* | 0* | 1 | 1 | 2 | 0 | 1 |
| Craftsperson | 9* | 1* | 5 | 3 | 5 | 5 | 5 |
| Farmer | 0 | 1 | 1 | 0 | 1 | 0 | 1 |
| Manager/administrator | 7 | 6 | 6 | 8 | 8 | 6 | 6 |
| Military | 3* | 1* | 2* | 0* | 0 | 2 | 2 |
| Operative | 0* | 1* | 0 | 1 | 2 | 0 | 1 |
| Professional | 24* | 43* | 32 | 37 | 23* | 35* | 33 |
| Proprietor/owner | 5 | 3 | 4 | 3 | 4 | 4 | 4 |
| Protective services | 0* | 2* | 3 | 4 | 5* | 3* | 3 |
| Sales | 4 | 3 | 3 | 4 | 4 | 0 | 3 |
| School teacher | 3* | 13* | 8 | 6 | 12* | 7* | 8 |
| Service | 2* | 3* | 2 | 0 | 0 | 2 | 2 |
| Technical | 10* | 6* | 7 | 8 | 6 | 7 | 7 |
| Not working | 2 | 0 | 1* | 3* | 0 | 2 | 2 |
| Relevance of EFE Class | | | | | | | |
| Agree/strongly agree with "EFE class helped me to decide on job at 30." | 39 | 41 | 40 | 38 | 50 | 37 | 40 |

*Note*: Table entries are sample percentages. Sample size for occupational aspirations is 1,681. Sample size for relevance is 1,644. Columns may not add to 100 due to rounding.
*Difference from other population group is statistically significant at the .05 level.

occupational aspirations of last year's sample of students. The differences by gender, by race or by work-site experience were not statistically significant.

## Current Employment

The last topic covered by the survey is current employment experiences. As table 3.9 indicates, 53 percent of the students indicated that they were currently working for pay apart from any work-based experience that they are having through EFE. Males and whites had a higher employment rate than females and nonwhites, respectively, though these differences were not statistically significant. Somewhat surprisingly, students without a work-based program experience were only slightly more likely to be employed than those with a work-based program experience.

**Table 3.9**
**Current Employment Characteristics**

| Characteristic | Sex | | Race | | Work-based program | | Total |
|---|---|---|---|---|---|---|---|
| | M | F | W | NW | Yes | No | |
| Currently employed? (n = 1,676) | 53 | 52 | 55 | 42 | 54 | 52 | 53 |
| If yes: | | | | | | | |
| Average hours (n = 833) | 17.2* | 15.8* | 16.6 | 16.9 | 18.6* | 16.0* | 16.6 |
| Average pay (n = 792) | $7.06* | $6.41* | $6.80 | $6.38 | $7.42* | $6.61* | $6.77 |
| Use training from EFE class? (n = 864) | | | | | | | |
| A lot | 14 | 16 | 14 | 19 | 19 | 14 | 15 |
| Some | 28 | 31 | 29 | 34 | 33 | 28 | 29 |
| Hardly any | 24 | 26 | 26 | 21 | 23 | 26 | 25 |
| Never | 34* | 27* | 31 | 26 | 24 | 32 | 31 |

*Note*: Table entries for rows 1 and 4-7 are sample percentages.
*Difference from other population group is statistically significant at the .05 level.

For those with jobs, the average hours of work per week was around 17, and the average hourly wage was $6.77. Males worked more hours per week than females–17.2 to 15.8–and they earned a higher hourly wage–$7.01 to $6.41. Students with work-based experiences worked more hours (18.6 to 16) and earned higher wages (7.61 to 7.44) compared to their counterparts.

Since 1996, the percentage of students who were employed has declined or stayed the same, from 60 percent to 56 percent to 54 percent in both 1998 and 1999 to 53 percent in 2000. (See figure 3.A.14, which displays this trend and the trend by race and sex.) The average hours per week for employed students has also declined or stayed the same–from 18.7 to 18.2 to 17.7 to 17.8 to 16.6. On the other hand, hourly wages have risen–from $5.35 to $6.77.

We asked the students whether or not they were using the training that they had received through their EFE course in their current job. Forty-four percent of the students who were working indicated that the skills and training they had received in their EFE class were somewhat useful or useful "a lot" on their part-time jobs. The other students reported that they used "hardly any" of the EFE skills and training or none at all. Indeed, nearly one-third of the students indicated that they

never use their EFE training. Males were more likely to report that they never used their EFE training in their current jobs.

## Summary and Trends

The following points summarize the key findings from the survey of students:

- The average EFE student has a (self-reported) 2.94 (B) grade point average (GPA), participates in 2.7 extracurricular activities per year, and does about 2.6 hours of homework per week. The average GPA of males and of minorities reported in this year's data is identical to last years which reflects a significant increase over previous year's data.

  There continues to be a substantial increase in Freshman enrollment in EFE, and a gradual increase in the number of activities in which students engage. In last year's report, we pointed out an upward trend in (self-reported) tardiness. The data collected in 2000 continues the downward trend in tardiness from years prior to 1999, and also continues the downward trend in unexcused absences.

- The sources of information that students relied upon and the individuals who assisted in decisionmaking about EFE classes showed a slight shift compared to previous years. The most important sources of information were guidance counselor advice, friends/ acquaintances and brochures. The individuals who were mentioned most often as assisting the students were guidance counselors, parents/guardians, and friends. Both years of data indicated that students had fewer sources of information about EFE courses and involved fewer people in making their enrollment decisions than in the prior two years. This may imply that EFE classes have become quite familiar to students.

- Indicators of student satisfaction with EFE classes were reasonably high. They rose somewhat from last year on all aspects except equipment. Once again this year we see a gap between whites and non-whites particularly in their satisfaction with the amount of information they received in the EFE class. As in last year, students in work-based program experiences tended to have lower satisfaction indicators.

- The percentage of students who participated in work-based programs decreased slightly from last year. In 1999, this percentage was 23 and it dropped to 21. There continues to be a downward trend in the percentage of students who participate in work-based programs who get paid, but for those who do get paid, the wage rates were higher. The hours per week for these activities have remained the same–around 16.1 hours on average.

  There was a further decrease in the percentage of students who participate in work-based programs who agreed that there was a connection to their course work in EFE, but there

continued to be a high level of agreement that workplace mentors are "supportive and answer questions."

- The percentage of students who plan to attend a postsecondary institution either right after high school, or after working for a few years, has remained right around 85 percent for all four years of the survey. About three-quarters of the students planned to enter a postsecondary institution right away after high school, whereas about 10 percent plan to attend more schooling after working for a few years. The planned rate of attendance is higher for females, and lower for males but the gap is smaller. EFE influences the decision to attend a postsecondary institution and the decision about which institution to attend for over 40 percent of the students.

- Just under half of the students indicated that they could receive direct or transferable 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.

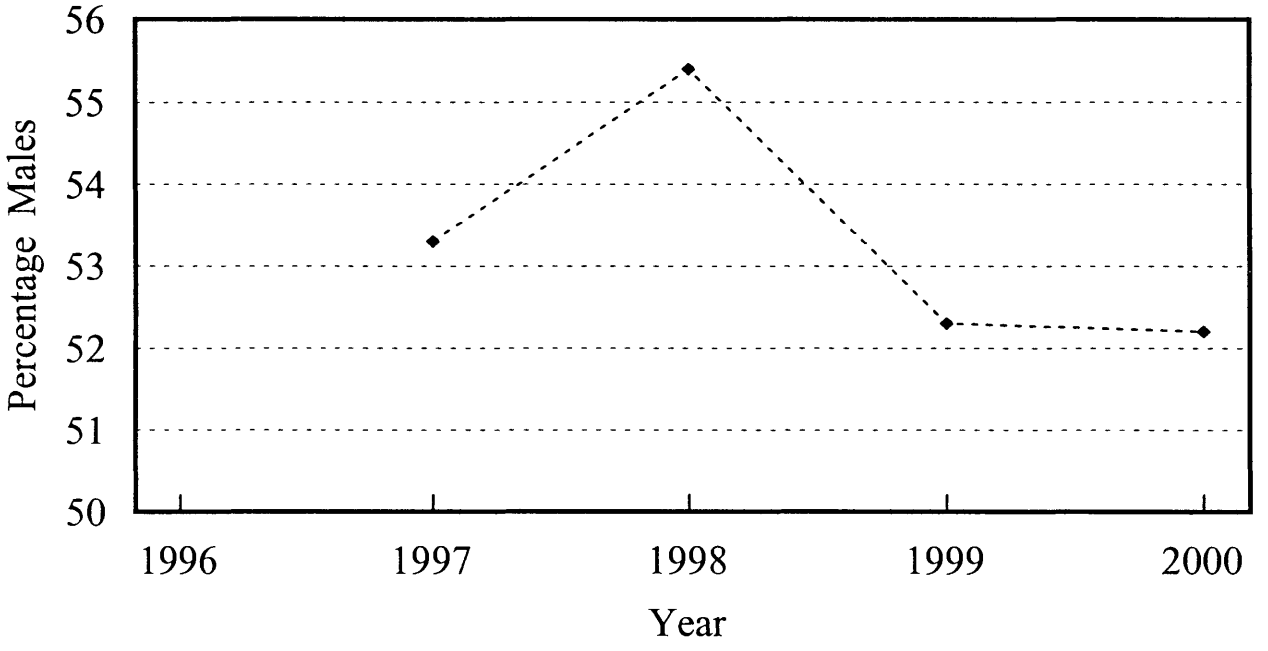
- Compared to previous years, we see a less skewed distribution for occupational aspirations About 54 percent of the students (much higher for females) planned to be in a white collar occupation when they reached age 30. There is a slight downward trend in the percentage of students who aspire to be in "white collar" occupations, and a slight upward trend in the percentage of students who aspire to be in "blue collar" occupations. About 40 percent of the students indicated that EFE influenced their career choices.

- Current employment, other than in work-based programs affiliated with EFE, and average hours of work per week have gone down over time. Average hourly wages have increased. Among the students who work, 44 percent indicated that they use their EFE training in their part-time jobs and about 31 percent reported that they "never" used their EFE training in their current job.

# Appendix: Time Series Graphs of Characteristics and Experiences of Current Students

**Figure 3.A.1**

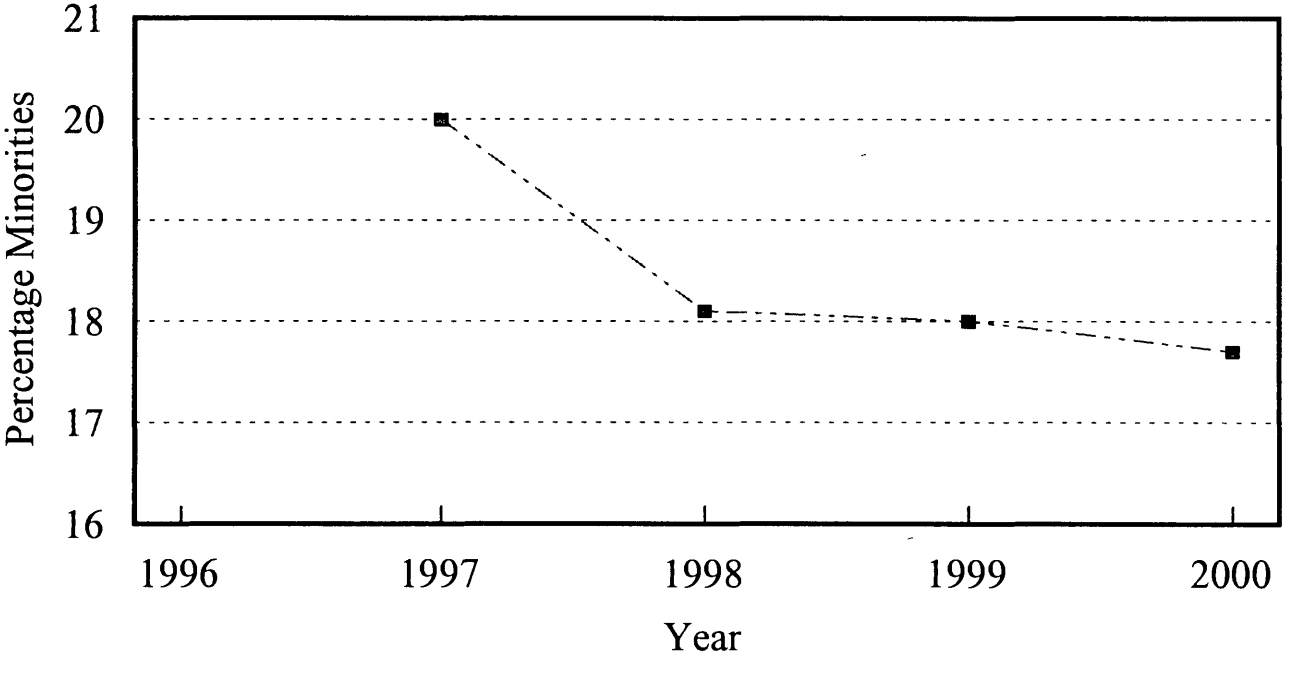
## Gender Composition of Student Enrollment




