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Assessment of Kalamazoo County's Education for Employment (EFE) Programs Using 2004 Survey Data

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*Assessment of Kalamazoo County's
Education for Employment (EFE) Programs
Using 2004 Survey Data*

September 2004

by

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The report was expertly prepared by Ms. Claire Black. Of course, the usual disclaimer applies. All errors are the sole responsibility of the authors. Furthermore, all opinions expressed are solely the authors' and do not necessarily represent the Education for Employment consortium or the W.E. Upjohn Institute for Employment Research.

Table of Contents

<u>Section</u>	<u>Page</u>
Acknowledgements	ii
List of Tables	iv
List of Figures	v
1. EFE Programs and Study Methodology	1
Career and Technical Education Programs	2
Study and Methodology	4
2. EFE Completers	8
Postsecondary Experiences	9
Employment Status	14
High School and EFE Program Experiences	16
EFE Outcomes	22
Summary and Trends	23
Appendix: Time Series Graphs of Characteristics and Outcomes of EFE Completers	25
3. EFE Students	37
High School Experiences	37
EFE Enrollment Decisionmaking	40
Opinions About EFE Classes	43
Work-Based Program Experiences	47
Postsecondary and Career Plans	49
Current Employment	53
Summary and Trends	54
Appendix: Time Series Graphs of Characteristics and Experiences of Current Students.....	57
4. Findings and Recommendations	73
Who Enrolls in EFE?	73
Work-Based Learning Experiences	74
Stakeholder Satisfaction	75
Postsecondary Attendance	75
Equity Issues	76
Outcomes	76
Caveats	77

List of Tables

	<u>Page</u>
Table 2.1 Postsecondary Experiences of EFE Completers	10
Table 2.2 Importance and Use of College Credits Earned in High School	13
Table 2.3 Employment and Unemployment Status of EFE Completers	15
Table 2.4 High School Experiences as Recalled by EFE Completers	17
Table 2.5 EFE Program Satisfaction Indicators from Completers	18
Table 2.6 Best and Worst Aspects About EFE Program as Recalled by Completers	20
Table 2.7 EFE Work-Based Program Experiences as Recalled by Completers	21
Table 2.8 EFE Performance Indicators	22
Table 3.1 High School Experiences and Characteristics of EFE Students	38
Table 3.2 Sources of Information and Individuals Who Assisted in Decisionmaking About EFE Class	41
Table 3.3 EFE Class Satisfaction Indicators	43
Table 3.4 EFE Class Best and Worst Aspects	46
Table 3.5 Work-Based Program Experiences	47
Table 3.6 Postsecondary Plans and Relevance of EFE Class	49
Table 3.7 Availability and Importance of Transferable College Credit	51
Table 3.8 Career Plans and Relevance of EFE Class	52
Table 3.9 Current Employment Characteristics	53

List of Figures

	<u>Page</u>
Figure 2.A.1 Postsecondary Attendance, By Type of Institution	27
Figure 2.A.2 Racial Composition of Students Not Attending Postsecondary Schooling	28
Figure 2.A.3 4-Year Institution Postsecondary Attendance, by Sex	29
Figure 2.A.4 2-Year Institution Postsecondary Attendance, by Sex	30
Figure 2.A.5 Percentage of Students in Postsecondary Schooling who Report their Major/Program is Related to EFE Class(es), By Extent of Relatedness	31
Figure 2.A.6 Employment Rate, By Training Relatedness	32
Figure 2.A.7 Unemployment Rate, By Race	33
Figure 2.A.8 Indicators of Satisfaction with Aspects of EFE Classes: Percentage Agreement or Disagreement with Descriptive Items	34
Figure 2.A.9 Participation in Work-Based Program Experiences, by Sex	35
Figure 2.A.10 EFE Performance Outcomes, By Type of Outcome	36
Figure 3.A.1 Gender Composition of Student Enrollment	59
Figure 3.A.2 Racial Composition of Student Enrollment	60
Figure 3.A.3 Participation in Work-Based Programs	61
Figure 3.A.4 Enrollment of Students in Grades 9 and 10	62
Figure 3.A.5 Average Number of Incidents of Tardiness and Unexcused Absences	63
Figure 3.A.6 Average GPAs, By Race and Sex	64
Figure 3.A.7 Indicators of Satisfaction with Aspects of EFE Classes: Percentage Agreement or Disagreement with Descriptive Items	65
Figure 3.A.8 Student “Grades” for Course Quality, By Race and Sex	66
Figure 3.A.9 Participation in Work-Based Program Experiences, By Race and Sex	67
Figure 3.A.10 Percentage of Students in Work-Based Programs Receiving Pay, By Race	68
Figure 3.A.11 Percentage of Participation in Work-Based Programs who Report Experience Related to EFE, by Race and Sex	69
Figure 3.A.12 Planned Postsecondary Attendance Rate, by Sex	70
Figure 3.A.13 Occupational Aspirations, by Race and Sex	71
Figure 3.A.14 Part-Time Employment Rates, By Race and Sex	72

1. EFE Programs and Study Methodology

The Kalamazoo Regional Educational Service Agency (K/RESA), which is the intermediate school district for Kalamazoo County, administers a career and technical education consortium called 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 across a wide range of grade levels, and it supports professional development activities for teachers. For students, the consortium uses a puppet show to introduce careers to districts' first graders; organizes and sponsors a career exploration day for all 8th graders in the county; offers job shadowing experiences for 10th graders; and offers a variety of career and technical education programs for high school students and services for community college students (through the Tech Prep program). An example of its professional development activities for teachers is the "Voyager" program, an inservice program in which secondary school teachers work for a short time at a local business to learn how their subjects are used in the workplace. The largest share of EFE's mission, however, is career and technical education (CTE) coursework for high school students, and those activities are the subject of this study. Note that most CTE course offerings are fully articulated with KVCC and with Davenport College, a local private postsecondary institution, allowing students to obtain transferable college credits while taking secondary course offerings.

Career and Technical Education Programs

EFE programs may be classified as either (1) **classroom-based** or (2) **work-based**. But this simple dichotomy does not do justice to the wide variety of offerings. The classroom-based programs are offered at three different types of sites—high schools, postsecondary institutions—the community college or proprietary schools—and work sites. Classroom-based programs are offered in 29 occupational areas—agri-science; allied health; art & design careers; auto body; automotive technology; aviation; business management technology; construction trades; cosmetology and nail technician; dental assisting; drafting technology; early childhood education; electro-mechanical technology; emergency medical technician; entertainment industry technician; furniture making; health occupations; heating and air conditioning; hotel, restaurant, and travel management; information technology; law enforcement; machine tool technology; marketing; photography; radio broadcasting; teacher education; television broadcasting; veterinary science; and welding.

Of these 29 occupational areas, over half—15—are offered in at least one of the 11 high schools in the county, and students from any of the high schools may enroll in them.¹ The extent of student commutation between high schools varies widely across these 15 programs. Two of the programs—business management technology (BMT) and marketing—account for about 80 percent of the enrollment in the 15 programs (2,230 students out of 2,684).² They have enough students to be offered at most of the county high schools,³ and because of their wide availability, only a handful of students come from other high schools. The other 14 programs with classes

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

²All of the enrollment statistics in this section of the report pertain to Fall 2003, and come from the document “EFE Enrollment Matrix,” October 22, 2003.

³BMT was offered at all 11 high schools in Fall 2003 and marketing was offered at 8.

offered in high schools have a total enrollment of 454, of which 60 percent are students from the high school offering the course and 40 percent commute from other high schools.

Of the 29 occupational areas, six are taught in postsecondary institutions—five at KVCC campuses and one at two different proprietary cosmetology institutions. Total high school student enrollment in these five programs in Fall 2003 was 213.

A particularly innovative type of instructional environment that EFE offers is referred to here as worksite programs. There are eight occupational areas where the formal class work is conducted at worksite settings. 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 and a one-year health occupations program offered at a local hospital; a one-year aviation trades program at an airport facility; a two-year hotel, restaurant, and travel management program offered at a hotel; an entertainment industry technician program at a community auditorium facility; a one-year television production and broadcasting program at a community cable access center; and a one-year veterinarian science program at a veterinarian clinic. The eighth program is a teacher cadet program in which students are placed in classrooms as teacher aides throughout the county. 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 330 students were enrolled in these programs in Fall 2003; that is, left their home high schools each day to take classes at worksites.

All together, EFE had 3,227 students enrolled in classroom offerings in Fall 2003; 2,684 at high schools, 213 at postsecondary institutions, and 330 at worksite settings. In a few cases, students may be enrolled in more than one program, so we estimate that there were approximately 3,100 separate students enrolled.

Supplementing classroom-based programs (which may include work-based learning experiences) is co-operative learning, 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, which is meant to enhance the school-based program. In Fall 2003, about 175 students, from all but one of the county's 11 high schools, were engaged in co-op experiences in marketing, office, trade and industrial, or agricultural 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.

Study and Methodology

In Spring 2004, EFE contracted with the Upjohn Institute to conduct surveys to provide information from two of the program's key stakeholder groups: recent graduates and current students. This is the ninth year that the Upjohn Institute has conducted this type of study. In conducting the follow-up study, we surveyed students who had been identified as completers of EFE programs as of the second semester of the 2002–2003 school year approximately one year after graduation. This survey served two purposes. First, the survey included the questions that are mandated by the State of Michigan as a one-year follow-up survey. Second, the survey asked

additional questions about the students' experiences with and opinions about EFE, so it could be useful as a marketing and information-gathering tool for the consortium.

Past years' meager response rates to the follow-up survey have been a concern, so we added an option of using the Internet to complete the survey, and we sent out several letters ahead of our telephone calls. The online and telephone data collection efforts were conducted during March and April. When it was determined that an individual was not reachable or was unlikely to respond to a telephone call or through the Internet, we sent them a shorter version of the survey by mail. 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 information in which the State is interested includes the post-secondary and employment activities of CTE graduates. The telephone nonrespondents were sent a mail survey that contained just the State's questions without the additional locally-added questions that were aimed at gauging satisfaction with the EFE classes/programs.

The response rate for the follow-up survey was still quite low, despite our increased efforts. The number of respondents was smaller than last year's follow-up survey, even though the universe of completers increased. The total sample (universe for the study) was 1,430. This was the number of unique student names that was supplied to EFE by the state data system. The number of completed surveys was 654, which was 46 percent of the total sample and almost 100 fewer responses than last year's survey, which had a total sample of 1,350. The number of responses that were received by telephone was 434; by Internet 76; and by mail 144. Clearly the Internet response was the most disappointing.

What happened with the 776 students in the sample for whom we didn't get a response? The mail survey was sent to individuals for whom we were having difficulty getting a response,

and 144 of those individuals ended up sending in a survey. So we cannot be precise about the reasons for nonresponse. Our telephone survey protocol required up to 10 calls before giving up. We had 160 individuals for whom we received no answer or a busy signal for all 10 calls, which were made at various times during the day. We had 129 respondents, including 44 proxies (parents or guardians), refuse to answer the survey. We had 207 respondents with answering machines who did not call back. (Note that the protocol that we used asked for a call back whenever an answering machine was encountered.) We had 152 respondents for whom the telephone number we were given was disconnected, and we had 134 students for whom the telephone number we were given was wrong. We had 126 cases in which we scheduled call backs because the students who we reached asked to re-schedule the interview or we reached siblings/friends who could not serve as proxies. In these cases, no call back was received. We had 36 individuals who were still in high school, and we had 16 individuals who claimed they had never taken an EFE course.

The second part of this study provides data from a survey of current EFE students. The survey was conducted in all EFE classes sometime during the March/April time frame. 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. As noted above, we estimate that there were approximately 3,100 students enrolled at the time of the survey, and 2,199 usable responses were received (a response rate of about 70 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.

2. EFE Completers

This chapter describes analyses of data collected by telephone, online, or by mail from former EFE students. Advanced Data Services, Inc. of Kalamazoo, conducted the follow-up survey under subcontract to the Upjohn Institute. The population for this survey was students who were identified as completers of EFE programs as of the end of the 2002/2003 school year. These students were surveyed in March/April 2004, which was just under a year after they graduated from high school.

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 of the current EFE students who are not seniors may not complete their EFE program. 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 included 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 (51 percent males and 49 percent females), race (88 percent whites and 12 percent nonwhites), postsecondary attendance status (37 percent in a two-year college, 41 percent in a four-year college, and 22 percent in no postsecondary institution), and whether or not the students participated in a work-based program while in EFE (35 percent had participated in a

work-based program and 65 percent had not). The appendix to this chapter displays graphically trends in a number of the statistics discussed in the chapter.

Postsecondary Experiences

Table 2.1 summarizes the postsecondary experience data for the EFE completers. The top panel classifies respondents as those attending a four-year institution (41 percent), attending a two-year institution (37 percent), or not attending school including military service (22 percent). Relative to last year, there was a sizable increase in the percent of females attending a four-year institution (46 percent) and in the percent of males attending a two-year institution (41 percent). These two percentages were statistically significantly larger than the percentage of males in four-year colleges (36 percent) and females in two-year institutions (33 percent). The postsecondary attendance rates did not differ significantly by race. A larger percentage of the individuals who had participated in work-based programs were in two-year colleges and a smaller percentage was in four-year colleges, with the latter being statistically significant.

The postsecondary attendance rate among the follow-up sample—78 percent—is higher than any of the prior years of data. It stems from a high rate of attendance at 4-year institutions and a large increase in the attendance rate at 2-year institutions. The overall attendance rate at four-year colleges—41 percent—stayed the same as it was last year, but this rate is a 10 percentage point increase over the rate in 2001. The attendance rate at 2-year institutions increased substantially over its rate from last year—31 percent to 37 percent, with males accounting for most, but not all, of this increase. Figures 2.A.1 through 2.A.4 show the nine-year trends in postsecondary attendance of EFE completers.

Table 2.1
Postsecondary Experiences of EFE Completers

Characteristic	Sex		Race		Work-based program		Total
	M	F	W	NW	Yes	No	
<u>Postsecondary Status</u>							
Not attending school	23	21	21	29	27	25	22
Full time active duty military	1	0	0	0	0	0	0
2 year institution	41*	33*	37	34	42	35	37
4 year institution	36*	46*	42	37	30*	40*	41
Sample size	335	319	574	79	172	321	654
<u>For those in 2- or 4-year postsecondary (n = 399)</u>							
Accounting/Finance	4	2	2*	8*	1	3	3
Business-related	19	15	18	14	15	18	17
Communications	2	3	2	3	2	3	2
Computers	7*	0*	4	3	4	3	4
Cosmetology	1	3	2	0	2	2	2
Criminal justice	4	3	4	0	4	4	4
Education	4*	18*	11	8	11	9	10
Engineering	18*	3*	11	11	8	13	11
Graphic/Fine Arts	4	7	5	11	7	4	5
Marketing	2	1	1	0	1	1	1
Medical-related	11*	26*	18	19	29*	13*	18
Agriculture	0	0	0	0	0	0	0
Liberal Arts	3*	9*	5	11	5	6	6
Sports/Leisure	1	0	0	3	0	1	1
Trade & Industrial	8*	0*	5	0	6	3	4
Travel & Tourism	2	0	1	0	1	1	1
Undecided	12	10	11	11	7	14	11
<u>Training related to named field (n =471)</u>							
A lot	34	34	35	24	48*	26*	34
Some	33	31	31	41	25	36	32
Hardly any	18	13	15	22	13	16	16
None	15	23	19	12	14	22	19
<u>Degree working on (n = 485)</u>							
Associate's	32	26	28	32	36	28	29
Bachelor's	53*	56*	60	57	50*	62*	59
Other/none/don't know	16*	8*	12	11	14	10	12

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 0.05 level.

The first figure shows the trends in attendance by type of institution: 4-year, 2-year, and not attending. The figure shows graphically the extreme drop in the percentage of students not attending a postsecondary institution, which would be the converse of the fact that the attendance rate is the highest that it has ever been.

The second figure disaggregates the latter trend (not attending) by race, and the next two figures disaggregate the trends in attendance of 4-year and 2-year institutions by sex. Figure 2.A.2 shows that minorities have a higher proportion who have not enrolled in a postsecondary institution (a trend that has been evident over the entire survey period), although the trend is clearly downward and the difference between minorities and whites is not statistically significant. Figure 2.A.3 shows that female EFE completers have higher rates of attending four-year institutions, whereas the 2-year college attendance rates, by sex, in figure 2.A.4 are reasonably close to each other. Males have had higher rates in the last two years.

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 remarkable concurrence.⁴ In table 3.6, we report that 79 percent of current students planned to attend a postsecondary institution right after high school. Table 2.1 shows that about 78 percent were attending. This concurrence gives us fairly solid grounds for concluding that 75 to 80 percent of EFE students attend a 2-year or a 4-year postsecondary institution right after high 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. Eleven percent report that they are undecided about a major or program. A medical-related major or program is given by the highest percentage of students—18 percent—followed closely by business-related at 17 percent. The only other field with 10 or more percent of the students is education. The students' choices across fields are very similar to last year; no substantial changes or trends are evident. As in past years' data, there are substantial

⁴In every prior report, the postsecondary attendance aspirations of current students exceeded the actual attendance rates measured in the follow-up survey. But this year, the rates are virtually identical.

differences by gender. Males are more likely to be in computer-related, engineering, and trade and industrial programs/majors than are females. Conversely, females are more likely to be in education and medical-related programs. Students with work-based program experience are more likely to be in education, and are less likely to be undecided about their major/program.

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 are in postsecondary programs and who had decided upon a program indicate that it is related to their EFE class “a lot” or “somewhat.” The only statistically significant difference in training-relatedness between population groups is a much high percentage of students who had been in a work-based program report that their major is training-related “a lot” compare to students who had not been (48 percent to 26 percent).

The percentage of respondents who report “a lot” or “some” training-relatedness between their EFE program and their current field/program has not changed dramatically over the years. (See figure 2.A.5.) This year’s percentage is a slight decrease from last year’s, although looking at the figure suggests that these percentages have not changed much since 1998.

A little over a quarter of the students currently attending a postsecondary institution report that they are pursuing an associate’s degree. About three-fifths are pursuing a bachelor’s degree. Females and individuals who are not in work-based programs are more likely to be working on a bachelor’s degree. One-tenth are pursuing other degrees or are undecided about what degree they are pursuing.

Table 2.2 presents a summary of data about usage of college credits earned while in EFE courses in high school. Overall, about half of the respondents indicate that, when they were in

high school, they believed they could have received college credit for their high school EFE class. About one-third indicate that they believed that they would not be able to receive college credit. The other 20 percent indicate that they did not know. Students who participate in a work-based program are more apt to report that they believed that they could earn college credits than students who had not been in a work-based program.

Table 2.2
Importance and Use of College Credits Earned in High School

Characteristic	Sex		Race		Work-based program		Total
	M	F	W	NW	Yes	No	
Could student have received credit? (n = 401)							
Yes	44	47	42	46	56*	40*	45
No	34	35	31	35	28*	38*	34
Don't know	23	18	27	20	15	22	20
If yes:							
Have you arranged to receive credit? (n = 177)	65	70	69	50	73	64	67
Average credits (n = 119)	4.2	4.2	4.3	3.0	4.0	4.4	4.2
Important in program enrollment? (n = 179)	42	41	43	28	47	37	41
Important in postsecondary enrollment? (n = 179)	26	26	27	16	29	24	26

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

* Differences between population groups is statistically significant at the 0.05 level.

