Wyoming State Department of Education

Carl Perkins WyCTA State Report:

Secondary Schools and Students
2003-2004

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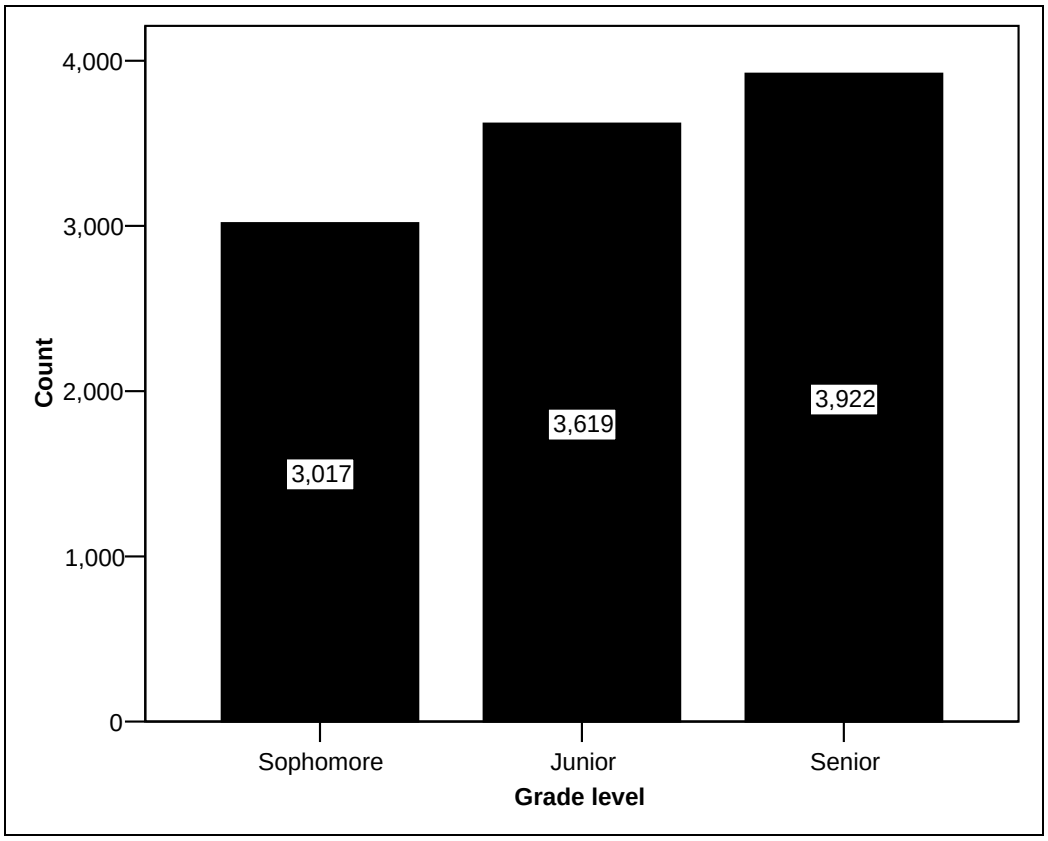
Demographics

Information for the Wyoming Career and Technical Assessment (WyCTA) was provided by 75 secondary schools during the 2003-2004 school year. The total number of students on which data was collected was 10,558. The following charts and tables in this section summarize demographic information on these students.

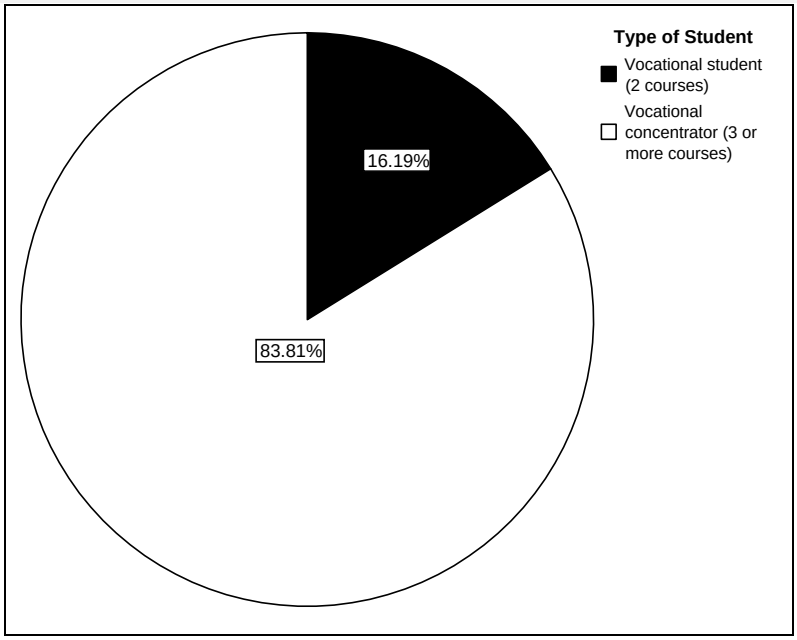
Grade Levels

Data was obtained from all juniors and seniors who were vocational concentrators (i.e. a student who has taken 3 or more semester courses in a vocational program) and from all sophomores who were vocational students (i.e. a student who has taken at least 2 semester courses in a vocational program).

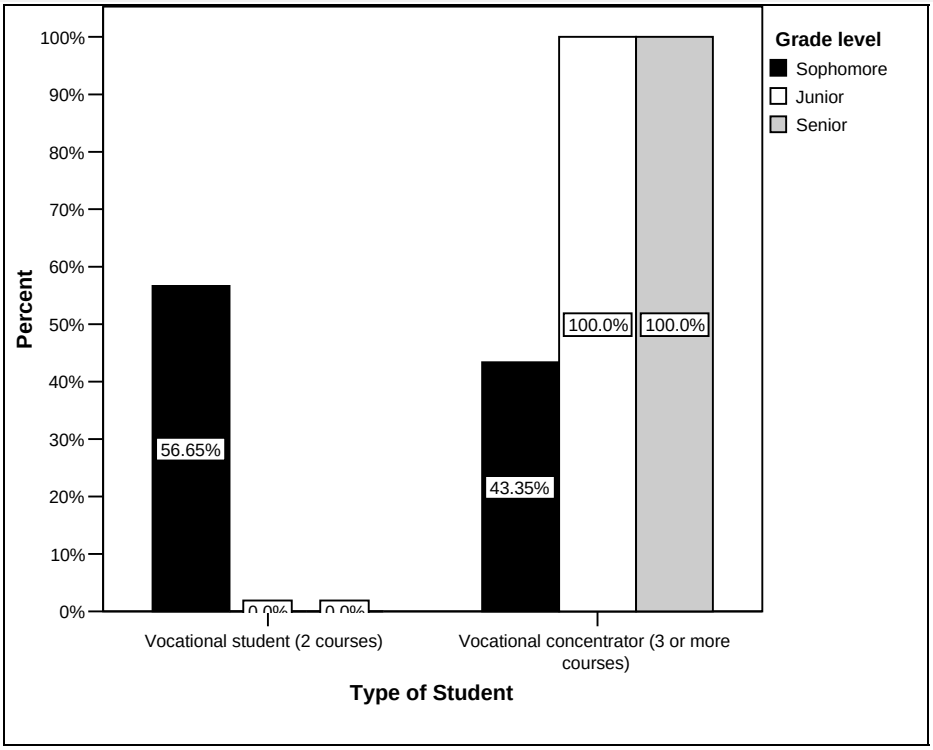


Type of Student

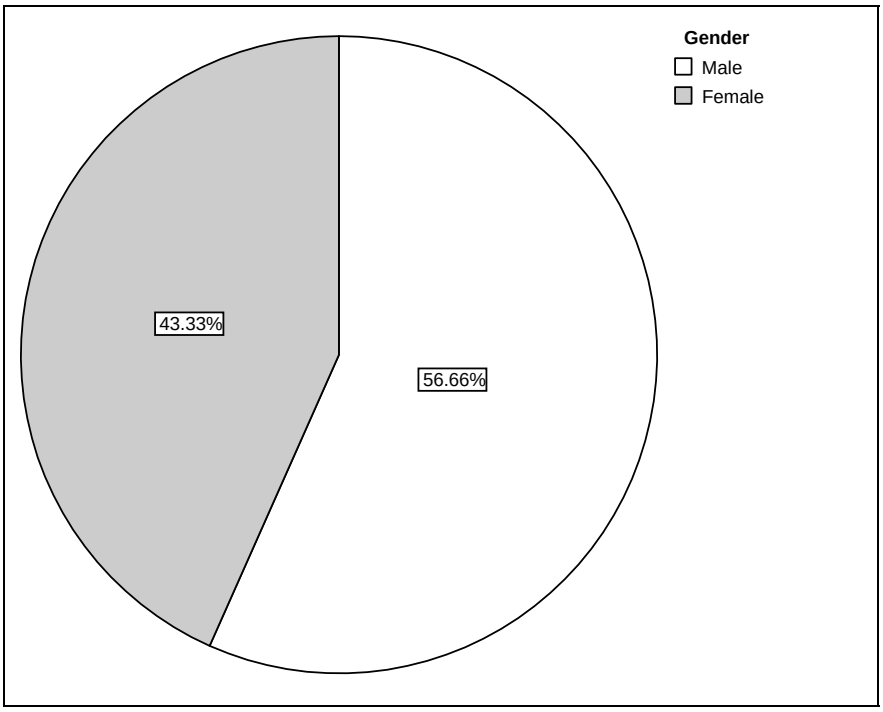
There were 8,849 (84%) vocational concentrators and 1,709 (16%) vocational students.



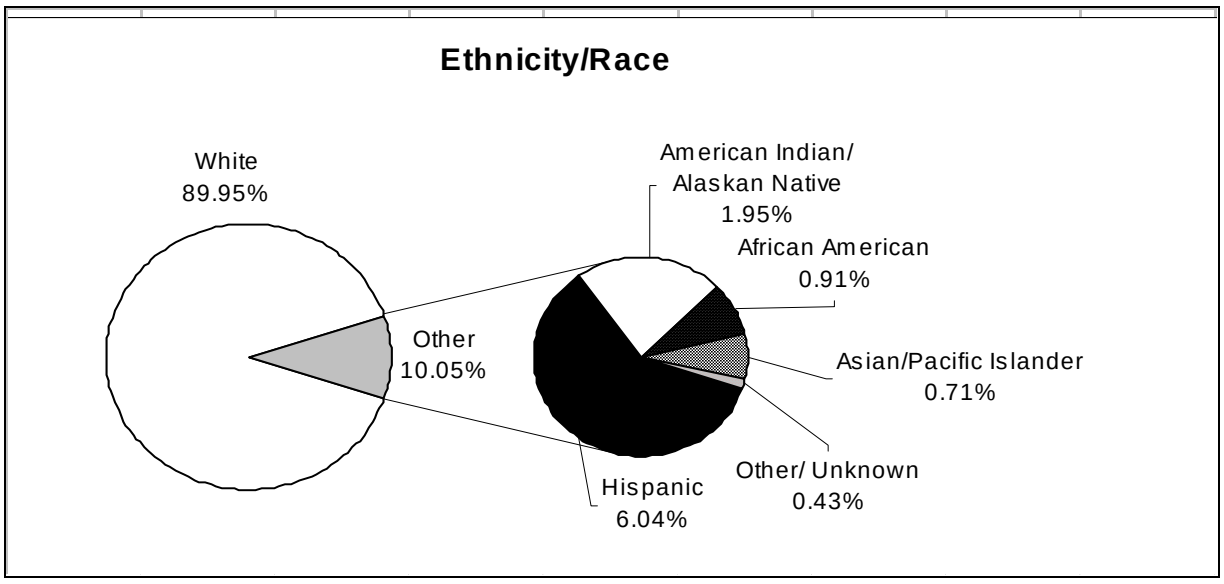
Among 10th graders, 1709 (56.7%) were vocational students and 1308 (43.3%) were vocational concentrators. Again, only vocational concentrators were included in the 11th (N=3619) and 12th grades (N=3922).



Gender



Ethnicity



Eligibility Category

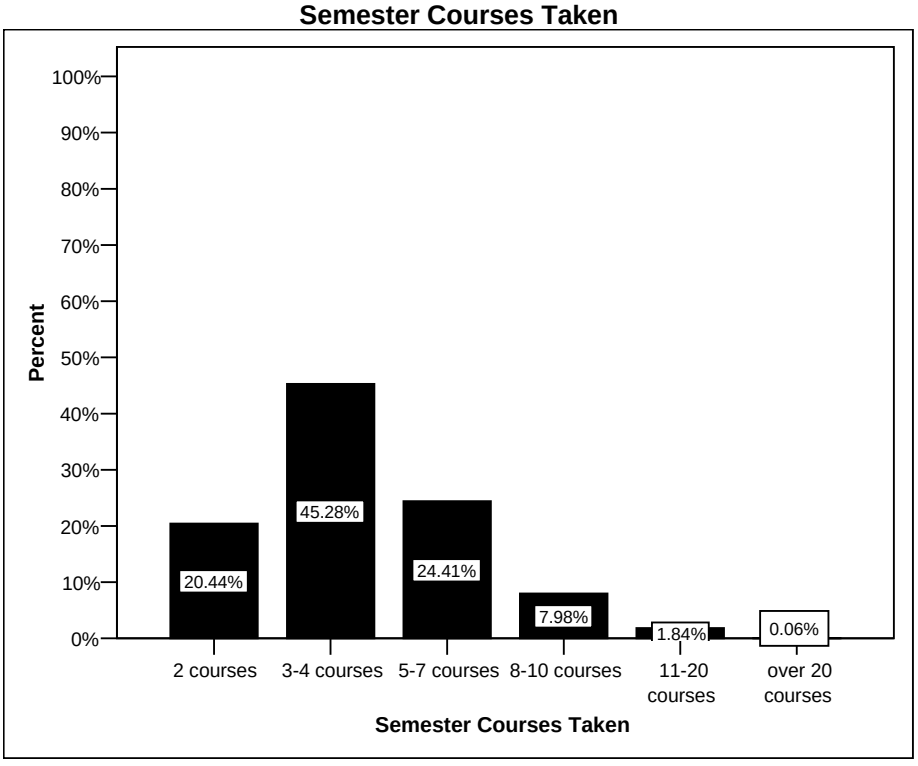
Compared to last year's eligibility category composition, there was a slight increase (4%) in the percentage of those categorized as "regular." The composition of the other subpopulations has remained stable.

Category*	Count	Percent
Regular	8123	76.9%
Economically Disadvantaged	1646	15.6%
Disability	710	6.7%
Other Educational Barriers	261	2.5%
Single Parent	217	2.1%
Limited English Proficiency	185	1.8%
Corrections	43	0.4%

*Students may have been eligible under more than one category.
There was also one displaced homemaker (a female senior vocational concentrator)

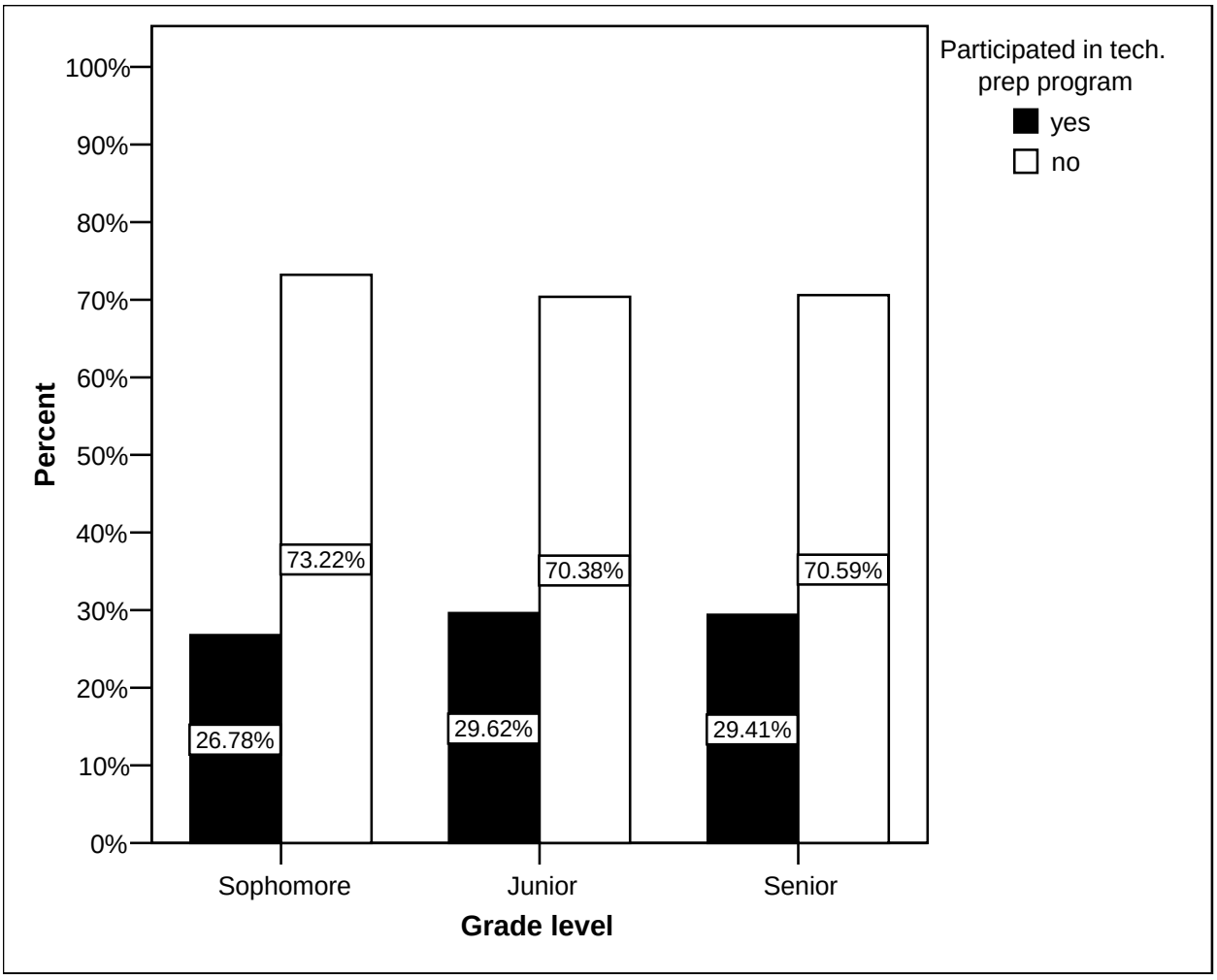
Percent of Vocational Program Courses Taken By Students

Approximately 70% of students took 3-7 semester courses within their vocational program sequence.



Tech Prep Participation by Grade Level

Approximately 3% more juniors participated in a tech prep program compared to sophomores. There was virtually no difference in the participation rates of juniors and seniors.



Career Cluster/Program Area

Architecture and construction, business administration, agriculture, and arts-AV technology and communication were the most popular program areas. More than half (55.12%) of all students were enrolled in these four program areas. This pattern has been observed during the past 2 years.

Area	Count	Percent
Architecture & Construction	1524	17.94%
Business Admin.	1250	14.72%
Agriculture, Nat. Resources	1032	12.15%
Arts, AV Tech & Comm.	876	10.31%
Info. Technology	752	8.85%
Manufacturing	676	7.96%
Transportation, Distribution & Logistics	584	6.88%
Human Services	570	6.71%
Hosp. & Tourism	508	5.98%
Retail & Wholesale Sales	289	3.40%
Health Science	160	1.88%
Education & Training	121	1.42%
Law & Public Safety	45	0.53%
Gov. & Public Admin.	37	0.44%
Finance	36	0.42%
Sci. Research & Engineering	34	0.40%

Proficiency Credential

Approximately 299[1] (3.6%) students received a proficiency credential or had completed all requirements but had not yet received their credential in one of the following areas.

- Diploma/Certificate Unspecified (106)
- CNA (51)
- NCCFR (31)
- MOUS (25)
- Auto Desk/Cad (20)
- Microsoft (11)
- FFA (10)
- IC3 (8)
- ProStart Certification (6)
- Construction (6)
- CISCO (6)
- Customer Service (5)
- Agriculture (4)
- Welding (4)
- Cabinetry (2)
- Automotive (2)
- C++ (1)
- ServSafe (1)

[1] Total counts based on valid responses (i.e. missing data excluded).

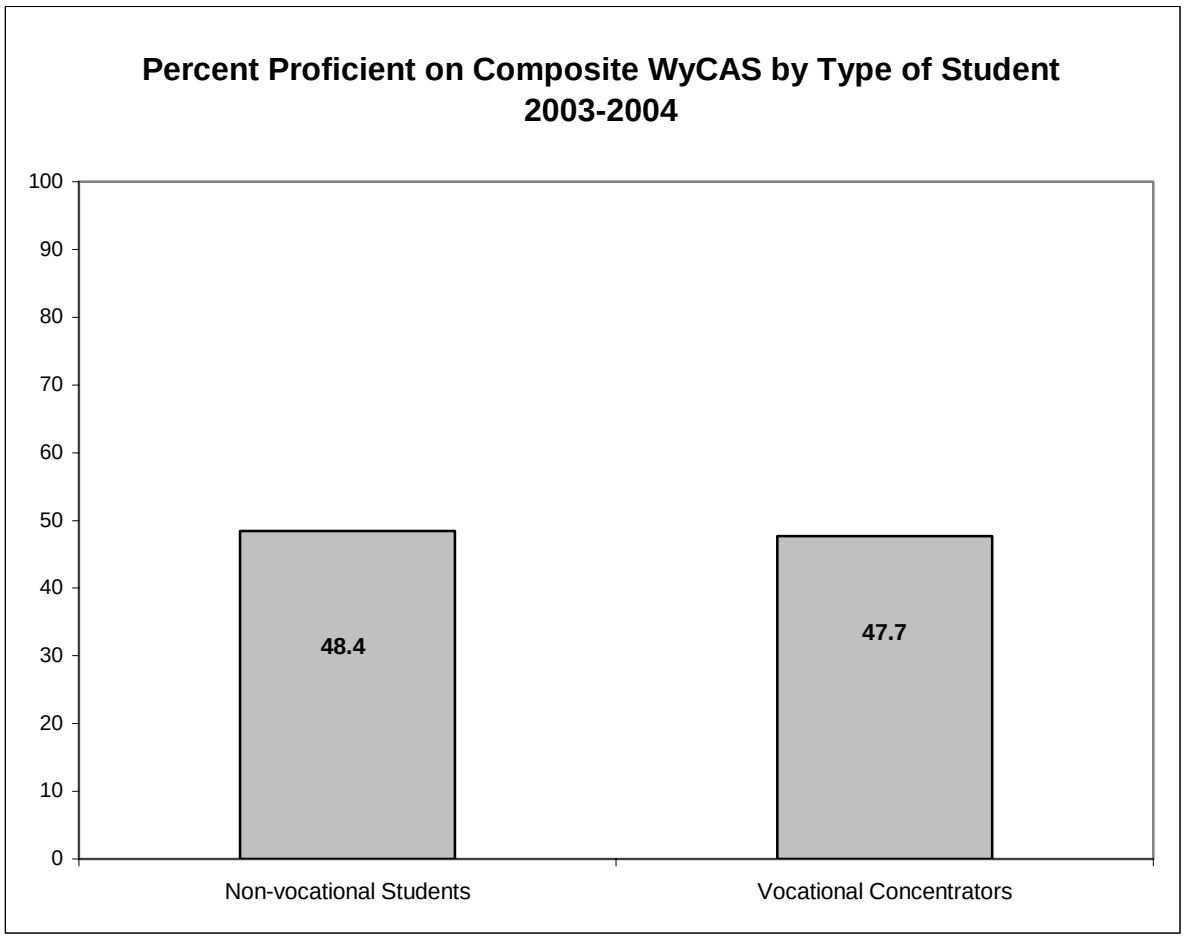
Federal Indicators

1S1 – Academic Skill Attainment

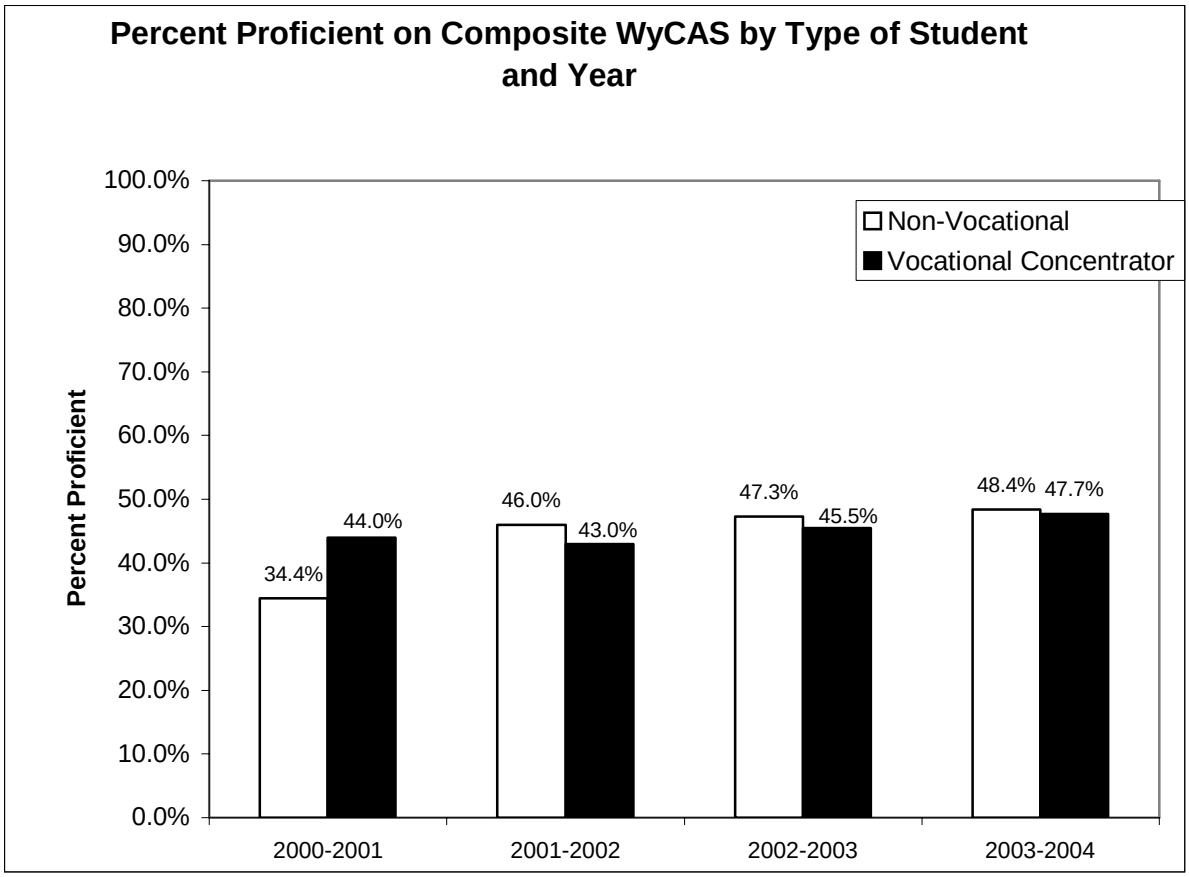
To compute the composite WyCAS scores, 11th grade student reading and writing scores were averaged to determine an average language score. This was then averaged with the math score to determine a composite WyCAS score. A composite score greater than 240 is considered proficient.