Note: Data not available for 1996

**Figure 3.A.2**

## Racial Composition of Student Enrollment




Note: Data not available for 1996

**Figure 3.A.3**

## Participation in Work-Based Programs

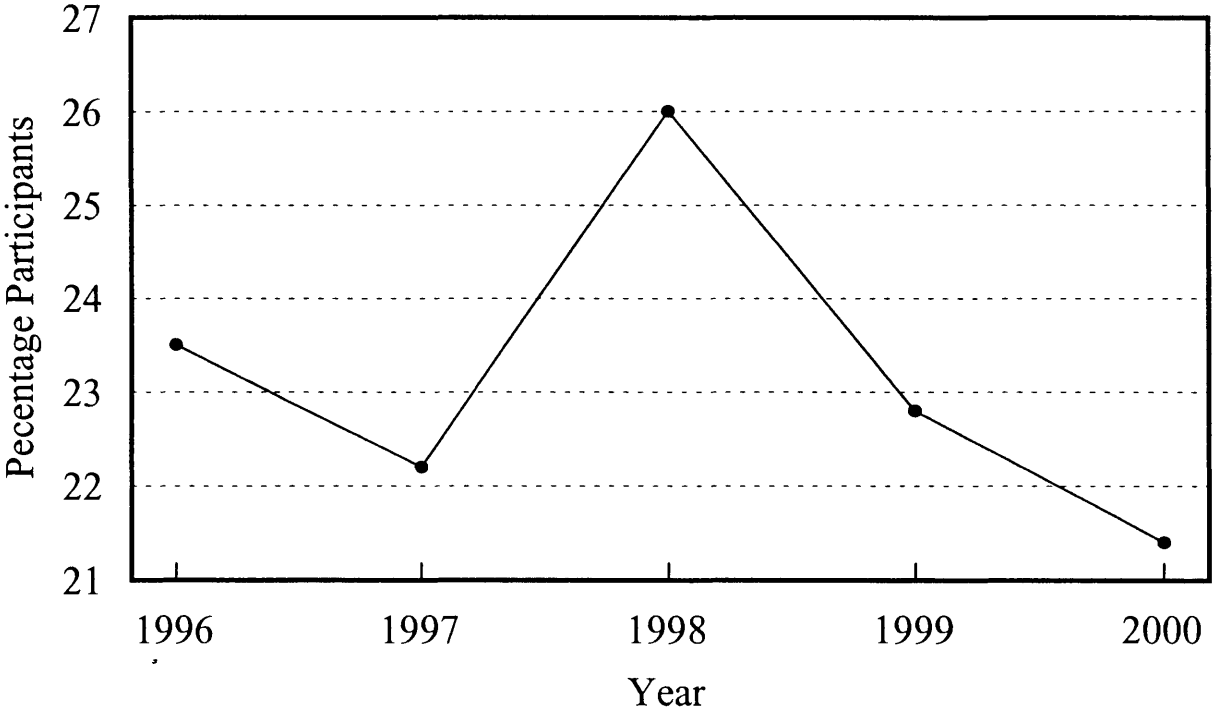
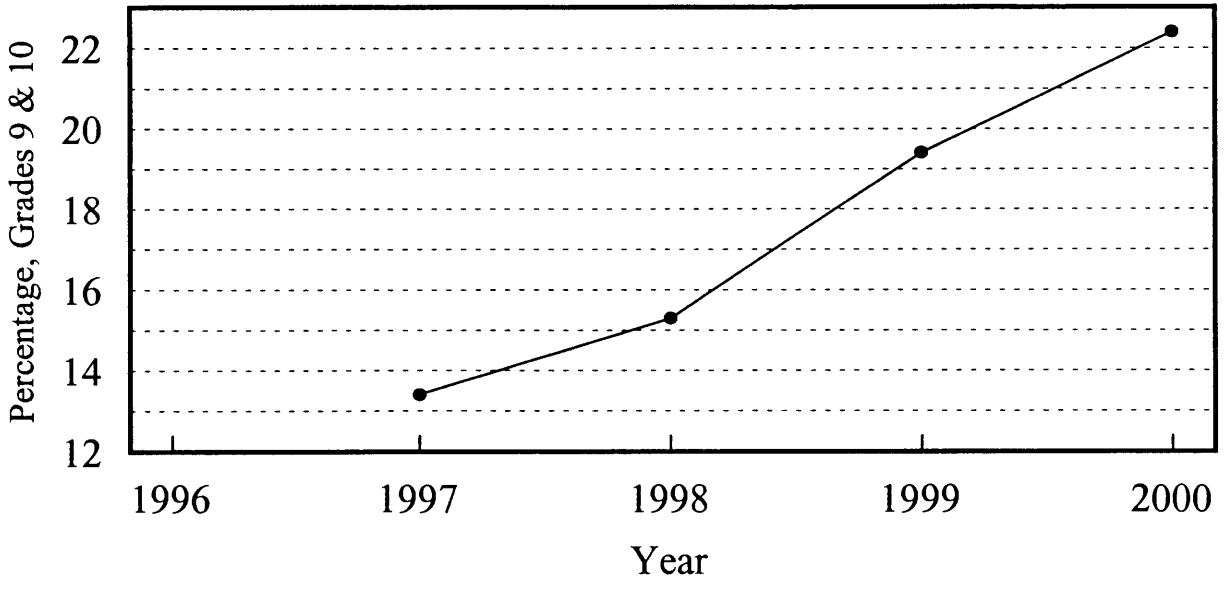


**Figure 3.A.4**

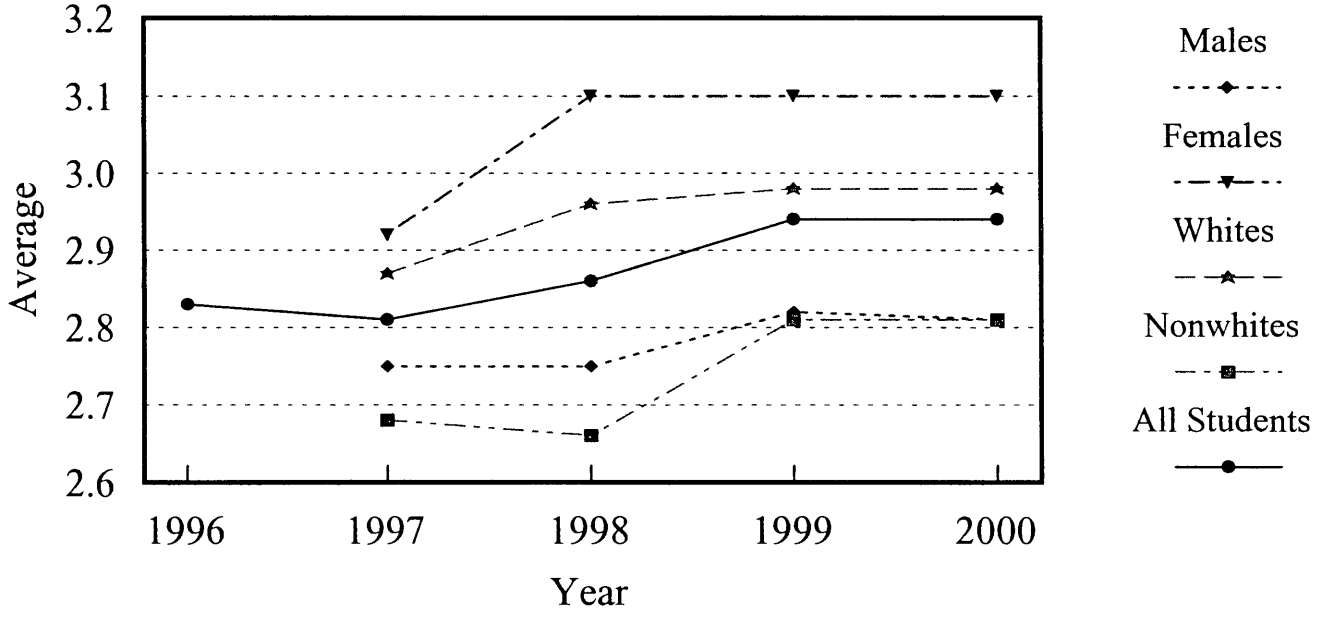
## Enrollment of Students in Grades 9 and 10




Note: Data not available for 1996

**Figure 3.A.5**

## Average GPA's, By Race and Sex




Note: Data by race and sex not available for 1996

**Figure 3.A.6**

**Average Number of Incidents of Tardiness and Unexcused Absences**

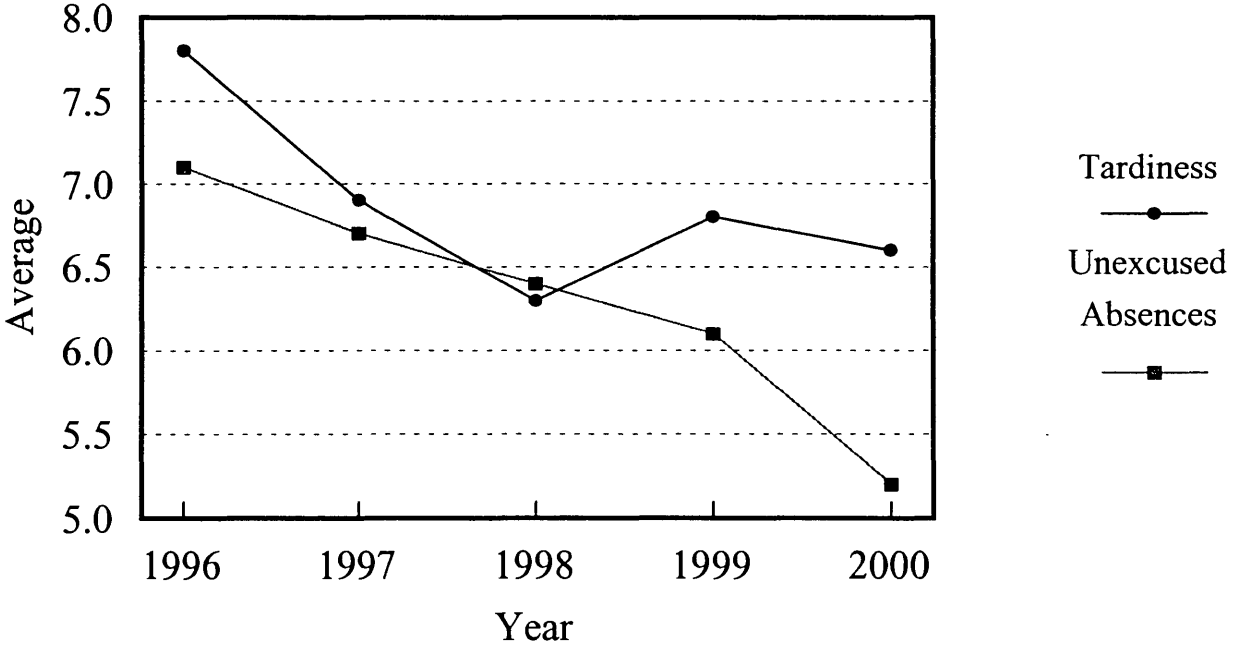
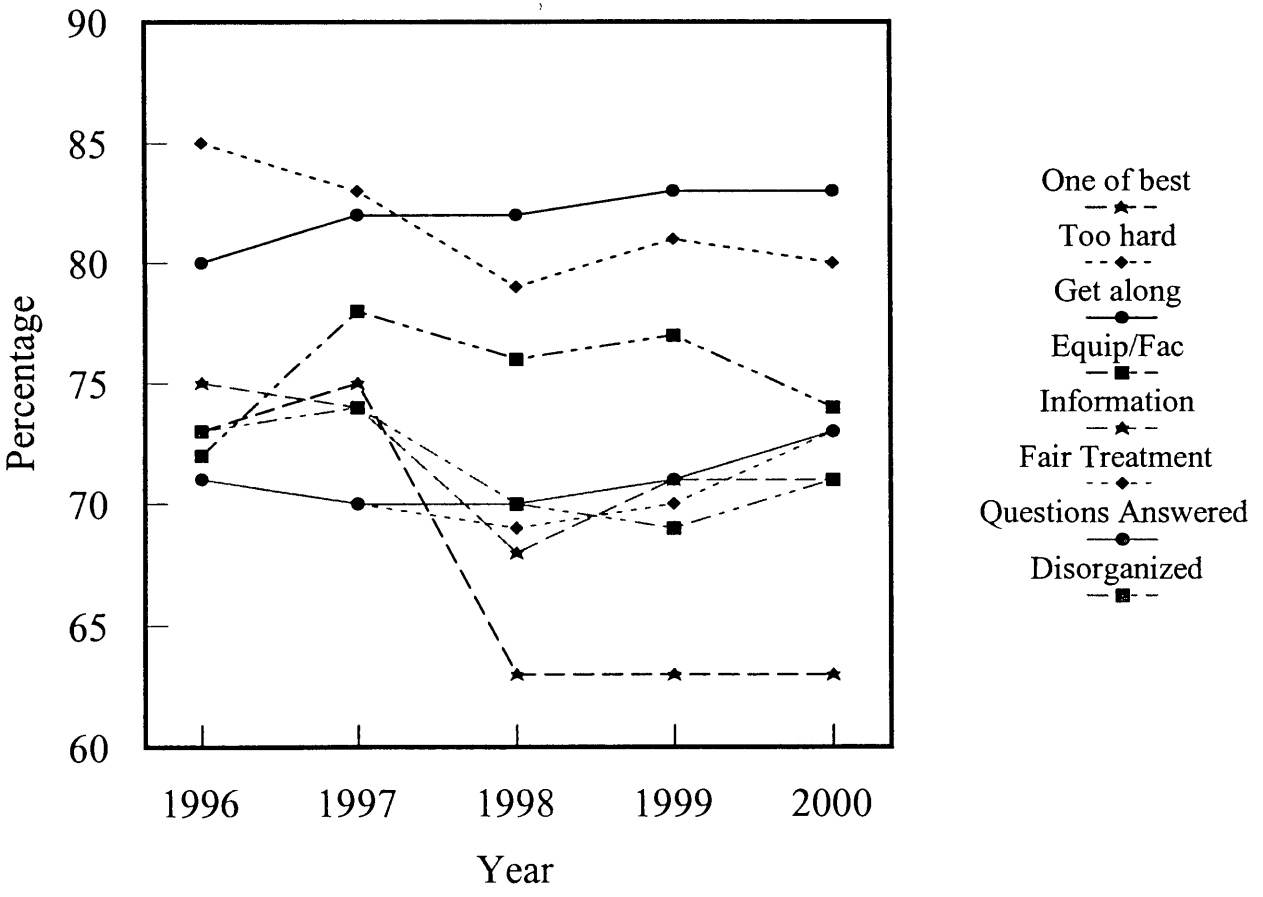