We asked those students who believed that they could have received college whether they had actually arranged to do so. About two-thirds of these respondents (67 percent) reported that they had. On average, these students had earned 4.2 college credits. Students who had been in work-based program experiences, and were aware of the possibility of receiving college credits, were more likely to have arranged for those credits; although there was no difference between them and students who had not participated in work-based programs in the average number of credits actually received.

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 between students who had or who had not participated in a work-based program (47 percent to 37 percent). About one-quarter of the students, with little variation across groups, reported that the ability to transfer credits was an important factor in choosing a postsecondary institution.

Employment Status

A major emphasis of the survey is on the current employment status of the EFE completers. Note that the data that were collected represent an amalgam of part-time or full-time work experiences of students, summer jobs for students who may have finished schooling for the year, and full-time or part-time employment of students who are not attending postsecondary institutions. All together, table 2.3 shows that about two-thirds of the survey respondents indicate that they are currently working for pay. While it is still lower than most previous years' rates (see figure 2.A.6), the employment rate increased considerably from last year, when the rate was only 57 percent. Students who had been in a work-based program in high school have a significantly higher employment rate than those that had not; and students attending 2-year colleges or not attending any postsecondary institution have higher rates than individuals in 4-year colleges.

The average work week for employed individuals is about 29 hours, an increase of about one hour from last year. This difference may reflect a much lower percentage of students in 4-year institutions who are more likely to have part-time employment. Indeed, their average hours

Table 2.3
Employment and Unemployment Status of EFE Completers

Characteristic	Sex		Race		Work-based program		Postsecondary			Total
	M	F	W	NW	Yes	No	2-yr	4-yr	No	
<u>Employment rate</u> (n = 622)	67	66	67*	59	74*	63*	77*	52*	77*	66
<u>If employed:</u>										
Usual hours/week (n = 395)	31.0*	25.2*	28.7*	24.4*	27.3	28.4	27.9*	22.7*	35.1*	28.2
Hourly wage (n = 360)	\$8.44	\$7.90	\$8.25	\$7.68	\$8.24	\$7.93	\$8.07	\$8.25	\$8.32	\$8.19
<u>EFE training - relatedness</u> (n = 261)										
A lot	33	27	31	27	42	27	31	31	17	31
Some	36	31	31	53	29	34	21	32	67	33
Hardly any	9	16	14	0	6	15	9	16	0	13
None	22	25	24	20	23	34	29	21	17	23
<u>Unemployment rate</u> (n = 471)	22.3	19.5	19.8	29.4	15.7*	26.7*	14.5*	28.8*	19.1*	21.0

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 0.05 level.

per week are only 20. Respondents who did not go on to college average about 36 hours per week, which is about eight hours more per week on average, than for individuals who are at 2-year institutions. Males also average about four more hours per week than females.

The average hourly wage this year is \$8.19, which is actually about one percent lower than in 2003. The average for males is higher than females—\$8.44 to \$7.90, although this difference is not statistically significant. Also, the average hourly wage for individuals who had been in a work-based program in high school—\$8.84—is statistically higher than the average for students who had not been in such a program. The average wage for individuals not pursuing postsecondary education in this year’s data—\$8.32—is higher than the hourly wage reported by college attendees. This is noteworthy because in four of the last five years, individuals who had not gone to college were receiving wages that were just equal to or less than the average wage for college attendees. This suggests that the job market for unskilled workers had “tightened up” somewhat this year, so that individuals who did not pursue college were paid slightly more than the part-time opportunities held by college students.

We also asked respondents about how related the training in their EFE classes is to their current job. There was a big increase in the percentage of the respondents who indicated that it is relevant (“a lot” or “some”) as can be seen in figure 2.A.6. Almost two-thirds of the employed individuals report that their job is training-related. After a long-term trend that had been relatively flat, the increase is quite dramatic. Among the population groups, students who had work-based program experiences in high school are significantly more likely to report that their employment is training-related than students who had not been in a work-based program.

The unemployment rate, shown in the bottom row of table 2.3, is defined as the share of the labor force that is not working for pay and is looking for employment. For the sample as a whole, the unemployment rate is quite high—21.0 percent, although this is slightly lower than last year’s rate of 21.6 percent. This high rate may reflect a soft labor market for young individuals, although the slight improvement may suggest that the labor market is improving. The unemployment rates vary substantially by group. Whites have a 10 percentage point lower rate than nonwhites; students who had been in a work-based program have a 11 percentage point lower rate than student who had not been; and students in 4-year colleges have a significantly higher unemployment rate than do students in 2-year colleges or students who did not pursue postsecondary education. Figure 2.A.7 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 2.4 presents summary data on (self-reported) grade point averages in

high school and on incidents of tardiness and absences. These data show considerable improvement over last year's levels. Recalled tardiness and absences are down, and recalled high school GPA has increased. 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. Not only are these statistics lower than those reported last year, but they are lower than almost any year of the data.

Table 2.4
High School Experiences as Recalled by EFE Completers

Characteristic	Sex		Race		Work-based program		Postsecondary			Total
	M	F	W	NW	Yes	No	2-yr	4-yr	No	
Average number of tardies (n = 480)	5.4	4.5	4.9	5.7	4.6	5.3	4.7	4.9	5.5	5.0
Average number of absences (n = 488)	4.8	4.5	4.6	5.1	4.8	4.7	5.0*	3.9*	5.3*	4.7
Average GPA (n = 503)	3.09*	3.40*	3.24	3.17	3.22	3.24	3.07*	3.60*	2.96*	3.23

*Significantly different from other population at the 0.05 level.

The overall mean high school GPA reported by respondents to the follow-up survey, 3.23, is much higher than the average GPA for current students, 3.05, which suggests that the respondents to the follow-up survey are probably biased toward “better” students, which also may explain why the tardiness and unexcused absence data are so positive. Males reported lower GPAs in high school than females, and as expected, students who went on to 4-year colleges/universities had higher GPA's than students who went to 2-year institutions or who did not pursue postsecondary education.

Table 2.5 provides data on a set of items that are intended to be EFE class satisfaction indicators. The same items were posed to the EFE current students, whose summary data are given in table 3.3. 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 opinions about those classes. The

current students provide assessments of classes they are enrolled in at the time of the survey. All in all, the completers report much higher levels of satisfaction than current students.

Table 2.5
EFE Program Satisfaction Indicators from Completers

Indicator	Sex		Race		Work-based program		Postsecondary			Total
	M	F	W	NW	Yes	No	2-yr	4-yr	No	
Agree/strongly agree with “The classes are among the best...”	74	76	74	79	81*	72*	79	71	75	75
Disagree/strongly disagree with “These classes are too hard...”	90	94	93	85	92	91	90	95	89	92
Agree/strongly disagree with “I got along with other students and we worked together...”	94	94	93	97	97*	92*	92	94	96	94
Agree/strongly agree with “The equipment and facilities were excellent.”	84	78	81	82	80	82	81	83	79	81
Disagree/strongly disagree with “not enough information...”	81	86	83	84	85	82	83	86	80	83
Agree/strongly agree with “The program treated everybody fairly.”	92	91	92	94	93	91	91	95	88	92
Agree/strongly agree with “I could get questions answered...”	91	92	91	90	92	91	90*	95*	89*	91
Disagree/strongly disagree with “the program seemed disorganized.”	86	86	86	84	88	84	86*	90*	79*	86
Letter grade for program quality	3.36	3.49	3.42	3.39	3.54*	3.35*	3.39*	3.54*	3.28*	3.42

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 498.

*Difference between population groups is statistically significant at the 0.05 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.” Three-quarters of the respondents agreed with this statement. Ninety-two percent of the respondents disagreed with the statement that “these classes were too hard,” and 94 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 positive. Eighty-one percent of the sample agreed the “equipment and facilities were excellent.” Almost 80–90 percent or more of the students have positive responses to the final four items, which compares to 65–70 percent for current students. About five-sixths of the respondents (83 percent) disagree with the statement that “not enough information was provided to students or their parents.” Over 90 of the respondents agree that “the program treated everybody fairly,” and that they “could get questions answered and problems easily resolved.” Finally, 86 percent of the respondents disagreed with the statement that “the program seemed disorganized.” Only a few of these items have statistically significant differences across population groups. Generally, students in 4-year colleges and students who had been in work-based programs have higher levels of satisfaction than their population counterparts.

These satisfaction indicators are slightly more positive than in last year’s data, although the relative satisfaction among the items is identical. (That is, higher levels of satisfaction are garnered for the second, third, sixth, and seventh items, and relatively lower levels of satisfaction are achieved by the other items.) Figure 2.A.8 displays the trend in each of these indicators for the graduates.

The follow-up survey asked respondents to assign a letter grade to the EFE courses that represented their assessment of program quality. The overall average for this grade, converted to a 4.0 scale, was 3.42, which would be a B+/A-. Students who had not participated in a work-based program and students not attending a postsecondary institution assign the lowest grades for quality.

Table 2.6 provides tallies of the responses to questions about what were the best and worst aspects of the EFE classes as recalled by the completers. The aspects that are mentioned the most often among the best aspects are specific teachers or staff members and the opportunity to participate in work-based “real world” learning opportunities. Two other aspects that are mentioned a significant number of times are other students/teamwork and hands-on instruction. Far fewer negatives are mentioned. Among the complaints, the most often mentioned item is that the student had a logistical problem such as transportation or scheduling.

Table 2.6
Best and Worst Aspects About EFE Program as Recalled by Completers

Best		Worst	
Aspect	Number of Times Mentioned	Aspect	Number of Times Mentioned
Equipment	71	Equipment, classroom environment	45
Books, software	16	Books, software	17
Pace	19	Pace: too easy	23
Hands-on instruction	86	Pace: too fast	14
Specific teacher	172	Pace: too much work	36
Small class size, individual attention	18	Specific teacher	39
Technical or employability skills learned	63	Class size too large	21
Work-based experience/real world	126	Transportation/schedule	56
College usefulness	35	Classmates behavior	30
Interesting/fun	85	Disorganized	25
Other students, team work	88	Work experience	4
Everything about the class	10	Unfair treatment	6
Vocational clubs	1	Specific activity or project	21
Other	<u>23</u>	Grading policy	6
		Other	<u>38</u>
Total	813	Total (except for “Absolutely nothing...”)	381

The EFE completers were also asked to recall whether they had participated in work-based experiences. As shown in table 2.7, about one-third (35 percent) indicate that they had participated in a work-based program. (See figure 2.A.9.) While this is a one percentage point increase over last year, these are the lowest reported rates of participation in eight years. The gap between females and males is significant—females significantly higher than males. In every year

of the survey, a higher percentage of females than of males reported having participated in a work-based program in high school. Respondents in four-year colleges had a statistically significant lower rate of work-based learning than did those in two-year institutions or non-attenders. As in prior years, there is a sizeable, although not significant, gap between whites and nonwhites.

Table 2.7
EFE Work-Based Program Experiences as Recalled by Completers

Characteristic	Sex		Race		Postsecondary			Total
	M	F	W	NW	2-yr	4-yr	No	
<u>Participation</u> (n = 493)	30*	40*	36	26	39*	29*	37*	35
<u>If participated:</u> (n = 171)								
Paid?	55*	36*	44	56	49*	29*	56*	45
Disagree/strongly disagree with “Work was unrelated...”	70	78	76	56	76	80	64	74
Agree/strongly agree with “Mentors were supportive and answered my questions.”	89	86	88	75	85	88	89	87

Note: Table entries are sample percentages.

* Differences between population groups is statistically significant at the 0.05 level.

The percentage of students from the follow-up survey who reported that they had participated in work-based programs (35 percent) contrasts starkly with 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 this year, just under half indicate that it had been a paid experience. Males’ experiences are paid more often than females’ according to these data. Similarly, students in two-year colleges or not attending postsecondary institutions have significantly higher rates of having gotten paid for their work-based program participation.

About three-quarters of the respondents who had been in work-based programs disagree with the opinion question that “the work was unrelated to the EFE class.” In other words, the

vast majority felt that the experience was related. Almost 90 percent of the respondents indicate that “workplace mentors were supportive and answered my questions.”

EFE Outcomes

Two performance indicators using EFE outcomes are presented in table 2.8. The first indicator measures how many EFE completers are either attending college or are employed one year after completing their high school course(s). Ninety-four percent of the sample meet these criteria. The percentages do not differ significantly by race, sex, or whether students had participated in work-based programs. (It is not meaningful to look at the differences in this outcome measure by the different types of college attendance because all college attenders met the standard, by definition.) This indicator is slightly higher than its value in 2003, when it was 92. (See figure 2.A.10 for a time trend.)

Table 2.8
EFE Performance Indicators

Indicator	Sex		Race		Work-based program		Postsecondary			Total
	M	F	W	NW	Y	N	2-yr	4-yr	No	
Postsecondary attendance or employed (n = 654)	93	95	95*	86*	96	92	100*	100*	73*	94
Training-related postsecondary attendance or employment (n = 558)	64	68	67	60	69	61	80*	68*	42*	66

Note: Table entries are sample percentages.

* Difference between population groups is statistically significant at the 0.05 level.

One criticism of this standard is that it is not difficult to meet. An interview of almost any population of 19-year-olds near the end of a school year would likely yield a high percentage of respondents who were either attending college during the academic year or currently working. The second indicator is somewhat more rigorous. This indicator measures the percentage of individuals who are pursuing a major field or occupational program area in a postsecondary

setting that is related to the course work taken in high school or who are employed in a job where their EFE course work is related. About 65 percent of the sample meet these criteria. Much more variation is exhibited in this indicator than in the first one. Females, whites, and students who had been in work-based programs have higher values than males, nonwhites, and students who had not been in work-based programs, but these differences were not statistically significant. However, the substantial differences between students in postsecondary institutions and those who are not are significant. The discrepancy is startling in some instances. For example, 80 percent of 2-year college students are in a training-related education or employment situation, whereas only 42 percent of individuals who did not attend college had such an outcome.

Summary and Trends

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

- Over three-quarters of students who completed high school about a year ago and had taken an EFE class are attending either a 4-year postsecondary institution or a 2-year institution. Less than a quarter are not attending a postsecondary school. Compared to previous follow-up surveys, this is by far the highest rate of college attendance. The percentage of students in a 4-year college remained as high as it was in last year's survey, 41 percent, and the percentage of students in community colleges shot up from 31 to 37 percent.
- Males and students who had been in a work-based program when in high school lag significantly behind females and students who had not been in a program in the attendance rate at 4-year colleges. On the other hand, females lag behind males in their rates of attendance at 2-year institutions. None of the differences in postsecondary attendance rates by race are statistically significant.
- For students who are attending a postsecondary institution, there were very few changes in the fields that students reported as their major field or program. Medical-related and business-related majors or programs are the most popular fields. Males far outnumber females in computers, engineering, and trade & industrial fields; females outnumber males in education and medical-related.

- About two-thirds of the students report that their EFE training is related “a lot” or “some” to their postsecondary field/program. This was a decline from last year, but still very much in the range of previous years. Students who had participated in work-based programs have a much higher percentage of responses indicating that their field or major is related to their EFE class “a lot” than do students who had not participated.
- About half of the students indicate that they could have received college credit for the EFE classes that they took in high school. Of those, about two-thirds report 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 indicate that it had been an important reason for enrolling in the EFE class, but only one-quarter report that transfer of college credits had been an important consideration in selecting a postsecondary institution.
- The employment rate of completers, which is 66 percent, is higher than last year, but still lags behind the employment rates observed in most of the previous follow-up surveys. Students who had not participated in work-based programs in high school and students in 4-year colleges have much lower employment rates than their population counterparts. The average work week is about 28 hours (about 1 hour less than last year). The average wage decreased by about 1 percent to \$8.19 per hour.
- Concomitant with the low employment rate, the unemployment rates are high—the overall rate was over 20 percent. While quite high, the unemployment eased slightly from an even higher rate last year. Among population groups, nonwhites, students who had not participated in work-based programs, and students in 4-year colleges have much higher unemployment rates than their population counterparts.
- The completers report much higher levels of satisfaction with their EFE classes and experiences than current students. Furthermore, the levels of satisfaction increased slightly compared to last year’s data. There are few differences between population groups in the satisfaction data.
- Despite a weak economy, the performance indicators for EFE remain high. The percentage of follow-up students employed or in a postsecondary program is 94 percent, and the percentage of follow-up students who have training-related employment or who are in a training-related postsecondary program is 64 percent.

Appendix
Time Series Graphs of Characteristics and Outcomes
of EFE Completers

Figure 2.A.1
Postsecondary Attendance, By Type of Institution

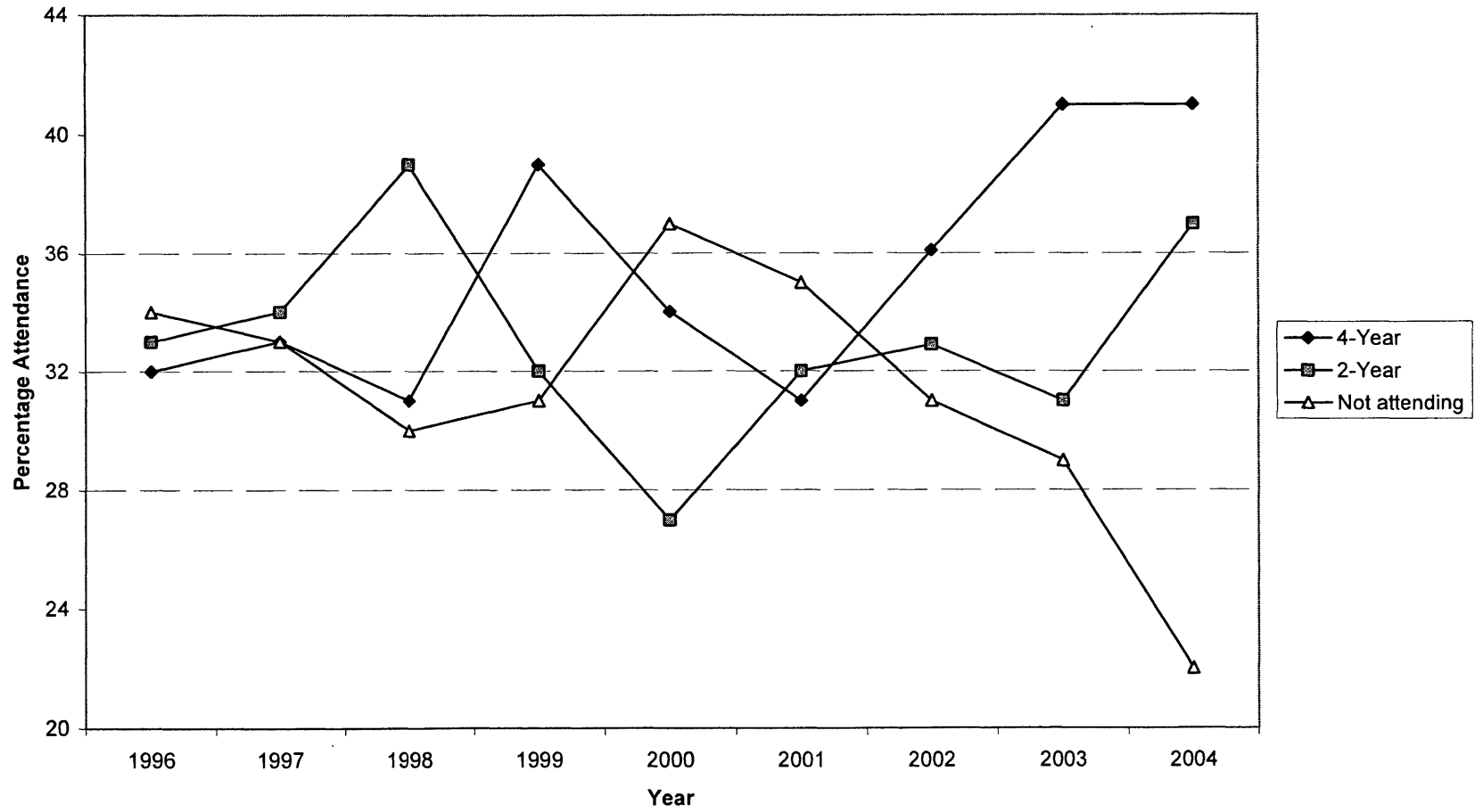


Figure 2.A.2
Racial Composition of Students Not Attending Postsecondary Schooling