Statistical tests showed no significant difference between vocational concentrators (mean=238.68, sd=15.30) and non-vocational students (mean=238.68, sd=17.30) on the composite WyCAS score.

The table below breaks down the proficiency levels by the type of 11th grade student taking the WyCAS. Results showed that 2203 (47.7%) vocational concentrators were proficient compared to 3501 (48.4%) non-vocational students.



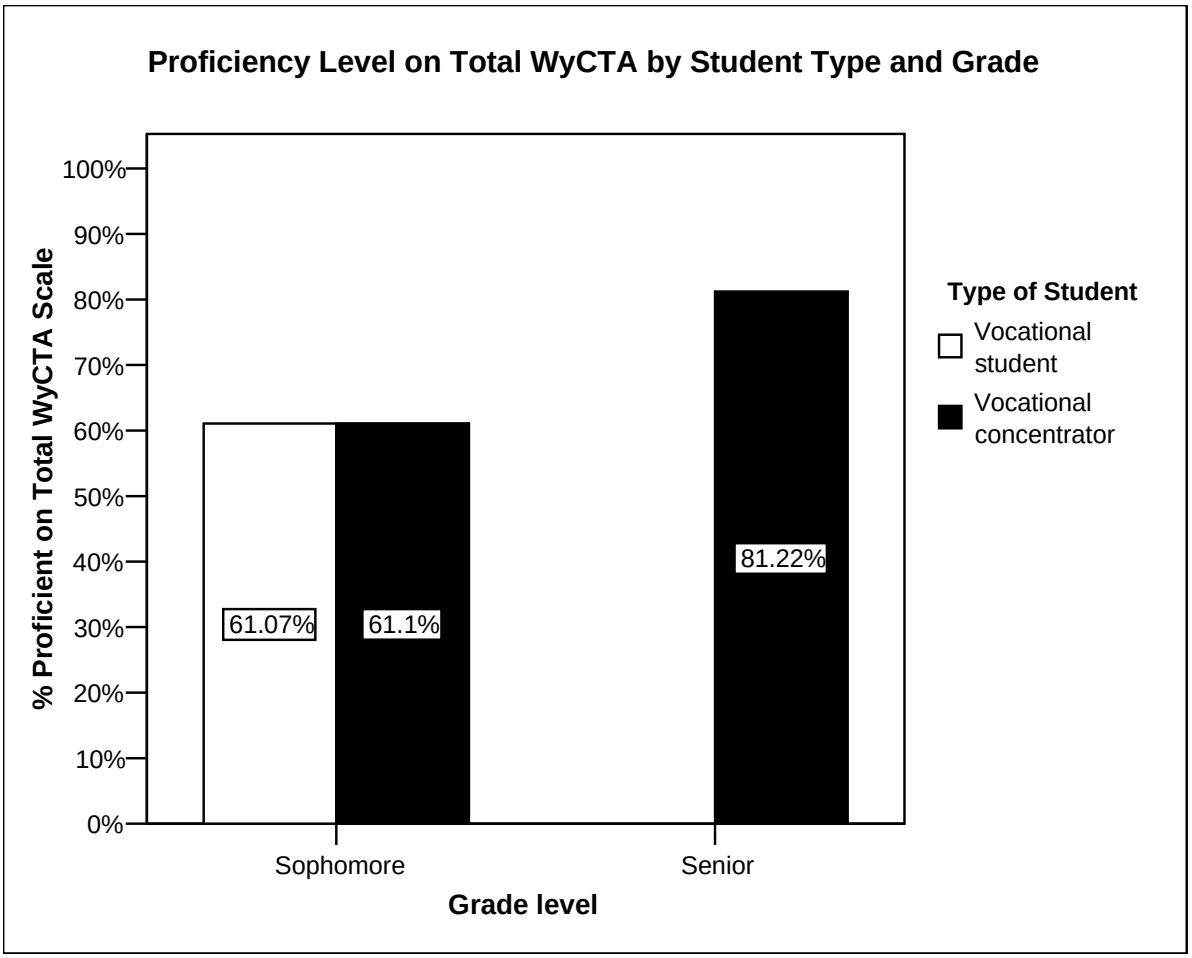
Proficiency levels on the WyCAS have steadily increased over time, for both vocational concentrators and non-vocational students.



1S2 – Vocational and Technical Skills Proficiency

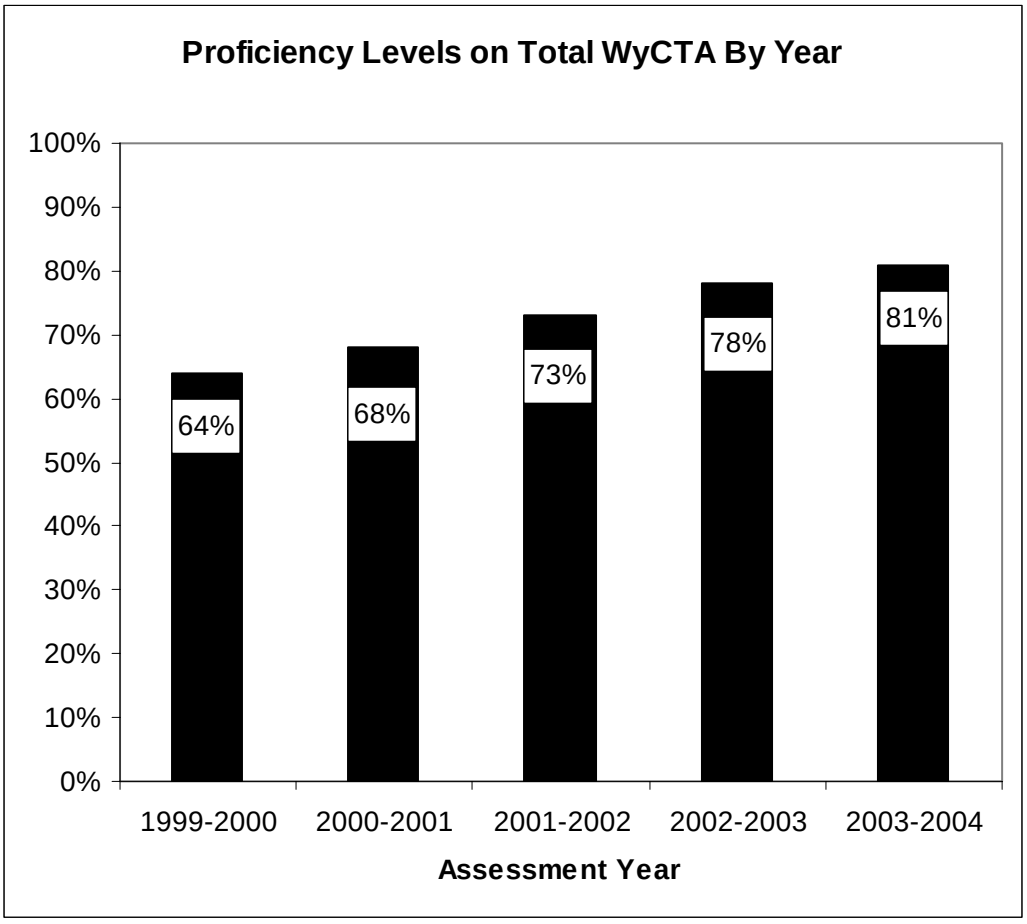
To be proficient in a WyCTA content area, students had to be proficient in at least 3 subskills within the Technology, Affective/Thinking, Communications, Pre-employability, and Employability content areas, and had to be proficient in at least 2 subskills within the Math content area. To be proficient in the overall WyCTA assessment, students had to be *tested* in and be *proficient* in at least 4 content areas.

The table below shows the grade and proficiency levels for all vocational students and concentrators. Approximately 2076 (81.2%) **seniors** were proficient in at least 4 of the 6 WyCTA content areas.



It should be noted that due to changes[2] in the WyCTA content areas during the 2002-2003 school year, comparisons between years prior to 02-03 and after 02-03 should be viewed with caution. However, the content areas remained unchanged between 2002-2003 and 2003-2004 and therefore, direct comparisons between these two years are acceptable.

There was 3% increase in proficiency among 12th grade vocational concentrators between 2002-2003 and 2003-2004. Additionally, there has been a steady increase in proficiency over the last five years.

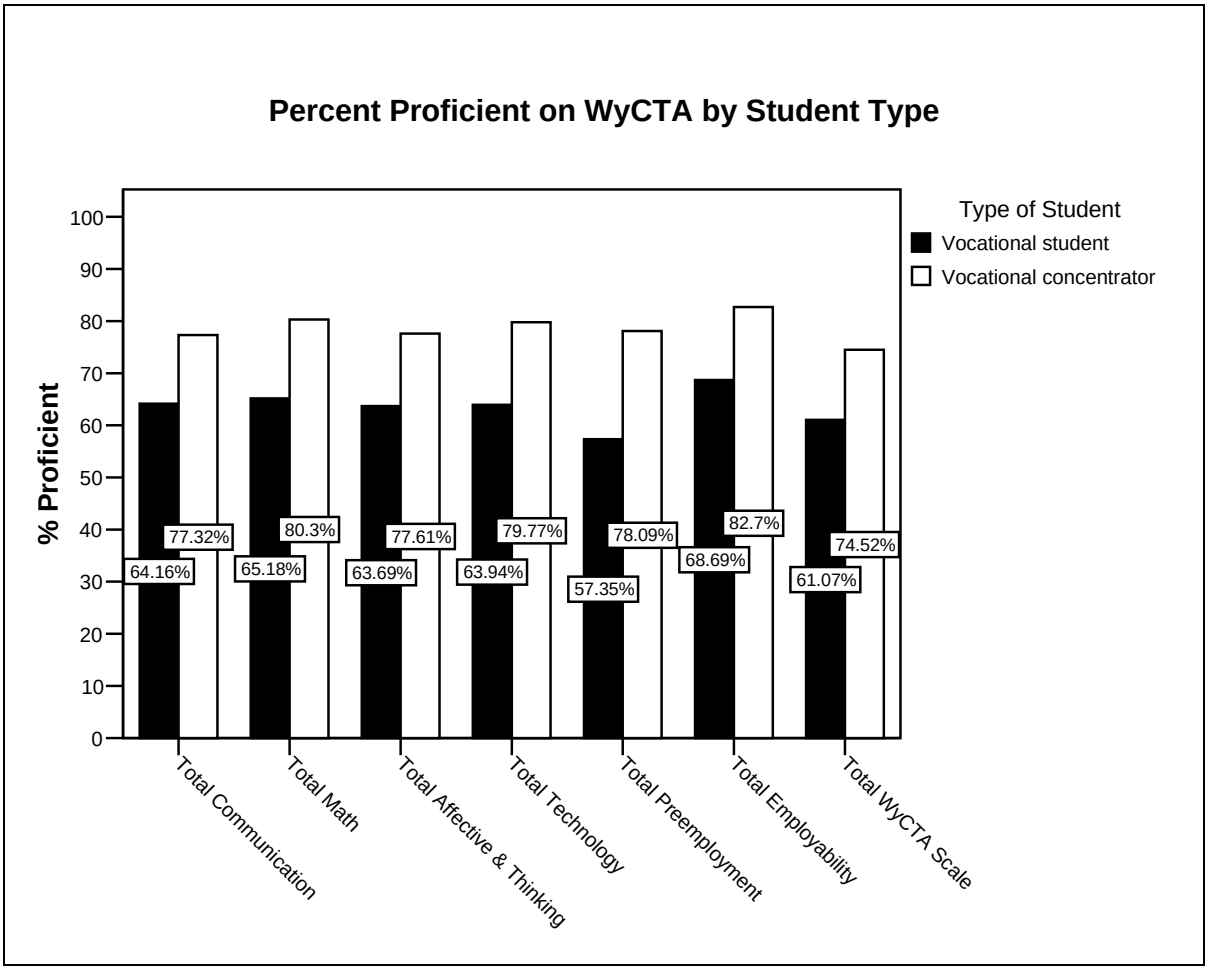


[2] During the 2002-2003 school year, the WyCTA content areas were modified. The changes are as follows:

- Leadership was *added* as a subskill under the Affective and Thinking content area,
- Industrial and Business Technology was *added* as a subskill under the Technology content area,
- Skill Performance was *added* as a subskill under the Employability content area,
- Advanced Mathematics was *removed* as a subskill under the Applied Mathematics content area,
- The Applied Science content area was completely *removed* from this year's assessment.

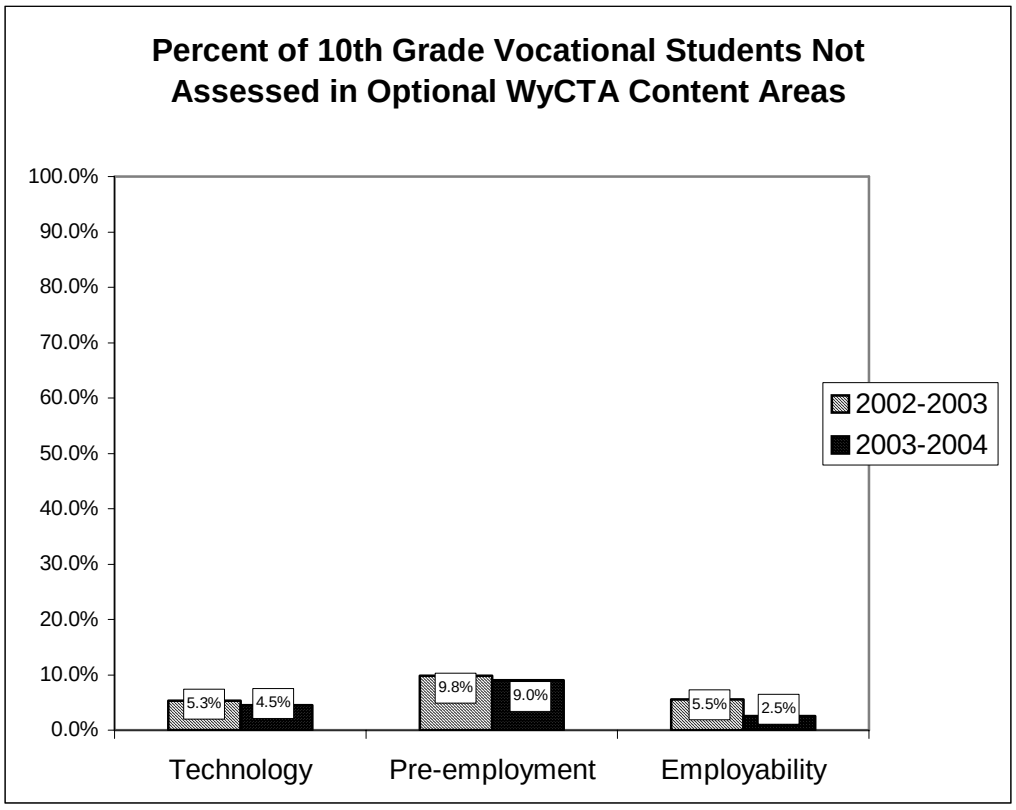
It is important to keep these changes in mind when making comparisons across years.

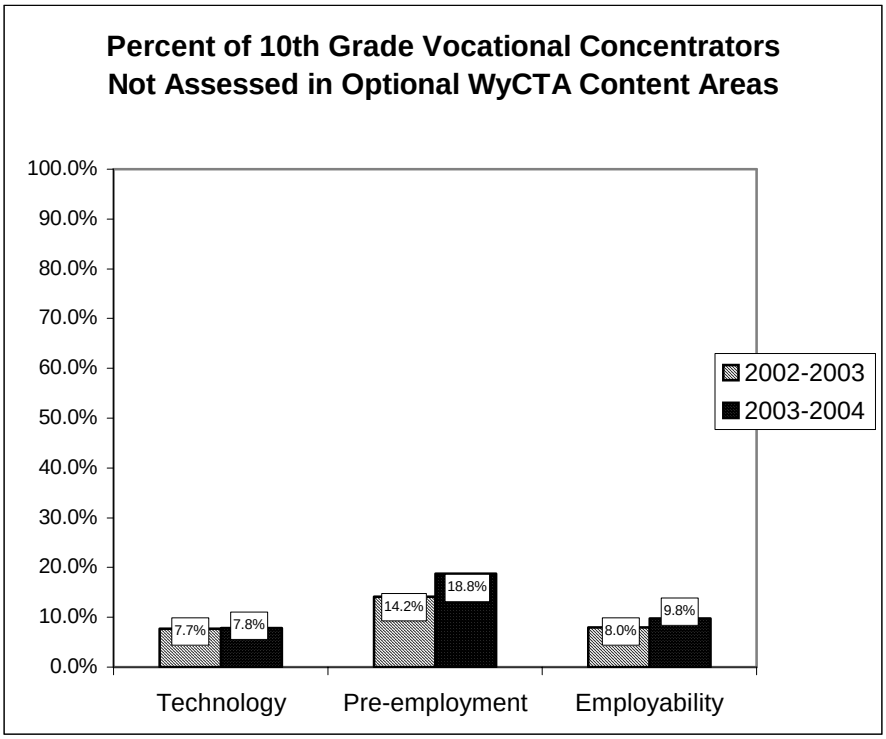
Vocational concentrators (including 10th and 12th graders) and vocational students (only 10th graders) were most proficient in the areas of Employability and Math. **On the Total WyCTA, 74.5% of all vocational concentrators were proficient while 61.1% of vocational students were proficient.**



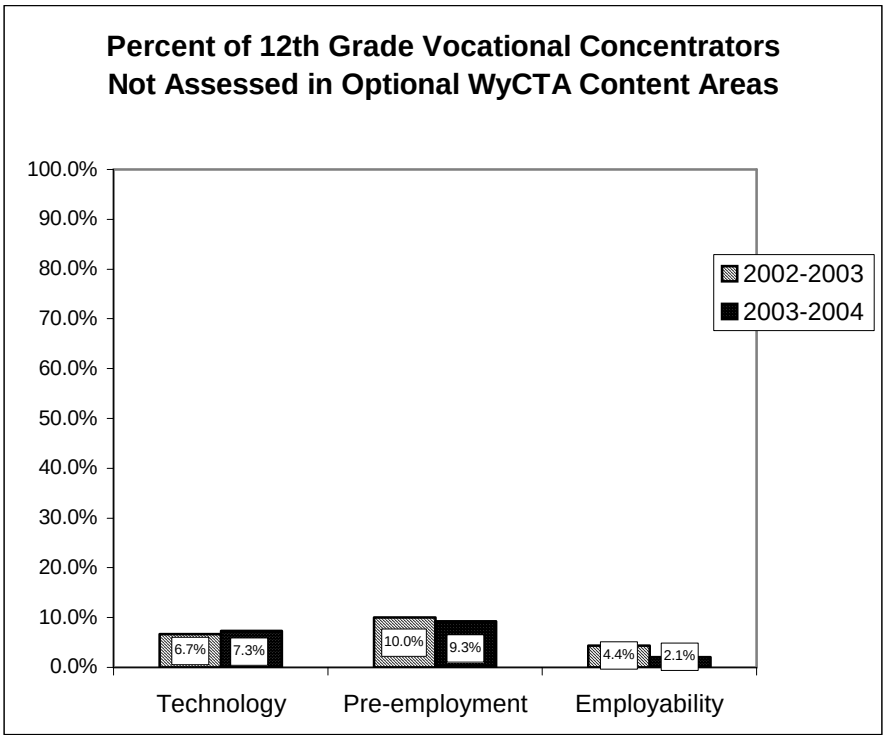
The graphs below display the percent of students who were not assessed in the optional content areas (i.e. Technology, Preemployment, Employment) by grade level. This only includes students not assessed because evaluators did not have an opportunity to assess (students not assessed because they left prior to the assessment date are excluded). Since collection of this information began in 2002-2003, results prior to this are not presented.

Among 10th graders, a greater percentage of vocational concentrators were not assessed compared to vocational students. In addition, there was a slight decrease in the percentage of vocational *students* not assessed compared to last year. However, the opposite was true for vocational *concentrators*; there was an increase in the percentage of those not assessed compared to last year.





Among 12th grade vocational concentrators, there was a slight decrease in the percentage of students not assessed in the areas of pre-employment (.7% drop) and employability (2.3% drop) compared to last year. For technology, there was a .6% increase.



The following set of graphs display the percent of **12th grade vocational concentrators** who were proficient in each strand of a particular WyCTA content area as well as the Total WyCTA[3]. The previous four years' data (1999-2002) is also presented. However, due to changes in some of the content areas, comparisons between data before the 2002-2003 school year data and data following this school year should be done cautiously. These graphs help identify trends and areas of strength and weakness within each content area.

Summary of Results by Content Area

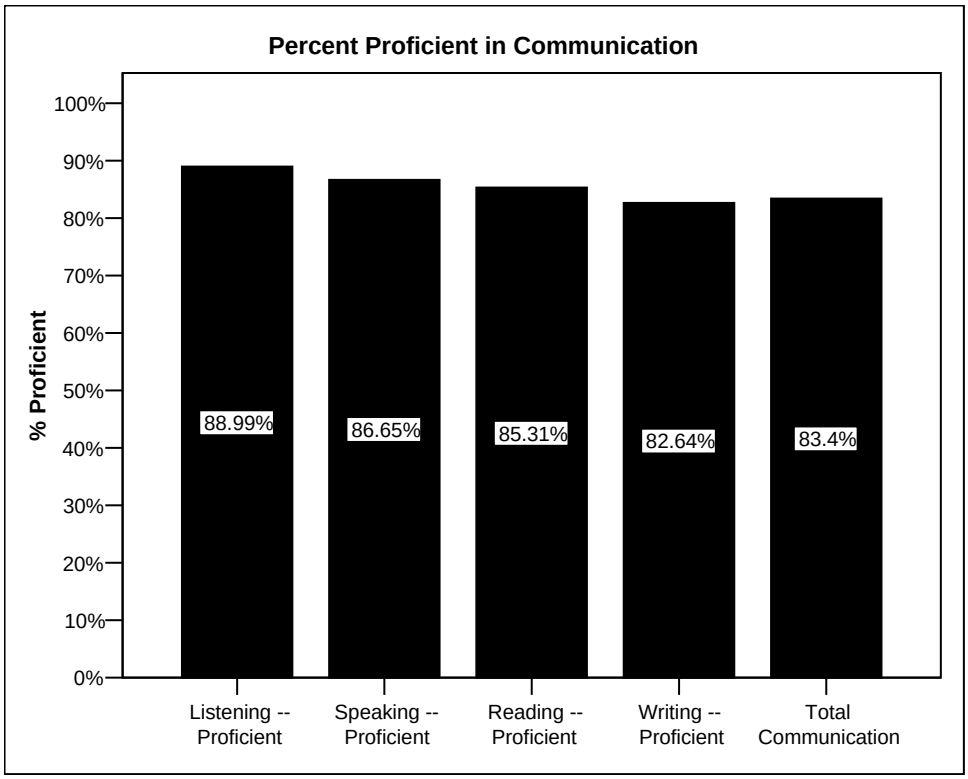
The graphs on the following pages show that senior vocational concentrators were most proficient in the areas of Employability (88%) and Math (86%) in 2003-2004. Although, vocational concentrators were least proficient in the Communication content area (83%), this percentage is still high. In addition, the subskill that most 2003-2004 vocational concentrators were proficient in was Internet Searches (93%) under the Technology content area.