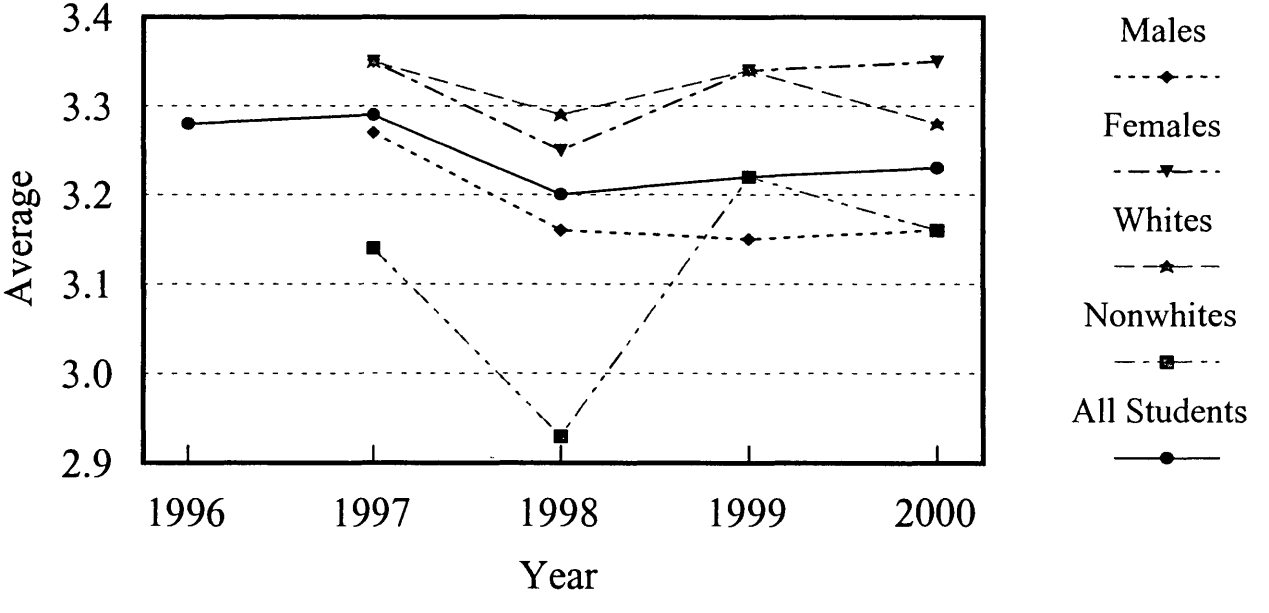
**Figure 3.A.7**

**Indicators of Satisfaction with Aspects of EFE Classes: Percentage Agreement or Disagreement with Descriptive Items**



## Figure 3.A.8

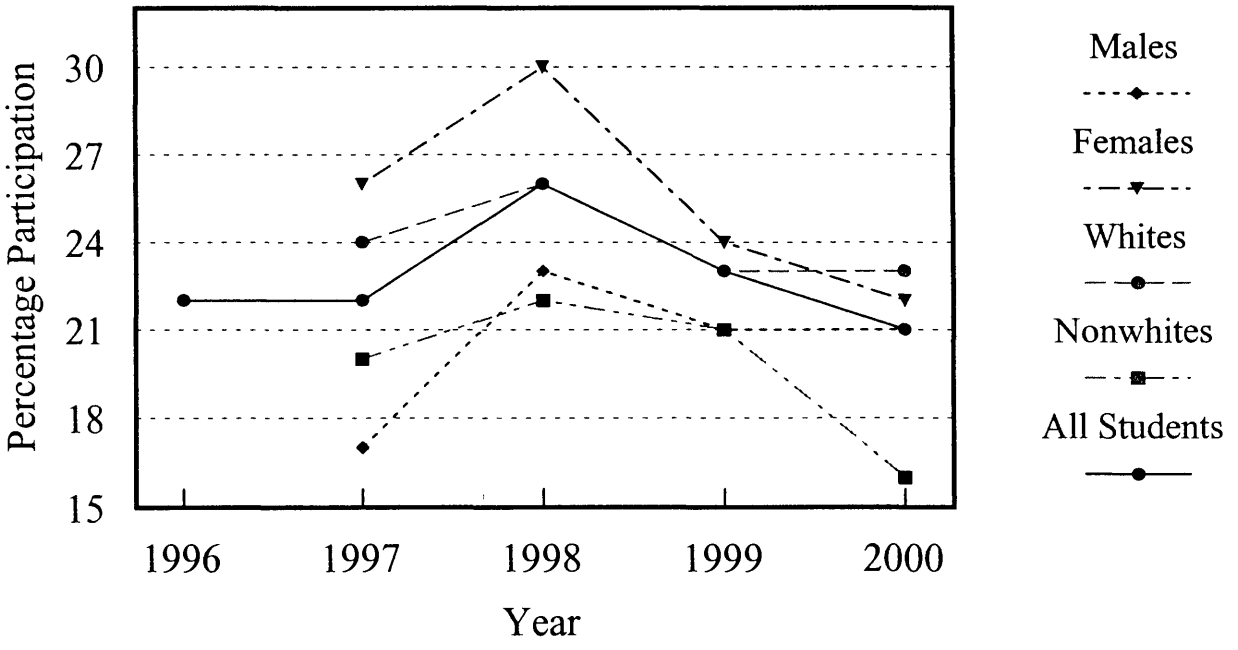
### Student "Grades" for Course Quality, By Race and Sex




Note: Data by race & sex not available for 1996

## Figure 3.A.9

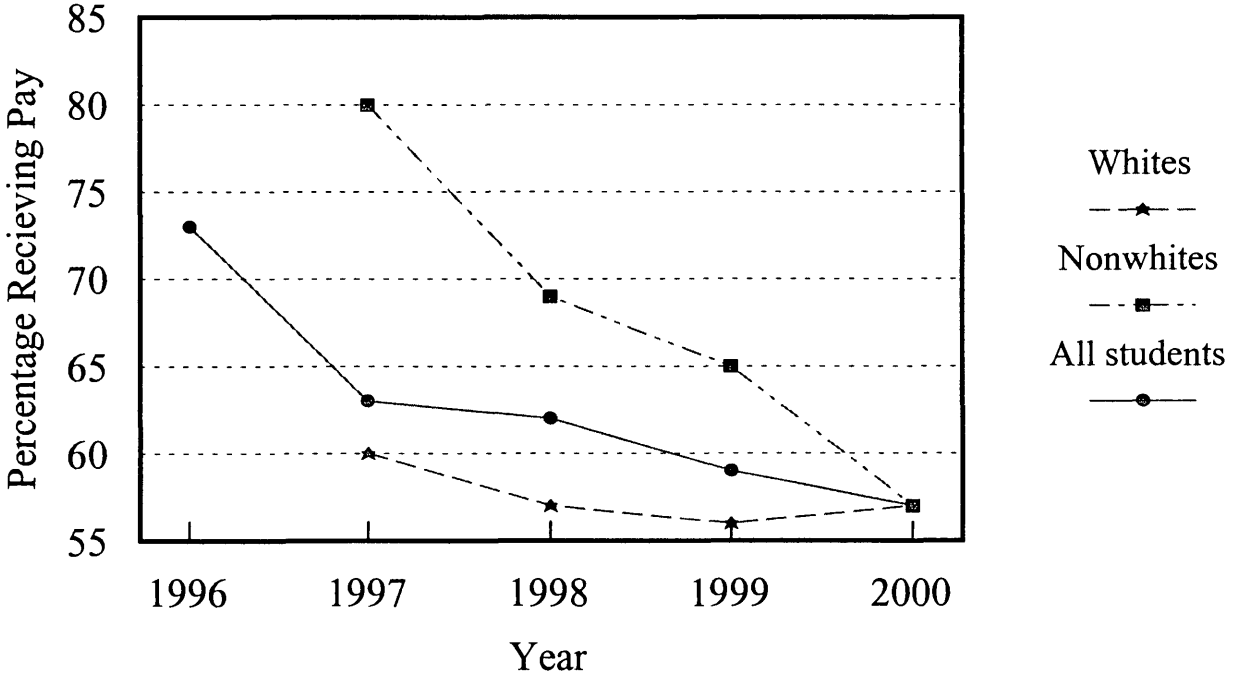
## Participation in Work-Based Program Experiences, By Race and Sex




Note: Data by race and sex not available for 1996

**Figure 3.A.10**

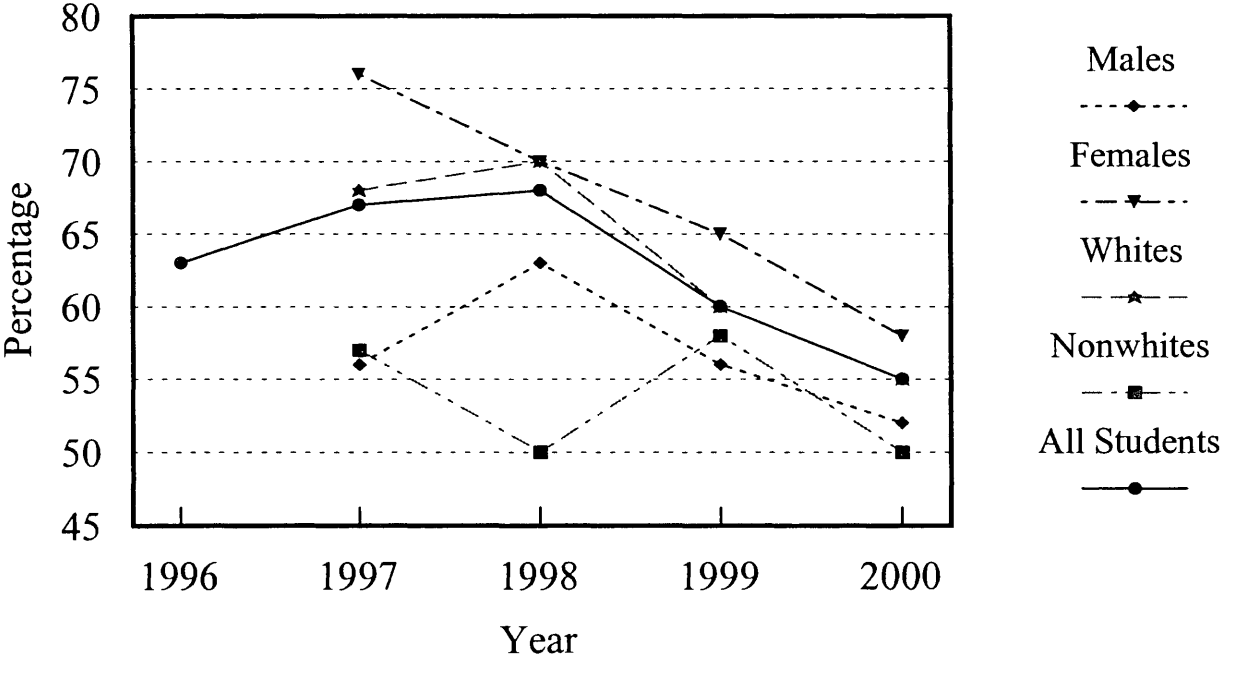
**Percentage of Students in Work-Based Programs Receiving Pay, By Race**




Note: Data by race not available for 1996

## Figure 3.A.11

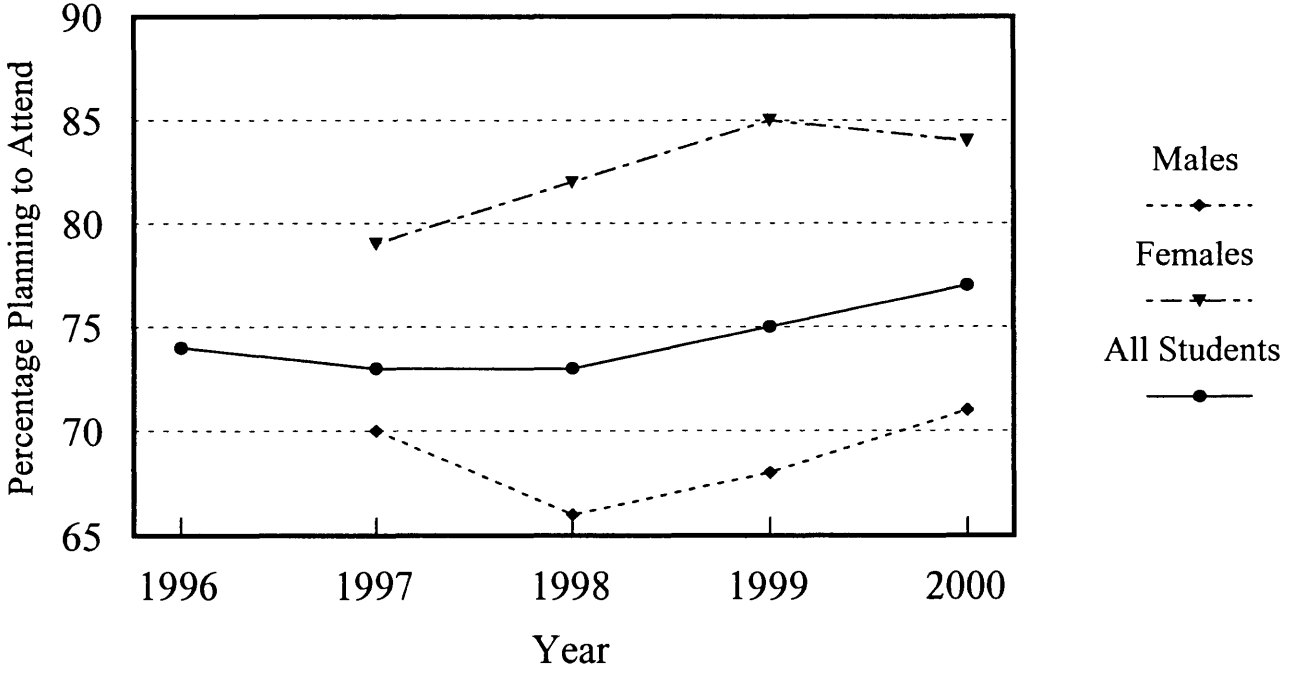
**Percentage of Participation in Work-Based Programs who Report Experience Related to EFE, By Race and Sex**