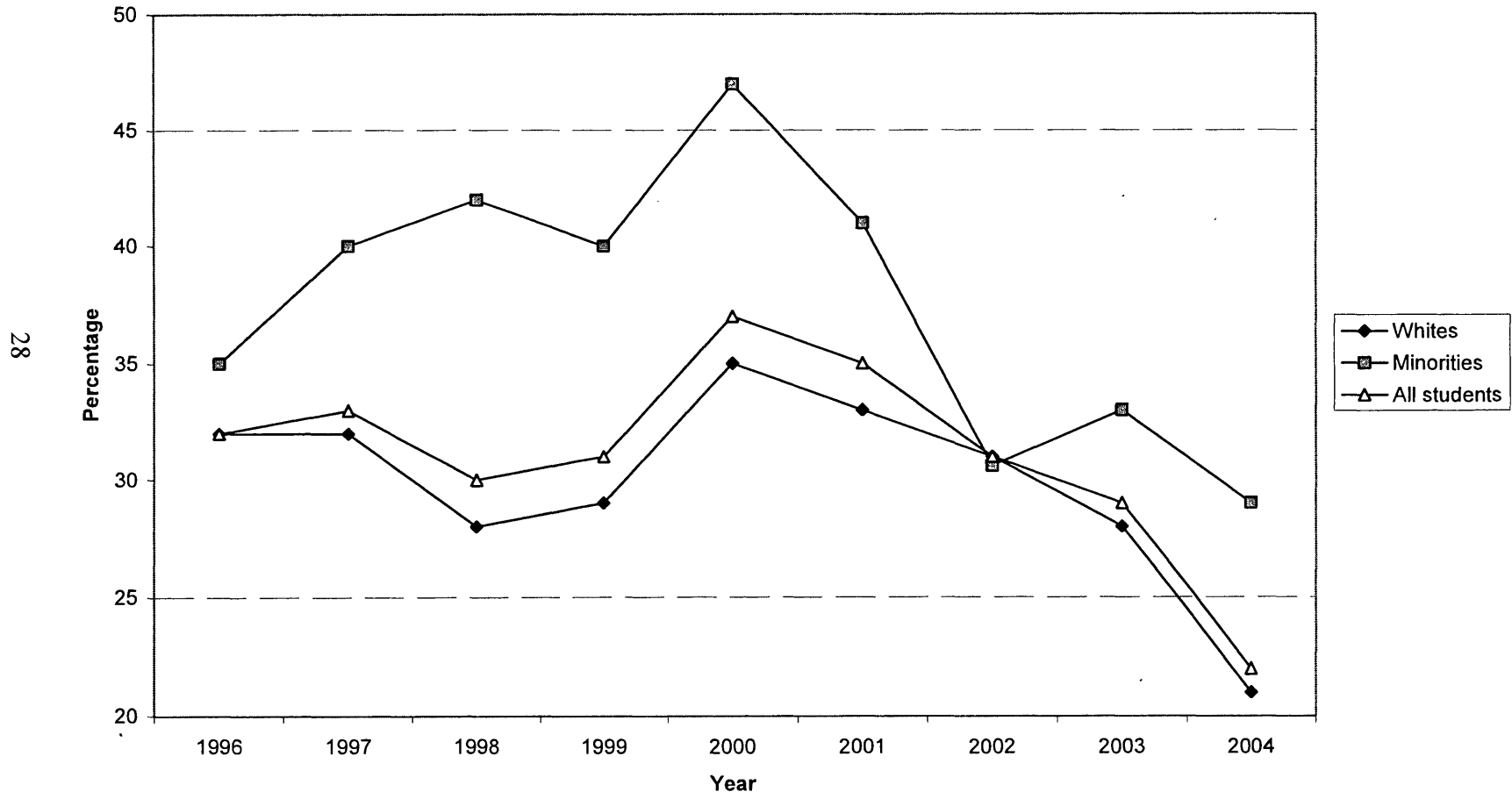


Figure 2.A.3
4-Year Institution Postsecondary Attendance, by Sex

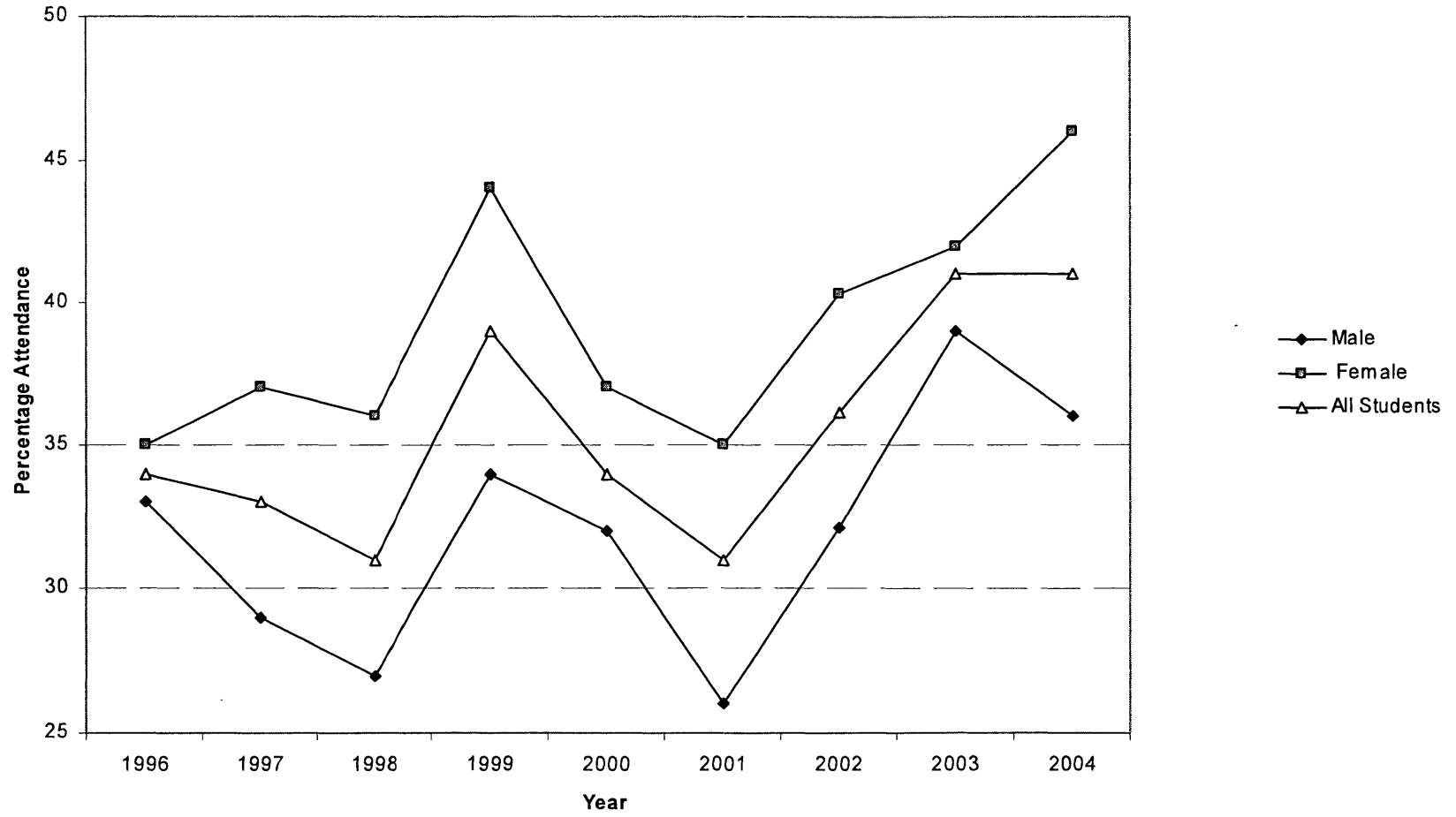


Figure 2.A.4
2-Year Institution Postsecondary Attendance, by Sex

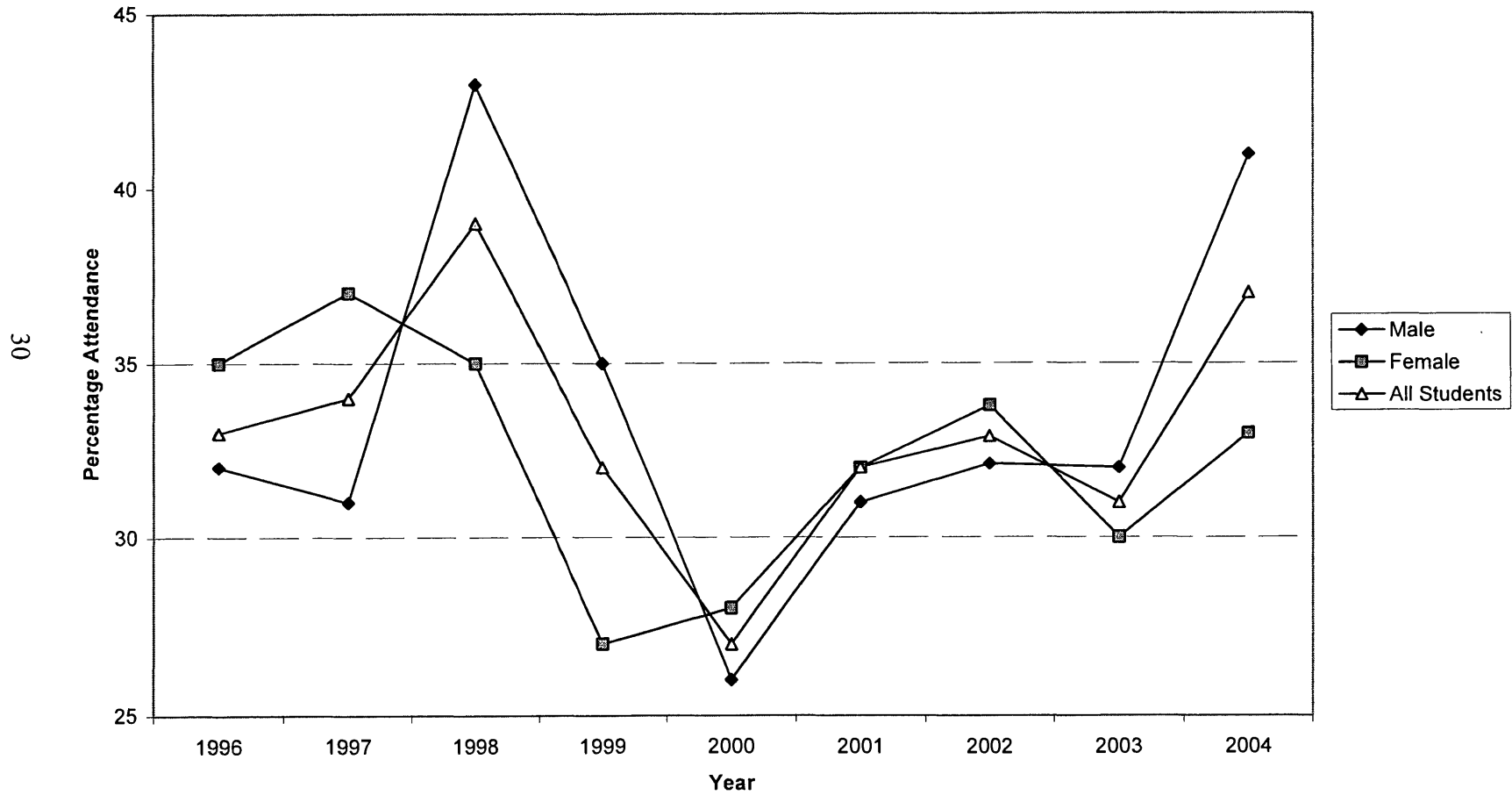


Figure 2.A.5
 Percentage of Students in Postsecondary Schooling who Report their Major/Program is Related to EFE Class(es), By Extent of Relatedness