Compared to previous year's results, the percent of 2003-2004 senior vocational concentrators who were proficient in each of the content areas was higher, except for the technology content area. In this content area, there was a 2% drop. The largest improvement was found in the Math content area (5% increase compared to the previous year).

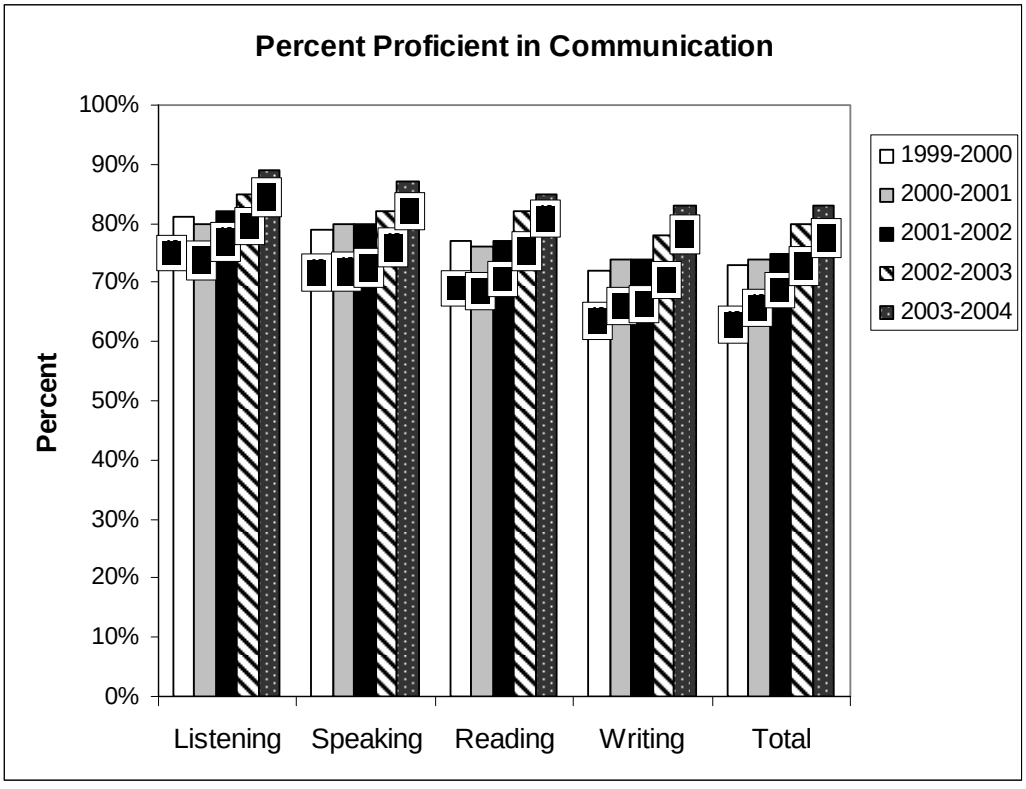
In general, there has been an upward trend with increased proficiency levels over the past 5 years. However, it should also be noted that the content areas of Employability and Pre-employment were relatively stable from 1999 until 2003, when it showed a notable improvement.

[3] Data is displayed according to variables. That is, the average percent based on the subskill areas will not necessarily equal the percent for the total content area. This is because students had to be assessed in a minimum number of subskill areas in order to calculate a proficiency score on the total content area. Therefore, here may be a high percent of students being proficient in some subskill areas but if they were not assessed in the required minimum number of suibskills, then there scores would not be applied to the total content area.

Content Area: Communication

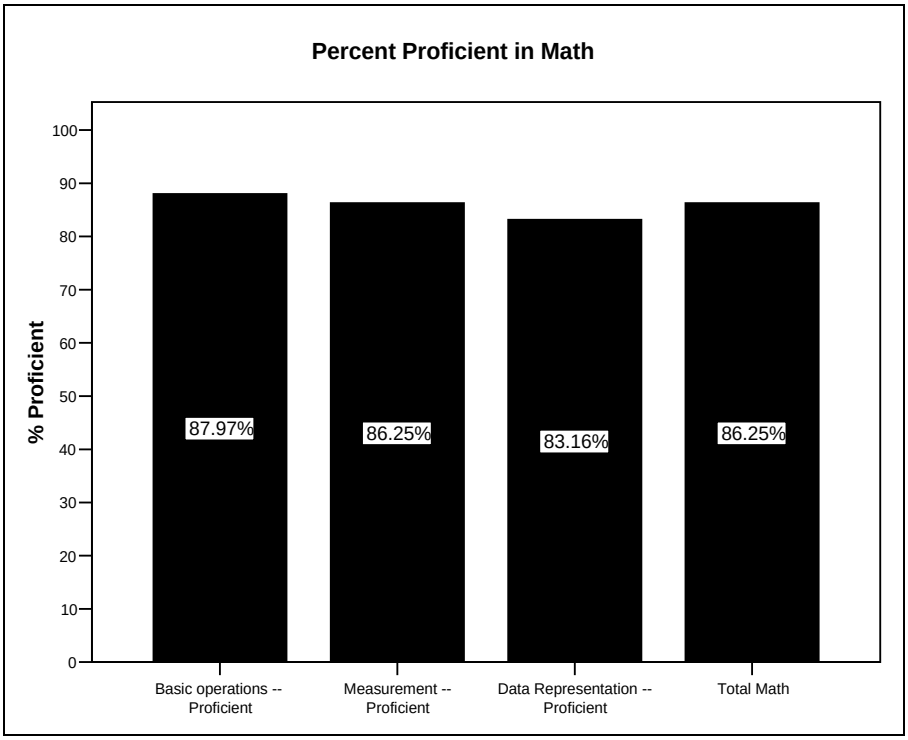


- Approximately 83% of students were proficient on the communication scale.
- Students were most proficient (89%) in the listening strand of the communication scale.

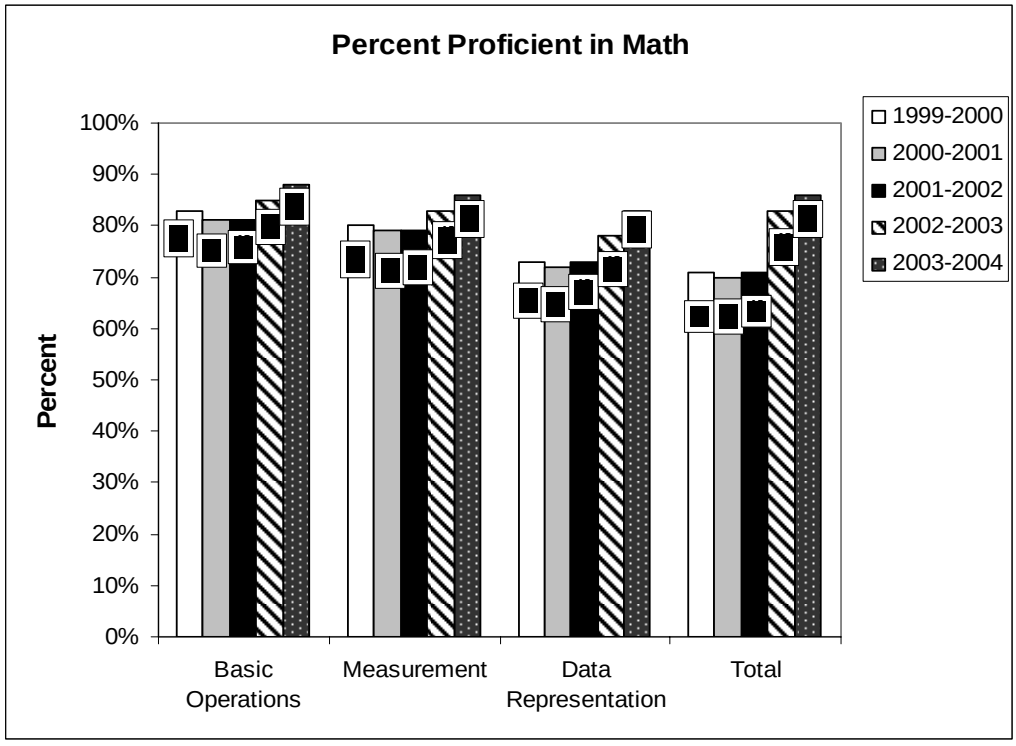


Content Area: Math

Note: Advanced Mathematics was removed as a subskill during the 2002-2003 school year. Therefore, this subskill is not displayed in the graph by assessment year.

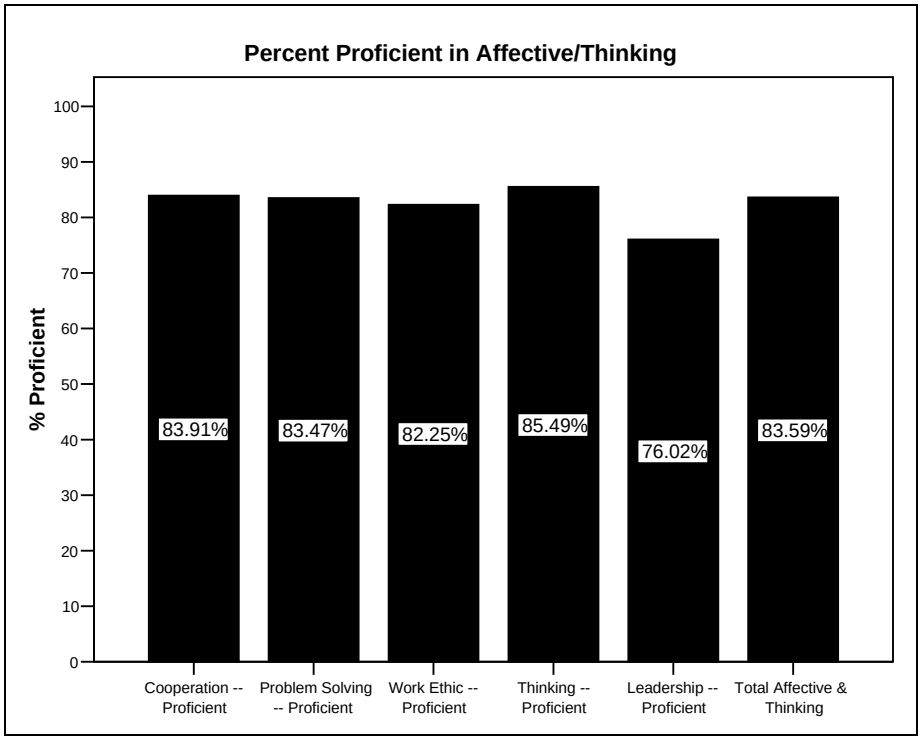


- Approximately 86% of students were proficient on the math scale.
- Students were most proficient (88%) in the basic operations strand of the math scale.

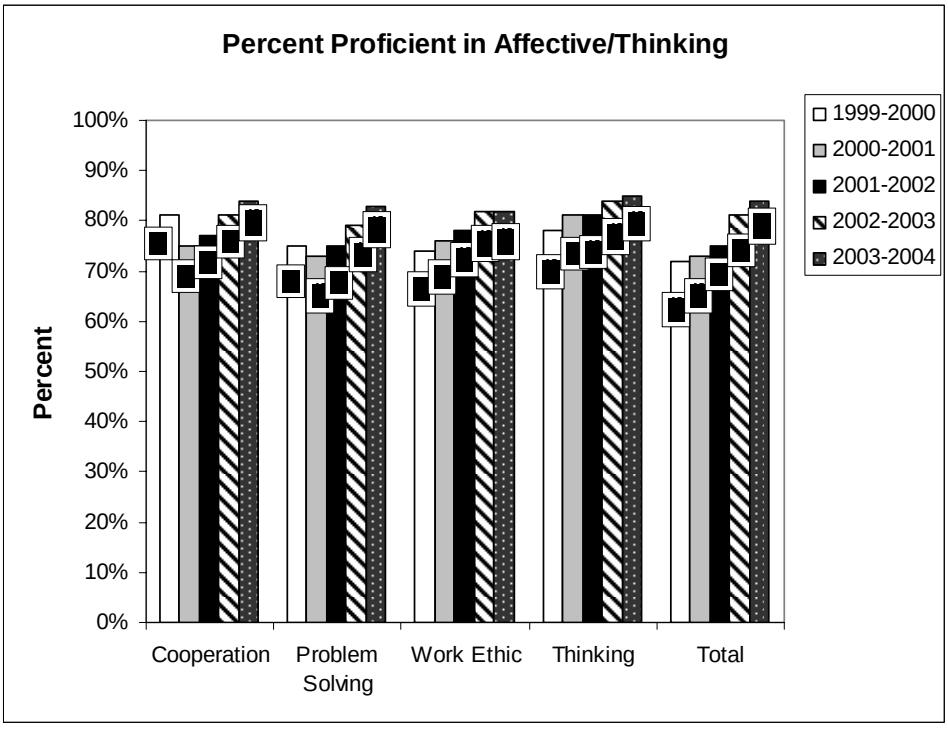


Content Area: Affective and Thinking

Note: Leadership was added as a subskill during the 2002-2003 school year. Therefore, this subskill is not displayed in the graph by assessment year.

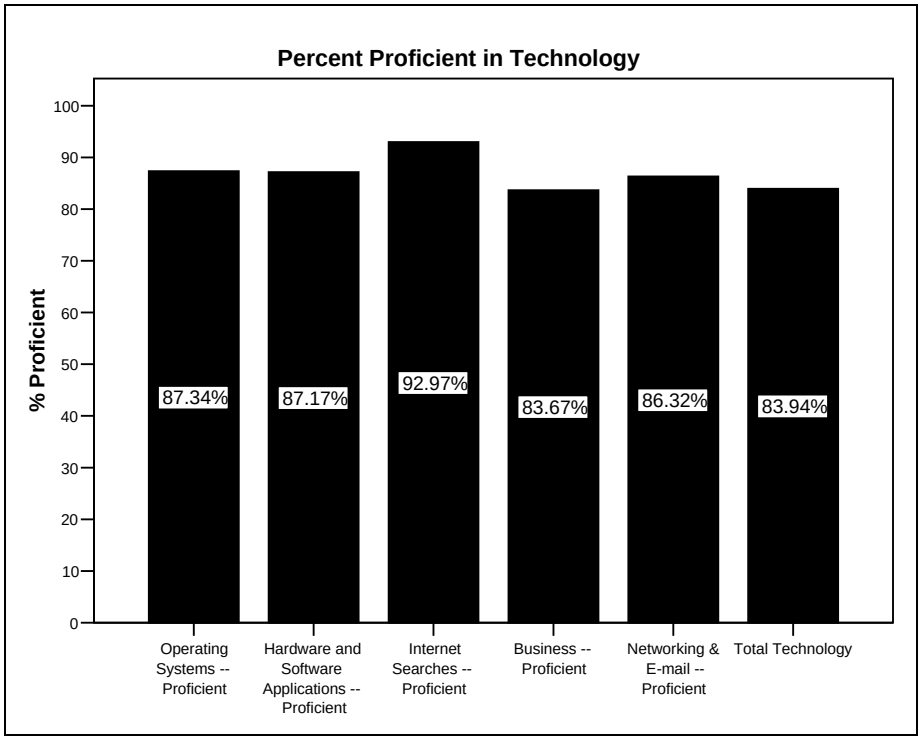


- Approximately 84% of students were proficient on the affective/thinking scale.
- Students were most proficient (85%) in the thinking strand of the affective/thinking scale.

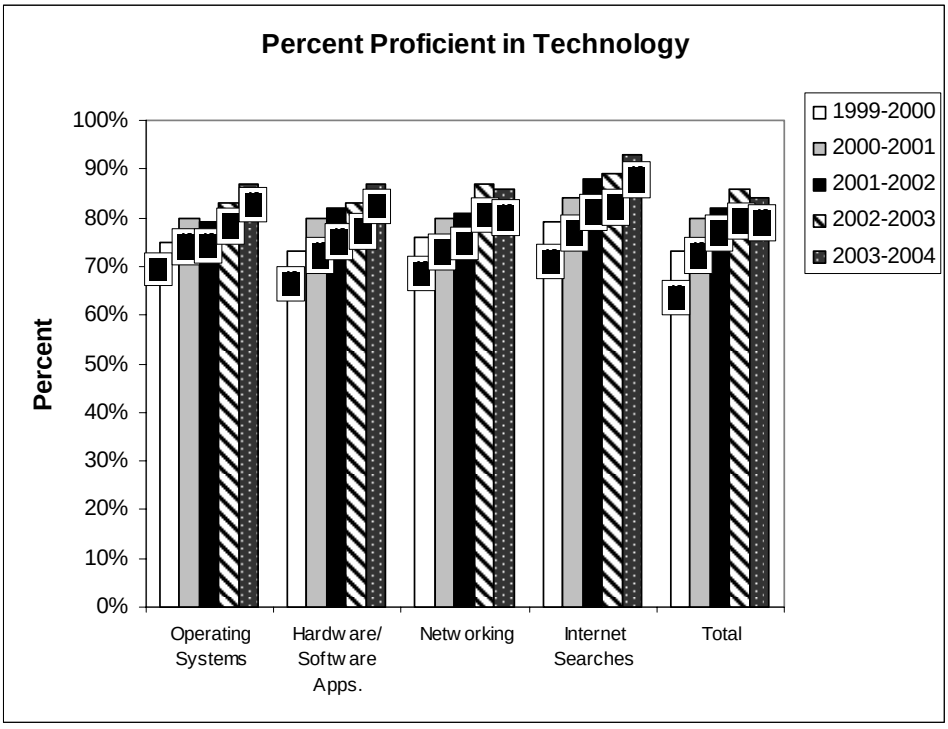


Content Area: Technology

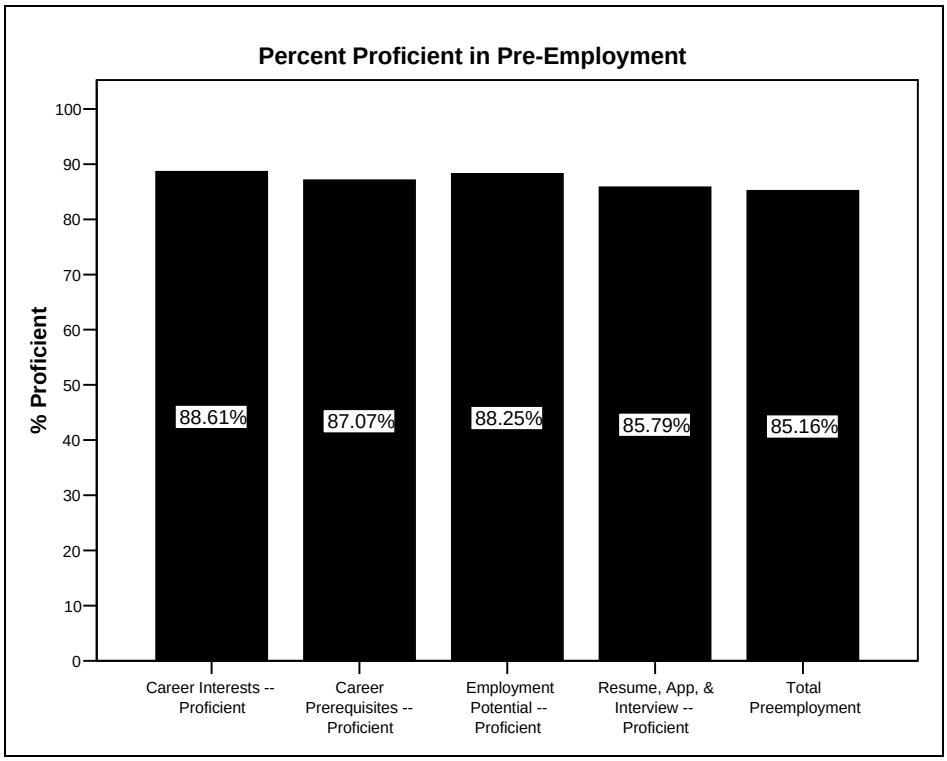
Note: Industrial and Business Technology was added as a subskill during the 2002-2003 school year. Therefore, this subskill is not displayed in the graph by assessment year.



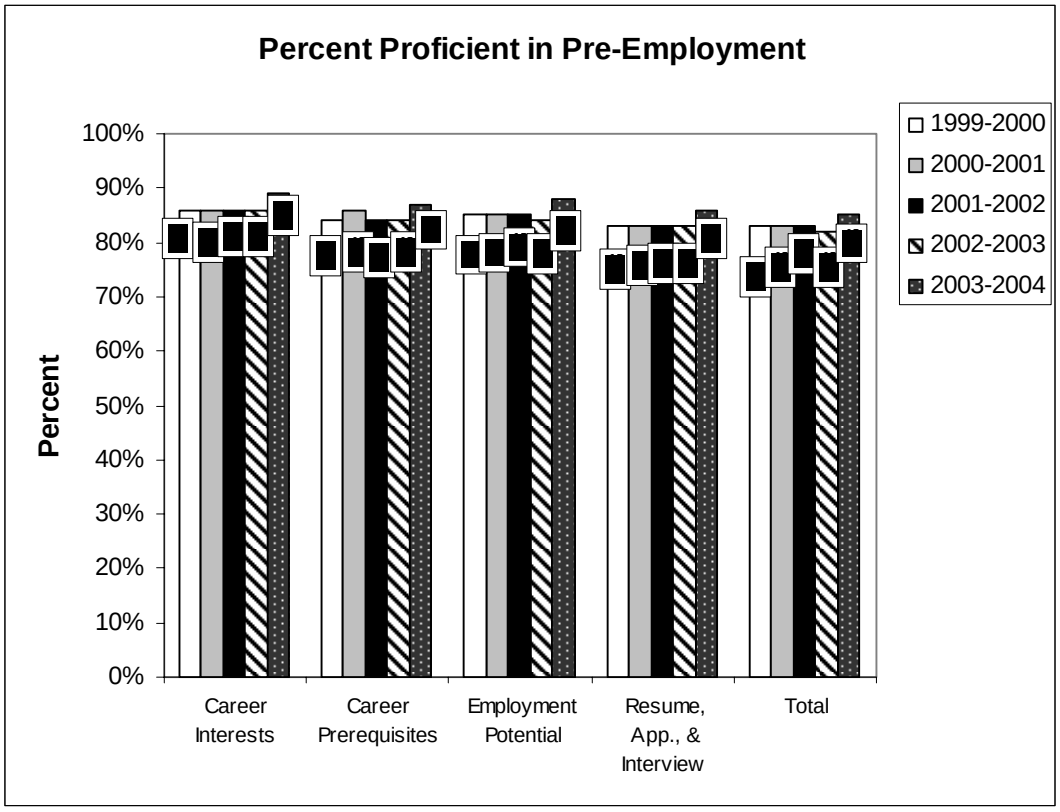
- Approximately 84% of students were proficient on the technology scale.
- Students were most proficient (93%) in the Internet searches strand of the technology scale.



Content Area: Pre-employment

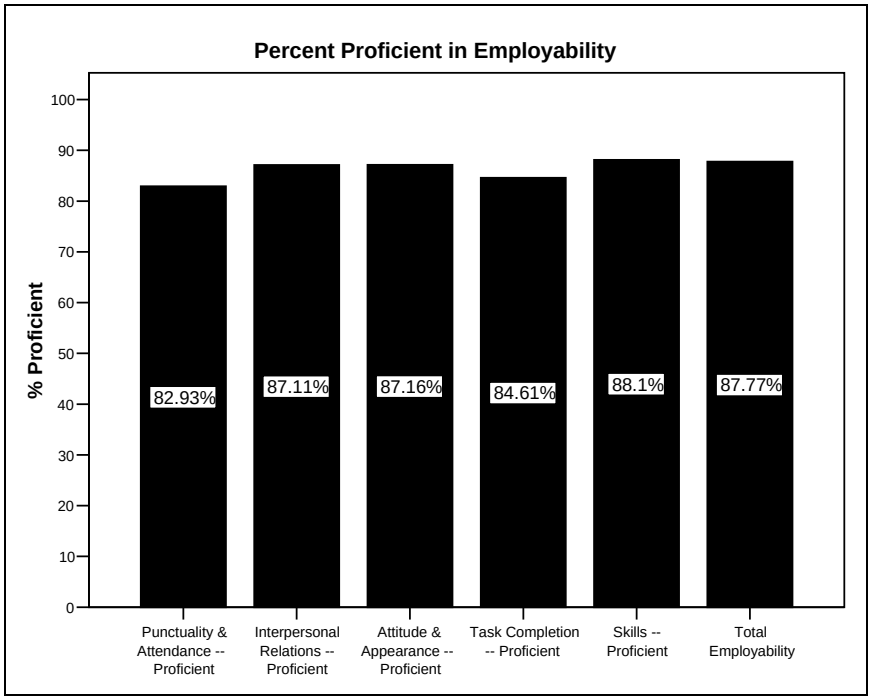


- Approximately 85% of students were proficient on the pre-employment scale.
- Students were most proficient (89%) in the career interests strand of the preemployment scale.