Note: Data by race and sex not available for 1996

**Figure 3.A.12**

## Planned Postsecondary Attendance Rate, By Sex




Note: Data by sex not available for 1996

**Figure 3.A.13**

## Occupational Aspirations, By Race & Sex

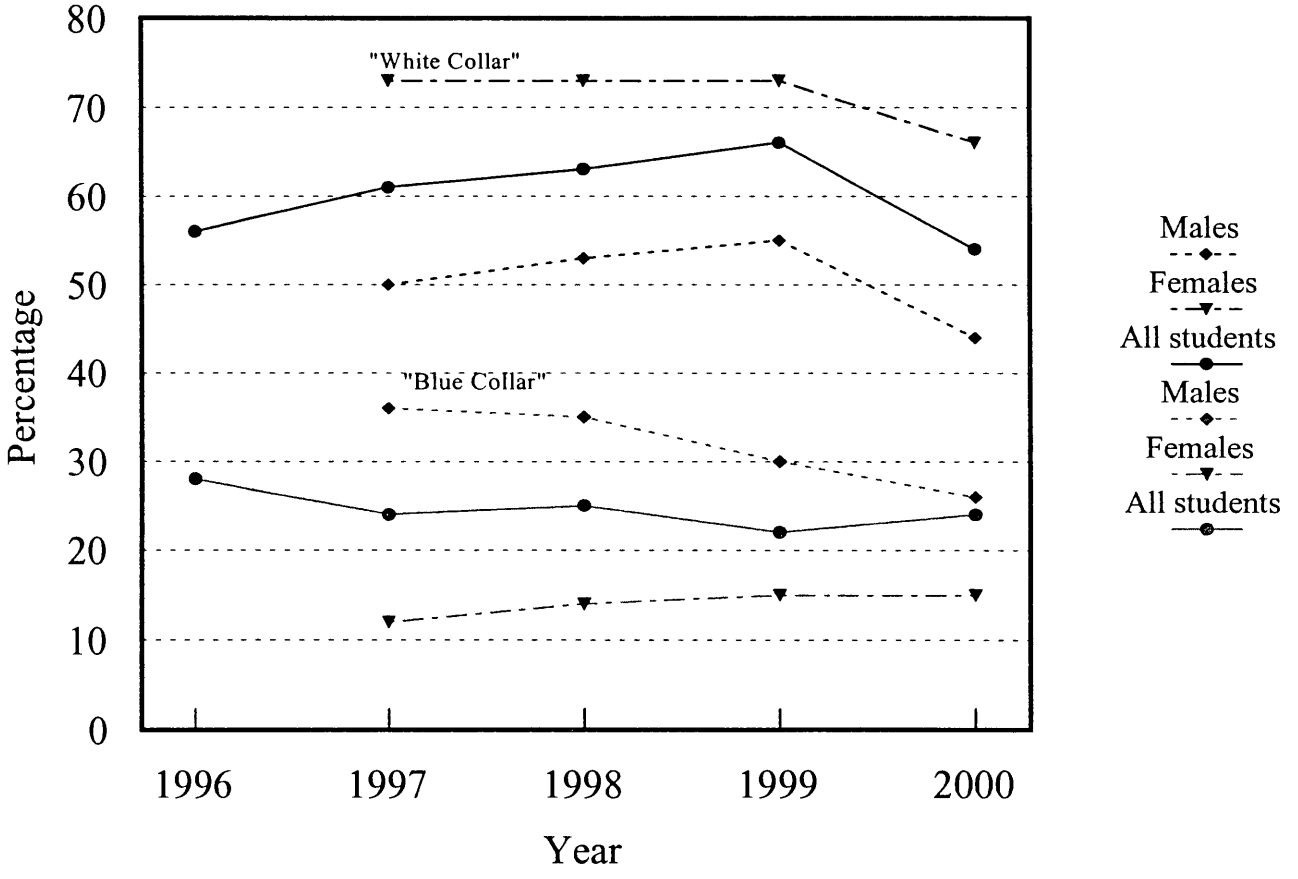
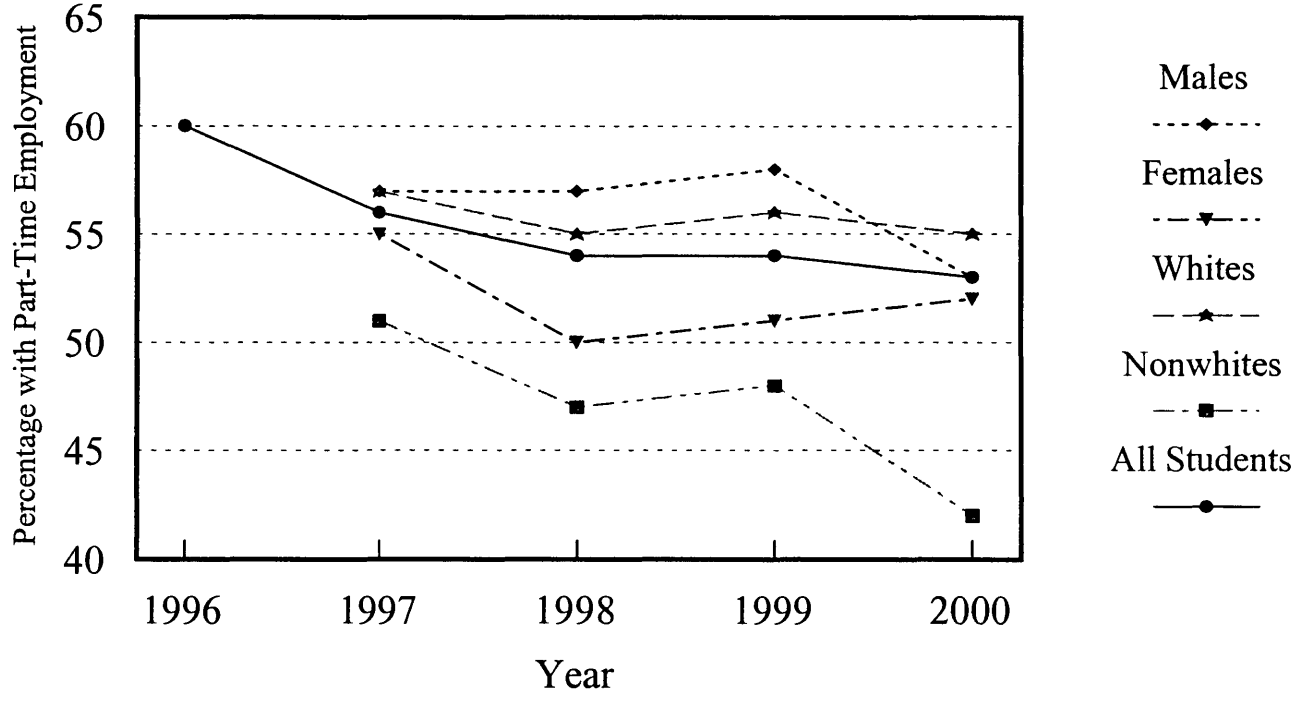


**Figure 3.A.14**

## Part-Time Employment Rates, By Race & Sex




Note: Data by race and sex not available for 1996

## 4. Parents/Guardians

Parents/guardians are an important stakeholder group in EFE programs and services. To gauge their level of satisfaction with their children's EFE classes, we conducted a mail survey of a random sample of parents. Note that the student and follow-up surveys were administered to the entire universe of current and graduated students. The parent survey was sent to a random sample of 500 parents/guardians of current students. We received about 150 completed surveys, so the overall completion rate was about 30 percent, which is quite good for a mail survey.

Topics measured in the survey included 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. Respondents could select one of four responses: a great deal, some, little, and none. Parents/guardians who responded that they had at least a little involvement were asked what sources of information were used, how adequate was the information, and what additional information would have been helpful. Table 4.1 provides the frequency distributions for these questions.

Almost 70 percent of the respondents indicated that they had at least "a little" involvement in their student's decision to enroll. However, most of the respondents indicated that their involvement could be characterized as "little" or "some." Under 20 percent of the respondents who indicated that they had some involvement reported that they had "a great deal" of involvement (this

is 13 percent of all parents). The reported level of parent/guardian involvement in the enrollment decision has stayed approximately the same in the last three years. In 1997, these percentages were 68 and 12, in 1998, they were 73 and 13. In 1999, they were 75 and 15. This year they are 68 and 13.

**Table 4.1**
**Parent Involvement in and Information about Enrollment Decision**

| Involvement/Information | Percentage |
|---|---|
| How much involvement did you have?[b] (n = 148) | |
| A great deal | 13 |
| Some | 33 |
| Little | 22 |
| None | 32 |
| Sources of information used[a] (n = 96) | |
| Student's knowledge/opinion of class/teacher | 60 |
| Own knowledge of class/teacher | 26 |
| High school handbook | 31 |
| Written information (brochure) | 21 |
| Guidance counselor | 26 |
| Adequacy of information[b] (n = 98) | |
| Very adequate | 30 |
| Adequate | 61 |
| Inadequate | 9 |
| What additional information would have been helpful?[a] (n = 140) | |
| Percentage of students who took this class and went on to college | 29 |
| Career ladders | 54 |
| Starting salaries in occupation | 39 |
| Description of course content | 63 |

[a] Respondents could have selected multiple responses, so percentages sum to greater than 100.
[b] Percentages may not add to 100 due to rounding.

The source of information that parents used most was what their child told them about the class or teacher (60 percent of parents). All of the other sources of information that respondents could select in answering this question were each used by approximately 20-30 percent of parents who got involved. These included the parents' own knowledge of the class or teacher, high school handbooks, written information such as a brochure, and information from guidance counselors. These numbers closely follow last year's data.

Over 90 percent of the parents who responded to the survey felt that the information that they had consulted was adequate or very adequate. Sixty-one percent of the parents felt it was adequate, 30 percent felt it was very adequate, and only 9 percent felt it was inadequate. Having 91 percent of parents reporting that the information is adequate or very adequate is quite positive. When asked what additional information would have been helpful to them in the enrollment decision, the parents' most frequent responses were "description of course content" and "career ladders in the occupation."

Around 60 percent of parents/guardians who were involved in their student's enrollment decision would have liked additional information about these matters. About 40 percent wanted more information about "starting salaries in the occupation" and about 30 percent 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 EFE class. About two-thirds of the parents/guardians reported that they had met the EFE teacher. This percentage dropped from 78 percent in 1999 to 66 percent in 2000. Just 10 percent had actually observed a class period, though. Most parents (about 75 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. About 15 percent of the individuals who said that they knew something about the

**Table 4.2**
**Parent Knowledge of/Opinions about Instruction in Class**

| Characteristic/Opinion | Percentage | |
|---|---|---|
| Met teacher (n = 150) | 66 | |
| Observed class period (n = 148) | 10 | |
| Amount of information about instructional content (n = 150) | | |
| A great deal | 10 | |
| Some | 42 | |
| Only a little | 21 | |
| None | 27 | |
| Opinion about amount of information given about student expectations (n = 145) | | |
| Too much | 1 | |
| Just right | 52 | |
| Not enough | 27 | |
| No information given | 20 | |
| Approve/greatly approve of: (n = 102) | | Don't know |
| Pace of instruction | 53 | 6 |
| Equipment/materials | 69 | 9 |
| Textbook | 57 | 12 |
| Class size | 65 | 7 |
| Subject matter | 83 | 2 |
| Amount of time on projects | 71 | 2 |
| Chance to learn employability skills | 68 | 6 |
| Student expectations | 63 | 2 |

*Note*: Percentages may not add to 100 due to rounding.

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

Parents/guardians were asked for their opinions about the amount of information they had been given about expectations of students in the EFE class. Slightly less than half of the parents indicated that they had no information or not enough information about what was expected of their students. Almost all of the other parents/guardians reported that the amount of information they had been given about expectations was "just right." (One percent felt they had "too much" information.) These data closely parallel the data from last year's survey of parents/guardians.

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 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 showed that the parents were generally pleased. Seventy percent or more of the parents approved or greatly approved of the subject matter, and the amount of time spent on projects. Just under 70 percent approved or greatly approved of the equipment and materials used in classes, and the chance to learn employability skills.. The approval ratings for the textbook and pace of instruction are the lowest ratings; both with just over 50 percent of the parents/guardians approving or greatly approving. However, a significant share of parents indicated that they did not know about these two characteristics (12 percent and 6 percent for textbook and pace, respectively.) If the data were adjusted to account for the "don't know's," then the approval ratings would be higher and more consistent with the other class characteristics.

This section of the questionnaire also asked parents open-ended questions in which they were to list 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; and affective gains (self-esteem). Apart from these two, a sizable number of positive comments were received about exposure to supplemental opportunities, specific teacher, and helpful for current job. Note that among the recommendations for improvement, the comment "None (everything was positive)," was received often.

On the complaints or recommendations for improvement side of the ledger, 14 mentioned "not enough communication with parents." Approximately a dozen respondents mentioned a logistical problem or problem with facilities. Only 2 parents/guardians mentioned that there were not enough work-based learning opportunities as opposed to 27 parents having that complaint last year. These comments were somewhat different from last year's and actually more consistent with previous year's data. This is especially true of the increased concern for logistical matters and lower concern for work-based learning opportunities. Among the positive

**Table 4.3**
**Positive Aspects and Recommendations for Improvement from Parents**

| Aspect | Number of times mentioned |
|---|---|
| Positive aspects | |
| Career exploration and information | 11 |
| Helpful for postsecondary plans | 9 |
| Hands-on instruction | 8 |
| Specific projects, activities, or skills | 42 |
| Supplemental opportunities | 15 |
| Specific teacher/staff person | 20 |
| Enjoyed class/learned a lot | 9 |
| Individual attention | 1 |
| Equipment/environment | 12 |
| Affective gains | 41 |
| Workplace know-how skills | 9 |
| Helpful for getting current job | 14 |
| Introduction to "real world" | 7 |
| Other | 40 |
| Recommendations for improvement | |
| None (everything was positive) | 33 |
| Pace or relevance | 3 |
| Specific teacher/staff person | 8 |
| Logistics/organization (e.g. communication w/parents, transportation) | 12 |
| Not enough individual attention | 3 |
| Facilities | 12 |
| Classroom management | 4 |
| Not enough WBL opportunities | 2 |
| Not enough communication w/parents | 14 |
| Other | 40 |

comments, similar to last year, there were relatively more comments about the affective gains of students and fewer comments about workplace know-how skills.

## Opinions about EFE

The last two questions in the parent survey asked for opinions about the Education for Employment consortium. Data from these questions are displayed in table 4.4. First, parents were asked about how well EFE prepares students for employment, college, learning technical skills, learning academic skills, work environments, and productive careers. For each of these items, respondents were asked to rate their level of approval for the preparation that EFE gives students. For all of the items, around 5-10 percent of the respondents indicated that they didn't know. However, for the remainder of the respondents, EFE was viewed very favorably. Around 75 to 80 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 technical skills

**Table 4.4**
**Parent Opinions About EFE**

| Opinion | Percentage/Number | |
|---|---|---|
| Approve/greatly approve of way EFE prepares students for: | | Don't know |
| Employment (n = 141) | 79 | 7 |
| College (n = 139) | 74 | 7 |
| Learning technical skills (n =141) | 81 | 8 |
| Learning academic skills (n = 141) | 68 | 8 |
| Work environments (n = 139) | 75 | 7 |
| Productive careers (n = 140) | 81 | 6 |
| Comments about EFE | Number of times mentioned | |
| Very positive | 27 | |
| More information needed for parents | 2 | |
| Counselors were a problem | 2 | |
| More programs suggested/needed | 2 | |
| Negative comment about specific individual | 1 | |
| Positive comment about specific individual | 5 | |
| Transportation problems | 1 | |
| Career awareness | 1 | |
| Reach more students | 1 | |
| Other | 13 | |

and productive careers. These positive comments about EFE agree quite closely to the responses received in the 1996, 1997, 1998, and 1999 surveys with only small shifts in emphasis from one characteristic to another.

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 about programs and teachers. 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 class pace, however.
- Parents/guardians particularly like the EFE classes for the technical skills that are being learned and for the affective (self-esteem) gains. Also important were 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. Advanced Data Services, Inc., of Kalamazoo, conducted the survey under subcontract to the Upjohn Institute. The population for this survey was students who were classified as seniors in 1998/99 and who were enrolled in an EFE class at the end of that school year. These students were surveyed by telephone in May/June 2000, which was approximately a year after they graduated from high school. As noted in a table below, about two percent of the students reported that they did not graduate in 1999, and that they had just completed high school in 2000.

The response rate for the survey was quite satisfactory. The number of respondents exceeded the samples that resulted from the previous follow-up surveys. The universe for the sample was 1,176 (this is the number of unique student names that was supplied to EFE by the state data information system VEDS[4]). However, 368 of the students could not be reached because of incorrect telephone numbers, disconnected telephone numbers, or missing telephone numbers in VEDS. Furthermore, there was not enough identifying information to find current telephone numbers for the students. Of the remaining 808 students, interviews were completed with 532 students. This represents a response rate of approximately 66 percent. There were 129 refusals or terminations (about 16 percent), and the remaining 147 nonrespondents were simply not reached within ten calls.

Note that the population of 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

[4]There were seven duplicate names.

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 survey include the postsecondary experiences of the students, the use of transferable 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 whether or not the students participated in a work-based program while in EFE. The appendix to this chapter displays graphically trends in a number of the statistics discussed in the chapter.

## Postsecondary Experiences

Table 5.1 summarizes the postsecondary experience data for the EFE completers. The respondents were divided among three groups: attending a four-year institution, attending a two-year institution, or not attending school (including just graduated from high school) as follows: 34 percent of the students were attending a four-year institution, whereas about 27 percent were attending a two-year institution, and 37 percent were not attending school. The percentage not attending school has increased from 30 percent last year to 37 percent this year. The difference in the postsecondary attendance rates between whites and minorities is statistically significant. Almost 47 percent of minority EFE completers were not attending school, whereas only 35 percent of whites were not attending. Whites were more likely to attend 4 year institutions than their counterparts.