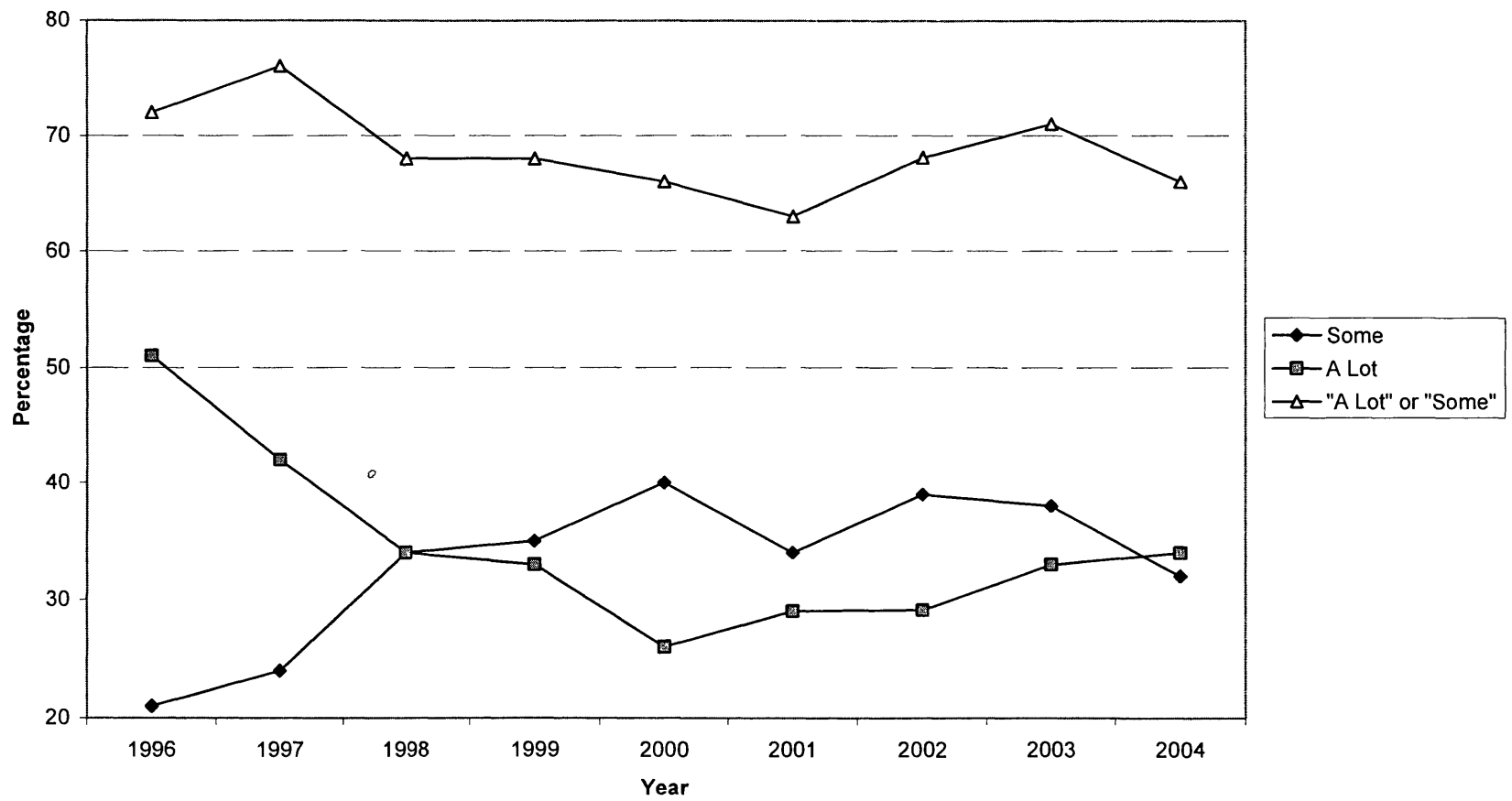


Figure 2.A.6
Employment Rate, By Training Relatedness

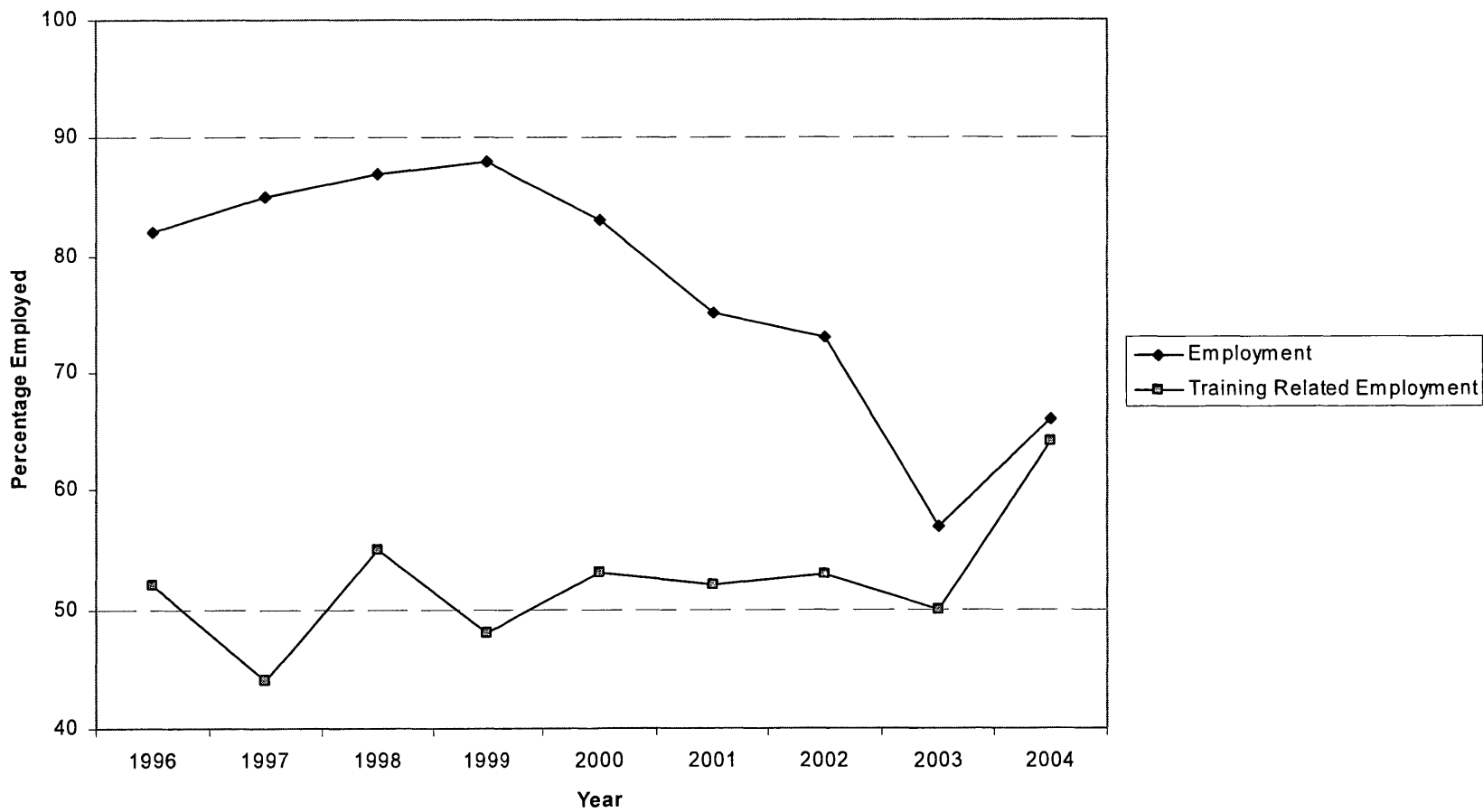


Figure 2.A.7
Unemployment Rate, By Race

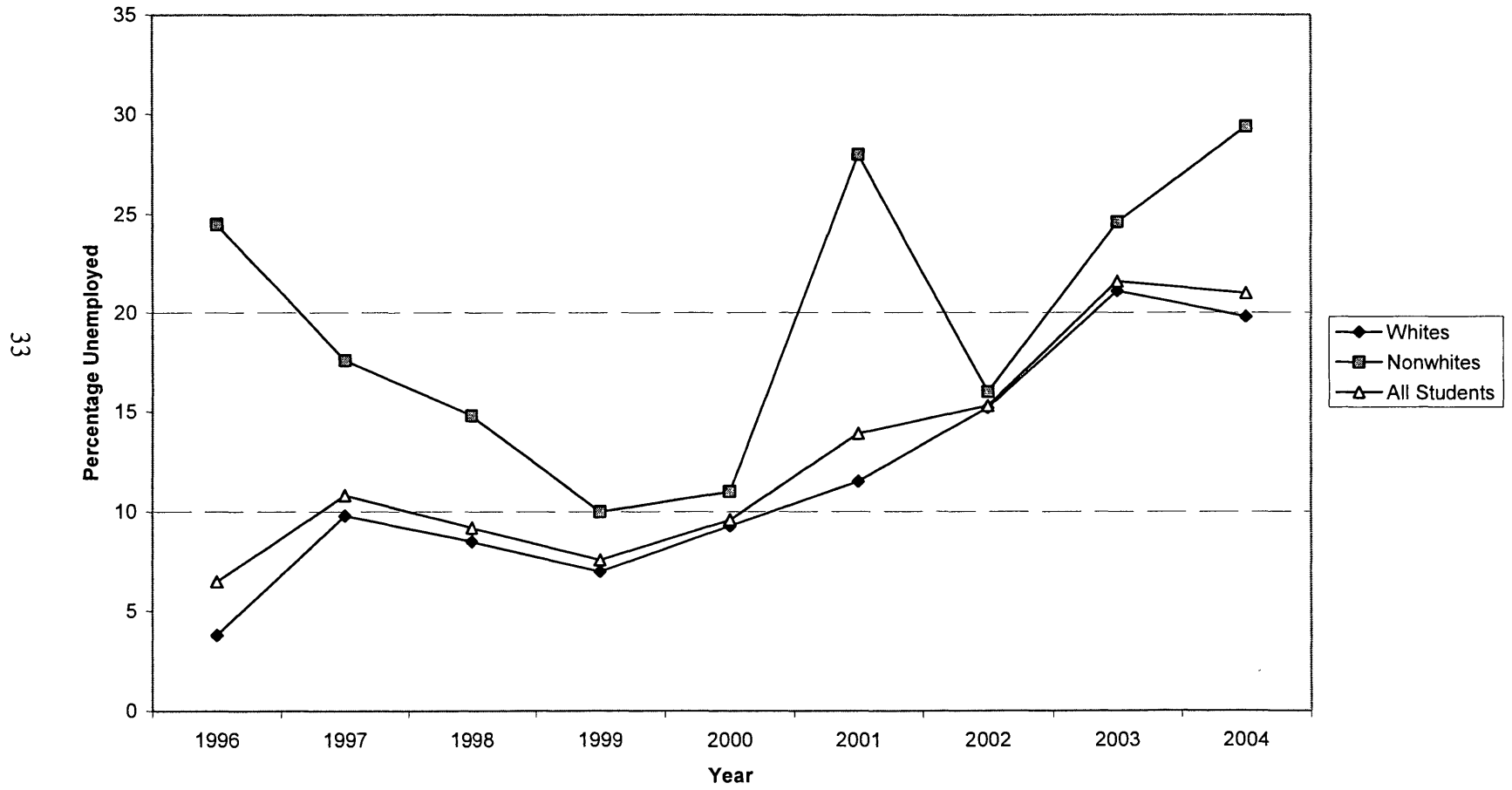


Figure 2.A.8
 Indicators of Satisfaction with Aspects of EFE Classes:
 Percentage Agreement or Disagreement with Descriptive Items

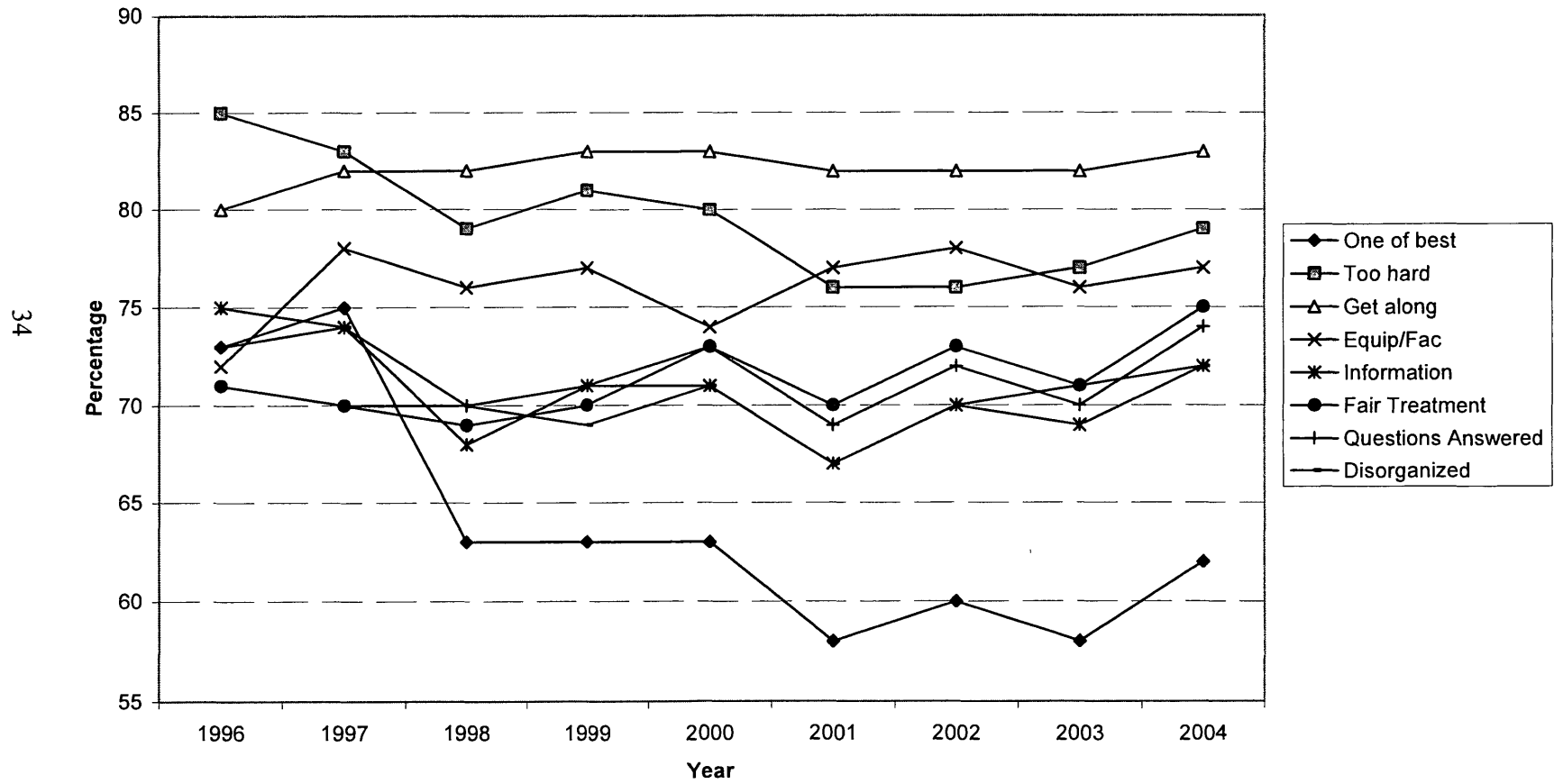


Figure 2.A.9
Participation in Work-Based Program Experiences, By Sex

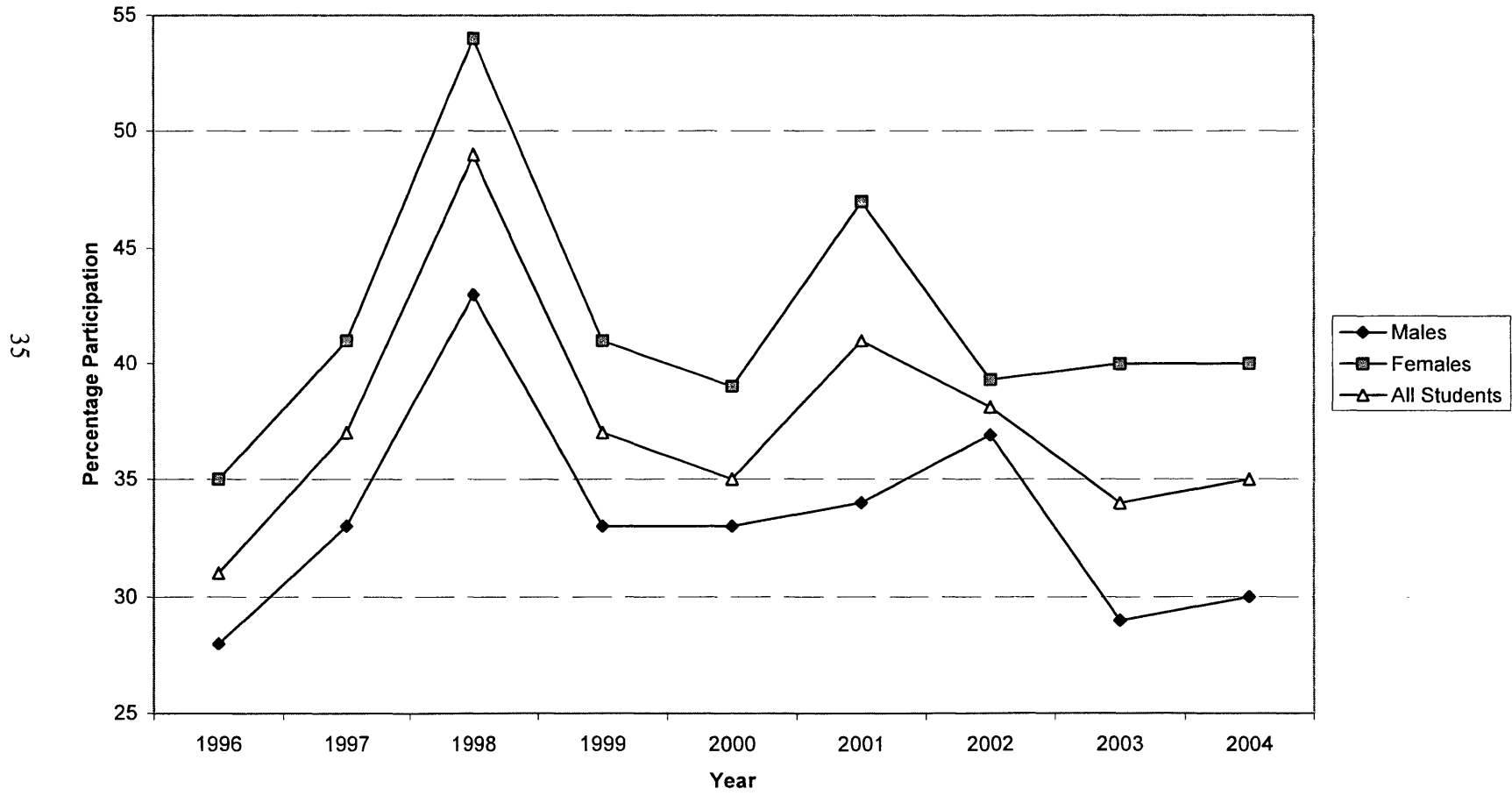
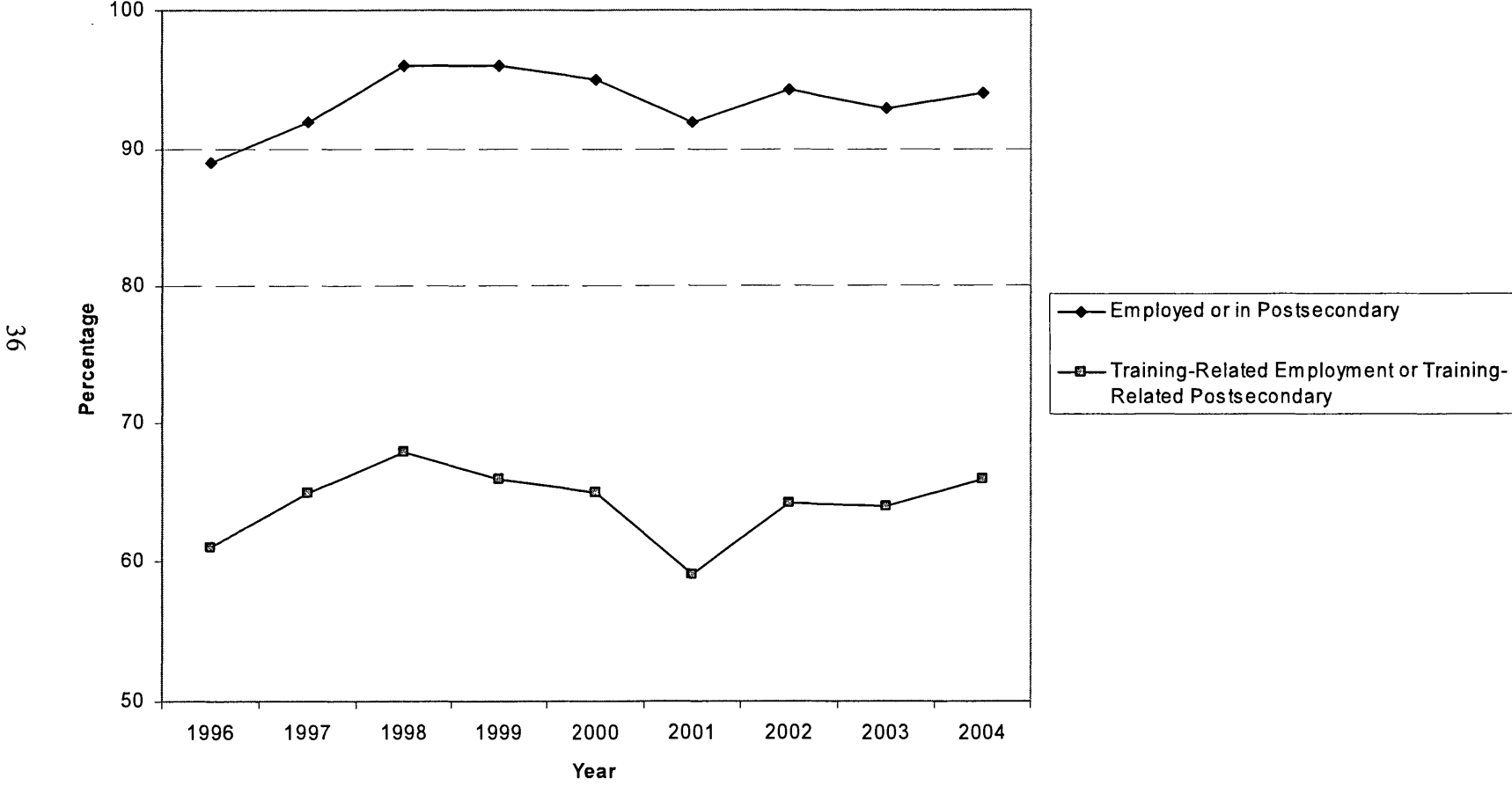


Figure 2.A.10
EFE Performance Outcomes, By Type of Outcome



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 55 percent males and 45 percent females, about 77 percent whites and 23 percent nonwhites, and about 19 percent in a work-based program and 81 percent not participating in such an experience. The appendix to this chapter has time series graphs for a number of the statistics presented. Figures 3.A.1–3.A.3 show the trends in gender, race, and work-based program participation. Note that last year's student survey was conducted "experimentally" through online responses, and so the data points for 2003 may be quite different than for other years. The respondents to last year's survey tended to be in their early high school years and in courses that had immediate access to computers.

High School Experiences

Table 3.1 provides summary data about the students' overall experiences in high school. The data are self-reported; none of these data were verified through official transcripts or other records. Furthermore, as chapter one pointed out, only about 70 percent of the students responded to the survey.

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 (percentages):							
Freshman	7.8	9.7	6.0*	18.1*	1.8*	10.5*	9.0
Sophomore	15.3	13.7	14.2	15.3	2.8*	17.0*	14.4
Junior	34.8*	29.1*	33.0	29.9	21.3*	34.8*	32.4
Senior	42.1*	47.5*	46.8*	36.7*	74.1*	37.7*	44.3
Homework (avg. hours)	1.9*	2.5*	2.1*	2.4*	2.0	2.2	2.1
High school grade (gpa)	2.93*	3.22*	3.12*	2.83*	3.17*	3.04*	3.05
High school activities (avg. no. of)	1.8*	2.5*	2.1	2.0	2.2*	2.0*	2.1
Tardies (avg. no. of)	6.4*	5.6*	5.6*	7.5*	5.6	6.2	6.1
Absences (avg. no. of)	5.1	4.8	4.9	5.0	5.3	4.9	5.0
Total percentage	55.3	44.7	77.3	22.7	18.7	81.3	100.0

Note: Sample size is 2,199.

*Difference from other population group is statistically significant at the 0.05 level.

The table shows that about 23 percent of the survey respondents are freshmen or sophomores; about 32 percent are juniors; and the remaining 44 percent are seniors. This percentage distribution exhibits some differences by sex and race. The percentage of females who are seniors is about 5 percent more than for males, and the percentage who are juniors is 5 percent smaller. These differences are statistically significant. Also statistically significant are the 12 percentage point difference between white and nonwhite freshman (6 and 18 percent, respectively) and the 10 percentage point difference in seniors (47 and 37 percent, respectively). As would be expected, students with work-based experiences are mainly concentrated in their junior and senior years. The percentage of students who are participating in work-based experiences who are freshmen or sophomores is significantly smaller than their overall share of students. Just under 5 percent of the students with work-based experiences are in 9th or 10th grade.

The overall percentage of EFE students who are freshmen or sophomores—23 percent—is smaller than it was last year, when it was almost 36 percent, but is much more in line with

prior years' data.⁵ Figure 3.A.4 shows the growth in the enrollment of students in grades 9 and 10. Given our concern about the nature of the data from last, we suggest caution in interpreting trends in this figure, however. The 2003 survey overrepresented freshmen and sophomores in all likelihood.

According to the table, respondents average about 2.1 hours of (self-reported) homework per week. Females average over half of an hour more per week than males (2.5 to 1.9), which is statistically significant. Nonwhites average almost a half hour more than whites (2.4 to 2.1). The difference between students in a work-based program and those not in a work-based program is not statistically significant. The students were asked about how many extracurricular activities they engage in. On average, the students indicate that they are involved in 2.1 activities. Females report being engaged in more activities than males (2.5 to 1.8), but there are no differences in the number of activities between whites and nonwhites, nor between students who are in a work-based program and those who are not.