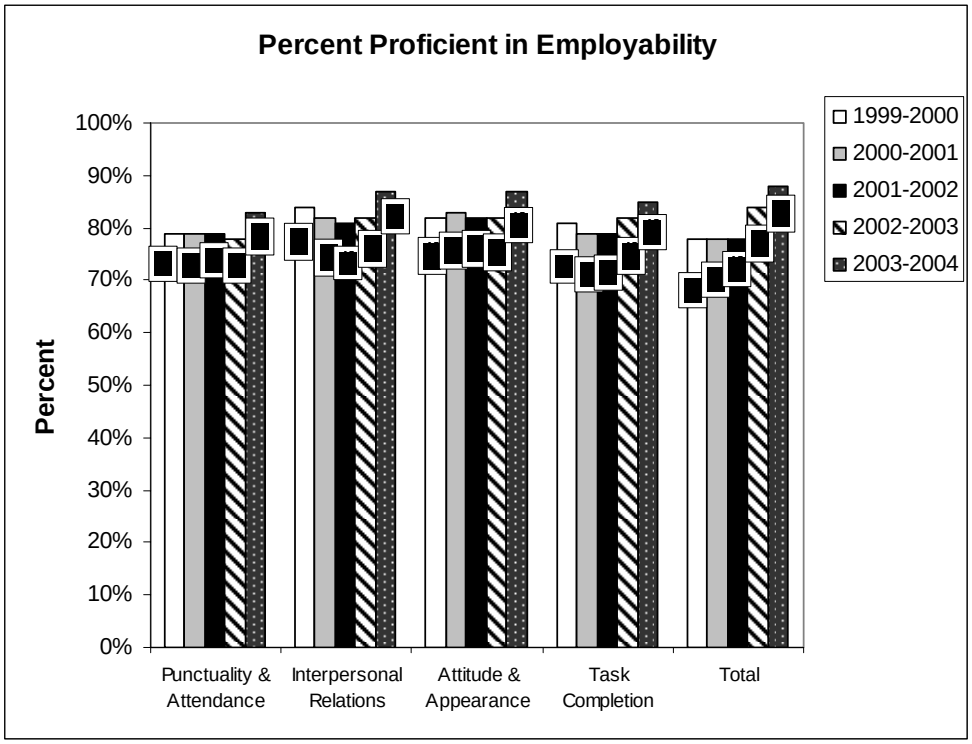


Content Area: Employment

Note: Skill Performance was added as a subskill during the 2002-2003 school year. Therefore, this subskill is not displayed in the graph by assessment year.

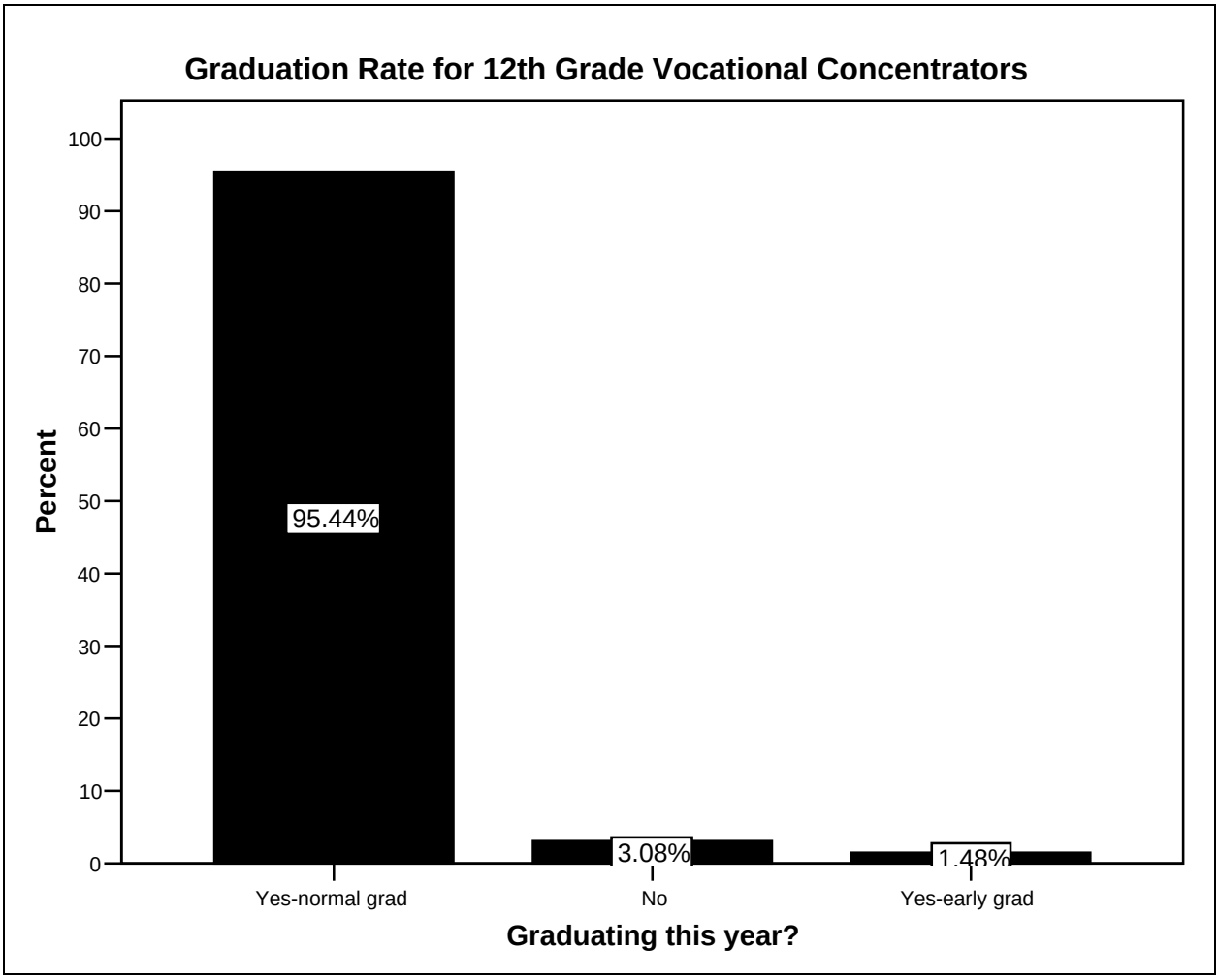


- Approximately 88% of students were proficient on employment scale.
- Students were most proficient (88%) in the skills strand of the employment scale.



2S1 - Completion

Approximately 97% (N=2549) of 12th grade vocational concentrators indicated that they would graduate (includes those graduating early). This results to a 4% increase in completion rate compared to last year.



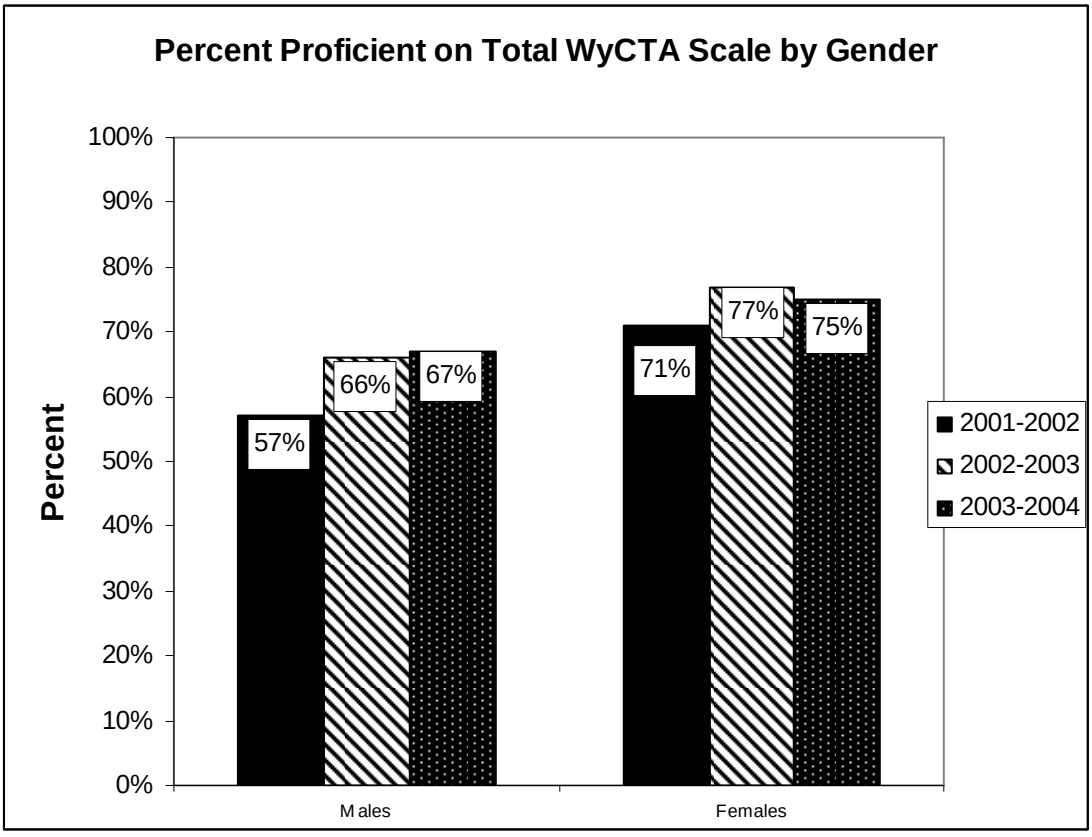
Subgroup Analysis of 1S2 and 2S1

The following section summarizes Total WyCTA Proficiency and graduation status by the following subgroups: gender, ethnicity/race, and eligibility category. This will allow for the identification of areas of strength and weakness among different groups. In addition, the previous year's WyCTA results are also presented for comparison purposes. However, recall that changes were made in the calculation of Total WyCTA during the 2002-2003 school year.

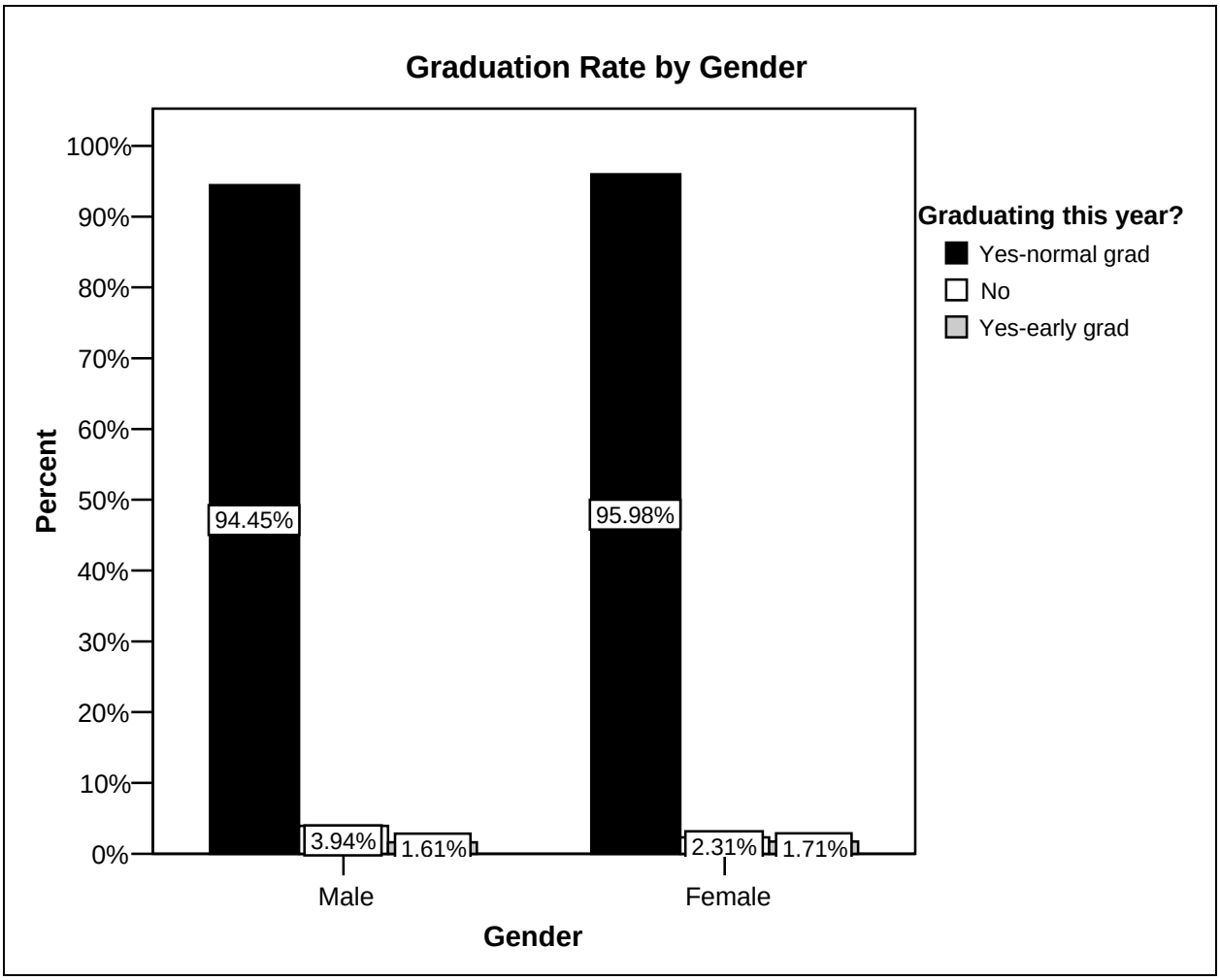
Results showed that the percent of students proficient on the Total WyCTA was higher than the previous year's for all subgroups, except females, Blacks, Asians/Pacific Islanders, and students with disabilities or in corrections.

Gender

- During the 2003-2004 assessment year, the proportion of females who were proficient (1770 out of 2358, 75.1%) on the Total WyCTA was greater than the proportion of proficient males (2183 out of 3250, 67.2%). [Note: Only students tested in at least 4 content areas are included].

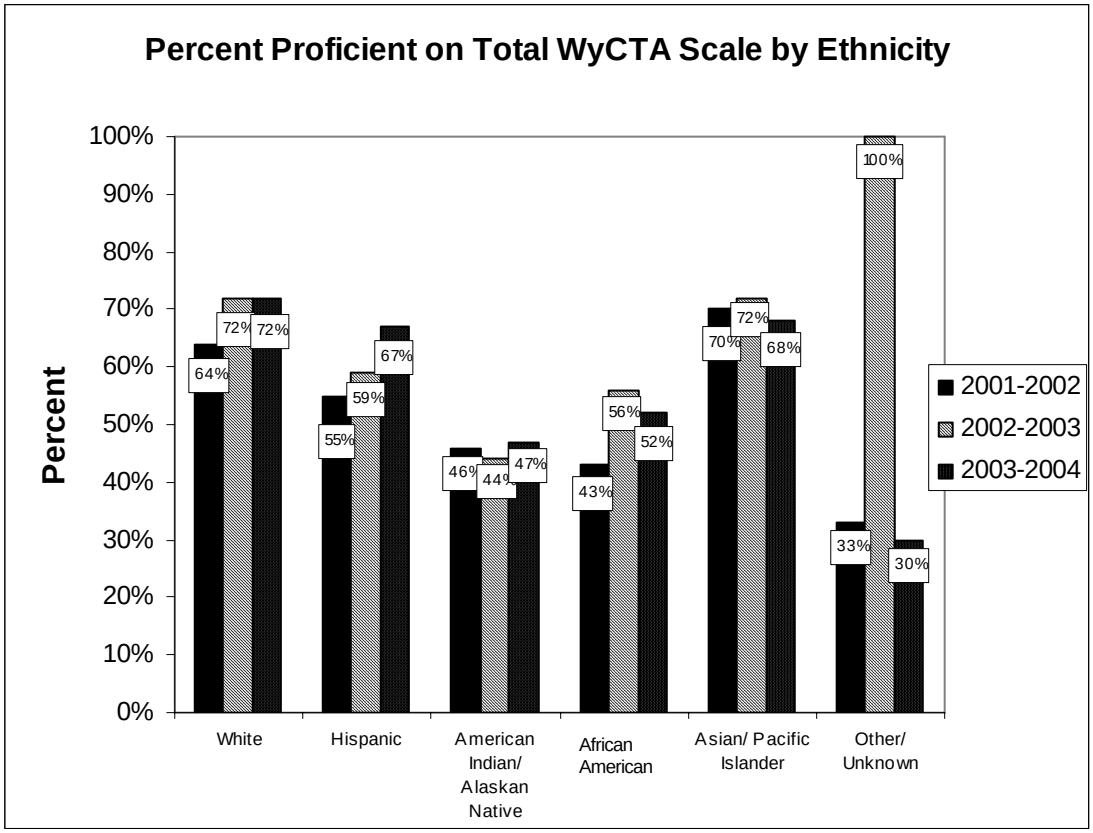


- There was little difference in graduation rates among 12th grade females (N=1141) and males (N=1488).



Ethnicity/Race

- The percentage of students within each *known* ethnicity proficient on the Total WyCTA during the 2003-2004 assessment year ranged from 47% (American Indians) to 72% (White).

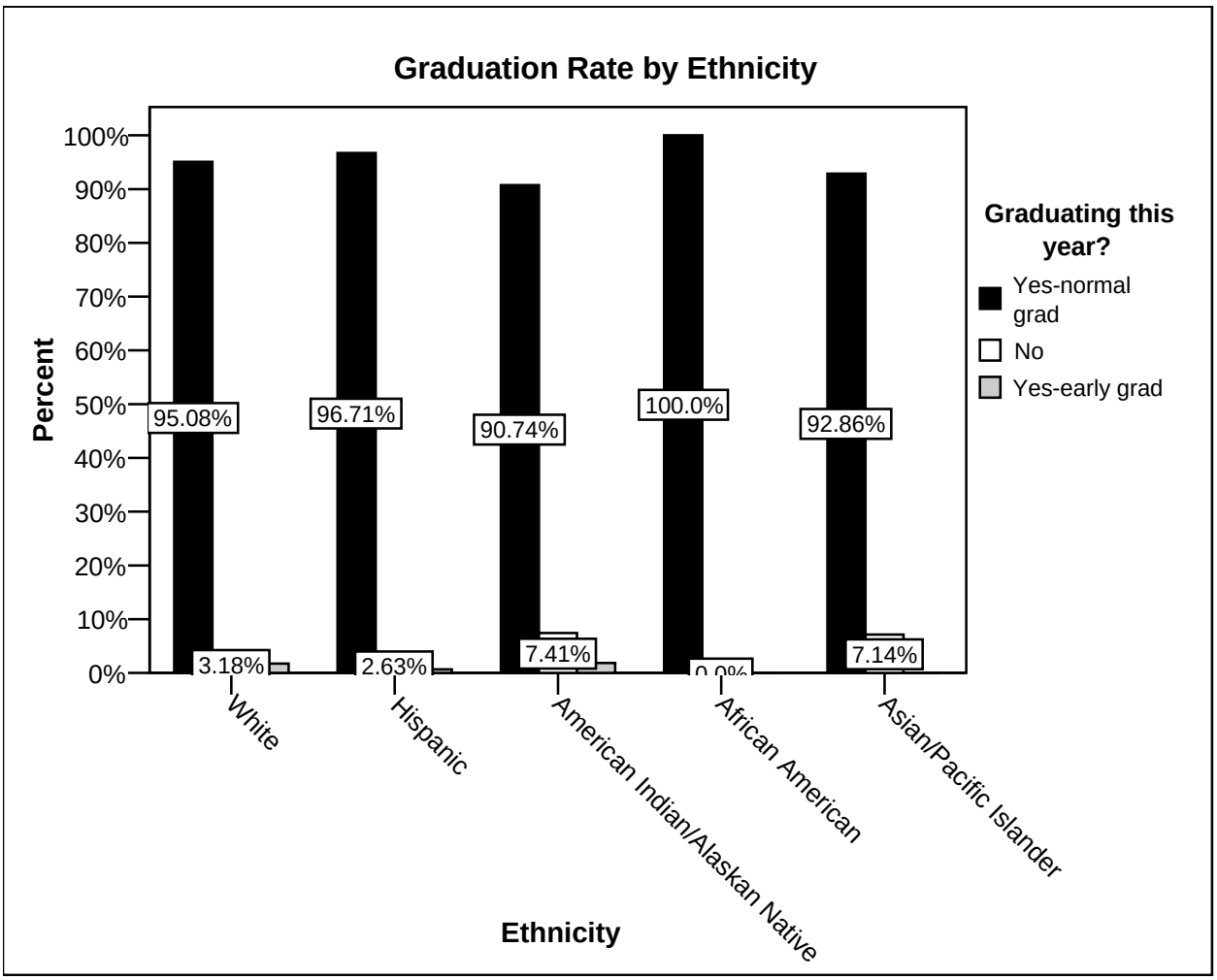


Number and Percent of Students by Ethnicity 2003-2004

	Frequency	Percent
Whites	5031	89.7
Hispanic	352	6.3
American Indian/Alaskan Native	121	2.2
Asian/Pacific Islander	56	1.0
African Americans	38	.7
Unknown/Other	10	.2

*This category was excluded from the graph above because less than 10 students in subgroup.

- Among the 12th graders, American Indians had the lowest graduation rate (90.74%) during the 2003-2004 school year.



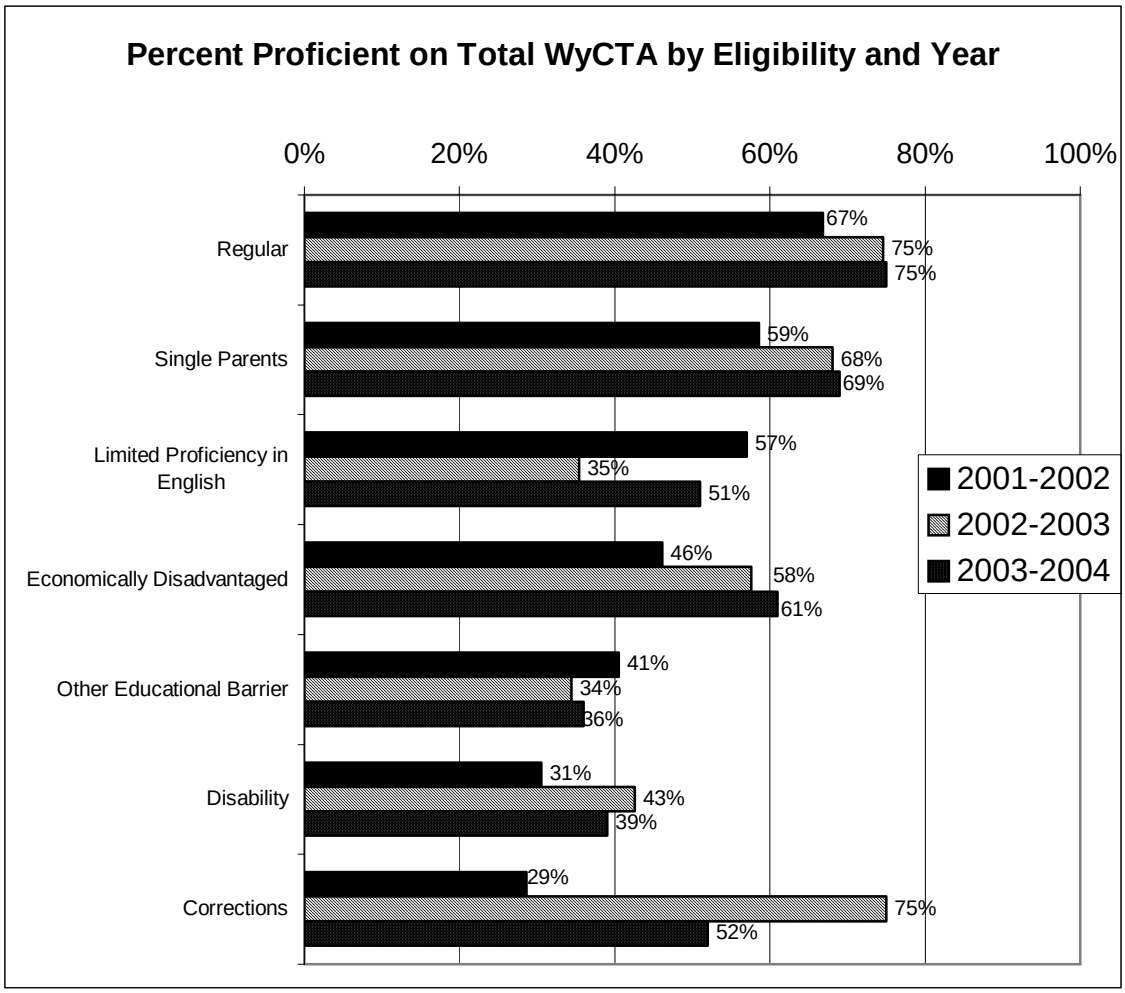
Number and Percent of 12th Grade Students by Ethnicity 2003-2004

	Frequency	Percent
White	2482	91.4
Hispanic	152	5.6
American Indian/Alaskan Native	54	2.0
African American	12	.4
Asian/Pacific Islander	14	.5
Unknown/Other	3*	.1

*This category was excluded from the graph above because less than 10 students in subgroup.