**Table 5.1**
**Postsecondary Experiences of EFE Completers**

| Characteristic | Sex | | Race | | Work-based program | | Total |
|---|---|---|---|---|---|---|---|
| | M | F | W | NW | Yes | No | |
| Postsecondary Status | | | | | | | |
| Not attending school | 40 | 34 | 35* | 47* | 33 | 39 | 37 |
| Full time active duty military | 3 | 9 | 0 | 1 | 2 | 0 | 2 |
| Just completed high school | 2 | 1 | 2 | 1 | 4* | 1* | 2 |
| 2 year institution | 26 | 28 | 27 | 28 | 33* | 24* | 27 |
| 4 year institution | 32 | 37 | 36* | 23* | 30 | 36 | 34 |
| For those in 2- or 4-year postsecondary | | | | | | | |
| Accounting/Finance | 0 | 6 | 1 | 0 | 4 | 5 | 5 |
| Business related | 20 | 13 | 17 | 14 | 22 | 14 | 17 |
| Communications | 1 | 3 | 2 | 0 | 2 | 2 | 2 |
| Computers | 8 | 3 | 5 | 10 | 6 | 5 | 5 |
| Cosmetology | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| Criminal justice | 0 | 3 | 2 | 10 | 7* | 1* | 3 |
| Education | 5* | 13* | 9 | 6 | 8 | 10 | 9 |
| Engineering | 1* | 0* | 5 | 2 | 2 | 7 | 5 |
| Graphic/Fine Arts | 5 | 7 | 6 | 6 | 4 | 8 | 6 |
| Marketing | 5 | 0 | 5 | 2 | 3 | 6 | 5 |
| Medical | 6* | 18* | 11 | 18 | 17 | 9 | 12 |
| Agriculture | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| Liberal Arts | 0 | 12 | 8 | 12 | 6 | 10 | 9 |
| Trade & Industrial | 13* | 1* | 8 | 8 | 10 | 7 | 8 |
| Travel & Tourism | 1 | 0 | 2 | 0 | 0 | 0 | 2 |
| Undecided | 14 | 11 | 13 | 10 | 9 | 15 | 13 |
| Sports/Leisure | 1 | 1 | 1 | 0 | 0 | 0 | 1 |
| Training related to named field | | | | | | | |
| A lot | 25 | 28 | 27 | 24 | 36* | 21* | 26 |
| Some | 38 | 43 | 41 | 39 | 35 | 43 | 40 |
| Hardly any | 19 | 17 | 19 | 16 | 18 | 19 | 18 |
| None | 18 | 11 | 14 | 20 | 11 | 18 | 15 |
| Degree working on | | | | | | | |
| Associate's | 22 | 25 | 22 | 34 | 23 | 24 | 24 |
| Bachelor's | 55 | 59 | 58 | 48 | 53 | 59 | 57 |
| Other/none/don't know | 22 | 16 | 20 | 18 | 25 | 17 | 20 |
| Sample Size | 307 | 225 | 435 | 97 | 186 | 342 | 532 |

*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.

Among the students who were attending a postsecondary institution, males were less likely to be enrolled in a two-year institution or in a four-year institution than females, but these differences were not statistically significant.

The postsecondary attendance rate among the follow-up sample –61 percent–is substantially lower than last year (70 percent) and the two years before (67 percent). A lower share of the sample reported being in four-year institutions and two-year institutions. This year, the percentage of students who were pursuing postsecondary education at a four-year institution was 34 percent and the percentage at a two-year institution was 27 percent. The percentage of minority students who reported not pursuing postsecondary education–47 percent–represents a substantial increase from last year. Figures 5.A.1 through 5.A.3 show the four-year trends in postsecondary attendance of EFE completers. The first figure shows the trends in attendance of 4-year institutions, 2-year institutions, and not attending. The second figure disaggregates the latter trend (not attending) by race, and the third figure disaggregates the trends in attendance of 4-year and 2-year institutions by sex.

If we compare the postsecondary attendance plans of current EFE students as reported in Chapter 3 with the actual postsecondary attendance rates of EFE completers, we find that the latter are lower than the former. In Table 3.6, we reported that roughly 77 percent of current students planned to attend a postsecondary institution right after high school. Table 5.1 shows that about 61 percent were attending. The actual rates are lower for all population groups, but the greatest discrepancy is for females. Among the current students, 84 percent of females plan to go on to postsecondary schooling right after graduation, but only about 65 percent of female students in the follow-up survey were in school.

The bottom three items in the table concern the postsecondary experiences of the EFE completers who reported that they were attending a two- or four-year institution. The first item is the student's program or major field. Thirteen percent reported that they were undecided about a major or program. A business-related major or program was given by the highest percentage of students–17 percent. The only other field with more than 10 percent of the students was medical

which was listed by 12 percent of the students in postsecondary schooling. Relative to last year, there were substantial increases in enrollment percentages in education, medical, and accounting. There were substantial declines in liberal arts, computers, and communications. Males were more likely to be in computer-related, business-related, and trade and industrial programs/majors than were females. Conversely, females were more likely to be in education, health-related, and communications. Minority students were more likely to be in computers, liberal arts, and criminal justice than whites, but less likely to be in education and engineering fields, although these differences were not statistically significant. Students with work-based program experience were more likely to be in criminal justice and medical services fields.

An important outcome for career and technical education students is whether they 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 between males and females, and between whites and minorities. However, students who had a work-based program in high school were much more likely to report that their EFE training was related to their field than the students who did not have a work-based program.

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 four years. However, there has been a 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, 34 percent in 1998, 33 percent in 1999 and 26 percent in 2000. (See figure 5.A.4.)

About a quarter of the students in a postsecondary institution reported that they were pursuing an associate's degree. About three-fifths, with almost no variation across the groups, were pursuing a bachelor's degree. Twenty percent were pursuing other degrees or were apparently undecided about what degree they were pursuing.

Table 5.2 presents a summary of data about usage of college credits earned while in EFE courses in high school. Overall, 43 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. Thirty-six percent indicated that they believed that they would not be able to receive college credit. The other 21 percent indicated that they did not know. These percentages are slightly different from the 1998 data, when 37 percent of the students indicated that they could have received credit and 46 percent indicated that they could not have received credit. There has been an increase in the

**Table 5.2**
**Importance and Use of College Credits Earned in High School**

| | Sex | | Race | | Work-based program | | |
|---|---|---|---|---|---|---|---|
| Characteristic | M | F | W | NW | Yes | No | Total |
| Could student have received credit? (n = 335) | | | | | | | |
| Yes | 37 | 50 | 45 | 29 | 52 | 38 | 43 |
| No | 42 | 28 | 34 | 47 | 33 | 38 | 36 |
| Don't know | 20 | 22 | 21 | 24 | 15 | 24 | 21 |
| **If yes:** | | | | | | | |
| Have you arranged to receive credit? (n = 139) | | | | | | | |
| Yes | 63 | 66 | 63 | 73 | 74* | 58* | 65 |
| No | 37 | 34 | 36 | 27 | 26* | 42* | 35 |
| Average credits (n = 71) | 8.0 | 5.1 | 6.4 | 6.9 | 7.6 | 5.2 | 6.5 |
| Important in program enrollment? (n = 144) | | | | | | | |
| Yes | 51* | 31* | 38 | 60 | 45 | 35 | 40 |
| No | 49* | 69* | 62 | 40 | 55 | 65 | 60 |
| Important in postsecondary enrollment? (n = 142) | | | | | | | |
| Yes | 30 | 22 | 26 | 29 | 38 | 15 | 26 |
| No | 70 | 78 | 74 | 71 | 62* | 85* | 74 |

*Note*: Except for average credits, table entries are sample percentages.
* Differences between population groups is statistically significant at the .05 level.

percentage of completers in postsecondary institutions who thought they could have earned college credits. 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, though the difference is not statistically significant.

We asked those students who believed that they could have received college whether they had actually arranged to do so. Sixty-five percent of the respondents this year reported that they had in contrast to 47 percent last year. On average, these students had earned 6.5 college credits. Students who had been in work-based program experiences and were aware of the possibility of receiving college credits were statistically more likely to have arranged for those credits; they received 7.6 credits, on average, compared to 5.2 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 share varied substantially across student characteristics, however. For males, the ability to receive college credits was far more important than for females. A smaller percentage–around 26 percent–indicated that potential college credits influenced their postsecondary institution choice. Again, students who had participated in work-based experience programs were more likely to have said yes.

## Employment Status

A major emphasis of the survey was on the current employment status of the EFE completers. 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 83 percent of the survey respondents indicated that they were currently working for pay. This rate was lower than most of the previous years, which were 82, 85, 87, 88 percent for 1996, 1997, 1998 and 1999 respectively. Those attending 2-year colleges or no college had a much higher employment rate than those attending 4-year colleges.

The average work week for employed individuals was about 34 hours. It was over 36 hours per week for respondents who did not go on to college, 3 to 4 hours more per week on average, than for individuals who did go on to postsecondary education. Males also averaged more hours per week than females. A downward trend in average weekly hours during the years 1996-98 was reversed

**Table 5.3**
**Employment and Unemployment Status of EFE Completers**

| | Sex | | Race | | Work-based program | | Postsecondary | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Characteristic | M | F | W | NW | Yes | No | 2-yr | 4-yr | No | Total |
| Employment rate (n = 532) | 83 | 83 | 83 | 84 | 83 | 83 | 91* | 73* | 86 | 83 |
| If employed: | | | | | | | | | | |
| Usual hours/week (n = 431) | 36.2* | 31.5* | 34.5 | 33.1 | 35.7 | 33.4 | 33.4 | 31.8* | 36.4 | 34.2 |
| Hourly wage (n = 441) | $8.18 | $7.67 | $7.92 | $8.19 | $7.92 | $7.92 | $7.83 | $8.15 | $7.89 | $8.00 |
| EFE training - relatedness (n = 431) | | | | | | | | | | |
| A lot | 19 | 26 | 23 | 19 | 34 | 16 | 22 | 17 | 26 | 22 |
| Some | 31 | 32 | 30 | 36 | 28 | 33 | 29 | 33 | 32 | 31 |
| Hardly any | 19 | 18 | 19 | 18 | 20 | 18 | 21 | 15 | 19 | 19 |
| None | 31 | 25 | 28 | 28 | 19 | 33 | 28 | 36* | 23 | 28 |
| Unemployment rate (n = 532) | 10.0 | 9.2 | 9.3 | 11.0 | 10.9 | 9.0 | 5.7 | 14.5 | 8.7 | 9.6 |

*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.

last year. It had decreased by about two hours per week (6-7 percent) between 1996 and 1998, but the average in 2000 of 34.2 hours is almost identical to the 1999 figure. The average hourly wage this year was $8.00, which is one percent higher than in 1999. The average for males was higher than females–$8.18 to $7.67, but the difference was not statistically significant. In this year's data and in the previous two year's data, the average wage for individuals not pursuing postsecondary education was just equal to or less than the average wage for college attendees. In 1996 and 1997, individuals who were not attending college were receiving wages that were much higher than those who were attending. This coincides with a broad trend in 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. Just under half of the respondents indicated that it was relevant ("a lot" or "some"); conversely over half indicated that their EFE training had "hardly any" or "no" relatedness to their current job. The "relatedness" items have increased relative to last year. The percentage of respondents who indicated that their EFE training was related "a lot" to their current employment increased from 20 percent to 22 percent. Conversely, the percentage who indicated that their EFE training was not at all related decreased from 34 percent to 28 percent. Among the population groups, the only significant differences were between students who had work-based program experiences and those who did not. The latter had much lower rates of training-relatedness. Figure 5.A.5 displays the trends in the employment rate and the training-related employment rate.

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 was 9.6 percent. Note that it was higher for minorities, students who had participated in work-based program experiences, and students who went on to 4-year college. These groups all have an unemployment

rate of at least 11 percent (students at 4-year colleges had an unemployment rate of 14.5 percent!). Figure 5.A.6 displays the trends in the unemployment rates of EFE completers, by race.

## 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 recalled fewer incidents of tardiness or absences in their senior year of high school than the current students reported. These data, of course, are subject to recall error since they pertain to a time period of over a year prior to the survey date. There is an upward trend in self-reported tardiness and in absences. This year's average is about 7.1 tardies per year. The three previous years were 5.6, 6.1, and 6.3. For unexcused absences, this year's average of 6.3 which is close to last year but still higher than 6.2 in 1998, 5.2 in 1997, and 4.3 in 1996.

The overall mean high school GPA reported by respondents to the follow-up survey, 3.04, is close to the average GPA for current students, which suggests some validity in reporting. 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 5.4**
**High School Experiences as Recalled by EFE Completers**

| | Sex | | Race | | Work-based program | | Postsecondary | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Characteristic | M | F | W | NW | Yes | No | 2-yr | 4-yr | No | Total |
| Average number of tardies (n = 475) | 7.3 | 6.7 | 6.3* | 10.5* | 6.5 | 7.3 | 6.8 | 6.3 | 8.0 | 7.07 |
| Average number of absences (n = 484) | 6.4 | 6.1 | 5.9* | 8.0* | 5.8 | 6.5 | 5.7 | 5.7 | 7.2* | 6.29 |
| Average GPA (n = 525) | 2.91* | 3.22* | 3.11* | 2.73* | 3.03 | 3.04 | 2.99 | 3.39 | 2.80* | 3.04 |

*Significantly different from other population at the .10 level.

Table 5.5 provides data on the same set of EFE class satisfaction indicators for the completers as Table 3.3 does for current students. Of course, the follow-up survey asked respondents to recall their EFE classes, in which they were enrolled 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 of the survey. The completers reported much higher levels of satisfaction than current students.

**Table 5.5**
**EFE Program Satisfaction Indicators from Completers**

| | Sex | | Race | | Work-based program | | Postsecondary | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Indicator | M | F | W | NW | Yes | No | 2-yr | 4-yr | No | Total |
| Agree/strongly agree with "The classes are among the best..." | 67 | 64 | 65 | 69 | 71 | 63 | 67 | 62 | 68 | 66 |
| Disagree/strongly disagree with "These classes are too hard..." | 90 | 94 | 93 | 88 | 91 | 92 | 92 | 94 | 89 | 92 |
| Agree/strongly disagree with "I got along with other students and we worked together..." | 95 | 91 | 93 | 92 | 91 | 94 | 92 | 94 | 93 | 93 |
| Agree/strongly agree with "The equipment and facilities were excellent." | 73 | 79 | 75 | 78 | 75 | 75 | 72 | 76 | 77 | 75 |
| Disagree/strongly disagree with "not enough information..." | 81 | 78 | 80 | 78 | 76 | 82 | 76 | 84 | 79 | 80 |
| Agree/strongly agree with "The program treated everybody fairly." | 88 | 87 | 89 | 82 | 87 | 87 | 86 | 90 | 86 | 87 |
| Agree/strongly agree with "I could get questions answered..." | 88 | 85 | 88 | 82 | 82 | 89 | 82 | 88 | 89 | 87 |
| Disagree/strongly disagree with "the program seemed disorganized." | 81 | 78 | 80 | 79 | 78 | 80 | 77 | 80 | 81 | 79 |
| Letter grade for program quality | 3.25 | 3.29 | 3.31 | 3.07 | 3.37* | 3.20* | 3.21 | 3.28 | 3.29 | 3.26 |

*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 518. Approximately 30 cases are missing for each item.

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

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." Sixty-six percent of the respondents agreed with this statement. Ninety-two percent of the respondents disagreed with the statement that "these classes were too hard," and 93 percent of the sample agreed with the statement, "I got along well with other students and we worked together frequently."

Responses to the next item were less enthusiastic. About 75 percent of the sample agreed the "equipment and facilities were excellent." Almost 80-85 percent or more of the students had positive responses to the final four items, compared to 70-75 percent for current students. Eighty percent disagreed with the statement that "not enough information was provided to students or their parents." 87 percent of the respondents agreed that "the program treated everybody fairly," and that they "could get questions answered and problems easily resolved." Finally, about 79 percent of the respondents disagreed with the statement that "the program seemed disorganized."