The average (self-reported) grade point average in the sample is 3.05 (B). Among the groups, females, whites, and students in work-based programs report a higher grade point average than their counterpart population groups. These averages are quite similar to last years' grade point averages; just a little bit higher. 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 are 6.1 tardies and 5.0 days of unexcused absences. The average number of tardies increased considerably from last year (5.5 to

⁵ Recall that last year's survey was conducted entirely through the Internet and was biased toward earlier high school classes and classes with computer access, such as BMT.

6.1), and the average number of unexcused absences also increased significantly (4.6 to 5.0). (Assuming there are about 180 days of instruction, the average number of unexcused absences works out to about 2.7 percent.) Females report less tardiness than males (5.6 instances, on average, as compared to 6.4), and whites report less tardiness than nonwhites (5.6 versus 7.5).

We assume that the extremely low levels of tardiness and absences that were observed last year resulted from the survey methodology, so the large increase this year may simply be an artifact of the particular respondents to the survey. In fact, the tardiness and absence rates are lower than any year previous to 2003. As shown in figure 3.A.6, both outcomes have downward trends, with only a couple of exceptions.

EFE Enrollment Decisionmaking

Students were asked 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 table has two panels: the top panel of the table presents data concerning sources of information about the students' EFE course selections, whereas the bottom panel presents data about individuals who provided assistance in making course selections. The entries in both panels of the table are composed of two numbers. The first represents the proportion of the respondents who report that they use 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 them. For example, the first entry in the table is 0.54/0.29. This means that 54 percent of the males report that guidance counselor advice was a source of information about their EFE class, and that 29 percent of the

males indicate that guidance counselor advice was among the most important sources of information. (Asterisks indicate that the percentage for one group is a statistically significant difference from the percentage for the other group.)

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	
<u>Information Source Used/Most Important</u>							
Guidance counselor advice	0.54*/0.29*	0.65*/0.40*	0.59/0.34	0.61/0.35	0.67*/0.41*	0.57*/0.33*	0.59/0.34
Poster	0.04/0.01	0.04/0.01	0.03*/0.01*	0.07*/0.02*	0.04/0.01	0.04/0.01	0.04/0.01
Academic subject teacher	0.22*/0.11*	0.17*/0.08*	0.20/0.10*	0.19/0.07*	0.21/0.10	0.19/0.09	0.20/0.09
Technical ed. teacher	0.09/0.03	0.10/0.03	0.08*/0.03	0.13*/0.04	0.08/0.03	0.10/0.03	0.10/0.03
Brochure	0.32*/0.15	0.43*/0.17	0.38/0.17*	0.35/0.12*	0.34/0.14	0.38/0.16	0.37/0.15
High school handbook	0.27/0.12	0.27/0.11	0.28/0.11	0.25/0.11	0.36*/0.16*	0.25*/0.11*	0.27/0.11
Friends/acquaintances	0.37*/0.22	0.45*/0.24	0.43/0.26*	0.32/0.14*	0.45*/0.26	0.39*/0.22	0.40/0.23
Brother/sister - family	0.11/0.06	0.14/0.06	0.13/0.06	0.13/0.06	0.09*/0.04	0.13*/0.06	0.13/0.06
EFE staff presentation	0.05*/0.02	0.08*/0.03	0.07/0.03*	0.06/0.02*	0.09*/0.03	0.06*/0.03	0.07/0.03
Employer	0.03/0.02	0.02/0.01	0.01*/0.01*	0.06*/0.03*	0.03/0.02	0.02/0.01	0.02/0.01
Other	0.05/0.02	0.04/0.02	0.04*/0.02*	0.07*/0.03*	0.03/0.02	0.05/0.02	0.05/0.02
<u>Individual Who Assisted/Most Important</u>							
Guidance counselor	0.81*/0.80*	0.90*/0.88*	0.84*/0.82*	0.89*/0.88*	0.92*/0.92*	0.84*/0.82*	0.85/0.83
Academic subject teacher	0.13*/0.02	0.09*/0.01	0.12*/0.02*	0.09*/0.00*	0.14/0.02	0.11/0.02	0.12/0.02
Technical ed. teacher	0.09/0.01	0.10/0.01	0.09*/0.01*	0.13*/0.01*	0.11/0.00	0.10/0.01	0.10/0.01
Other school administrator	0.03*/0.01*	0.02*/0.00*	0.02*/0.00*	0.04*/0.00*	0.02/0.00	0.03/0.00	0.03/0.00
Parent/guardian	0.30*/0.04	0.40*/0.03	0.34/0.04*	0.34/0.02*	0.38/0.01*	0.33/0.05*	0.34/0.04
Friends	0.36*/0.05	0.42*/0.03	0.42*/0.05*	0.27*/0.01*	0.40/0.02*	0.39/0.05*	0.38/0.04
Brother/sister - family	0.08*/0.02	0.11*/0.01	0.09/0.02*	0.11/0.01*	0.08/0.01	0.10/0.02	0.10/0.01
Employer	0.02/0.00	0.01/0.00	0.01*/0.00	0.02*/0.01	0.04*/0.00	0.01*/0.00	0.02/0.00

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 2,199.

*Difference from other population group is statistically significant at the 0.05 level.

The data in the top panel show that the largest share of the students rely on guidance counselor advice for information and for assistance. Almost 60 percent of the respondents note this answer. After guidance counselors, the next most important sources of information are friends/acquaintances, brochures, high school course handbooks, and academic subject teachers. Around a quarter to a third of the students receive information from each of the sources. The statistics after the slashes show that the most important sources of information very much mirror

the overall sources of information. Highest is guidance counselors followed by friends/acquaintances, brochures, and high school handbooks.

The bottom panel of the table shows that the individuals who were seen as assisting in the course taking decisions by the largest share of students are guidance counselors—over 80 percent of responses. The next two highest are friends/acquaintances at 38 percent and parents/guardians at 34 percent. Interestingly, guidance counselors are virtually the only individuals who were chosen as the most important individual. The overall average for the next highest response is only 4 percent.

A number of the differences in the table's proportions among the sex, race, and work-based experience groups are significant. Females report more information sources than males, and in particular, a greater reliance on guidance counselors, friends, and brochures. In both panels of the table, minorities report significantly less reliance on friends/acquaintances both as a source of information and individuals who assisted in the course taking decision. This may indicate underrepresentation of minorities in EFE courses. Students in work-based programs tend to rely more heavily on friends/acquaintances and their high school handbooks than do the students who do not participate in such programs.

Over the years that we have surveyed the EFE students, the data in table 3.2 have changed somewhat. In the early years of the survey (i.e., 1996–1998), the number of information sources that students reported were substantial. But then they dropped significantly around 1999. We attribute that to more familiarity around the county with the EFE programs.

Opinions About EFE Classes

The students were presented with a number of survey items to gauge their opinions about their EFE classes; the items were identical to those used in the follow-up survey of completers (table 2.5). Specifically, the students 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 quality of 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 grades. The first eight rows of the table present the proportion of students who agree or strongly agree with various statements about their EFE class. (Note that some of the questions were worded negatively; and in this case, the indicators represent the percentage of respondents who disagree or strongly

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 . . ."	63	62	66*	53*	73*	60*	62
Disagree/strongly disagree with "This course is too hard . . ."	76*	84*	82*	72*	77	80	79
Agree/strongly agree with "I get along with other students and we work together . . ."	83	84	84	82	86	83	83
Agree/strongly agree with "The equipment and facilities meet the needs . . ."	74*	81*	79*	70*	81*	76*	77
Disagree/strongly disagree with "Not enough information . . ."	69*	76*	75*	65*	72	72	72
Agree/strongly agree with "This course treats everybody fairly . . ."	75	77	77*	71*	71*	77*	75
Agree/strongly agree with "I can get questions answered . . ."	73	75	76*	67*	73	74	74
Disagree/strongly disagree with "This course is disorganized."	70*	76*	74*	68*	72	72	72
Average grade for course quality (converted to 4.0 scale)	3.17*	3.29*	3.29*	3.03*	3.29	3.21	3.22

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 2,199. Approximately 20 cases are missing for each item. Sample size for average letter grade is 2,104.

*Difference from other population group is statistically significant at the 0.05 level.

disagree.) The entries in the columns can be interpreted as indicators of student satisfaction with their classes.

Note that the levels of satisfaction were moderate to high—all ranging between 62 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.” Just over 60 percent of the students agree, with the highest level of agreement from students who are in work-based program experiences. Almost three-quarters of students in work-based programs agree it is one of their best classes in high school, which is statistically significantly different from the responses for students who are not in work-based programs, where 60 percent of the students agree. Also whites have a significantly higher level of agreement with this indicator than do nonwhites (66 percent to 53 percent). The next item asked for agreement or disagreement with the statement, “This class is too hard.” Here, almost 80 percent of the students disagree. A higher proportion of females disagree than do males, and a higher proportion of whites disagree than nonwhites. It should be recognized that students would disagree with this statement if they feel that the class is too easy or if they feel that the pace and level are 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 agree with this statement. No follow-up questions to explore the students’ reasons for answering the items one way or another were asked, so we cannot explain differences with certainty. Note that none of the subgroups differ from each other for this indicator. The next item is intended to measure student opinion about the equipment and facilities in the classrooms and work sites. The item

was phrased, “The equipment and facilities meet the needs of the course.” Overall, over three-quarters of the students agree with this statement—females higher than males, whites higher than nonwhites, and work-based program participants higher than their counterparts not in such programs.

The next survey item asked students whether they thought enough information about the course had been given to students and families. Overall, just over 70 percent of the students are satisfied; females report higher satisfaction levels than males, and whites report higher satisfaction than nonwhites. Next, the battery of opinion items asked about whether everyone was treated fairly in the course. Exactly three-quarters of the respondents are satisfied, with whites and students **not** in work-based programs reporting higher levels of satisfaction. Students next indicated their agreement with the statement, “I can get questions answered easily in this class.” The results are quite similar to the previous question; overall, about 75 percent of all respondents in the sample are satisfied, but the level of agreement is lower for nonwhite students. The last indicator is disagreement with the statement that, “This course is disorganized.” Just over 70 percent of all the population groups disagree with the statement. The level of disagreement is higher for females than males and for whites than for nonwhites.

The average grade for course quality is given in the bottom row of the table. The sample average of 3.22 indicates that, all in all, students are quite satisfied with their classes. Significant differences in this average exist for females (3.29) as compared to males (3.17), and for whites (3.29) as compared to nonwhites (3.03).

In general, the trends in the EFE class satisfaction indicators over the eight-year period of data are rather flat. Most of the indicators shown in figure 3.A.7 change little over the time

period, although one of the indicators has trended downward—“one of the best.” This year brought about somewhat of a rebound for this indicator as it moved up from 58 to 62 percent. Figure 3.A.8 shows the averages for course quality grades, by race and sex, which increased somewhat this year, except for nonwhite students.

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 2,200 students responded to the survey, so the potential number of best aspects and worst aspects that could have been named was over 6,500. In fact, almost 4,400 positive aspects are named and about 2,900 worst aspects are named. This, in itself, is a good sign. Respondents could more easily name positive characteristics than negative ones.

Table 3.4
EFE Class Best and Worst Aspects

Aspect	Number of times mentioned	Percent
<u>Best Aspects</u>		
Equipment	366	8.3
Books/software	554	12.6
No homework/tests	217	4.9
Specific teacher	634	14.4
Work-based learning	301	6.8
Skills, experience	1,045	23.7
College usefulness	154	3.5
Hands-on	440	10.0
Other students	347	7.9
Nothing		—
Total (except “Nothing”)	4,412	100.0
<u>Worst Aspects</u>		
Equipment problems	271	9.3
Books/software	286	9.8
Too difficult	162	5.6
Too easy, boring	456	15.4
Too much work	573	19.7
Student:teacher ratio	224	7.7
Specific teacher/staff	79	2.7
Schedule problems	180	6.2
Class environment	109	3.7
Classmates	145	5.0
Other	112	3.8
Unfair	317	10.9
No worst comments	472	—
Total (except “No worst”)	2,914	100.0

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

Among the best aspects, students suggest most often the “real world” skills and experiences they are learning. Also mentioned a significant number of times is a specific teacher or staff person, followed by the books/software used and “hands-on” instruction.

On the other side of the ledger—i.e., worst things about the course—the item that was mentioned most often was “too much work.” Next was “too easy/boring,” and finally, “unfair treatment” and problems with books or equipment.

Work-Based Program Experiences

Table 3.5 shows that about one-fifth of the sample (19 percent) report that they participate in a work-based program experience. The percentages differ considerably by sex. Males report lower participation than females—14 percent to 25 percent. Figure 3.A.9 displays trends in participation rates by race and sex, and it shows that it has usually been the case that females have higher participation rates.

Table 3.5
Work-Based Program Experiences

Characteristic	Sex		Race		Total
	M	F	W	NW	
<u>Participation</u> (n = 2,104)	14*	25*	19	17	19
<u>If Participated:</u>					
Paid? (n = 375)	51*	35*	41	46	41
Average wage (n = 141)	\$7.84	\$7.14	\$7.43	\$7.63	\$7.42
Average hours (n = 318)	13.5*	10.6*	11.3	13.8	11.9
Strongly disagree/disagree with “Work is unrelated to course. . .” (n = 365)	57	66	66*	46*	62
Agree/strongly agree with “Mentors are supportive and answer questions. . .” (n = 354)	78	83	83*	70*	81

Note: Table entries are percentages except for wages and average hours.

*Difference from other population group is statistically significant at the 0.05 level.

Only about 40 percent of the students who participate in a work-based experience receive pay, and on average, the pay is \$7.42 per hour. The proportion of males who are paid for their work-based experience is much higher than the proportion of females. Over 50 percent of males report that they get paid, whereas only 35 percent of females report that they get paid. Figure

3.A.10 shows the trend in the percentage of students in work-based program experiences who received pay, by race. With the exception of a “blip” last year, which may have resulted from the survey design, there has been an almost uninterrupted downward trend in this proportion for both whites and minority students. Prior to 2002, the percentage of students who were paid in their work-based experiences was over 50 percent, but it has dropped below that level since.

The hourly pay for students who get paid is higher for males (\$7.84) than females (\$7.14) and for nonwhites (\$7.63) than for whites (\$7.14), although these differences are not statistically significant. The work-based program experiences average about 12 hours per week, and males work almost three more hours than females on average (13.5 hours to 10.6 hours), and nonwhites work about 2.5 more hours per week than whites.

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. About three-fifths of the students disagree or strongly disagree with the statement that the work experience is “...unrelated to their EFE class.” Note, however, that less than half of the nonwhite students disagree. These percentages are comparable to prior years as shown in figure 3.A.11. The second item asks for agreement with the statement that “...workplace mentors are supportive and willing to answer questions.” Over 80 percent of the sample agree with this statement. For both of these items, males and nonwhites are much less satisfied with the work-based experience than females and whites.

Postsecondary and Career Plans

The next general topic is postsecondary and career plans. Table 3.6 presents summary data about postsecondary plans. A relatively high proportion of students—about one-fifth—report that they plan to pursue an apprenticeship program after high school. A higher percentage of males and nonwhite students report that they are planning on an apprenticeship than females or whites. It is not clear why such a high percentage of students have this aspiration; there may be a misunderstanding about what apprenticeships mean and/or how readily accessible they are.

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 = 2,025)	23*	18*	19*	25*	20	21	21
Postsecondary college, university (including community college) (n = 2,025)							
Yes, right away	72*	88*	81*	74*	85*	78*	79
Yes, after work	13*	5*	9	11	8	10	9
Don't know	9*	5*	7	7	5	7	7
No	6*	2*	4*	7*	3	5	5

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

*Difference from other population group is statistically significant at the 0.05 level.

A large percentage of the students indicate that they are planning to attend a postsecondary institution (including community colleges and four-year colleges or universities). All together, 88 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 report a much higher rate of planning to attend college right after high school than do males—88 percent to 72 percent. Also whites report a higher percentage than nonwhites and students in work-based programs report a higher percentage, although these differences are smaller than the differential by gender. Figure 3.A.12 shows the trends in planned postsecondary attendance rates, by sex.

Note that the differences by sex, race, and work-based program participation are offset somewhat by respondents who indicate that they intend to work first, and then go to a postsecondary program. For example, about 13 percent of males indicate this plan as opposed to 5 percent of females. Still a greater percentage of females have postsecondary aspirations than males—93 percent to 85 percent. About 15 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 7 percent of females did not know or reported that they did not plan to go.

The percentage of students who plan to go on to postsecondary schooling right after high school has generally trended upward in past years, although there was a decline in last year's data. It was 74 in 1996; 73 in 1997 and 1998; 76 in 1999; 77 in 2000; 79 in 2001 and 2002. This year, it was again 79 percent.

Since 1998, we have included survey questions about the importance of and usage of transferable college credits earned while in EFE courses in high school. Table 3.7 presents a summary of these data. Overall, 56 percent of the respondents indicate that they believe that they can receive college credit for their high school EFE class. Seventeen percent believe that they would not be able to receive college credit for their class, and the remaining 27 percent indicate that they do not know. Whites and students in work-based programs are more likely to believe that they could receive college credit than their population counterparts; and just the opposite groups have significantly higher “don't know” responses.

Follow-up questions are asked of the students who indicate that they could earn college credits. These affirmative respondents were asked how many credits they thought they could earn for this course and whether the potential to earn college credit was an important factor in

Table 3.7
Availability and Importance of Transferable College Credit

Characteristic	Sex		Race		Work-based programs		Total
	M	F	W	NW	Yes	No	
<u>Can student receive postsecondary credit for this class?</u> (n = 2,111)							
Yes	55	58	58*	51*	61*	55*	56
No	16	17	17	15	23*	16*	17
Don't Know	28	25	24*	34*	16*	29*	27
<u>If yes:</u>							
College credits earned for this class (average) (n = 732)	3.6	3.4	3.6*	2.9*	2.7*	3.7*	3.5
College credit was important in decision to take this class (n = 1,166)	41*	51*	43*	56*	58*	43*	46
Sources of information on college credit (n = 1,148)							
Guidance counselor advice	33*	45*	38	41	51*	35*	38
Poster	2	3	2	2	2	2	2
Academic subject teacher	65	63	69*	55*	61	65	64
Technical education teacher	6	9	6*	12*	7	8	8
Brochure	11	13	12	10	14	11	12
High school handbook	10*	17*	14	12	14	14	14
Friends/acquaintances	11*	16*	14	10	15	13	13
Brother/sister - family	5	6	5	7	3	6	5
EFE staff presentation	5	5	6	5	6	5	5
Employer	1	1	1	1	1	1	1
Other	4	6	4*	11*	6	5	5
<u>Total college credits earned by end of this year (average)</u> (n = 984)	4.2	4.3	4.4*	3.5*	3.8	4.3	4.2

Note: Table entries are sample percentages, except for average number of college credits.

* Difference from other population group is statistically significant at 0.05 level.

deciding to enroll in the program. A substantial share—just under half—report that this factor had been important in their program enrollment decision in high school. This varies substantially by student characteristics. Higher percentages of females, nonwhites, and participants in work-based programs report that the potential availability of college credits was important in their enrollment decisions than for their population counterparts. The students believe they are able to earn about 3.5 college credits, on average, for the course they are in.

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 are the predominant source followed by guidance counselors.