Eligibility Category*

- Within eligibility categories, those who were categorized as "regular" had the highest proportion of proficient students (75%) followed by students classified as “single parents” (69%) during 2003-2004.

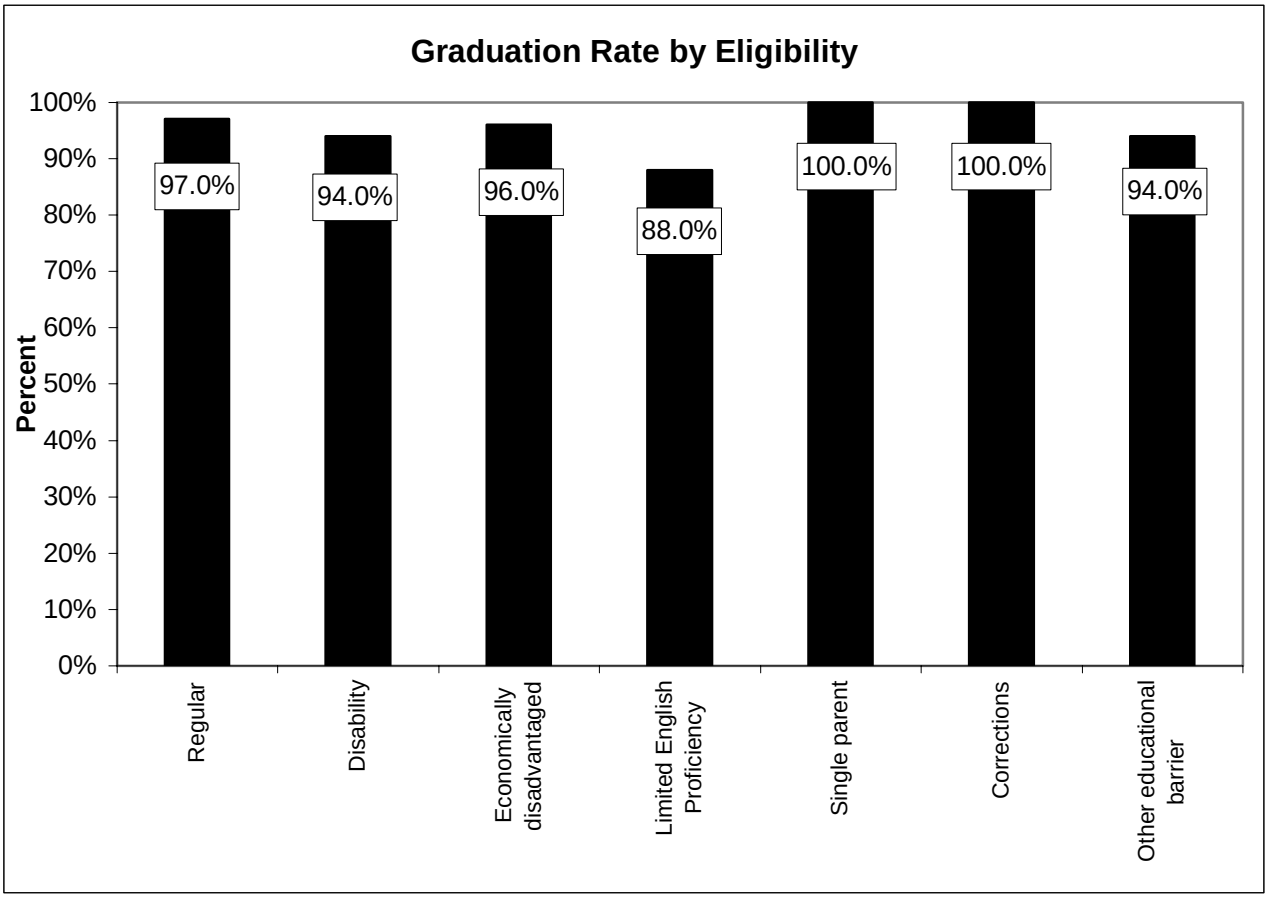


- Student may have been categorized under more than one category. During 2003-2004, there was one student who was eligible under the “displaced homemaker” category. This student was proficient in the total WyCTA scale.

Eligibility Counts
2003-2004

	Frequency	Percent
Regular	4298	73.5
Economically Disadvantaged	842	14.4
Disability	326	5.6
Other Educational Barrier	150	2.6
Single Parents	112	1.9
Limited English Proficiency	93	1.6
Corrections	23	.4

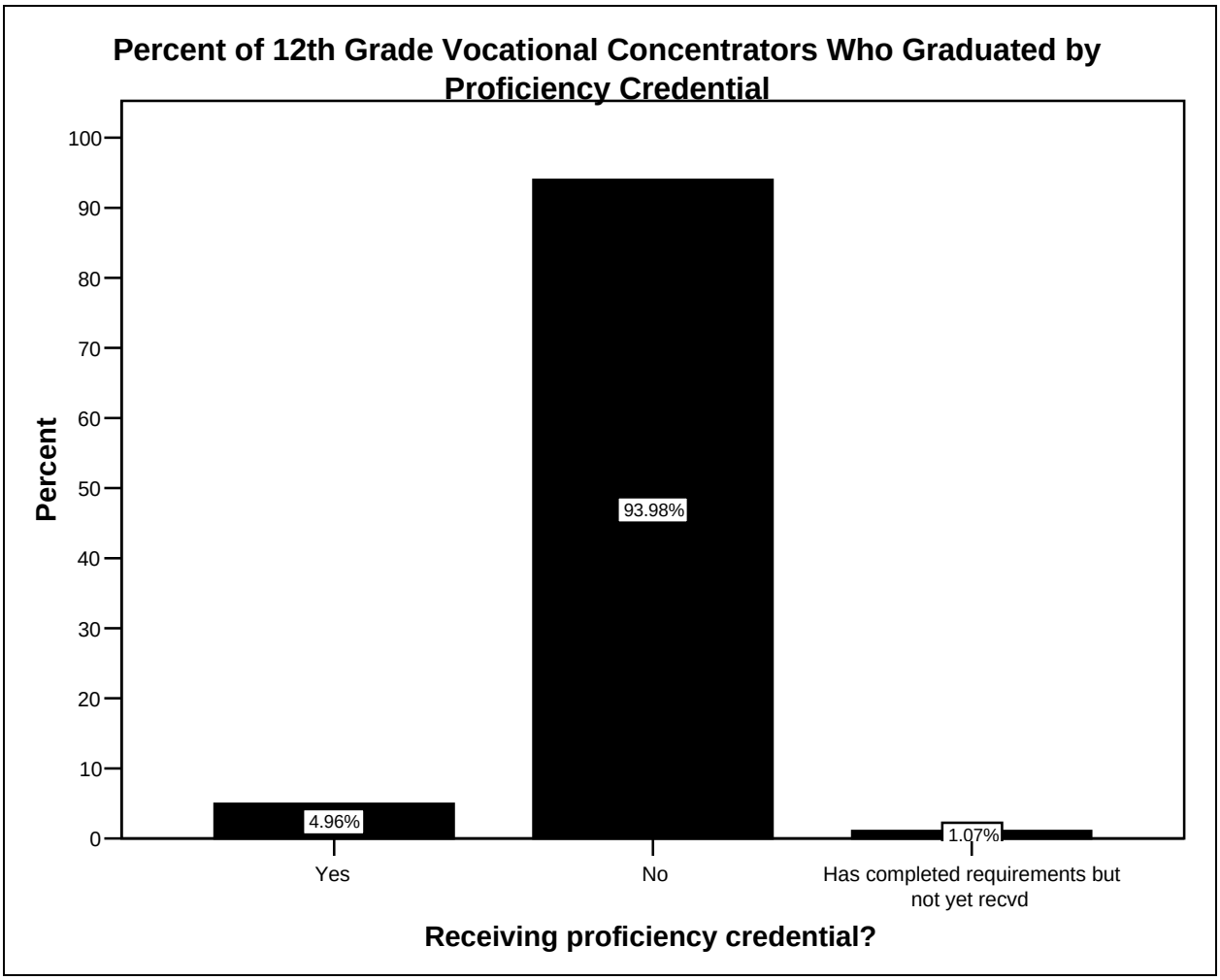
- Within eligibility categories, those who were categorized as "single parents" and “corrections” had the highest graduation rate (100%) during 2003-2004.



Counts of 12th Graders by Eligibility
2003-2004

	Frequency	Percent
Regular	2046	74.5
Economically Disadvantaged	351	12.8
Disability	153	5.6
Single Parents	71	2.6
Other Educational Barrier	63	2.3
Limited English Proficiency	51	1.8
Corrections	10	.4

2S2 - 12th Grade Vocational Concentrator Graduates by Proficiency Credentials



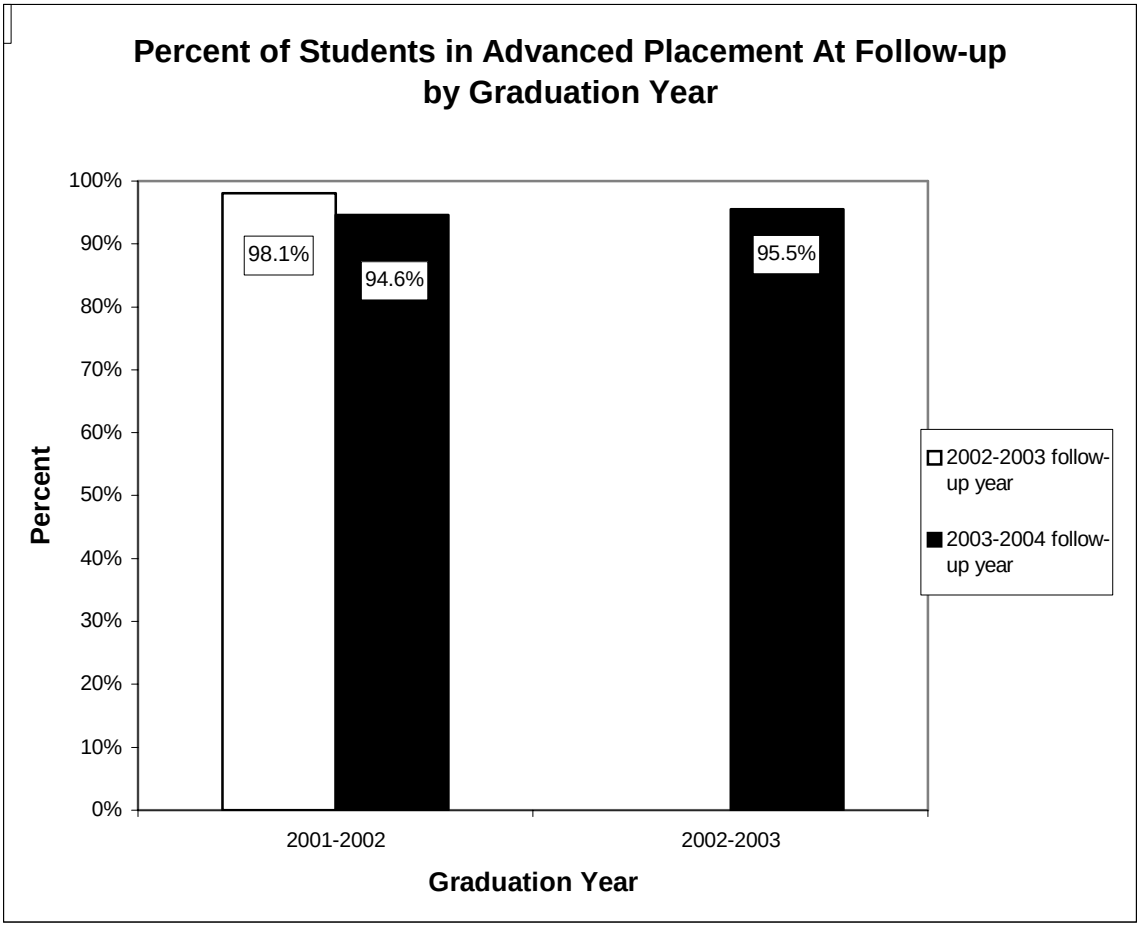
Approximately 6% (N=158) of 12th grade vocational concentrators who graduated received or completed the requirements for a proficiency credential in one of the following areas.

- Diploma/Certificate Unspecified (38)
- CNA (35)
- NCCFR (28)
- FFA (9)
- Auto Desk/Cad (7)
- Microsoft (7)
- CISCO (6)
- MOUS (4)
- ProStart Certification (4)
- Customer Service (4)
- IC3 (3)
- Agriculture (3)
- Construction (2)
- Automotive (2)
- Welding (2)
- Cabinetry (1)
- C++ (1)
- ServSafe (1)
- Computers (1)

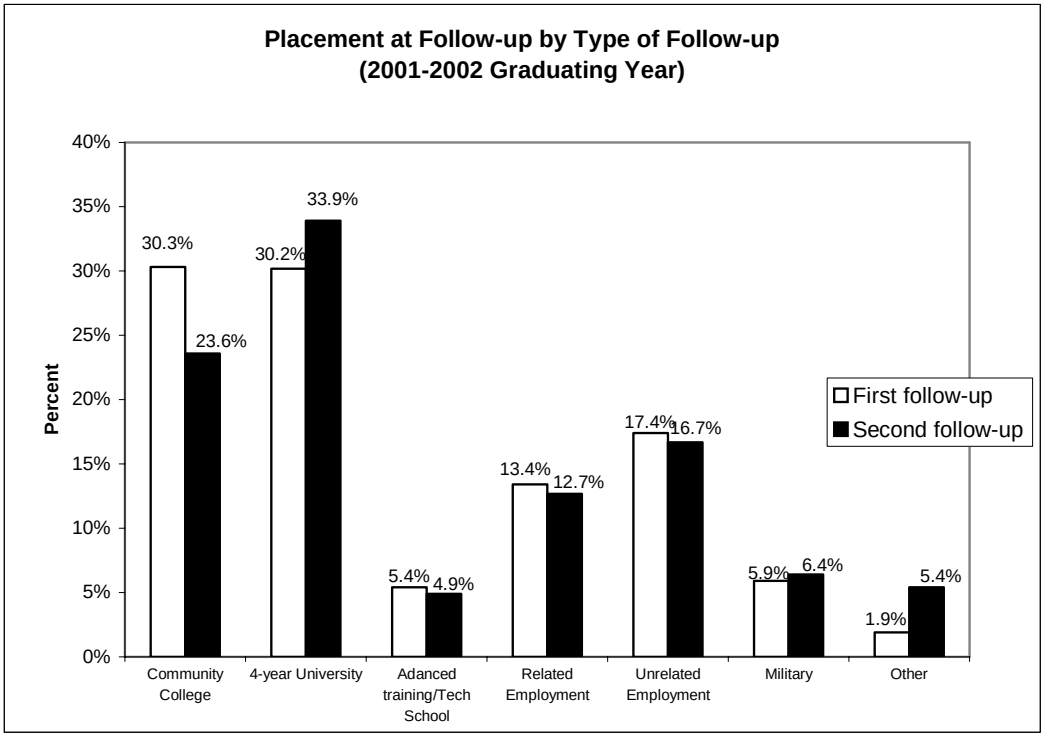
3S1 - Program completers who were in employment, post-secondary/advanced education, or the military at follow-up

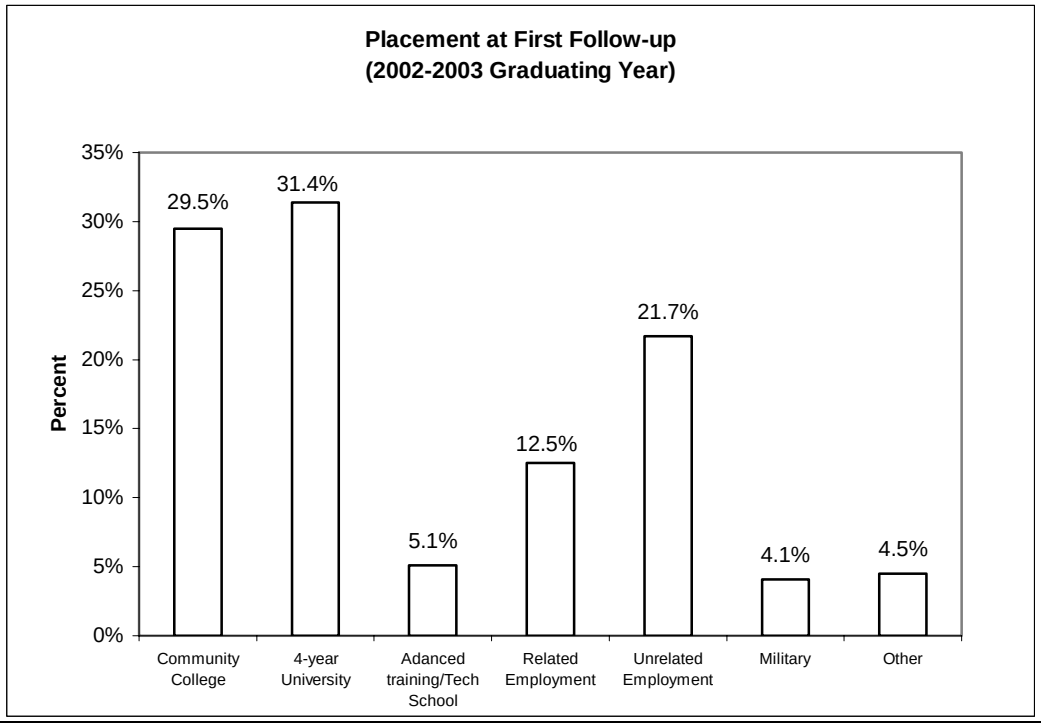
The following graph shows the percent of students who were in an advanced placement following graduation (i.e. post-secondary education, military, advanced training or employment). Follow-up data was provided by 66 of the 75 schools that reported WyCTA data.

During 2003-2004, data was obtained from students who graduated in 2001-2002 (N=2130) and 2002-2003 (N=2387). As is shown, students who graduated in 2001-2002 showed a 3.5% drop in advanced placement at the second follow-up (in 2004) compared to the first follow-up (in 2003). During the 2004 follow-up, on average 95.1% of students across both graduating years were in advanced placement. Across all follow-up data collected (2002-2004), 96.1% of students were in advanced placement.

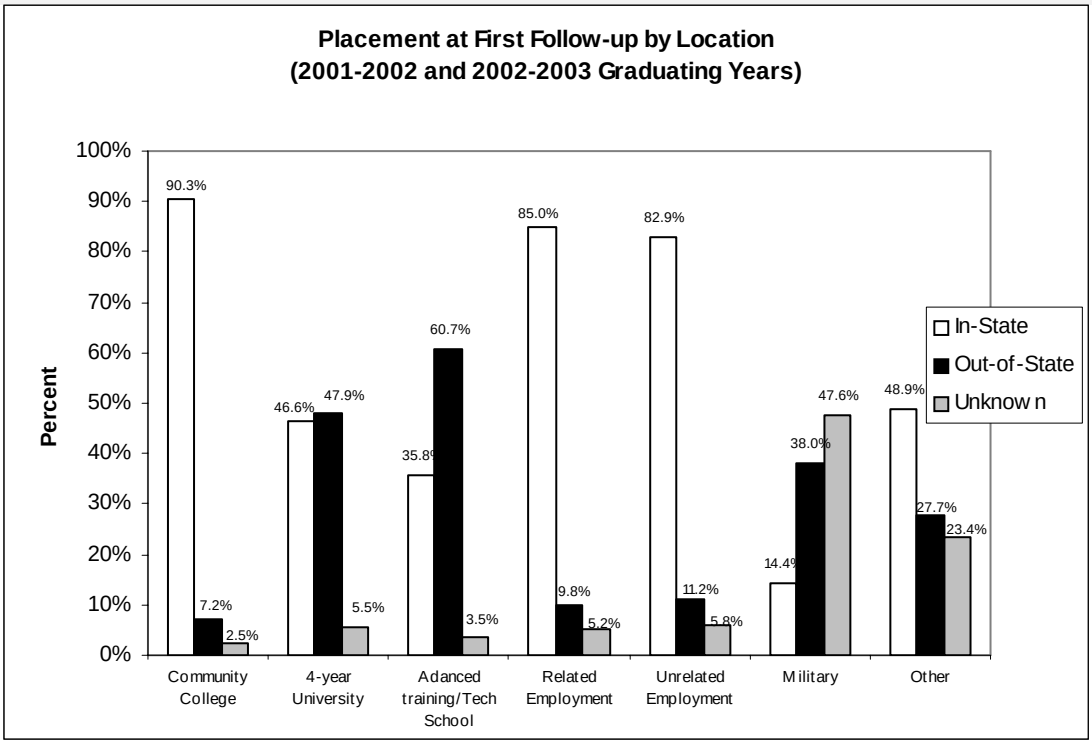


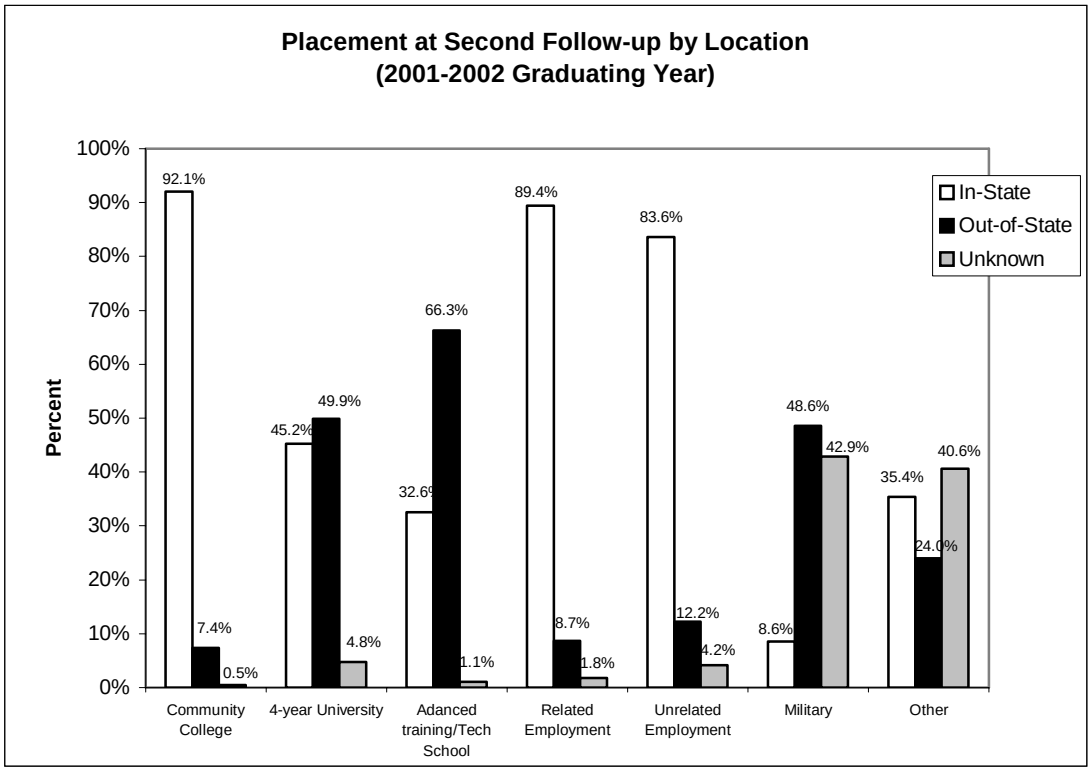
The decrease in advanced placement during the second follow-up year among the 2001-2002 graduates is due to decreases in the number of students attending a college and being employed during the second year. For both graduating classes, the same pattern emerges. The highest percentage of students go on to a community college or 4-year university, followed by employment, then advanced training or the military. *[Note: These percents are based on duplicated counts (i.e. graduates may have been in more than 1 placement].*



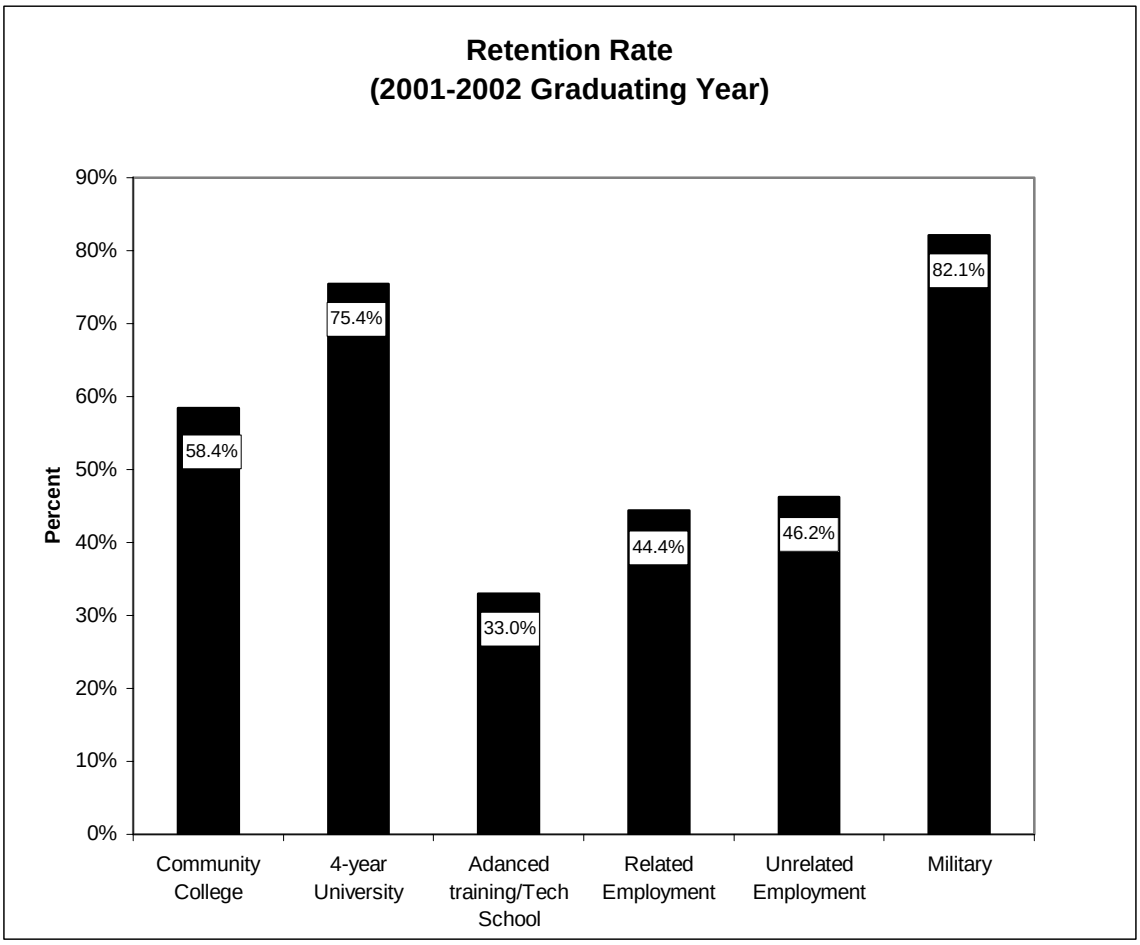


The majority of graduates who were attending a community college or were employed remained in Wyoming. A significant percentage of students who attend a 4-year university also do so in-state (46.6%-first followup and 45.2%-second followup). Those in an advanced training/tech schools or in the military were more likely to be out-of-state.