These satisfaction indicators were less positive than in last year's data, although the relative satisfaction among the items was identical. (That is, higher 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.) Figure 5.A.7 displays the trend in each of these indicators for the graduates.

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 3.26, which would be a B+. Students who had not participated in a work-based program and students who had not gone on to postsecondary education assigned the lowest grades for quality.

Table 5.6 provides tallies of the responses to the questions of what were the best and worst aspects of the EFE classes as recalled by the completers. The aspects that were mentioned the most

often among the best aspects were technical or employability skills learned, the opportunity to participate in work-based learning opportunities and other students/teamwork. Far fewer negatives were mentioned. Among the complaints, the most often mentioned items were equipment, followed by logistical problem such as transportation or scheduling, and the class being disorganized.

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

| Aspect | Number of Times Mentioned |
|---|---|
| **Best** | |
| Equipment | 81 |
| Books, software | 3 |
| Pace | 26 |
| Hands-on instruction | 51 |
| Specific teacher | 1 |
| Small class size, individual attention | 23 |
| Technical or employability skills learned | 125 |
| Work-based experience/real world | 105 |
| College usefulness | 24 |
| Interesting/fun | 32 |
| Other students, team work | 115 |
| Everything about the class | 13 |
| Vocational clubs | 29 |
| Other | 203 |
| Total | 831 |
| **Worst** | |
| Equipment, classroom environment | 46 |
| Books, software | 7 |
| Pace: too easy | 37 |
| Pace: too fast | 16 |
| Pace: too much work | 25 |
| Specific teacher | 0 |
| Class size too large | 17 |
| Transportation/schedule | 36 |
| Classmates behavior | 28 |
| Disorganized | 10 |
| Work experience | 16 |
| Unfair treatment | 10 |
| Specific activity or project | 27 |
| Grading policy | 13 |
| Money issues, low pay | 1 |
| Absolutely nothing wrong | 1 |
| Other | 14 |
| Total (except for "Absolutely nothing...") | 382 |

The EFE completers were also asked to recall whether they had participated in work-based experiences. As shown in table 5.7, 35 percent indicated that they had participated in a work-based program. Females were more likely to have been participants than were males. (See figure 5.A.8.) The percentage is higher than the 21 percent of current students who reported that they were participating in work-based programs. However, it is still lower than the 49 percent of respondents in 1998 who had reported being in a work-based program. Of those who reported that they had participated in a work-based program, 61 percent indicated that it had been a paid experience.

Half of the respondents who had been in work-based programs disagreed with the opinion question that "the work was unrelated to the EFE class." Above 80 percent agreed that "workplace

**Table 5.7**
**EFE Work-Based Program Experiences as Recalled by Completers**

| Characteristic | Sex | | Race | | Postsecondary | | | Total |
|---|---|---|---|---|---|---|---|---|
| | M | F | W | NW | 2-yr | 4-yr | No | |
| Participation (n = 528) | 33 | 39 | 35 | 36 | 43 | 31 | 34 | 35 |
| If participated: (n = 183) | | | | | | | | |
| Paid? | 70* | 51* | 62 | 54 | 65 | 47* | 68 | 61 |
| Disagree/strongly disagree with "Work was unrelated..." | 57* | 77* | 65 | 71 | 61 | 80* | 61 | 66 |
| Agree/strongly agree with "Mentors were supportive and answered my questions." | 83 | 83 | 85 | 76 | 76 | 90 | 85 | 83 |

*Note*: Table entries are sample percentages.
* Differences between population groups is statistically significant at the .05 level.

mentors were supportive and answered my questions." There were no differences among population groups on these two opinion items.

## 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). Ninety-five percent of the sample met these criteria with no statistically significant differences across groups. (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 level of this indicator is slightly lower than its value in 1999 but continues to exceed the percentages in 1996,1997, and 1998 which were 89,92, and 95 respectively. One criticism of this standard is that it is not difficult to meet. A summer telephone interview of almost any population of 19-year-old's would likely yield a high percentage of respondents who were either attending college during the academic year or currently working.

**Table 5.8**
**EFE Performance Indicators**

| | Sex | | Race | | Work-based program | | Postsecondary | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Indicator | M | F | W | NW | Y | N | 2-yr | 4-yr | No | Total |
| Postsecondary attendance or employed (n = 532) | 94 | 95 | 95 | 94 | 96 | 94 | 100* | 100* | 86* | 95 |
| Training-related postsecondary attendance or employment (n = 515) | 60 | 71 | 66 | 60 | 73* | 60* | 74* | 76* | 49* | 65 |

*Note*: Table entries are sample percentages.
* Difference between population groups is statistically significant at the .05 level.

The second indicator is somewhat more rigorous. This standard measures the percentage of individuals who were 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 were employed in a job where their EFE course work is related. About two-thirds of the sample met these criteria. There is no statistical difference in this standard between males and females or whites and minorities. However students who were in work-based program experiences had a 10 percentage point higher level than nonparticipants, and postsecondary students have higher levels than individuals who did not go to college. Notice that fewer than half of the students who were not attending college were working in a job that was related to their EFE course work. The time trend in this outcome is 61 percent, 65 percent, 68 percent, 66 percent in 1996 through 1999, and a drop to 65 percent in 2000 respectively. Figure 5.A.9 displays the trends in the two performance indicators.

## Summary and Trends

The following points summarize the key findings from the survey of completers:

- Students who completed high school about a year ago and had taken an EFE class were classified into three groups: attending a four-year postsecondary institution, attending a two-year institution, and not attending a postsecondary school. Compared to last year's follow-

up survey, there was an increase in students not attending school; and a decrease in attendance at 2-year institutions and 4-year institutions.

Females were more likely than males to be attending a 2-year and 4-year institutions. As in previous years, a larger percentage of minorities were not attending a postsecondary institution compared to whites—in fact, the gap remains identical to last year..

- For students who were attending a postsecondary institution, there were substantial increases in students reporting the following major programs or fields: education, medical, and accounting. There were substantial decreases in liberal arts, computers, and communications.

  The percentage of students who reported that their EFE training was related "a lot" or "some" to their postsecondary field/program has been stable over four years. However, compared to last year there has been a substantial decline in those reporting "a lot" that has been offset by those reporting "some."

- 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, three-fifths 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 30 percent reported that transfer of college credits had been an important consideration in selecting a postsecondary institution.

- The employment rate of completers of 83 percent was lower than any of the previous three years, when it was 85, 87, and 88 percent, respectively. There were no significant differences in the employment rate between demographic groups. The average work week was about 34 hours. The average wage decreased by about 1 percent to $8.00 per hour.

  As with last year's data, there was no difference in the average wage received by individuals who were not attending college from those who were attending. This result is consistent with national data that suggest 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 current students. However, the levels of satisfaction decreased compared to last year's data. There were no differences between population groups in the data.

- The performance indicators for EFE were extremely high and were about the same level as they were last year. 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 and 1999 and to 95 percent in 2000.

The percentage of follow-up students who have training-related employment or who are in a training-related postsecondary program was about two-thirds; it has been 65, 61, 68, 66 percent in 1996 through 1999, and 65 percent in 2000 respectively.

# Appendix: Time Series Graphs of Characteristics and Outcomes of EFE Completers

**Figure 5.A.1**

**Postsecondary Attendance, By Type of Institution**

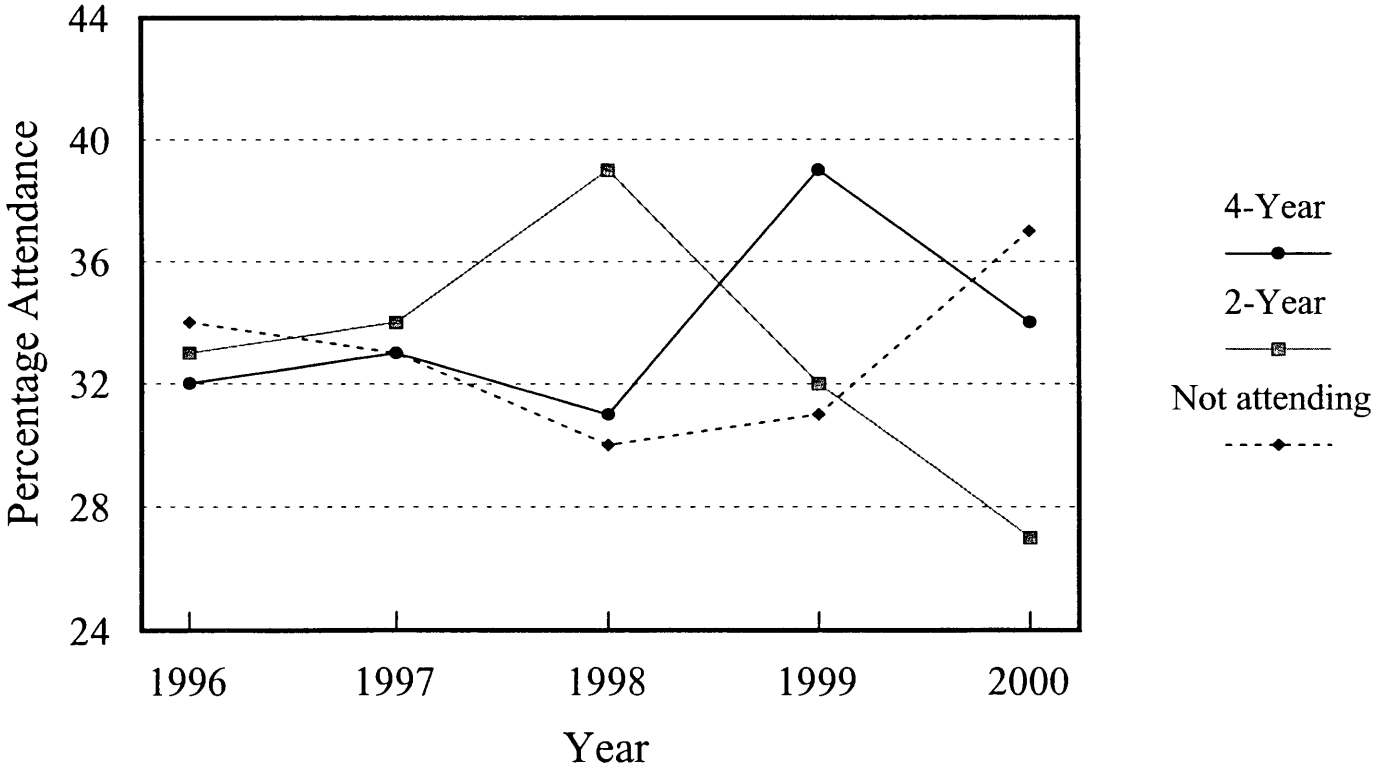


**Figure 5.A.2**

**Racial Composition of Students Not Attending Postsecondary Schooling**

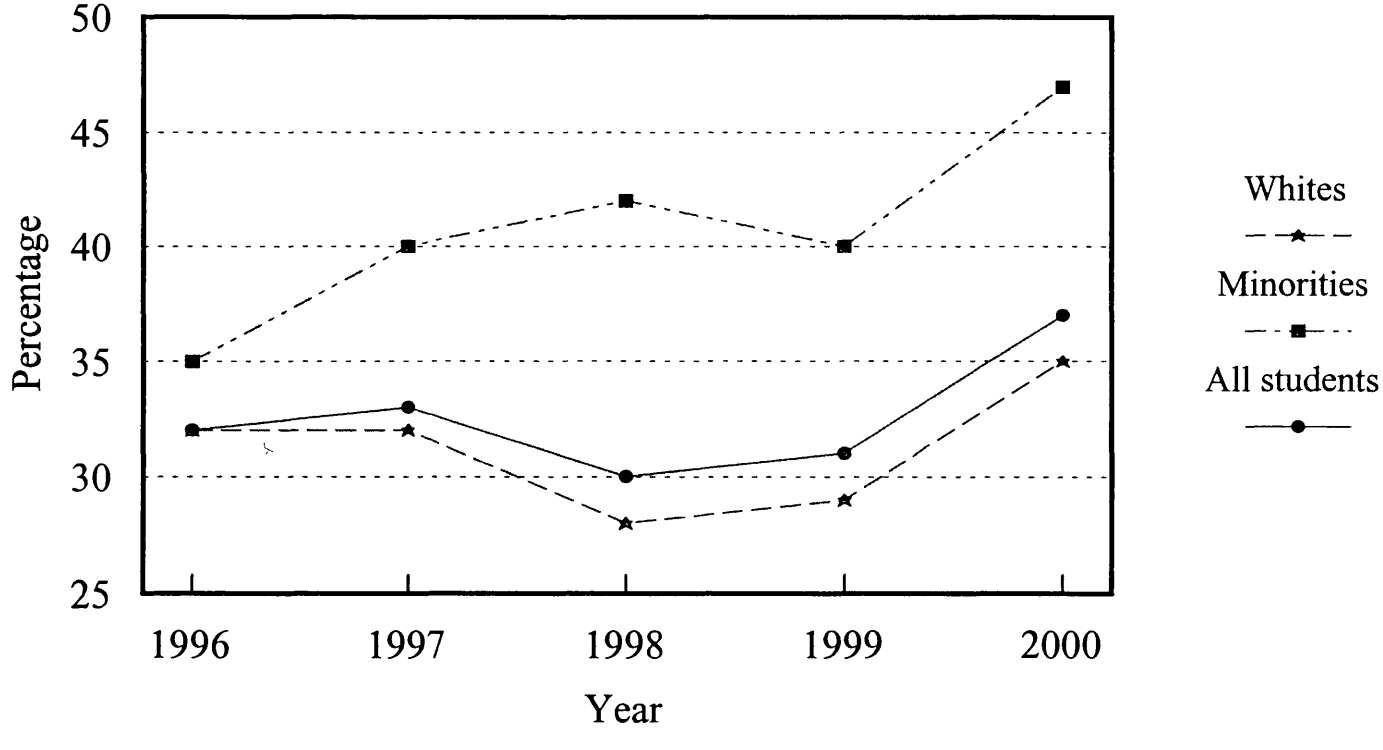


**Figure 5.A.3**

## Postsecondary Attendance, By Institution Type and Sex

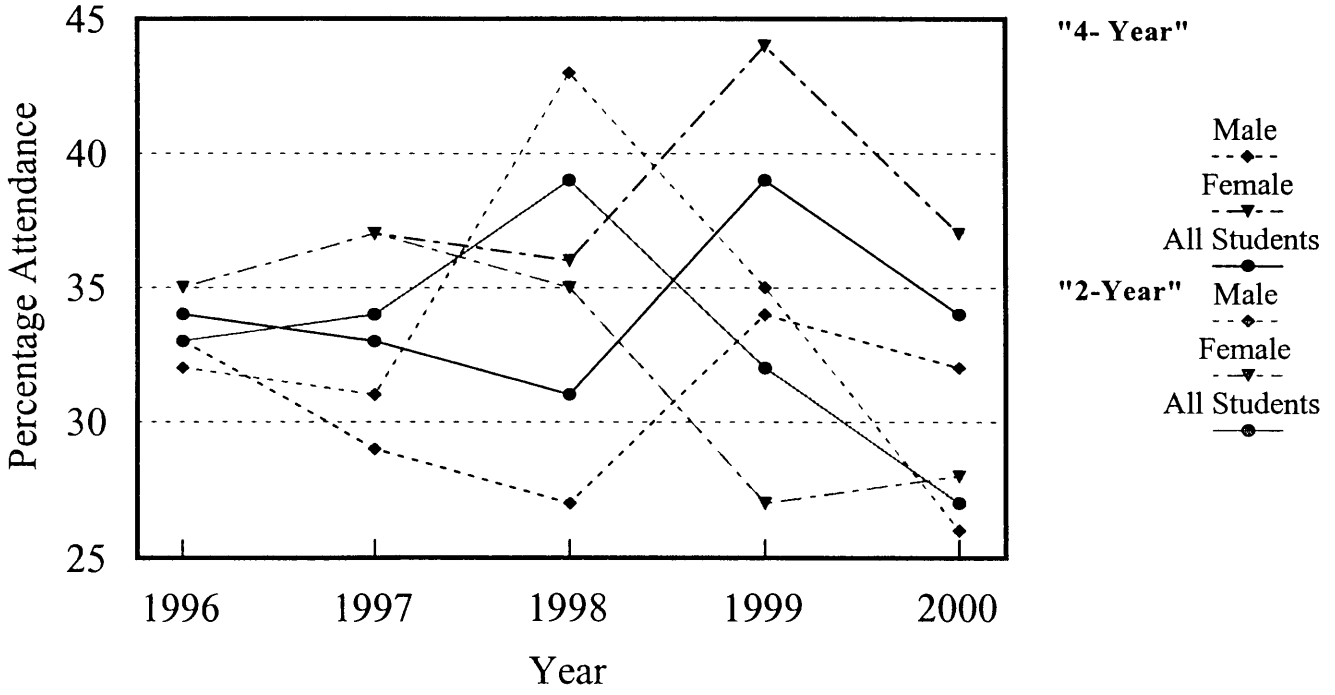


**Figure 5.A.4**

**Percentage of Students in Postsecondary Schooling who Report their Major/Program is Related to EFE Class(es), By Extent of Relatedness**