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. Over 60 percent of the sample list occupations in the following categories: manager/administrator, professional, proprietor/owner, or school teacher. Females, particularly, have set their aspirations in these directions. Fifty-one percent of the females in the sample report that they would like to be in a professional occupation when they reach 30 and another 13 percent want to be a school teacher. The comparable percentages for males are 29 and 3. On the other hand, 18 percent of males aspire to occupations in the category of craftspersons, whereas only 3 percent of women report this aspiration. Figure 3.A.13 shows the trends in the males’ and females’ aspirations to “white collar” and “blue collar” occupations.

Table 3.8
Career Plans and Relevance of EFE Class

Plan/Relevance	Sex		Race		Work-based program		Total
	M	F	W	NW	Yes	No	
<u>Occupational aspiration at age 30</u>							
Clerical	2	3	2	3	4*	2*	3
Craftsperson	18*	3*	12	10	9	12	11
Farmer	2	1	1	2	1	1	1
Manager/administrator	10*	7*	9	6	9	8	9
Military	4*	1*	3	3	1*	3*	3
Operative	2	1	1	2	1	1	1
Professional	29*	51*	37*	46*	37	39	39
Proprietor/owner	5	3	4	3	4	4	4
Protective services	4*	2*	3	3	4	3	3
Sales	4	5	5	2	3	5	4
School teacher	3*	13*	8*	5*	14*	6*	7
Service	2*	5*	3	4	4	4	3
Technician	13*	3*	9	7	6	9	9
Not working	2*	1*	1	2	1	1	1
<u>Agree help decide job</u>	41	40	41	39	51*	38*	41

Note: Table entries are sample percentages. Sample size for occupational aspirations is 2,033. Columns may not add to 100 due to rounding.

*Difference from other population group is statistically significant at the 0.05 level.

The differences across racial groups are not as dramatic. Nonwhites aspire to professional occupations more than white students. The students in work-based programs are more likely to aspire to become teachers compared to non-participants probably reflecting the teacher cadet program.

Current Employment

The last topic covered by the survey is current employment experiences. As table 3.9 indicates, 44 percent of the students indicate that they are currently working for pay apart from any work-based experience that they are having through EFE. Whites and work-based program participants are more likely to be employed (outside of the work-based program) than nonwhites or non-participants. For those with jobs, the average hours of work per week is 15.1, and the average hourly wage is \$7.33. On average, students in work-based programs work almost three more hours per week than nonparticipants—17.2 compared to 14.6, but the differences in average hours by sex and race are not significant. Males earn a higher average wage than females

**Table 3.9
Current Employment Characteristics**

Characteristic	Sex		Race		Work-based program		Total
	M	F	W	NW	Yes	No	
<u>Currently employed?</u> (n = 2,067)	44	44	47*	33*	49*	43*	44
<u>If yes:</u>							
Average hours (n = 853)	15.4	14.7	15.0	15.3	17.2*	14.6*	15.1
Average pay (n = 845)	\$7.67	\$6.93	\$7.13*	\$8.44*	\$7.68	\$7.26	\$7.33
Use training from EFE class? (n = 884)							
A lot	8*	14*	11	10	16*	9*	11
Some	27	31	29	30	27	29	29
Hardly any	24	23	23	29	27	24	24
Never	41*	31*	37	32	29*	38*	36

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

*Difference from other population group is statistically significant at the 0.05 level.

on average—\$7.67 to \$6.93—although this difference is also not statistically significant. On the other hand, nonwhites do have a significantly higher average wage—\$8.44 to \$7.13.

Since 1996, the percentage of students who are employed has declined, from 60 percent to 56 percent to 54 percent in both 1998 and 1999 to 53 percent in 2000 to 50 percent in 2001 to 46 in 2002 and to 44 percent this year. (See figure 3.A.14, which displays this trend and the trend by race and by sex.) The average hours per week for employed students has also declined from 18.7 to 18.2 to 17.7 to 17.8 to 16.6 to 17.1 to 15.5, and now to 15.1. In other words, there has been a strong downward trend in the amount of (part-time) employment—both the percentage of students working and the hours per week that they work. On the other hand, hourly wages have risen over this period of time—from \$5.35 to \$7.33.

We asked the students whether they are using the training that they receive through their EFE course in their current job (noting that the employment is part-time and not class-related.) Two-fifths (40 percent) of the students who are working indicate that the skills and training they receive in their EFE class are somewhat useful or useful “a lot” on their part-time jobs. The other students report that they use “hardly any” of the EFE skills and training or none at all. Indeed, over one-third of the students indicate that they never use their EFE training. The percentages of “never using” are highest for males and for students not in a work-based program.

Summary and Trends

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

- The average EFE student has a (self-reported) 3.05 (B) grade point average (GPA), participates in 2.1 extracurricular activities per year, and does about 2.1 hours of homework per week. The long-term trend in average (self-reported) GPAs of students is slightly upward. The long-term trend in tardiness and unexcused absences is slightly

downward. On average, EFE students self-report that they are tardy an average of 6.1 times per year and have 5.0 unexcused absences per year.

- The composition of current EFE students by gender and race seems quite balanced. The percentage of students who are freshmen or sophomores seems to have stabilized at around 25 percent.
- Almost 20 percent of students report that they participate in a work-based program experience. This percentage seems to have declined slightly over time.
- The most important sources of information for students about EFE classes are guidance counselor advice, brochures, academic teachers, handbooks, and friends/acquaintances. The individuals who were mentioned most often as assisting students were guidance counselors, friends, and parents/guardians.
- All nine indicators of student satisfaction with EFE classes increase this year. The overall grade for course quality is 3.22.
- However, there are significant differences between the student characteristic groups. Males rate 8 out of 9 categories lower than females (in four cases, the differences in rates are statistically significant). Nonwhites rate all 9 categories lower than whites (8 differences are significant). The difference in the grade for course quality between whites and nonwhites is 3.29 compared to 3.03.
- The long-term trends in participation in a work-based program and percentage of participants who receive pay in such a program are downward. Overall, 19 percent of the students participate in such a program and 41 percent get paid. Contrast that with 1998, when 26 percent of students participated in a work-based program and 62 percent got paid. For those who do get paid, the wage rates are slightly higher than in the past.
- There is an increase in the percentage of students who participate in work-based programs who agree that there is a connection to their course work in EFE and that workplace mentors are “supportive and answer questions.”
- The long-term trend in the percentage of students who plan to attend a postsecondary institution either right after high school, or after working for a few years, is upward. Eighty-eight percent of students have that aspiration—79 percent report that they plan to attend right after high school and 9 percent report that they plan to attend after working for a few years. The planned rate of attendance is higher for females; almost 90 percent plan to attend a postsecondary college right after high school compared to 72 percent for males.
- Under 60 percent of the students indicate that they believe they could receive direct or transferable college credit for their EFE class. About one-third of the rest of the students

report that they cannot get credit and the remainder do not know. Among the students who believe that they are eligible for college credit, about 46 percent indicate that such potential credit was an important reason for enrolling in the EFE class. On average, the students thought they could earn 3.5 college credits for the class that they were in.

- Similar to data from prior years, there is a skewed distribution for occupational aspirations. Over 60 percent of the students (much higher for females) aspire to be in a white collar occupation when they reach age 30. Half of the females aspire to be in professional/technical occupations compared to 29 percent for males. Males, on the other hand, aspire to craftsperson and technician occupations.
- Current employment, other than in work-based programs affiliated with EFE, has gone down over time. About 44 percent of students indicate that they are holding a part-time job. Also, the average weekly hours has decreased over time, having dropped about 25 percent since 1996. On the other hand, average hourly wages have increased steadily. Among the students who work, 40 percent indicate that they use their EFE training in their part-time jobs and 36 percent report that they “never” use their EFE training in their current job (especially high for males—41 percent—and students not participating in work-based programs—38 percent).

Appendix:
Time Series Graphs of Characteristics
and Experiences of Current Student