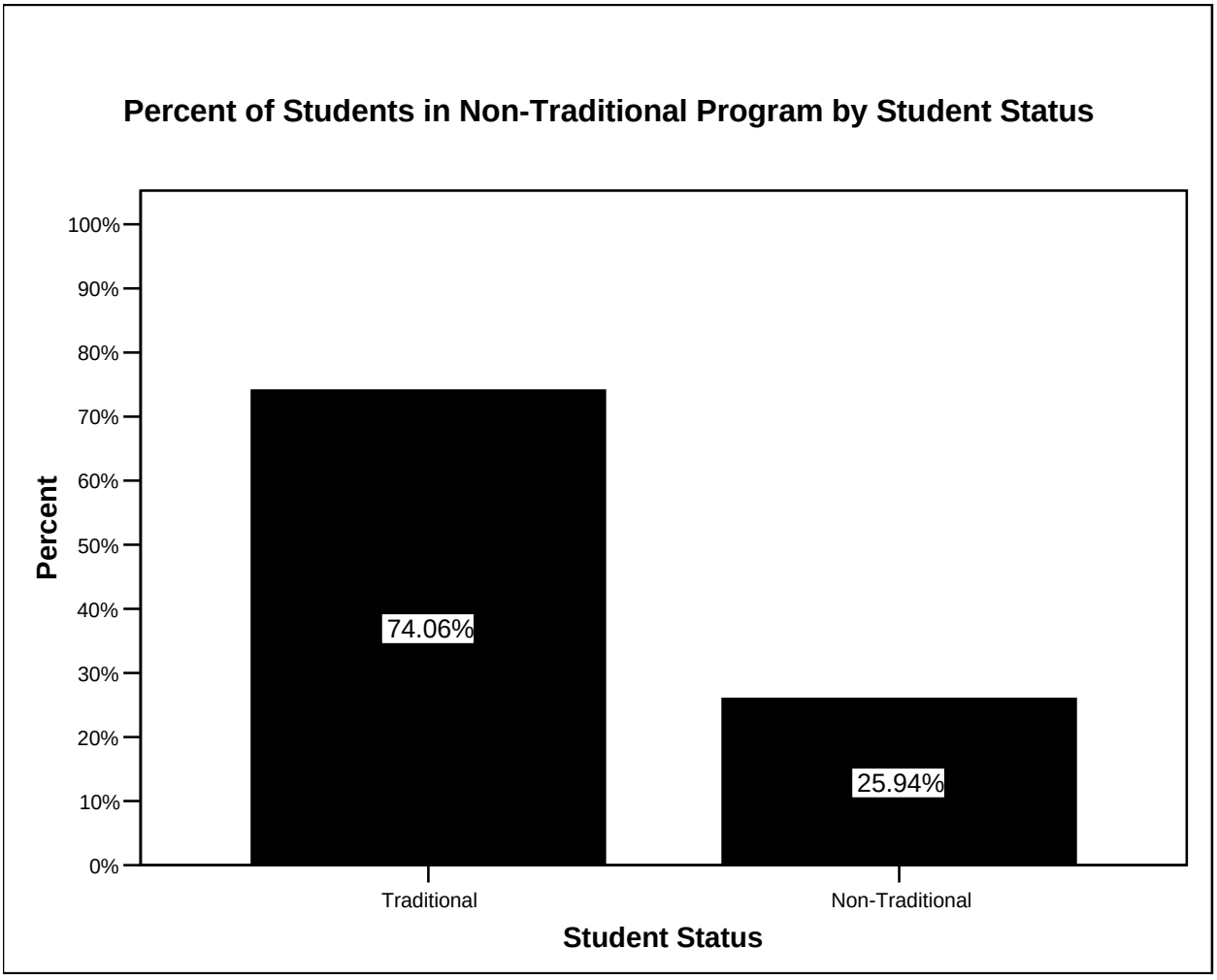
The following graph displays the retention rate for graduates in different advanced placements. This was calculated by determining whether the graduate was in the same placement category during the second follow-up as s/he was in the first follow-up. If the graduate was in the same category, then this was counted as retention. As expected, the highest rates of retention among placements were 4-year universities (75.4%) and the military (82.1%). Advanced training had the lowest retention, which is also expected since many training programs only involve 1 year. Thus, these graduates may be employed during the second follow-up.



4S1 - Non-traditional vocational students participating in non-traditional programs

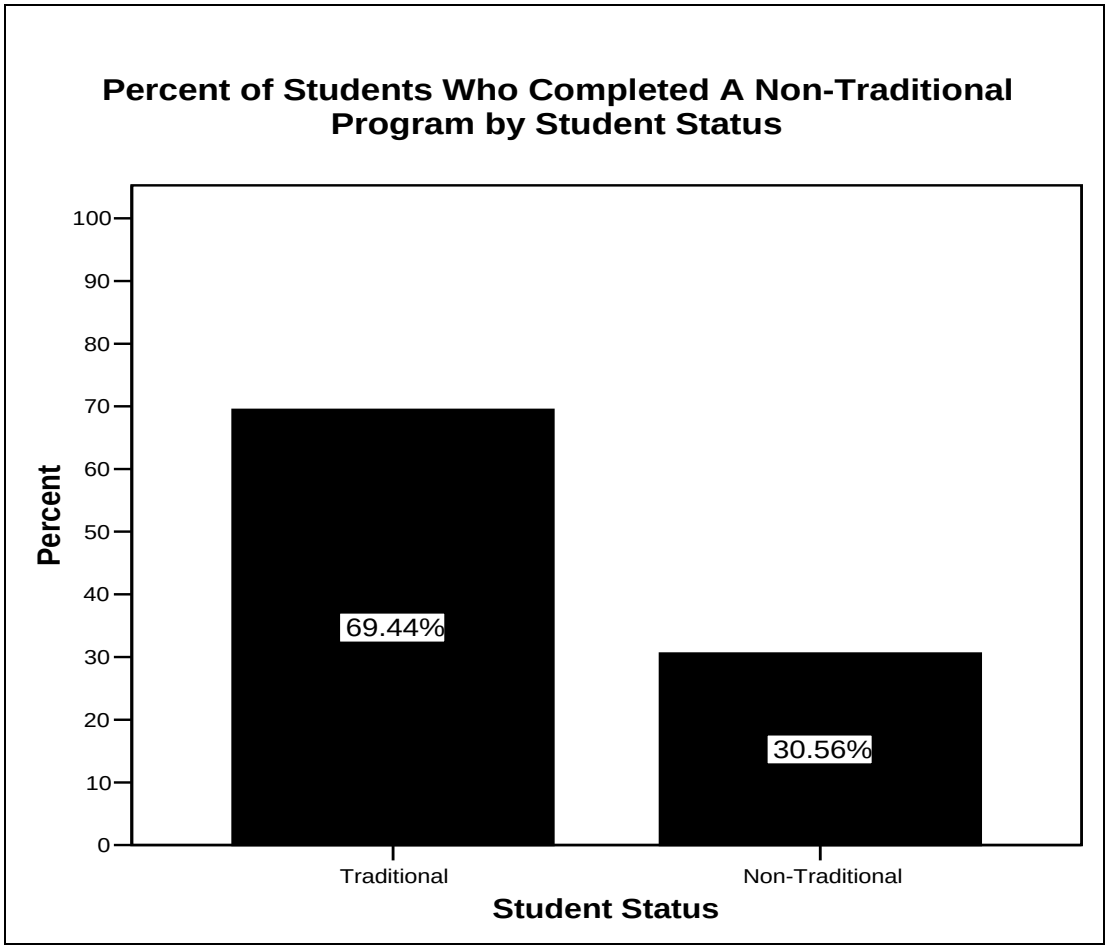
To calculate non-traditional programs, federal guidelines were used to determine fields that are considered non-traditional for each gender. For example, nursing is a non-traditional male profession while engineering is a non-traditional female profession. For this purpose, CIP codes gathered in the WyCTA database were analyzed to calculate non-traditional fields by gender. Students whose gender matched those in a non-traditional program (e.g. a female in a female-underrepresented field) were considered non-traditional students whereas students whose gender did not match a non-tradition program (e.g. a male in a female-underrepresented field) were considered traditional students. Therefore, a non-traditional student in a non-traditional program is someone whose gender is underrepresented in that particular field.

Approximately 26% of students in non-traditional programs were in under-represented gender groups. Compared to last year, this results in a 6% increase.



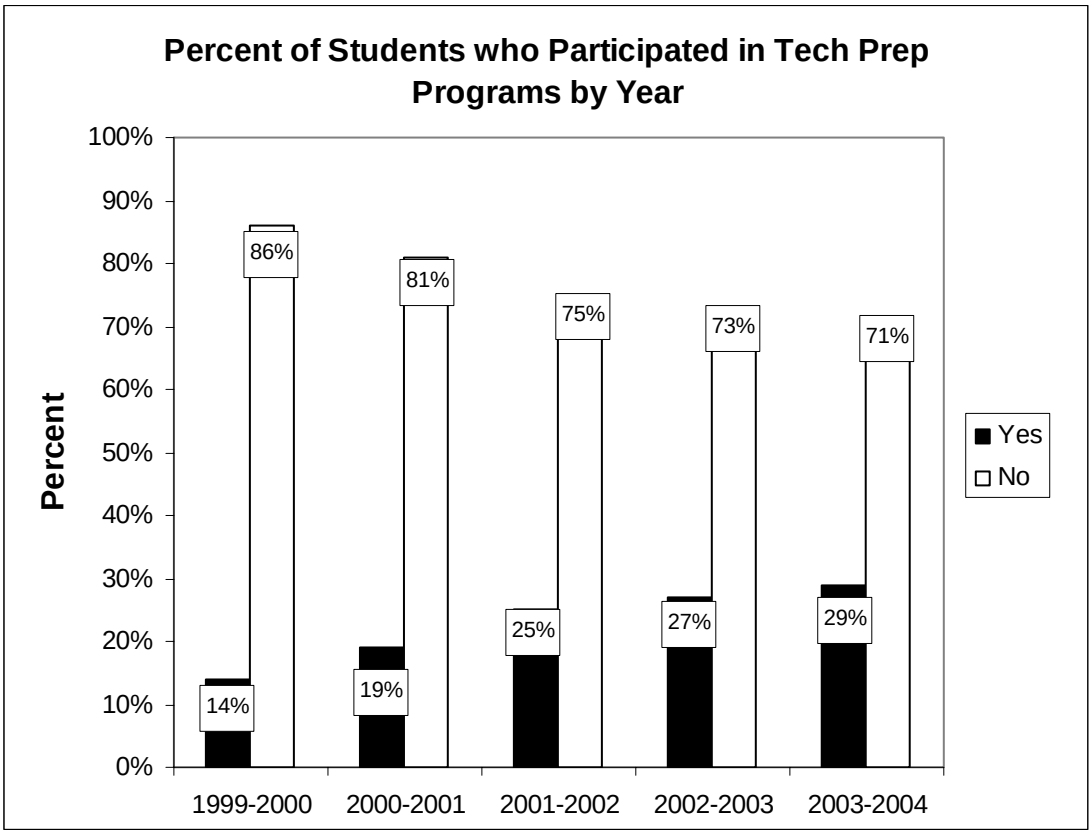
4S2 - Non-traditional vocational students completing non-traditional programs

Approximately 31% of all students completing a non-traditional program were non-traditional students. Last year, the completion rate for non-traditional students was 20%.



Technology Preparation

Approximately 29% of students (N=2429) participated in a technology preparation program. There was a 2% increase in participation rate between 2002-2003 and 2003-2004. Over the last five years, there has been an increase in tech prep participation from year to year.



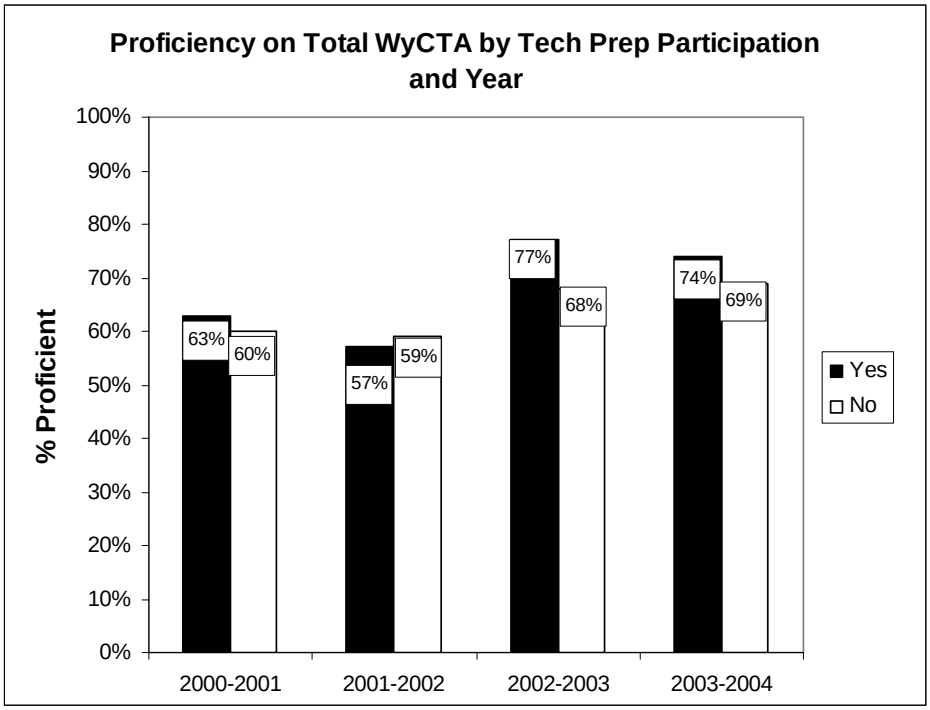
The following tables show the percent of students who participated in technology preparation programs by WyCTA overall and content area proficiency levels. In addition, results are presented for the last four assessment years (2000-2004). [Reminder: In 2002-2003, WyCTA content areas were changed as previously discussed]. For reference, the percent of students not assessed in the optional areas by tech prep participation are also presented for each assessment year.

Key findings include:

- Total WyCTA proficiency for those who participated in a tech prep program was lower (3% less) than last year,
- There were decreases in the percent of proficient students in all WyCTA content areas for those who participated in a tech prep program compared to the previous year,
- Improvements in Total WyCTA and content areas were observed in students not participating in a tech prep program (except technology),
- Except for the 2001-2002 school year, students who participated in a tech prep program generally had higher proficiency levels than those who did not.

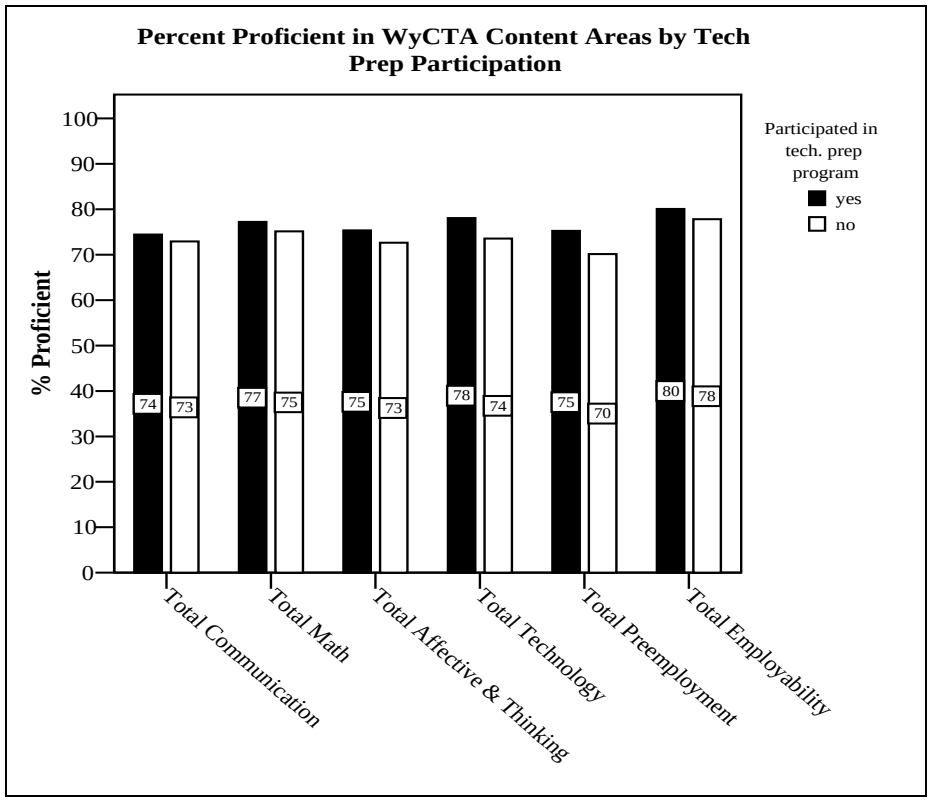
Tech Prep by Total WYCTA Proficiency Level

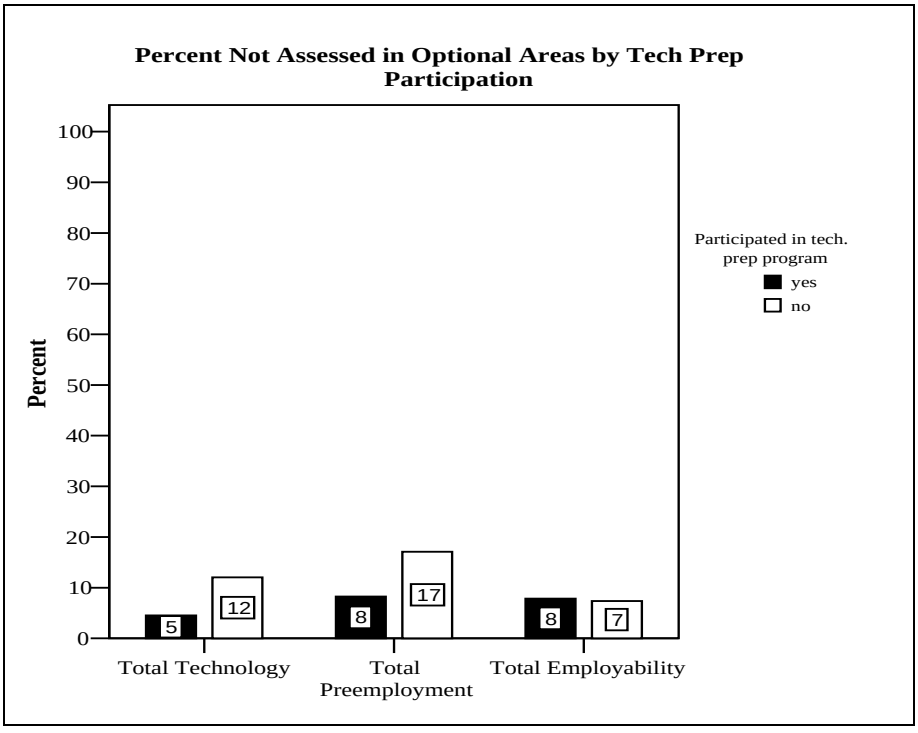
- Of those who were assessed in at least 4 out of the 6 WyCTA content areas, results show that those participating in a technology preparation program during 2003-2004 were more likely to be proficient (74%) than those who did not (69%). However, proficiency levels among tech prep participants decreased by 3% as compared to 2002-3.



Tech Prep by WyCTA Content Areas (2003-2004)

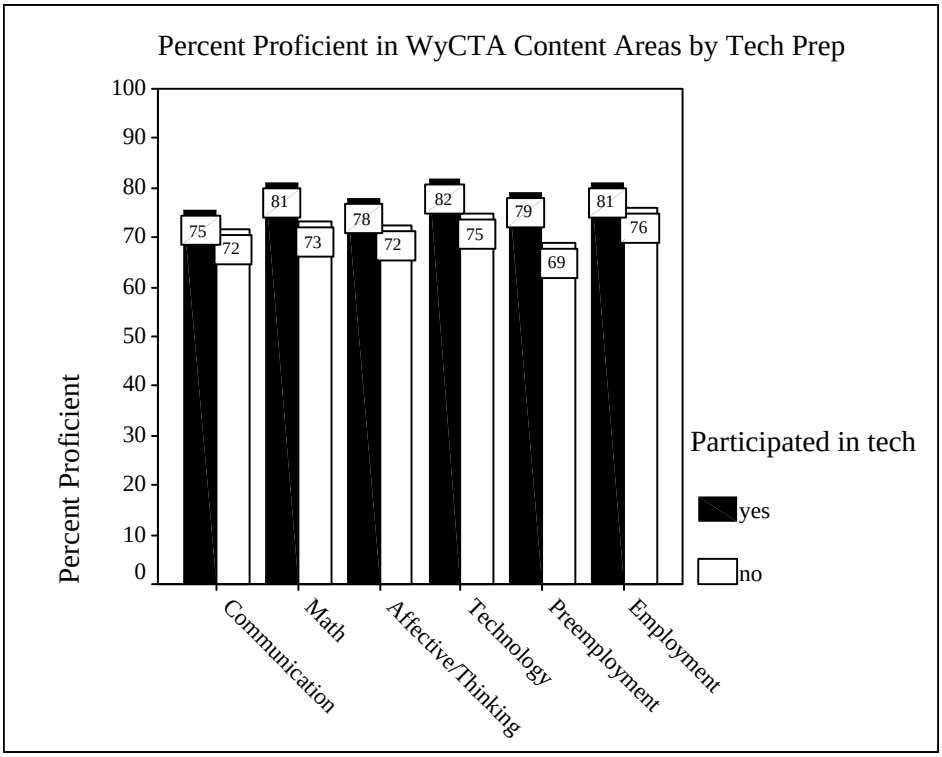
- During 2003-2004, those who participated in a technology preparation program were most proficient in the areas of employability (80%), technology (78%) and math (77%). Non-tech prep participants were most proficient in employability (78%) and math skills (75%).