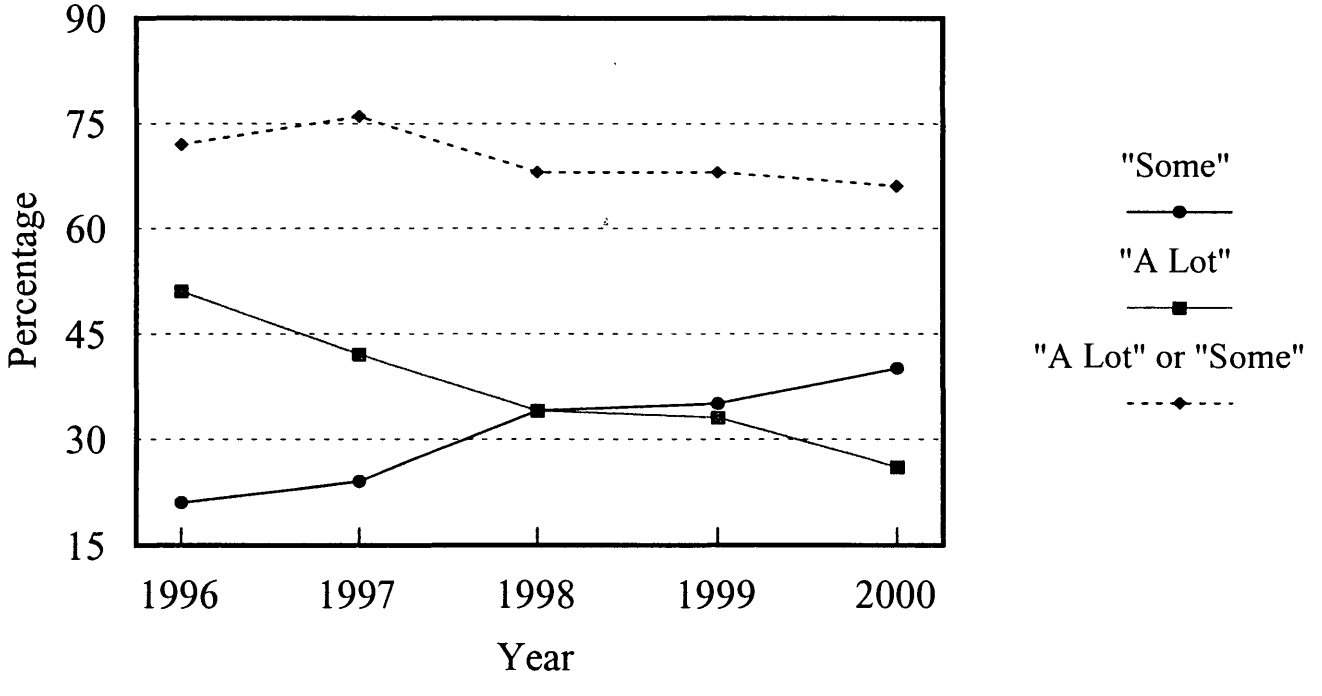


**Figure 5.A.5**

**Employment Rate, By Training Relatedness**

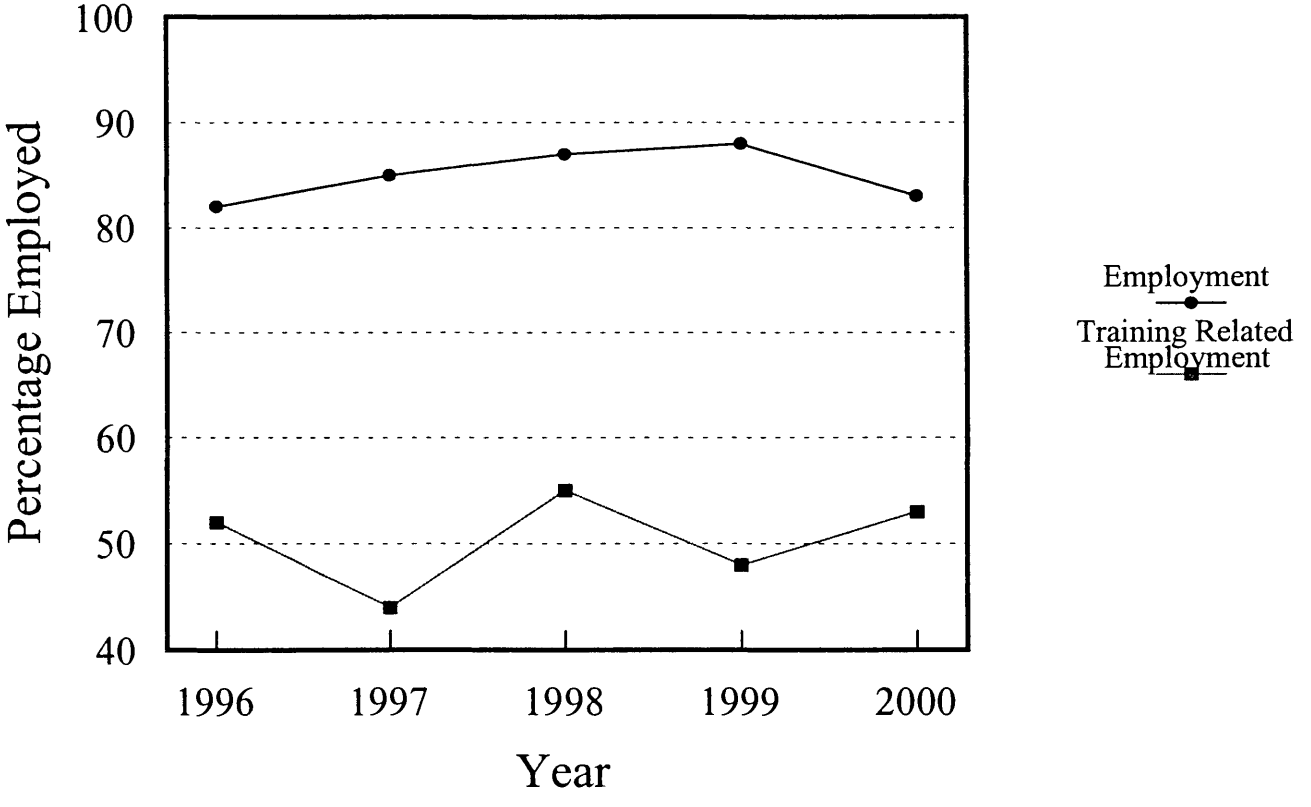
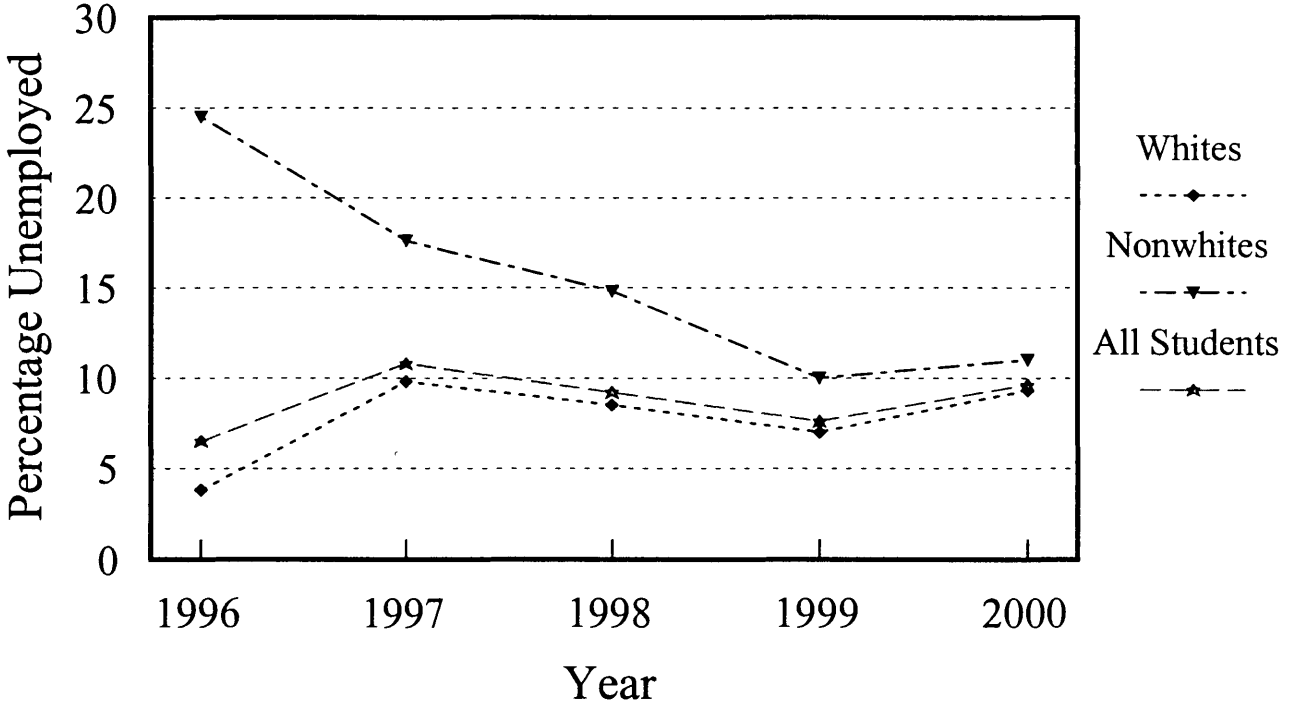


**Figure 5.A.6**

## Unemployment Rate, By Race




Note: Unemployment is defined as not working for pay and not actively looking for a job