Figure 3.A.1
Gender Composition of Student Enrollment



Figure 3.A.2
Racial Composition of Student Enrollment

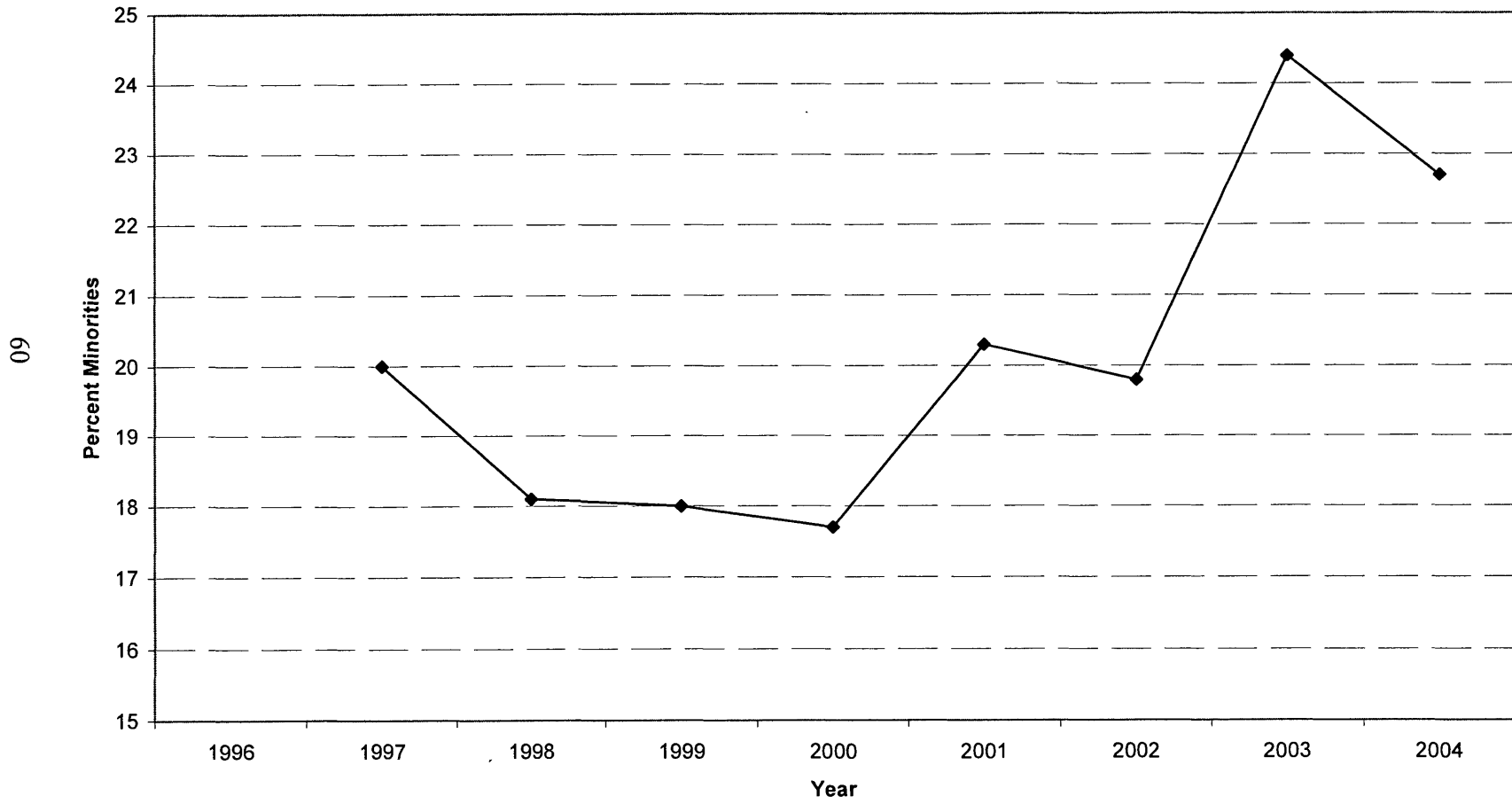


Figure 3.A.3
Participation in Work-Based Programs



Figure 3.A.4
Enrollment of Students in Grades 9 and 10

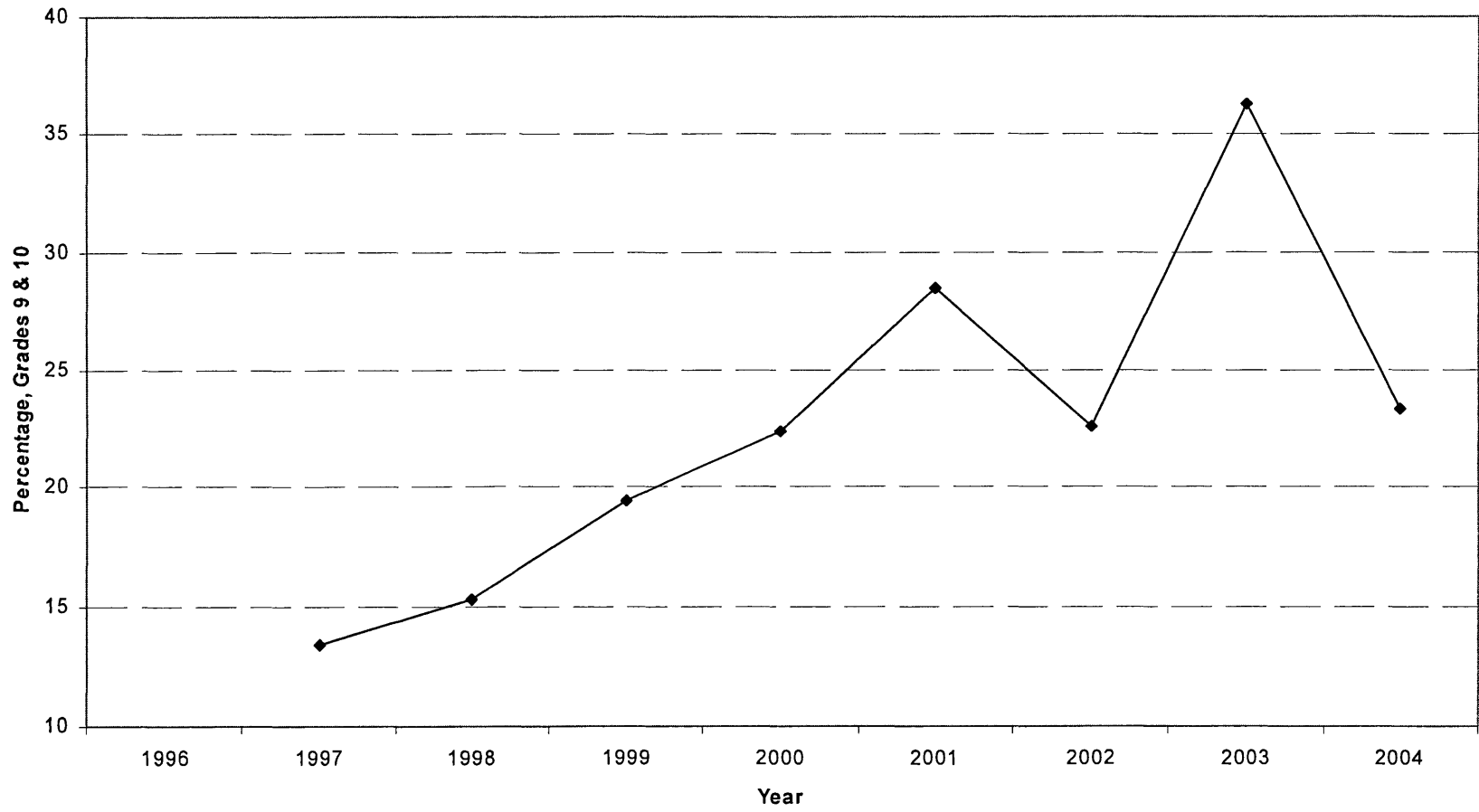


Figure 3.A.5
Average GPA's, By Race and Sex

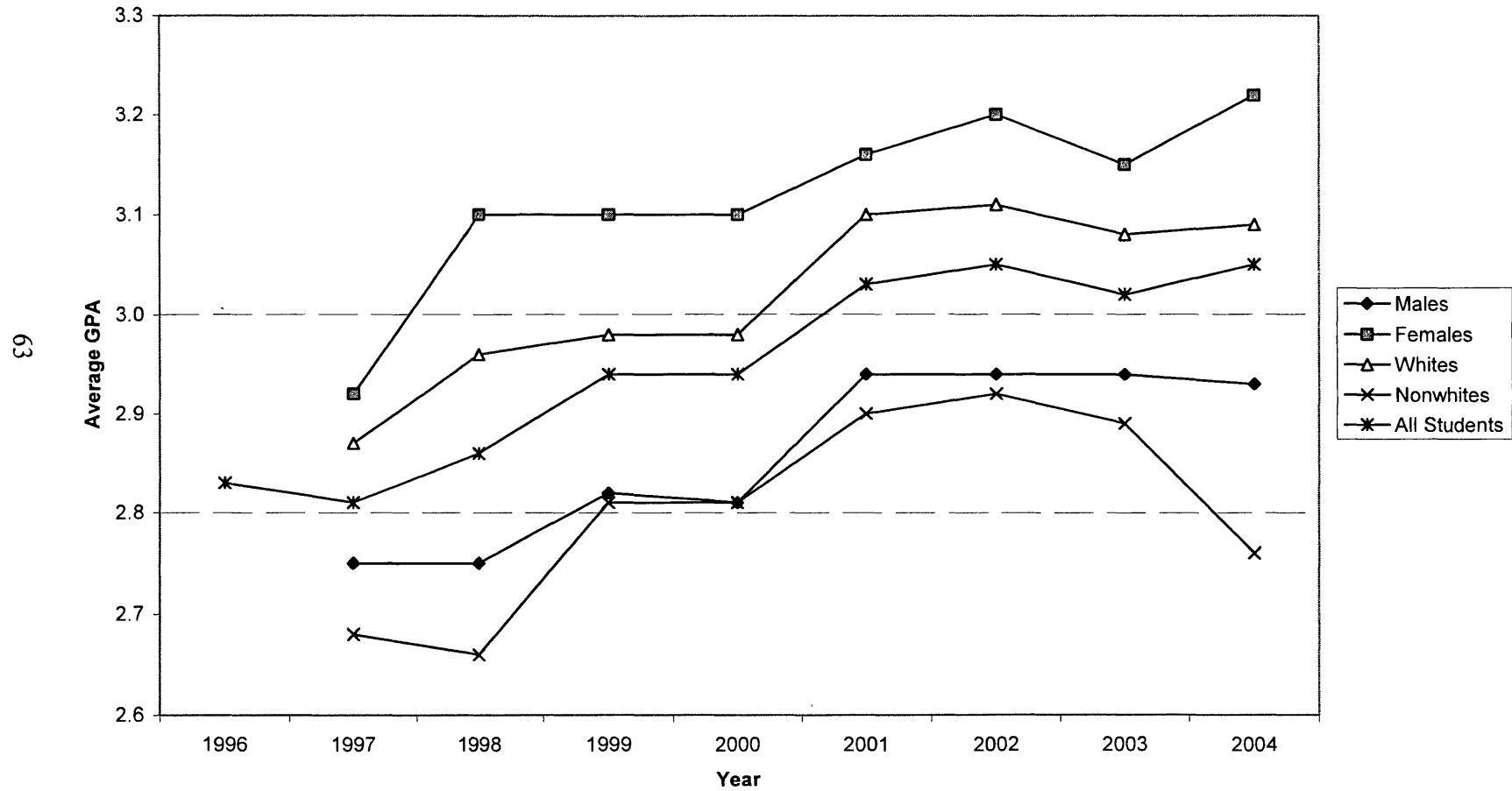


Figure 3.A.6
Average Number of Incidents of Tardiness and Unexcused Absences

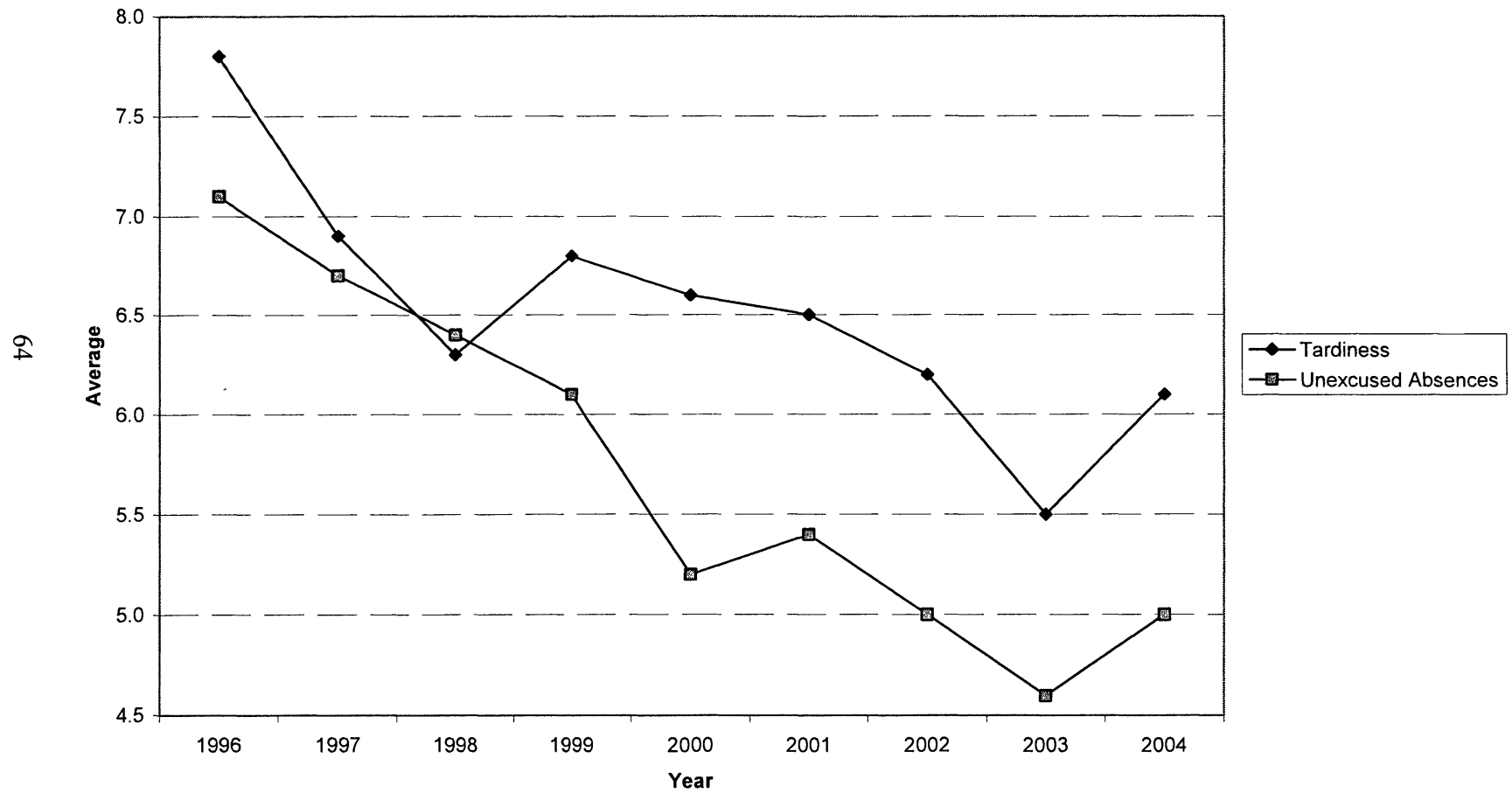


Figure 3.A.7
Indicators of Satisfaction with Aspects of EFE Classes:
Percentage Agreement or Disagreement with Descriptive Items

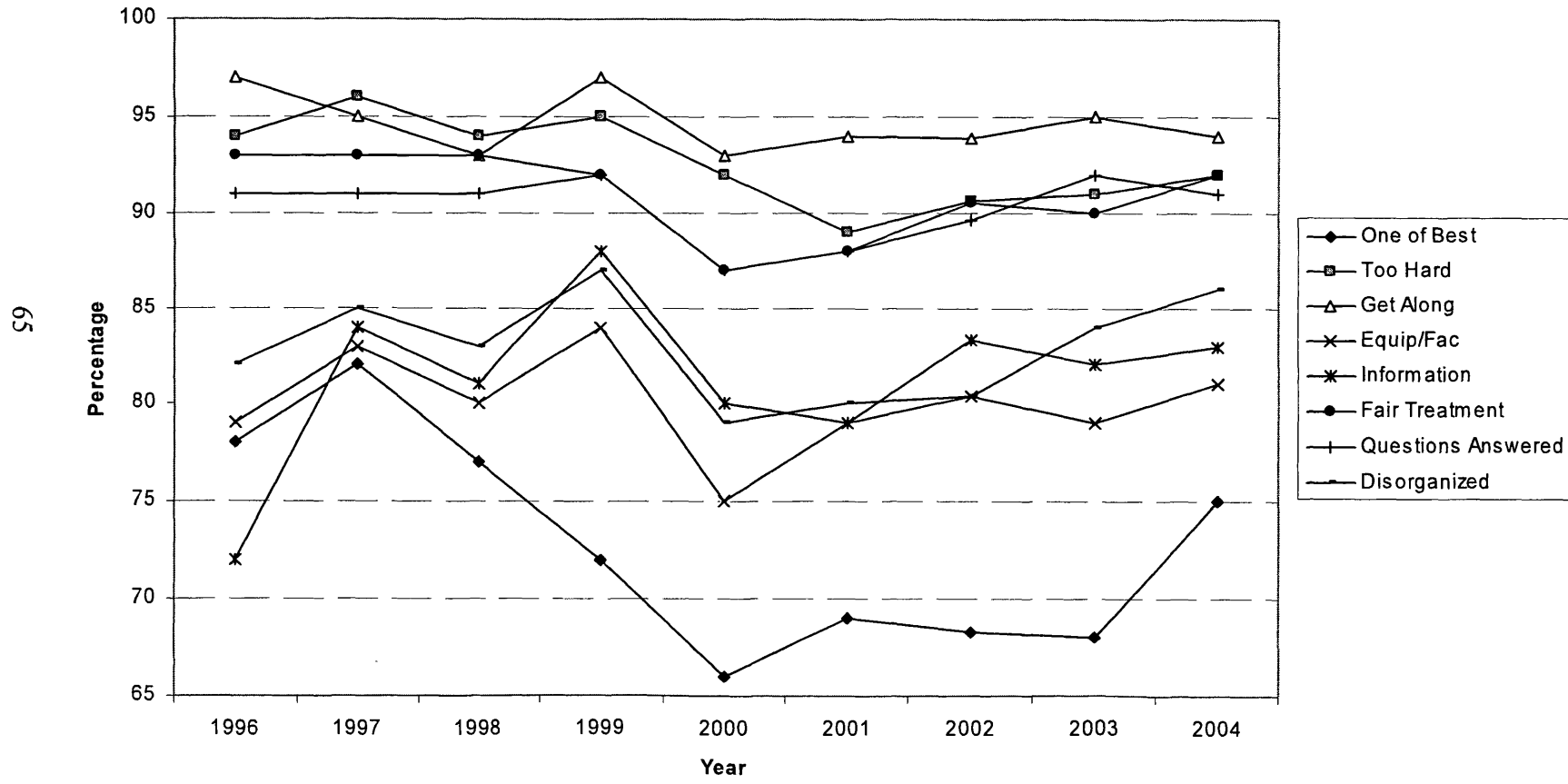


Figure 3.A.8
Student "Grades" for Course Quality, By Race and Sex

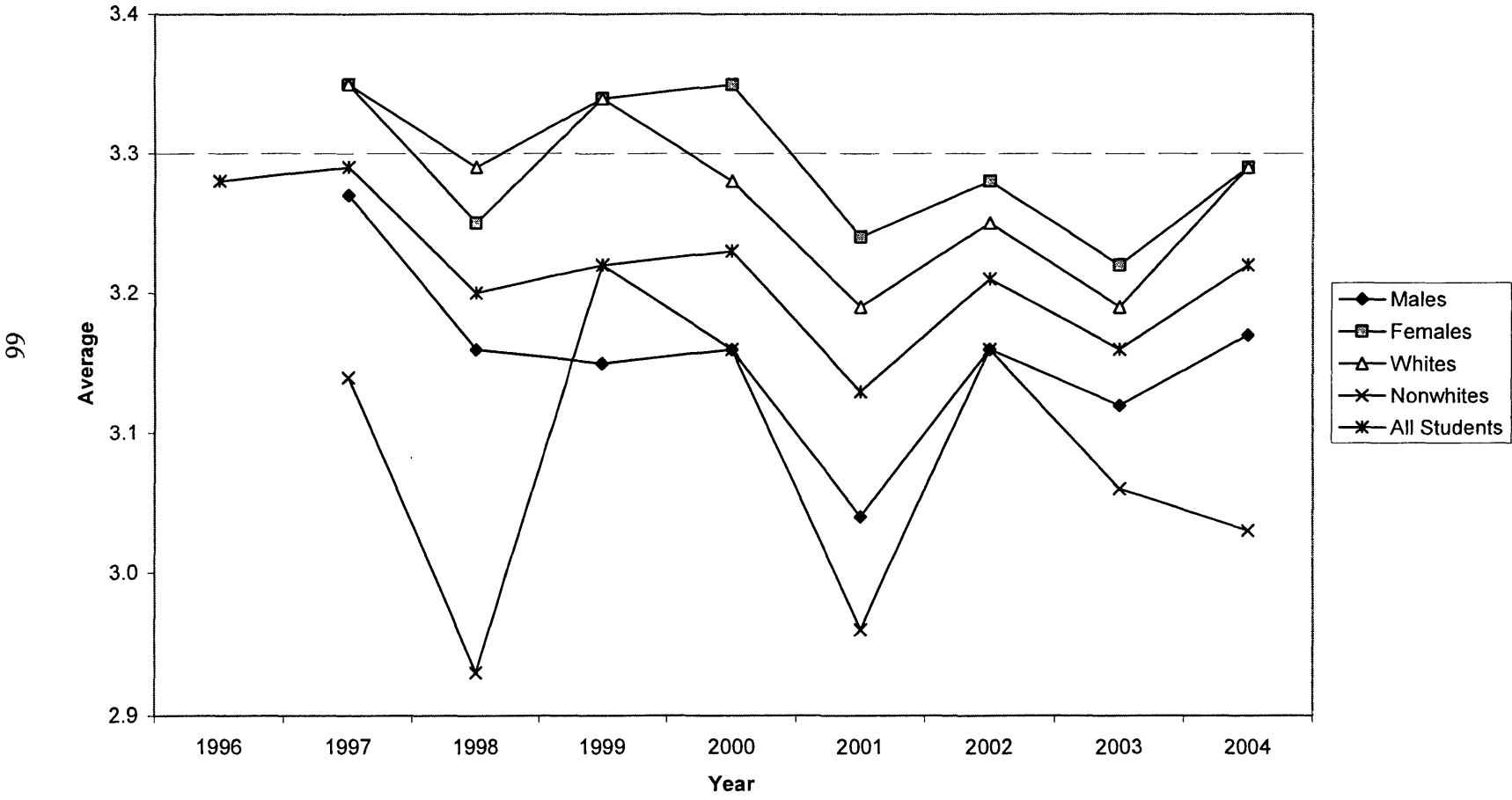


Figure 3.A.9
Participation in Work-Based Program Experiences, by Race and Sex

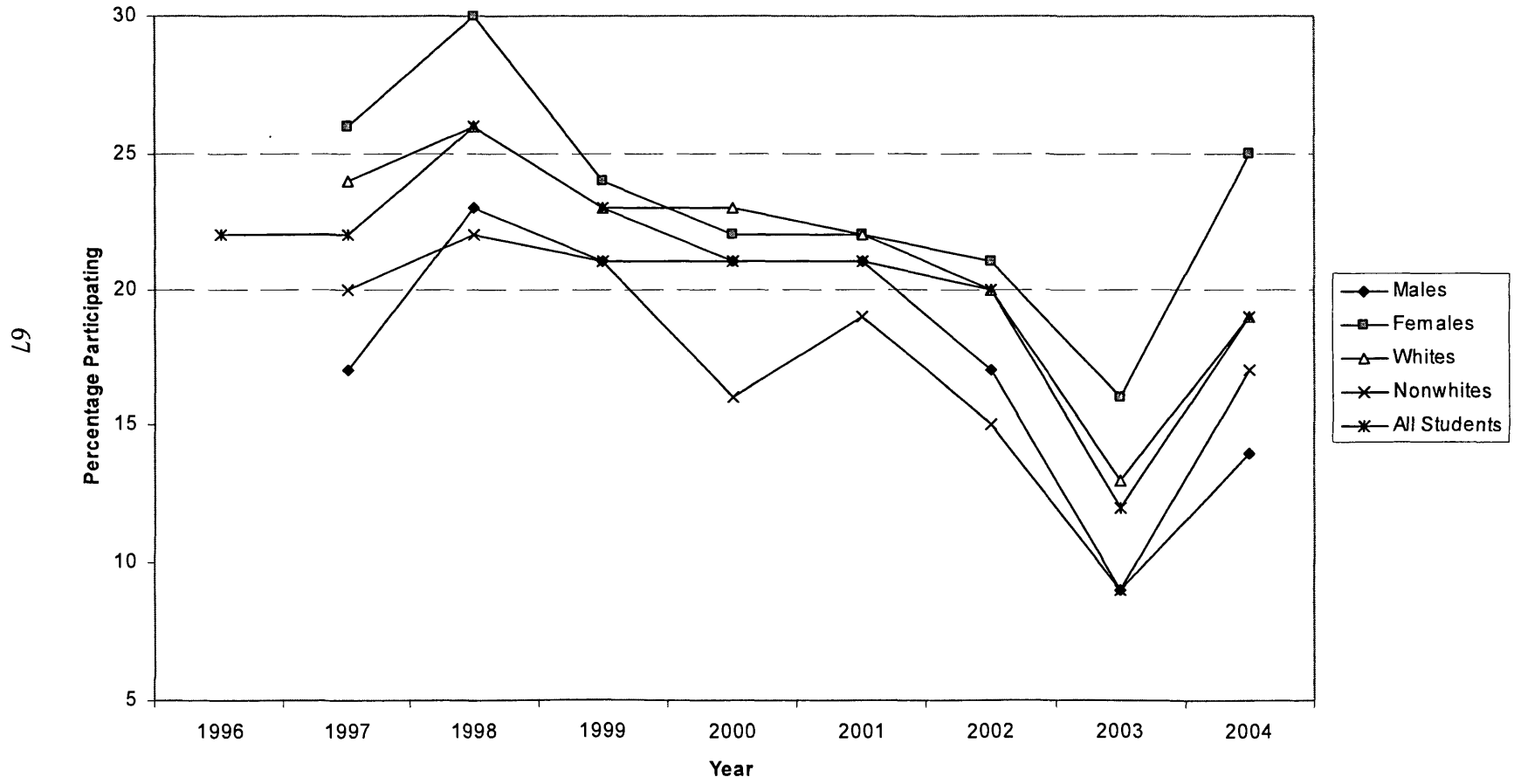


Figure 3.A.10
Percentage of Students in Work-Based Programs Receiving Pay, By Race

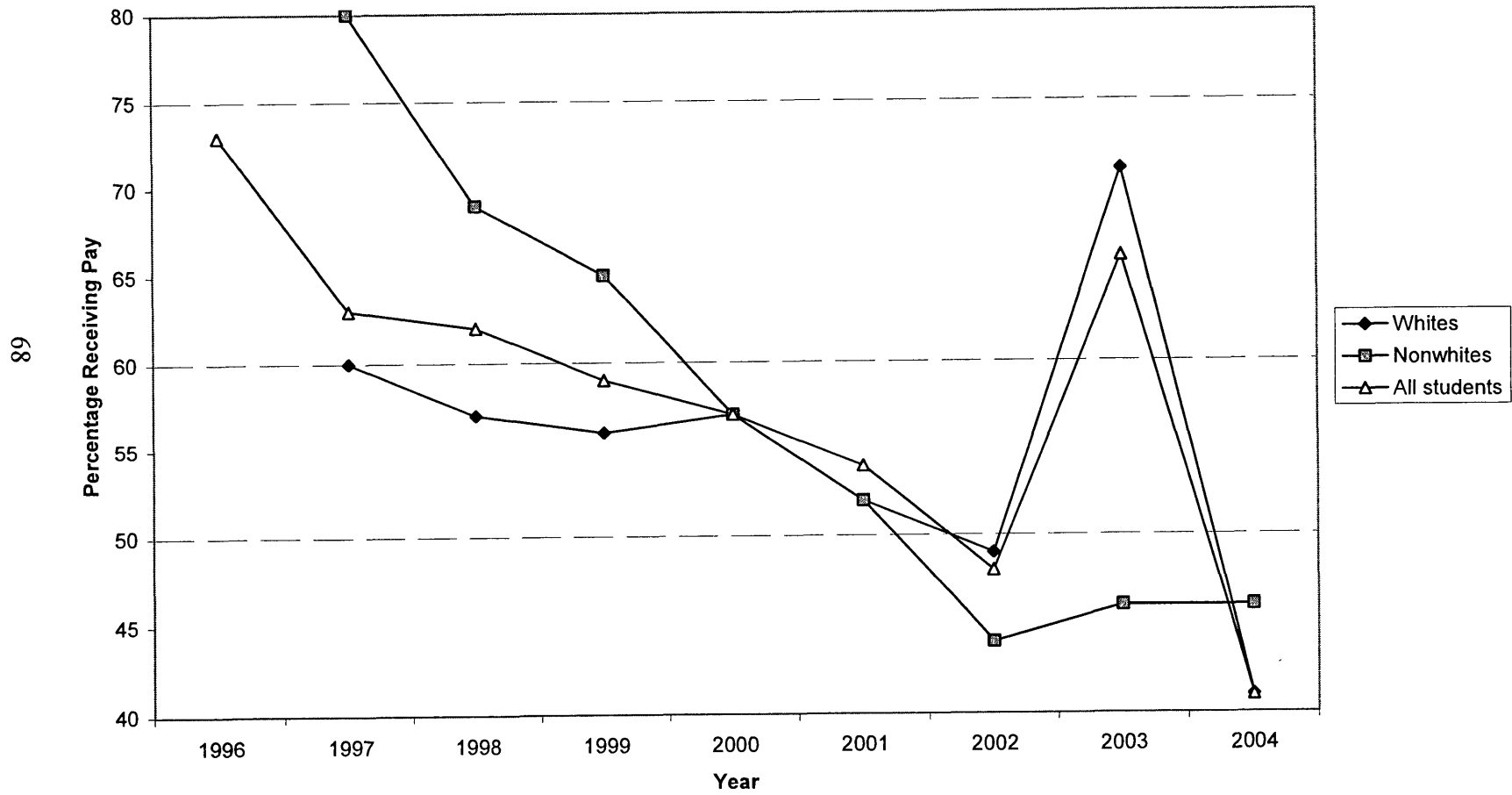


Figure 3.A.11
Percentage of Participation in Work-Based Programs
who Report Experience Related to EFE, By Race and Sex