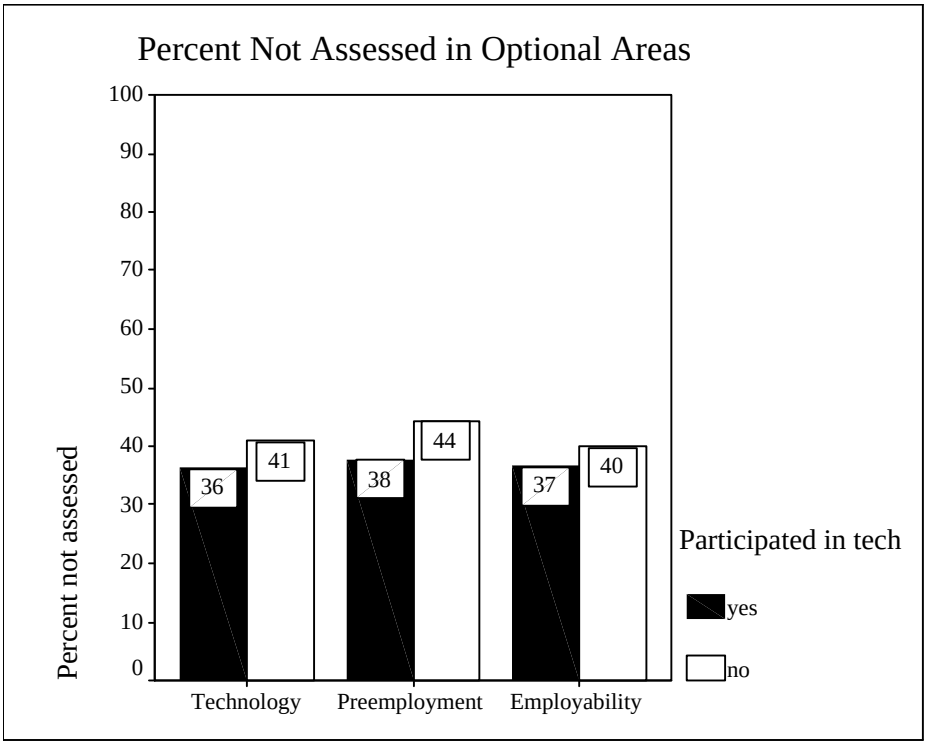




Tech Prep by WyCTA Content Areas (2002-2003)

- During 2002-2003, those who participated in a technology preparation program were most proficient in the areas of technology (82%), preemployment (81%) and math (81%). Non-tech prep participants were most proficient in employment (76%) and technology skills (75%).

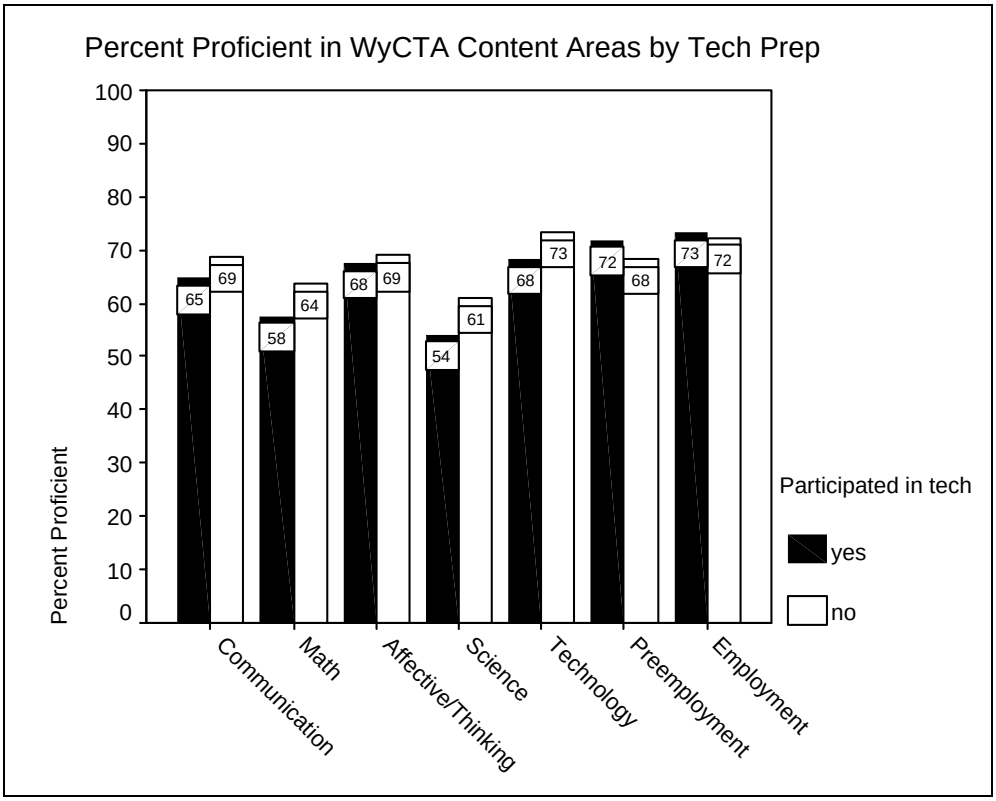


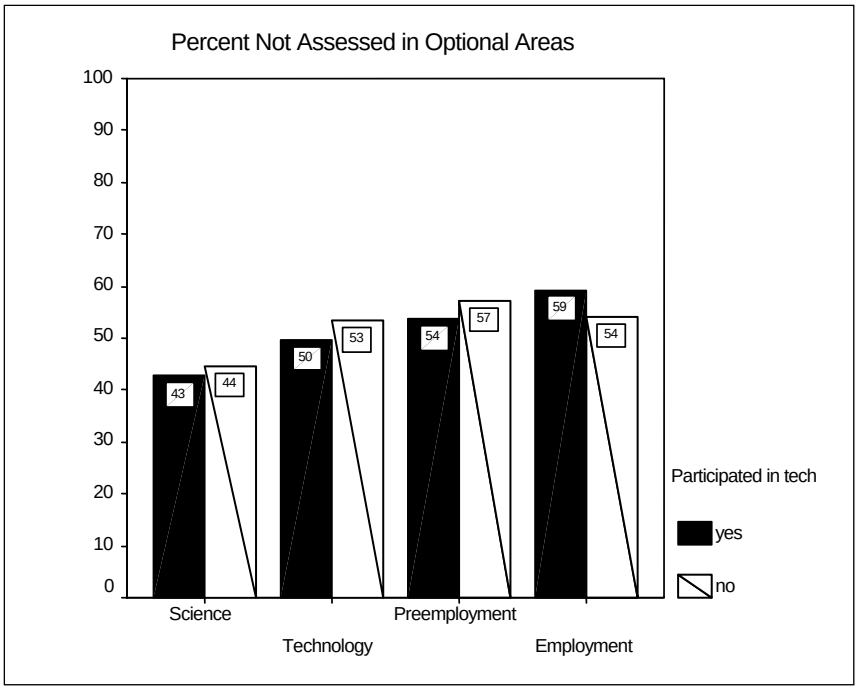


Tech Prep by WyCTA Content Areas (2001-2002)

- During 2001-2002, those who participated in a technology preparation program were most proficient in the areas of employment (73%) and preemployment (72%). Non-tech prep participants were most proficient in technology (73%) and employment skills (72%).

2001-2002

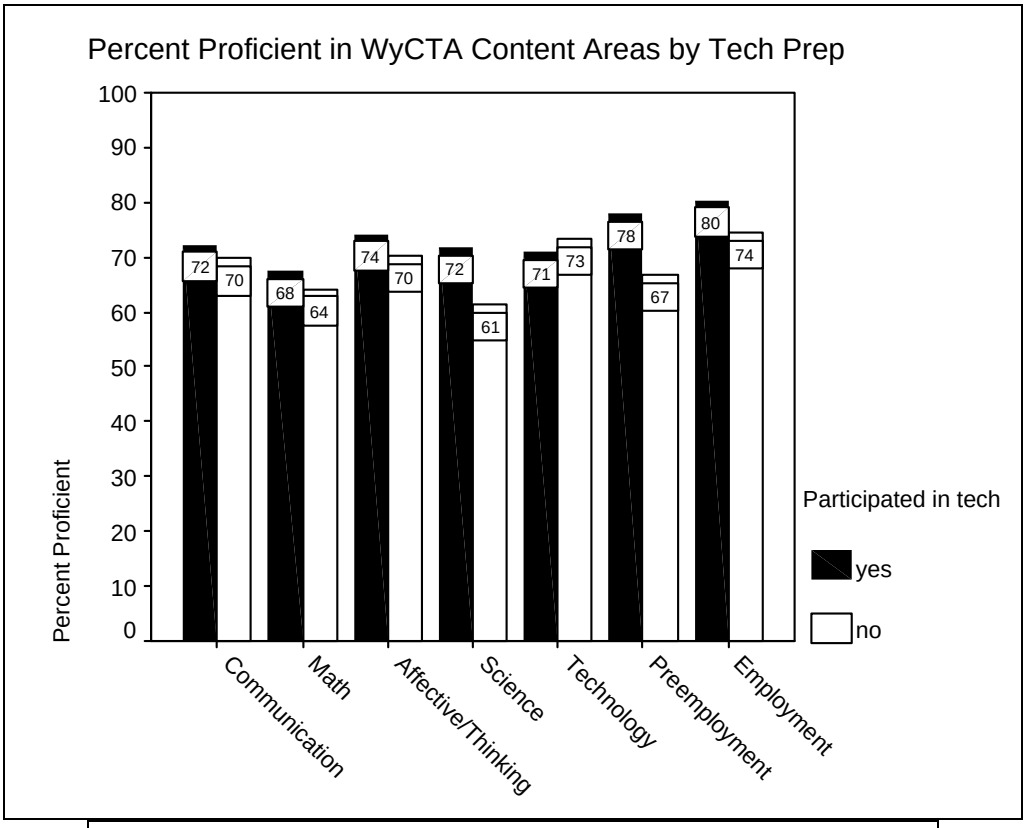


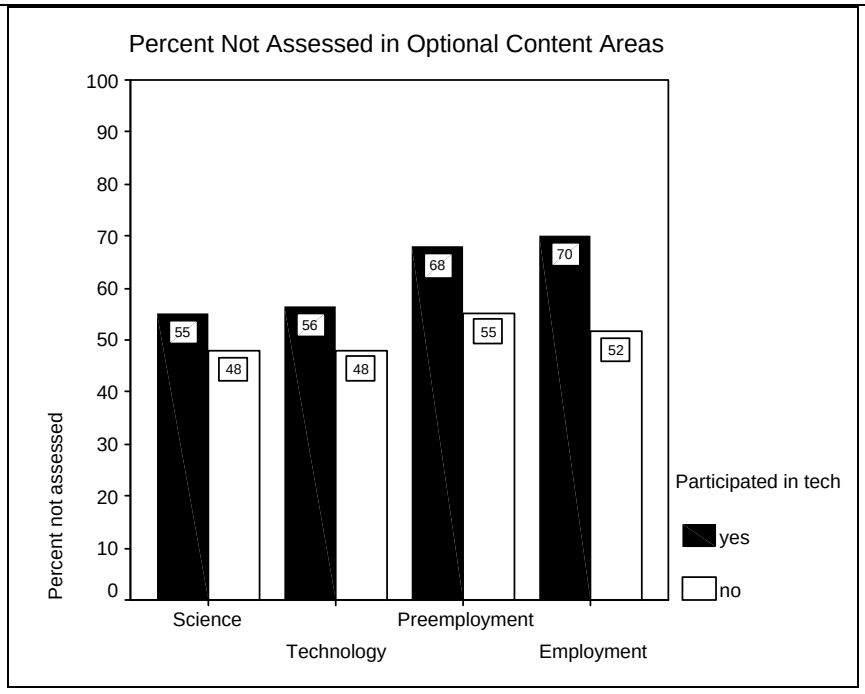


Tech Prep by WyCTA Content Areas (2000-2001)

- During 2000-2001, those who participated in a technology preparation program were most proficient in the areas of employment (80%) and preemployment (78%). Non-tech prep participants were most proficient in employment (74%) and technology skills (73%).

2000-2001





CTSO Participation

Approximately 21.8% of secondary students (unduplicated N=1788) participated in a CTSO during the 2003-2004 school year. The majority of students reporting CTSO involvement participated in FFA (40.5%).

Organization	Count	Percent
FFA	768	40.5%
FBLA	329	17.3%
FCCLA	288	15.2%
DECA	278	14.7%
USA-VICA	234	12.3%
Total	**1897**	**100.0%**

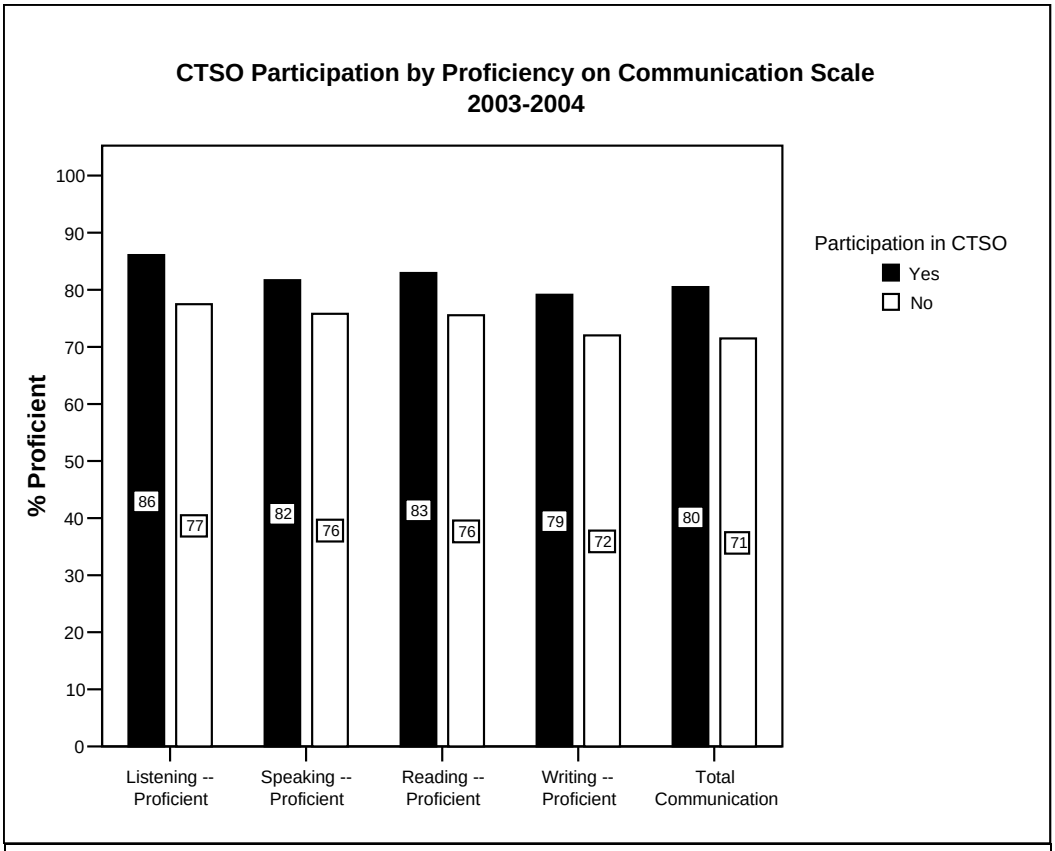
*Students may have participated in more than one CTSO.

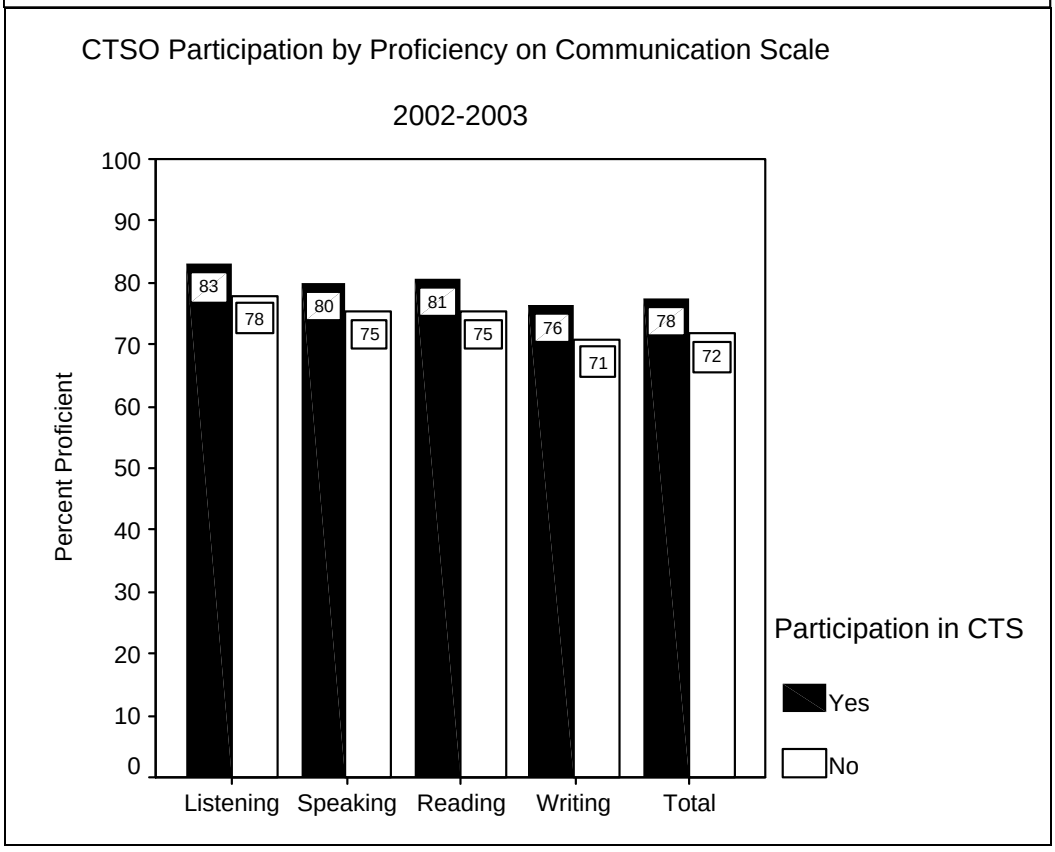
The following graphs show the percent of students proficient in **WyCTA** subscales and content areas by CTSO participation. In addition, graphs are presented for each of the last four assessment years. [Note: WyCTA content areas underwent changes in 2002-2003].

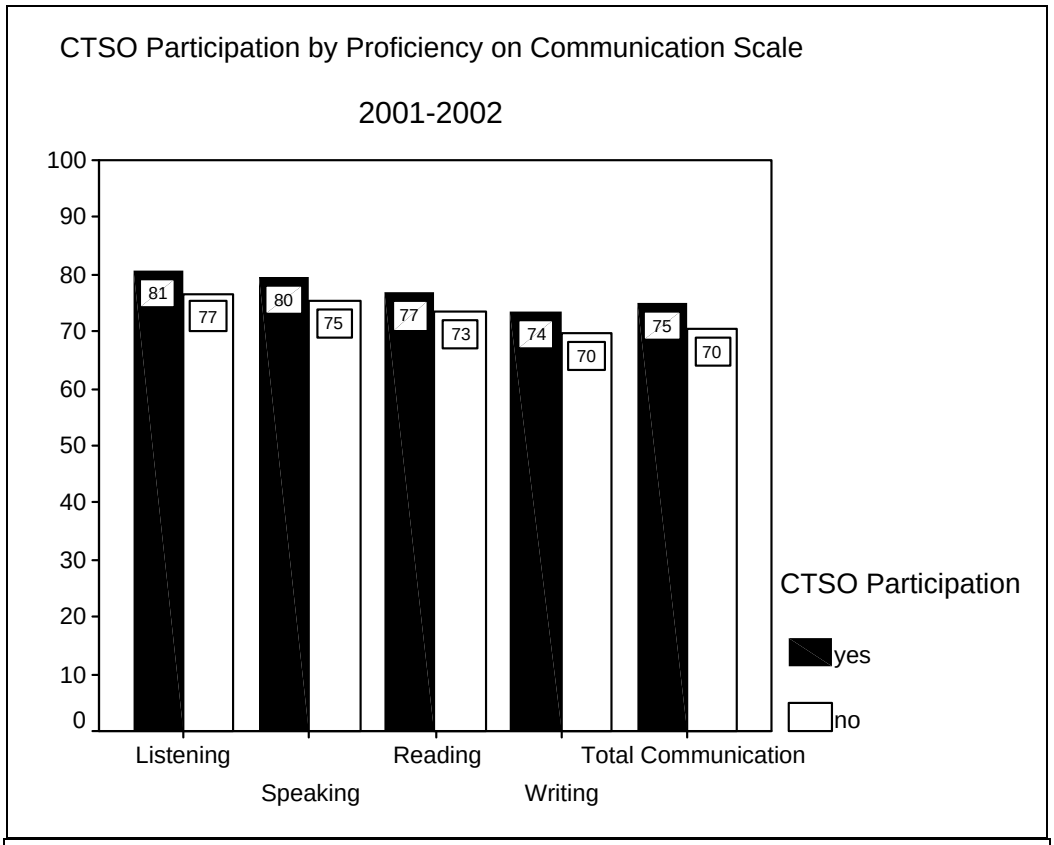
Key findings include:

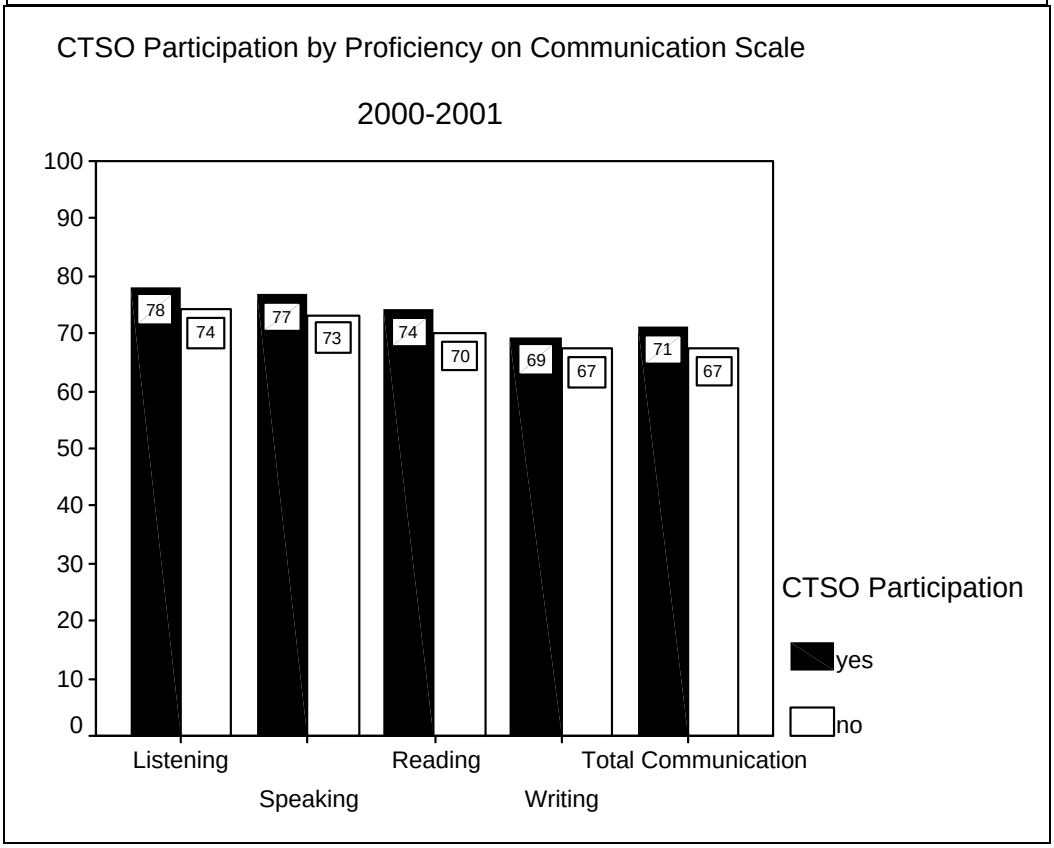
- There was an 4% increase in total WyCTA proficiency level for those who participated in a CTSO during 2003-2004 compared to 2002-2003,
- With the exception of technology, students participating in a CTSO and assessed in 2003-2004 had higher proficiency levels in all content areas than the previous three years' students,
- These improvements in proficiency levels were not observed in students not participating in a CTSO,
- During the 2003-2004 school year, students who participated in a CTSO had higher total WyCTA proficiency levels (80%) than those who did not (68%).
- Generally, across all years and content areas, students who participated in a CTSO had higher proficiency levels than those who did not.