**Figure 5.A.7**

**Indicators of Satisfaction with Aspects of EFE Classes: Percentage Agreement or Disagreement with Descriptive Items**

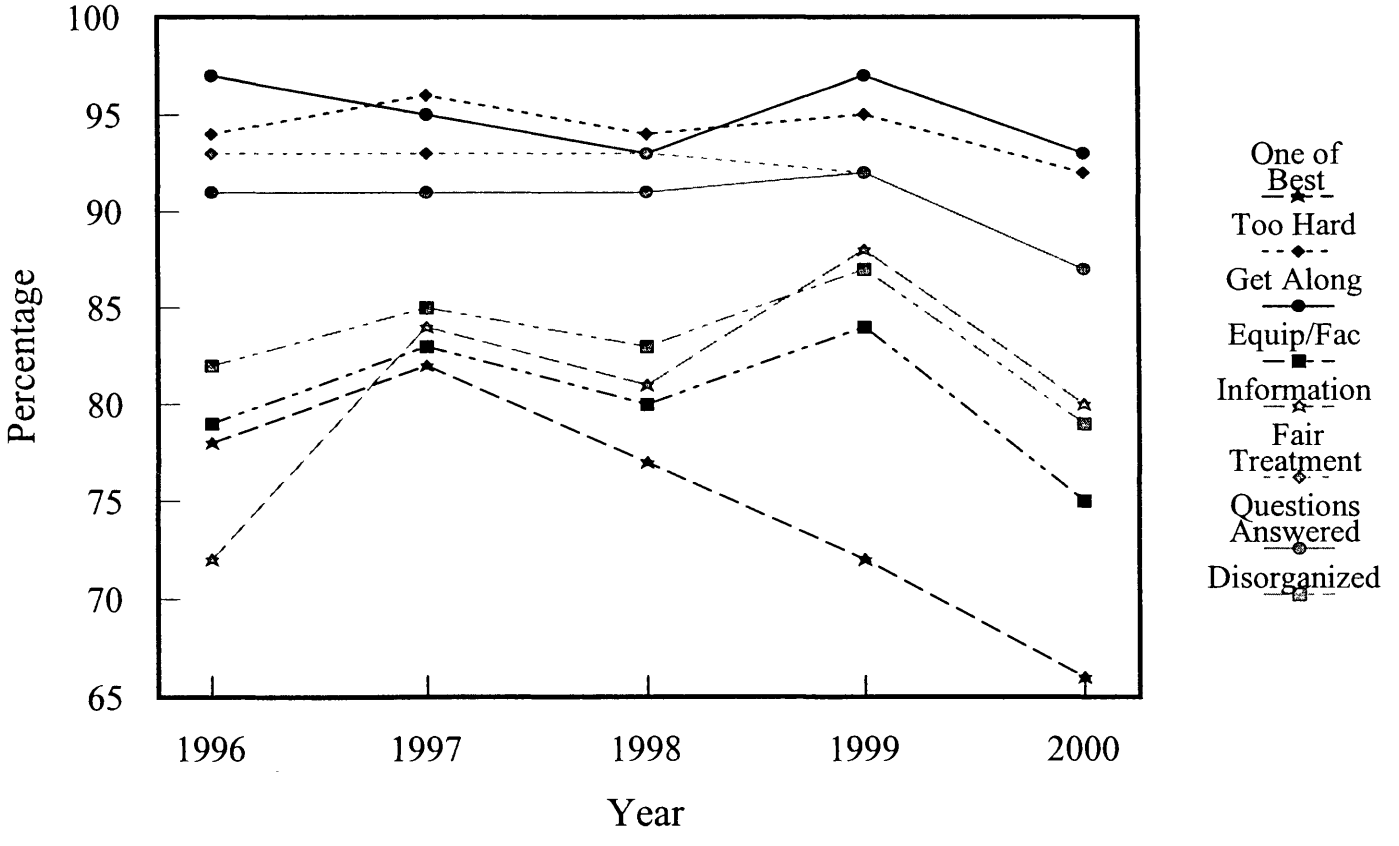


**Figure 5.A.8**

**Participation in Work-Based Program Experiences, By Sex**

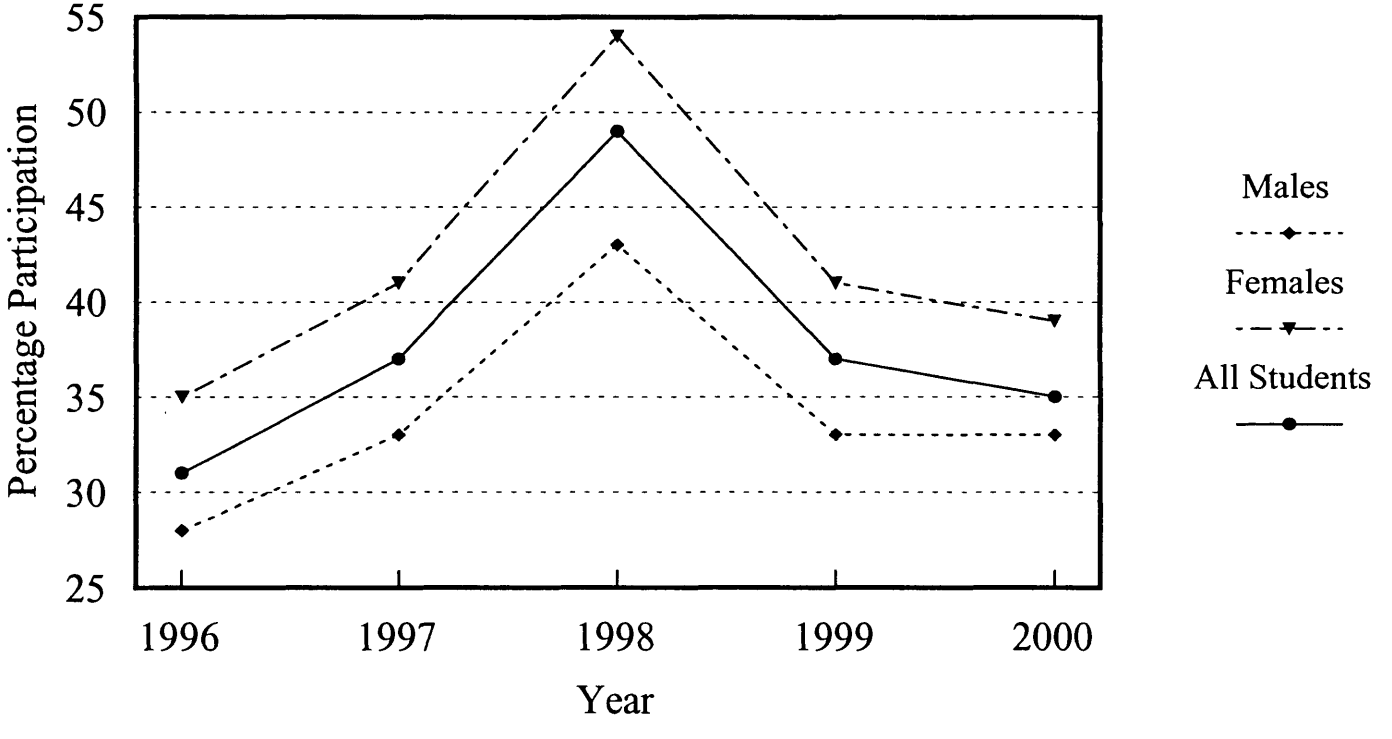
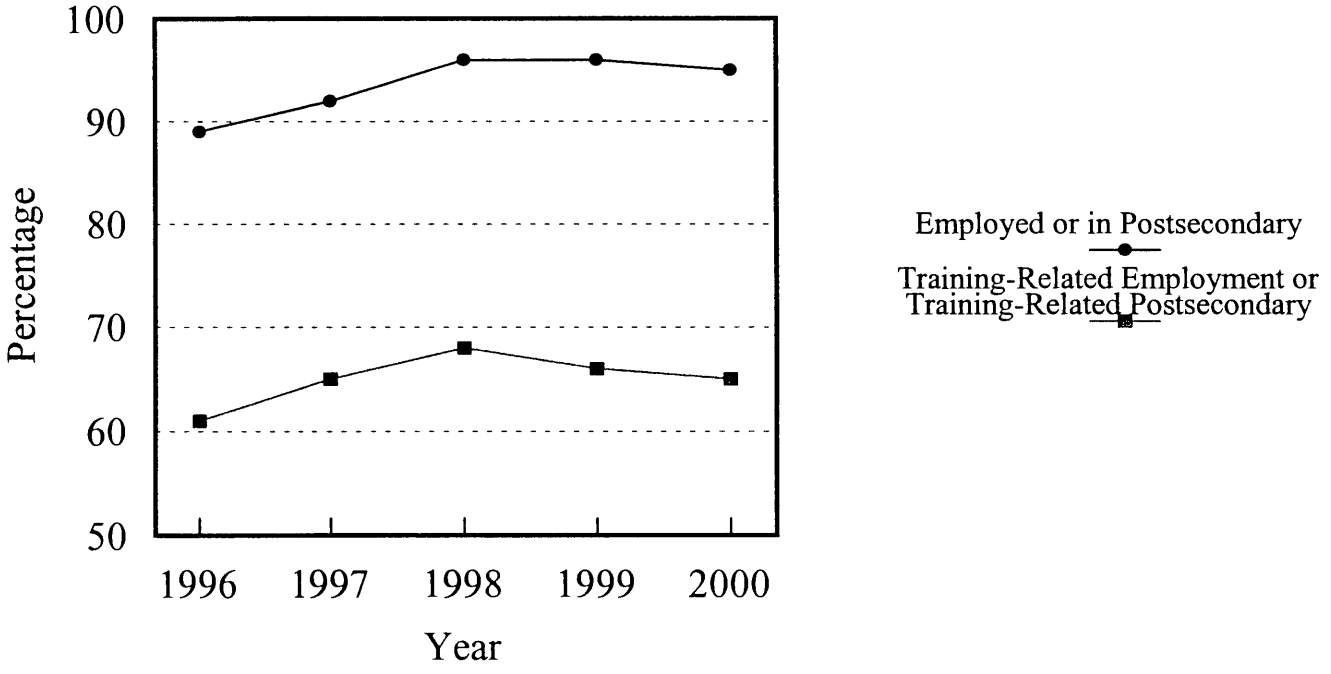


**Figure 5.A.9**

## EFE Performance Outcomes, By Type of Outcome



## 6. Findings and Recommendations

The purposes of this last section are 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 the future.

### Who Enrolls in EFE?

*The enrollment in EFE is gender-balanced. Gender equity efforts have been effective.*

EFE is attracting both males and females in approximately equal numbers. For the last two years, the proportion of males and females has been right around 50 percent, and has been unchanged.

*The enrollment of minorities in EFE has decreased slightly over time. EFE may wish to more actively recruit minority students.*

The percentage of EFE students who classify themselves as minorities has decreased three years in a row, although the declines in the past two years have been quite small. Nevertheless, there has been a 10 percent decline in the minority enrollment percentage over the three-year time frame.

*The percentage of students in EFE who are freshmen or sophomores has increased substantially. EFE should investigate to see if these students are continuing to choose EFE classes in their junior and senior years.*

Almost a quarter of the respondents to the survey of current students identified themselves as freshmen or sophomores. This is almost a 75 percent increase since 1996. This trend may be explained by the adoption of block scheduling at some high schools in the county, which allows students to take more elective classes, and by an increase in enrollment in basic BST classes.

## Work-Based Learning Experiences

*There has been an alarming decrease in the percentage of students who have a work site experience as part of their EFE class. In contrast, the five-year plan for EFE called for a substantial increase in this percentage, so that at least 50 percent of students who participated in EFE had a work site experience.*

Both the percentage of current students who indicate that they have participated in a work site experience and the percentage of completers who indicated that they had participated in a work site experience when they were taking their EFE class have declined over the past two years. There has been almost a 20 percent decline in participation in work site experiences for current students over the last two years (from 26 to 21 percent). Furthermore, figure 5.A.8 shows a decline of a similar percentage for completers referring back to their senior year (from 48 to 35 percent). These trends are counter to the five-year plan of the EFE Council, which calls for at least half of EFE students to participate in a work site experience.

## Stakeholder Satisfaction

*EFE programs receive satisfaction ratings that indicate very 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, between 63 and 83 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 well satisfied with their students' EFE classes and with the EFE 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'.

*Whereas the **levels** of customer (stakeholder) satisfaction were high, the **trends** were less positive (particularly among program completers). The satisfaction ratings of current students were approximately the same in 2000 as they were in 1999–a couple of the indicators went up, and a couple went down. However for completers, every single rating was lower in 2000 than in 1999.*

Substantial percentages of EFE students, parents, and graduates were quite satisfied with the programs and experiences they had been involved in. However, it is somewhat disconcerting that the percentages of completers who were satisfied with the various characteristics of the EFE programs declined by 5 percentage points or more. These decreases are completely counter to last year's data, in which the ratings had increased for the most part. It will be important to see if this trend continues next year. It should be noted that as EFE reaches more and more students, it will be harder and harder to sustain continual increases in 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.

*Among the characteristics about which respondents were asked to rate, two items of special concern were the continuation of downward trends in the percentage of students who indicated that their EFE class "was one of the best classes they had taken in high school" and the percentage of students who reported that "the facilities/equipment in their EFE course met the needs of the class."*

One of the items on the surveys asked students (both current students and completers) whether their EFE class "was one of their best classes in high school." Over 60 percent of current students and completers indicated that their EFE classes had been among their best classes. These percentages are reasonably high, but it should be noted that they have been declining over time, especially for the completers. There has been a 15 percentage point decline in the number of completers who felt good enough about their EFE class to describe it as ". . . one of their best classes in high school . . ."

Furthermore the students were asked whether the facilities/equipment met the needs of the class. This item exhibited the largest decrease from last year for both current students and completers. These declines in satisfaction may suggest that the EFE classes are having difficulty in keeping up to date with equipment.

## Student/Parent Enrollment Decisionmaking

*Parents' role in enrollment decisions is passive, but should not be overlooked. EFE should make sure that parents/guardians are well-informed about courses and career opportunities with material that includes course content and student expectations as well as economic outcomes such as career ladders.*

The parents'/guardians' roles in enrollment decisionmaking were, for the most part, passive. Table 3.2 shows that only about one-third of the students indicated that they relied on parents'/guardians' advice and only a quarter of the students reported that parents were among the most important individuals involved in their decisions to take the EFE class. About two-thirds of the parents indicated that they were somewhat involved in their students' decisions to enroll in an EFE class, however only about one-eighth of parents indicated that they take an active role. 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 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. Nevertheless, 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 over time. Part of the reason for this downward trend may be

that as more and more students enroll in EFE classes, the overall student familiarity increases. 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.

## Postsecondary Attendance

*A high share of the students who enroll in EFE classes want to pursue postsecondary education at two- and four-year institutions, and a high percentage actually do.*

About 85 percent of EFE students indicated that they planned 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 the years. The follow-up survey (table 5.1) shows that 61 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 simply not correct.

*The percentage of completers who went on to postsecondary education dropped substantially this year. Attendance rates of completers at both 4-year and 2-year institutions decreased, but the relative decline for the latter was much greater.*

For the first time in the five years that we have collected data from program completers, less than two-thirds of the respondents indicated that they were attending a two- or four-year college. Conversely, for the first time, the percentage of program completers who were not pursuing postsecondary education was more than one-third.

*A large share of EFE students hold part-time jobs that 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 worked in part-time (or full-time) jobs according to the survey data. Given the apparent advantages that work-based experiences provide to 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.

## Equity Issues

> *There continues to be a substantial difference in the characteristics of females who participate in EFE from those of males. The grade point averages and number of extracurricular activities engaged in are higher. Furthermore, the percentage of females who plan to attend postsecondary schooling is much higher.*

In the 1999 study, we reported that EFE is attracting females who are "above average" students–they had higher grades, participated in more extracurricular activities, and had a higher percentage who planned to attend postsecondary schooling than their male classmates. The data for this year is quite similar. In addition to the higher grades and activities, females tend to be more satisfied with EFE than males and they tend to participate in work-based program activities at a higher rate (although this difference is not statistically significant). The lower levels of satisfaction of males may be reflective of lower achievement in and less attachment to schooling, in general. If these characterizations are correct, the obvious recommendation is that "average" or "below average" females may be a target market for EFE outreach, as might "above average" males.

*Some gaps reappeared between minority and white students in program satisfaction and outcomes in this year's data. Minorities have a lower rate of college attendance and a higher unemployment rate.*

In the 1999 study, we were able to report a dramatic convergence of all EFE satisfaction indicators for whites and nonwhites as compared to previous years' data. Unfortunately, in this year's data some of those gaps have reappeared. In table 5.5, which shows the satisfaction ratings of completers with their high school EFE courses, the ratings of whites tends to be higher than nonwhites, but none of the differences are statistically significant. This is weakly consistent with the data from last year. However, in table 3.3, most of the indicators are also lower for minorities, and in this case, there are some that are different enough to be statistically significant. Furthermore, whites have a much higher level of participation in work site experiences (table 3.5) and current rates of employment (table 3.9).

The disparity is apparent in looking at the outcomes for the completers. Almost half of the minority respondents are not attending postsecondary schooling, whereas 35 percent of whites are not attending. The unemployment rate of nonwhite students is 11.0 percent compared to 9.3 percent for whites (not statistically significant, however).

## Outcomes

*The career aspirations of EFE students are 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 3.8, the career plans of EFE students are skewed toward professional and managerial occupations, although the good news is that there has been a slight decrease in this tendency. Still 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 of these aspirations—only one-fifth of jobs are in professional or managerial occupations. Thus there is a serious 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 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 are quite high. The percentage of follow-up survey respondents who were employed or in school–95 percent–was virtually the same as it was last year, and is higher than it had been in 1996 or 1997. The share of respondents who are in a training-related postsecondary program or training-related job is around two-thirds, which has stayed relatively consistent over the years.*

The bottom-line for EFE is the extent to which it improves the career prospects of its students. A one-year follow-up survey may be a premature means for drawing conclusions about students' ultimate careers and education choices. Nevertheless, surveys of graduates have shown that EFE has done better and better each year in postsecondary attendance and employment outcomes.

## Caveats

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

Finally, it should be recognized that the career and technical education courses that EFE offers in high school are 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 may ultimately depend on its ability to document enhanced 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 a substantial level of satisfaction with EFE classes (although that satisfaction has arguably declined), a reappearance of gaps between whites and minorities in levels of satisfaction and outcomes, 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, we recommend that EFE administrators consider broadening their data collection efforts in future years to include non-EFE student outcomes.