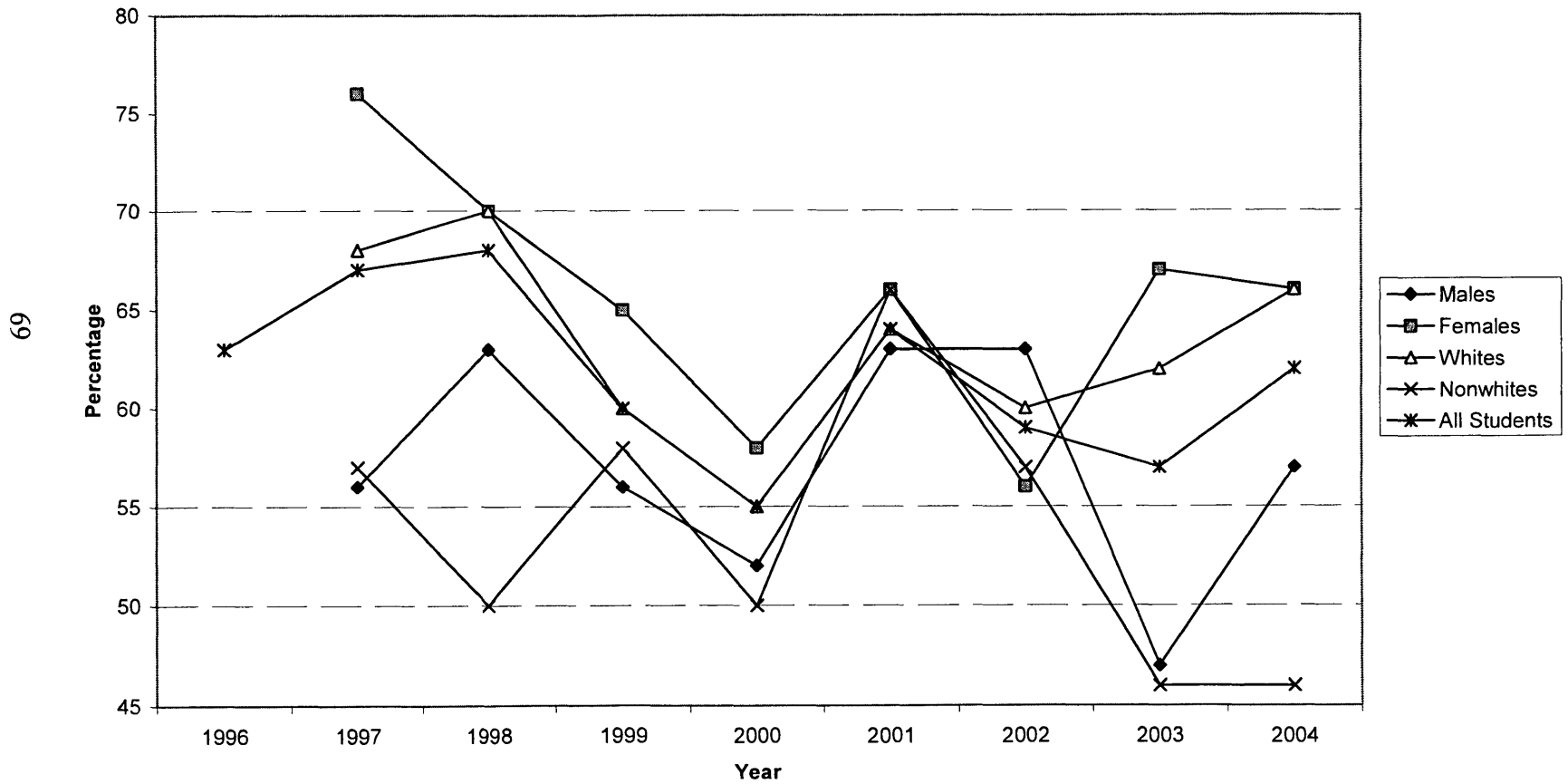


Figure 3.A.12
Planned Postsecondary Attendance Rate, By Sex

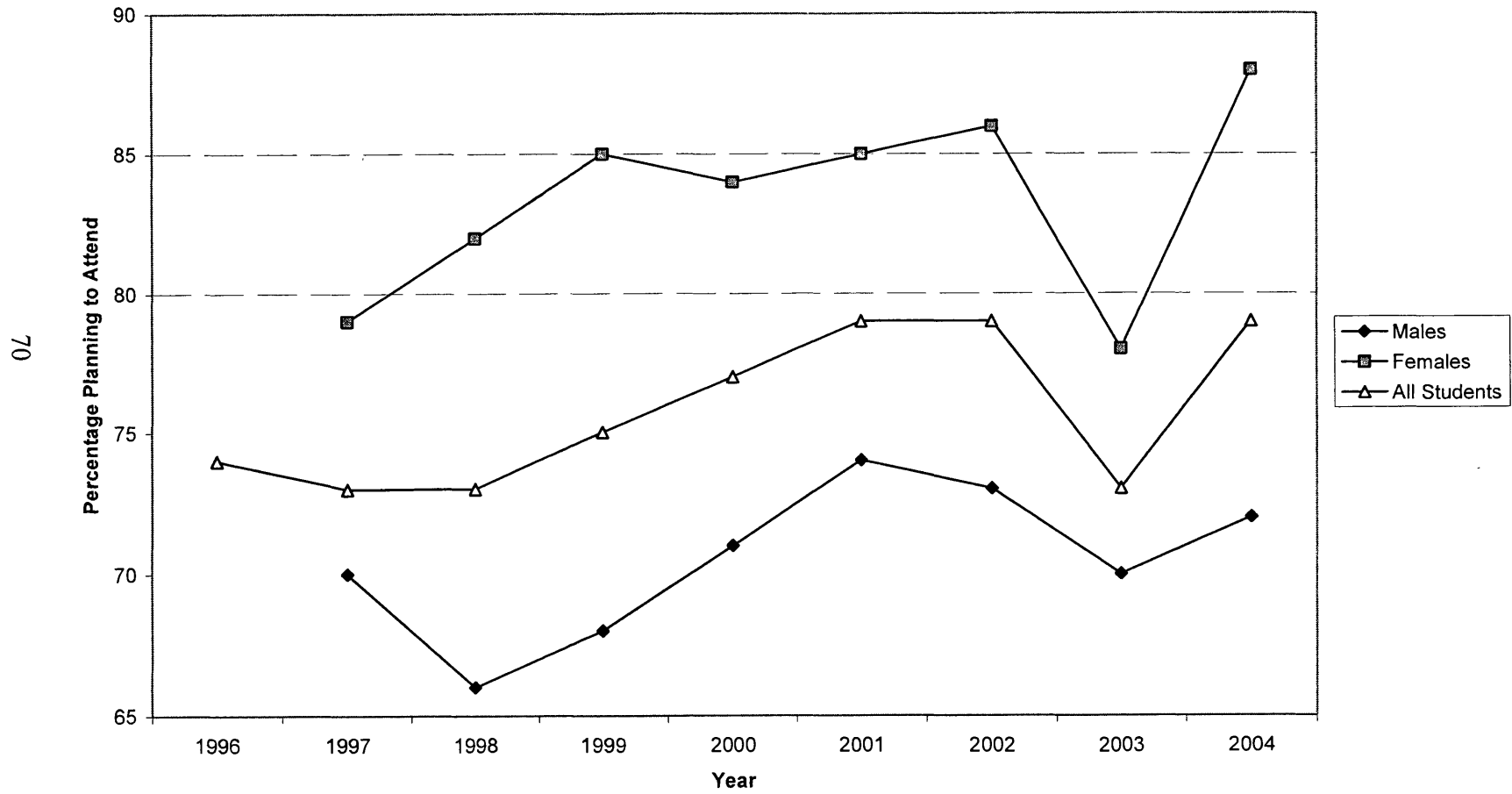


Figure 3.A.13
Occupational Aspirations, By Race & Sex

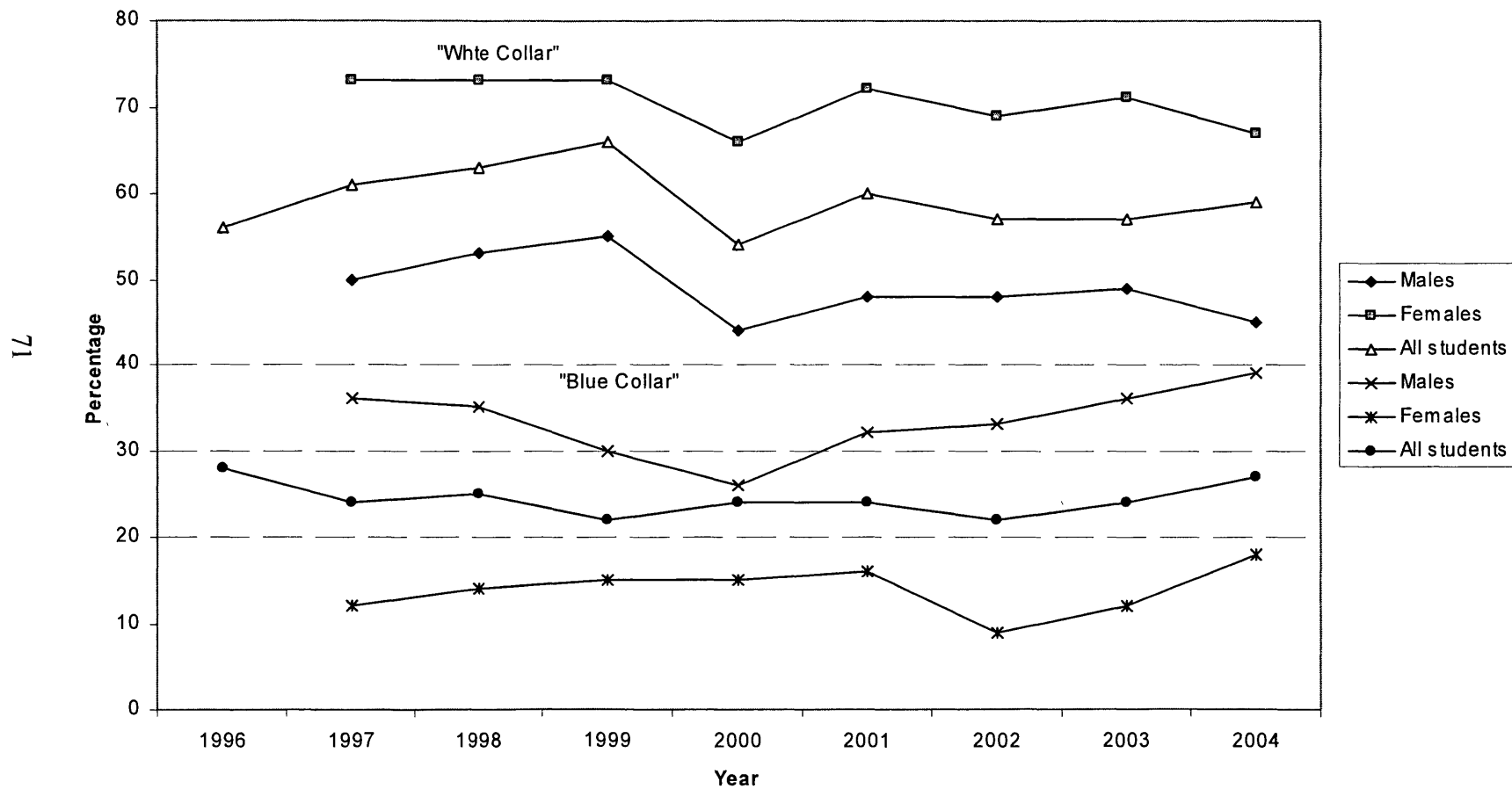
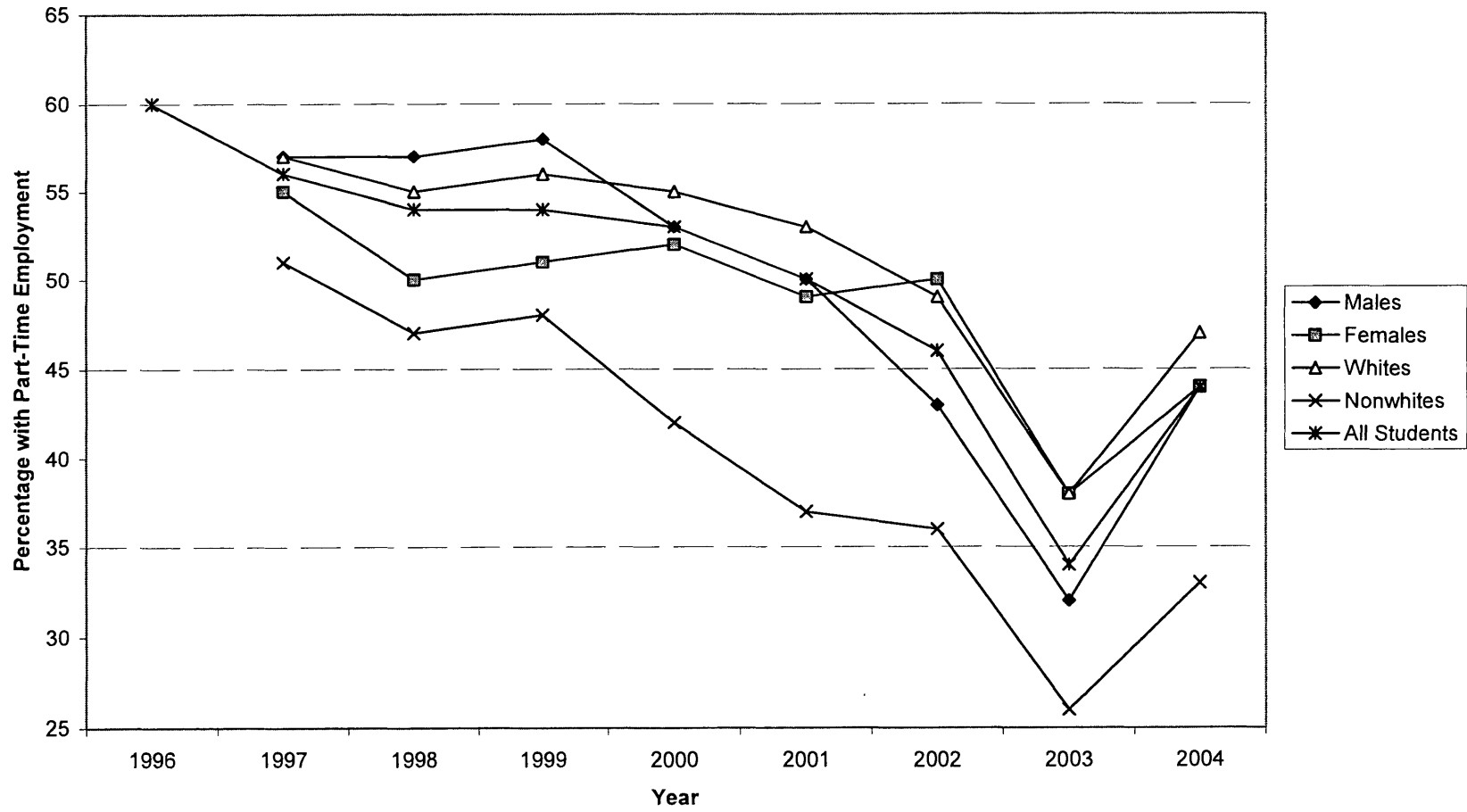


Figure 3.A.14
Part-Time Employment Rates, By Race & Sex



4. 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 seems to be gender-balanced, although the percentage of male students has been increasing over the past three years and is over 55 percent this year.

EFE is clearly an effective program for both males and females and has attracted them in approximately equal numbers for some years. However, for the last three years, the proportion of males has increased steadily and may warrant continued monitoring.

The enrollment in EFE is racially-representative. The percentage of minorities in EFE programs is 23 percent. This percentage closely mirrors the racial composition of the K-12 headcount in the county.

The percentage of EFE students who classify themselves as minorities has increased over the past four years. According to 1999 data, about 78 percent of the K–12 students in the county were white, and according to the current student survey data, 77 percent of the EFE students are white.

In past years, this report has pointed out a steady increase in the percentage of students in EFE who are freshmen or sophomores. Analyses of the data from this year suggest that perhaps this percentage has stabilized around 25 percent. EFE should investigate to see if these students are continuing to choose EFE classes in their junior and senior years. Furthermore, EFE should consider expanding its curricula to include 3rd and 4th year offerings.

In the current student survey, about 23 percent of the respondents identified themselves as freshmen or sophomores. The percentage of students in 9th or 10th grade increased substantially between 1997 and 2000, but seems to have stabilized since then at around 25 percent. This trend may be explained by the adoption of block scheduling at some high schools in the county in the late 90s, which allowed students to take more elective classes.

Work-Based Learning Experiences

Students who participate in work-based learning experiences seem to have better outcomes and more favorable opinions about their EFE experiences.

The data in table 2.3 show that students who had been in work-based programs in high school have higher employment rates and lower unemployment rates than students who did not participate in these programs. They tend to have much better-focused postsecondary experiences. That is, their programs or majors in college are much more likely to be related to their EFE program. They are less likely to be attending a 4-year college and more likely to be attending a 2-year college. Among current students, those individuals in work-based programs have much more favorable attitudes toward the quality of their EFE courses.

About 35 percent of EFE completers indicate that they participated in a work-based program when they were in high school and about 20 percent of current students indicate that they are participating in a work-based program. The long-term trends in both of these rates is slightly downward.

The percentage of current students who indicate that they participate in a work-based program fell below 20 percent in this year's survey. (Note that this is about a 20 percent decline since 1998). Furthermore, the percentage of completers who indicate that they had participated in a work site experience when they were taking their EFE class is 35 percent. Given the favorable

outcomes of students who are or were in work-based programs, EFE administrators need to continue to emphasize work-based learning in order to best serve students.

Stakeholder Satisfaction

EFE programs receive satisfaction ratings that indicate very high levels of customer (stakeholder) satisfaction.

In both surveys, respondents were asked several questions about their satisfaction with various aspects of EFE classes and programs. As shown in table 3.3, between 62 and 83 percent of current students are pleased with various aspects of their EFE classes. Furthermore, the students give their classes a B+ for quality. EFE completers were asked for their opinions about the same aspects of their EFE classes as current students were, and table 2.5 shows that their (recalled) levels of satisfaction are even higher than current students'. The quality indicators for both surveys increased this year.

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 88 percent of EFE students indicate that they planned to enroll in a postsecondary institution either right after high school or after working for a few years. This percentage has steadily increased over the years. Female EFE students have especially high levels of planned postsecondary attendance. The follow-up survey (table 2.1) shows that 78 percent of completers actually enroll 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.

Equity Issues

Substantial gaps exist between minority and white students in program satisfaction and outcomes. Minorities who have completed programs have a lower rate of college attendance, lower employment rate, and a higher unemployment rate. Minorities who are current students have lower levels of program satisfaction.

Table 3.3 shows that nonwhites are far less satisfied with their EFE class experiences than are whites. The average grade assigned for course quality was 3.03 for nonwhites and 3.29 for whites. Furthermore, 7 out of 8 “satisfaction” indicators are statistically significantly lower for nonwhites than for whites. Table 2.3 shows that nonwhites have lower employment rates and higher unemployment rates than do whites in the follow-up survey.

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. Only about one-quarter 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, and even increased slightly from last year. The percentage of completers who are employed or in school stands at one of its highest levels since this survey began—94 percent. Similarly, the share of respondents who are in a training-related postsecondary program or training-related job was almost two-thirds, which is one of its highest rates ever.

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 well 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, 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.