Communication

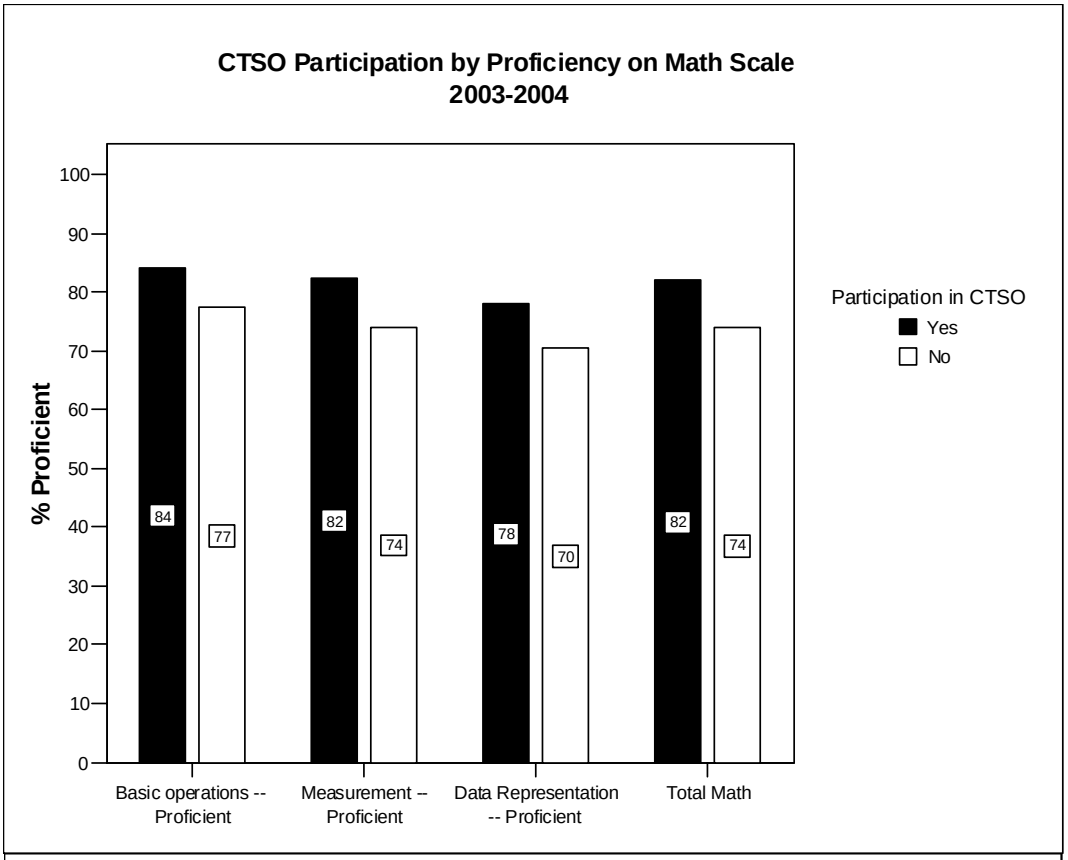


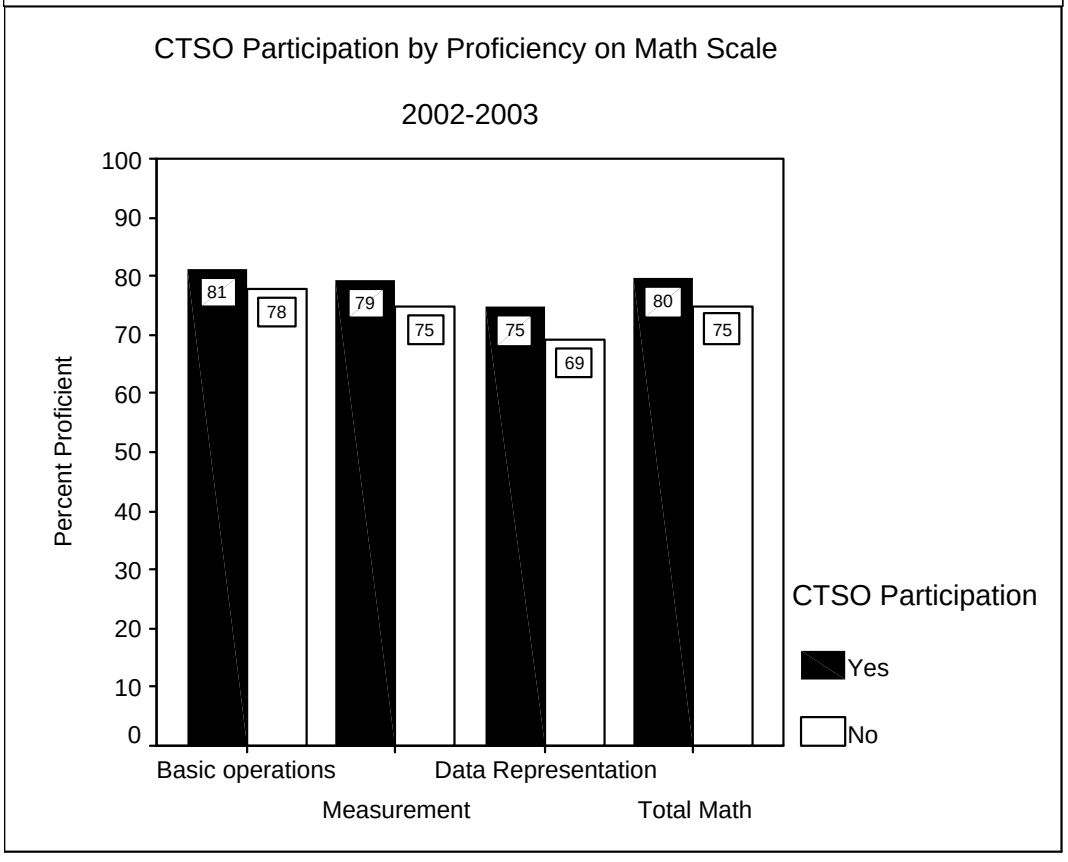


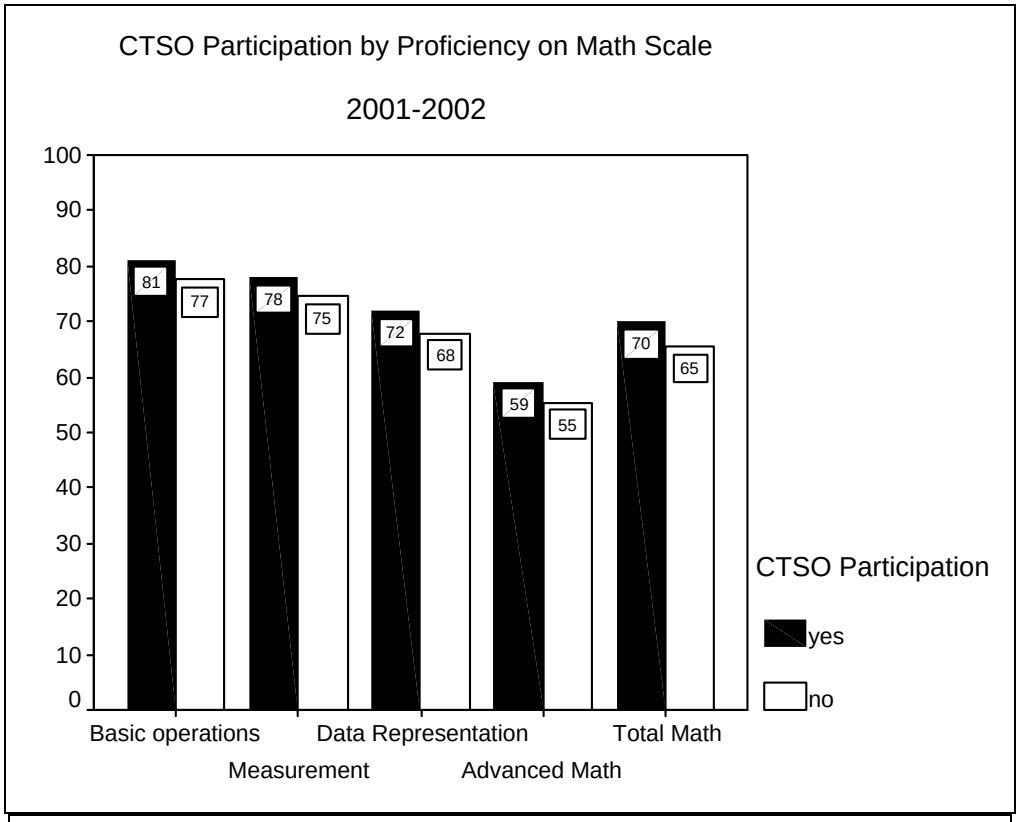

CTSO Participation by Proficiency on Communication Scale
2001-2002
100
90
80
70
60
50
40
30
20
10
0
81
77
80
75
77
73
74
70
75
70
Listening
Speaking
Reading
Writing
Total Communication
CTSO Participation
yes
no

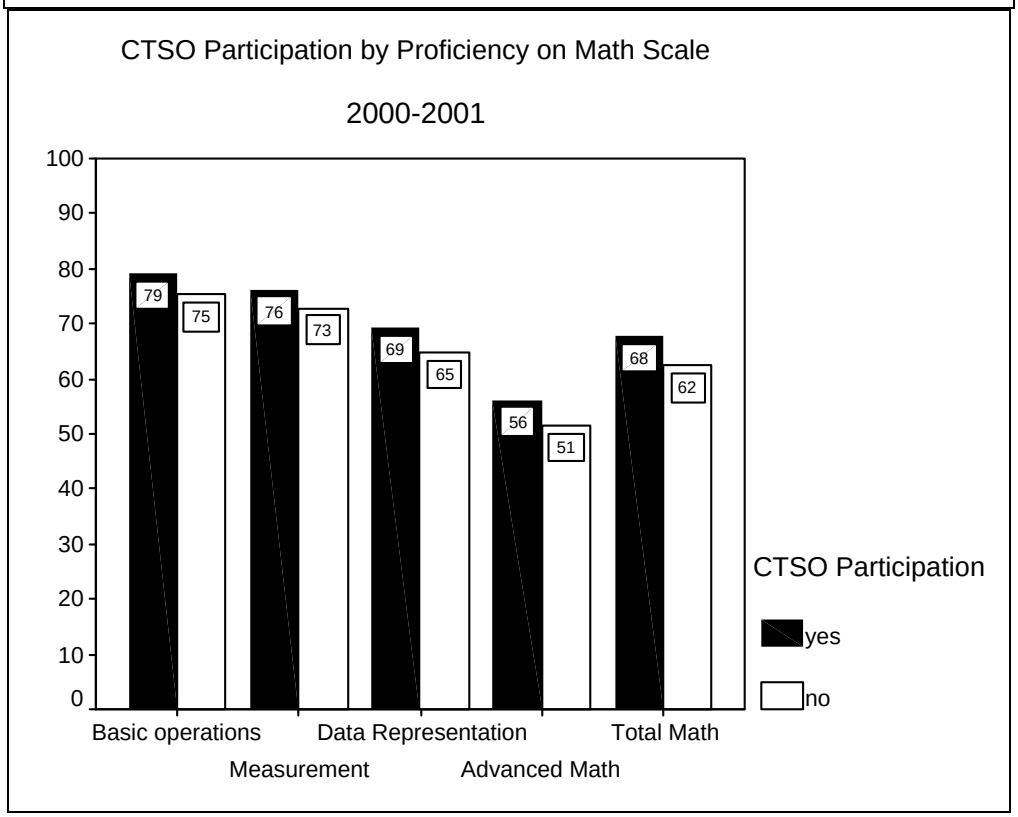

CTSO Participation by Proficiency on Communication Scale
2000-2001
100
90
80
70
60
50
40
30
20
10
0
78
74
77
73
74
70
69
67
71
67
Listening
Speaking
Reading
Writing
Total Communication
CTSO Participation
yes
no

Math

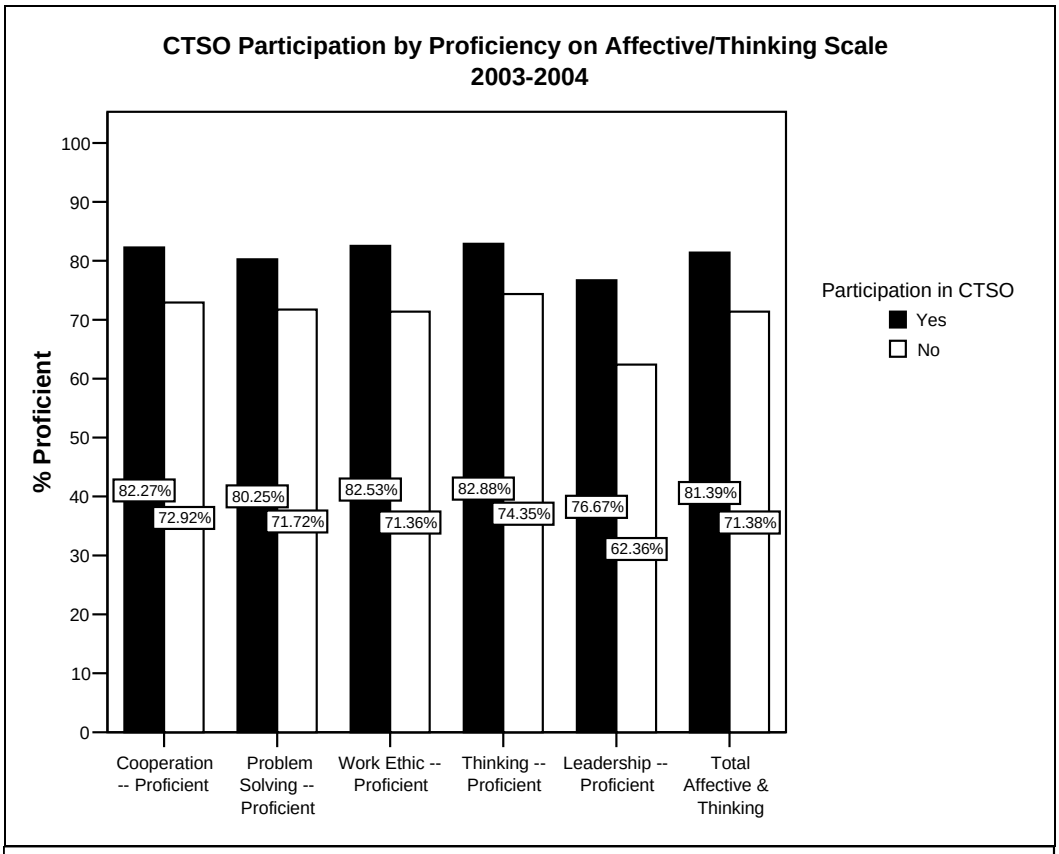

CTSO Participation by Proficiency on Math Scale
2003-2004
% Proficient
100
90
80
70
60
50
40
30
20
10
0
84
77
82
74
78
70
82
74
Basic operations -- Proficient
Measurement – Proficient
Data Representation -- Proficient
Total Math
Participation in CTSO
Yes
No

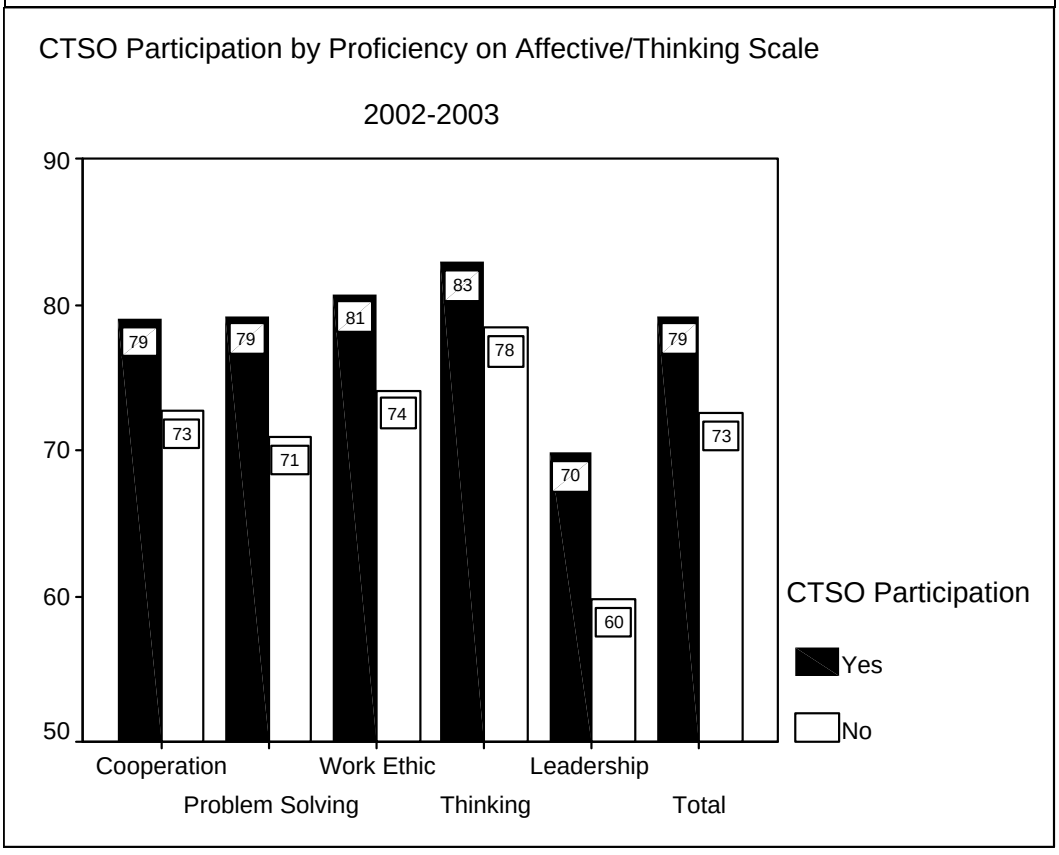

CTSO Participation by Proficiency on Math Scale
2002-2003
Percent Proficient
100
90
80
70
60
50
40
30
20
10
0
81
78
79
75
75
69
80
75
Basic operations
Measurement
Data Representation
Total Math
CTSO Participation
Yes
No

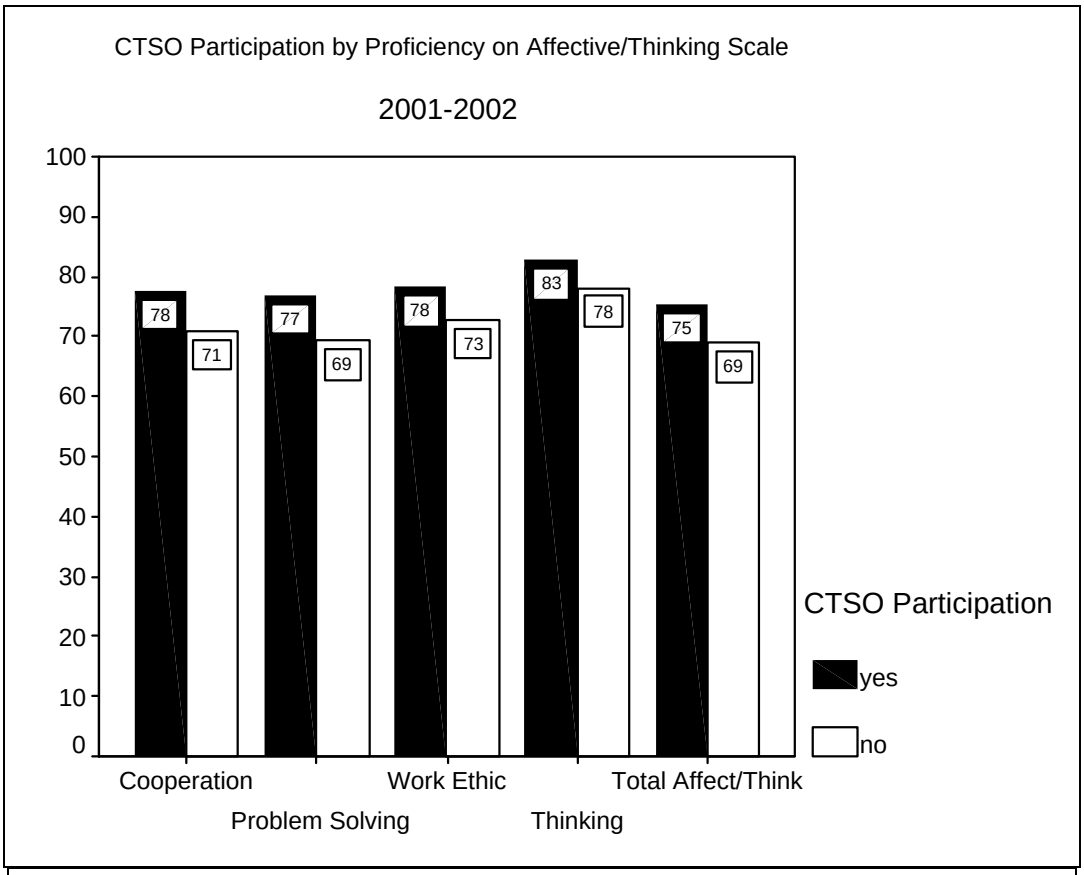

CTSO Participation by Proficiency on Math Scale
2001-2002
100
90
80
70
60
50
40
30
20
10
0
81
77
78
75
72
68
59
55
70
65
Basic operations
Measurement
Data Representation
Advanced Math
Total Math
CTSO Participation
yes
no

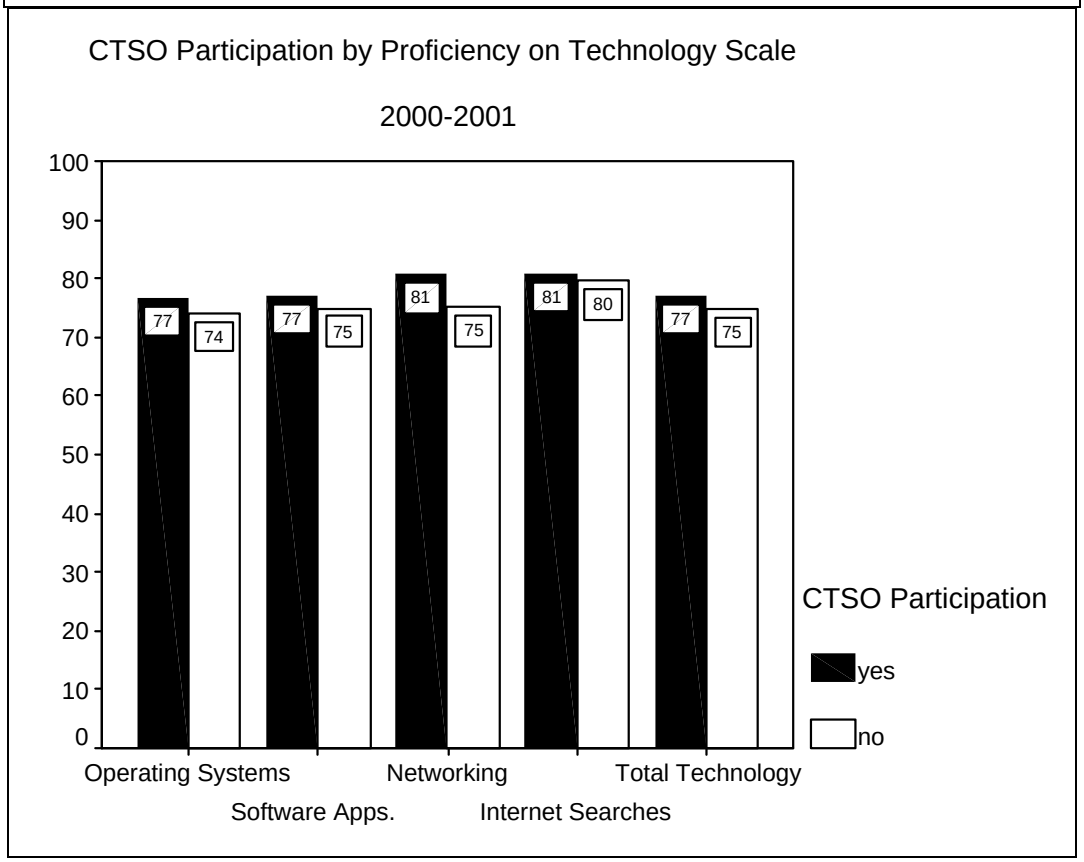

CTSO Participation by Proficiency on Math Scale
2000-2001
100
90
80
70
60
50
40
30
20
10
0
79
75
76
73
69
65
56
51
68
62
Basic operations
Measurement
Data Representation
Advanced Math
Total Math
CTSO Participation
yes
no

Affective/Thinking

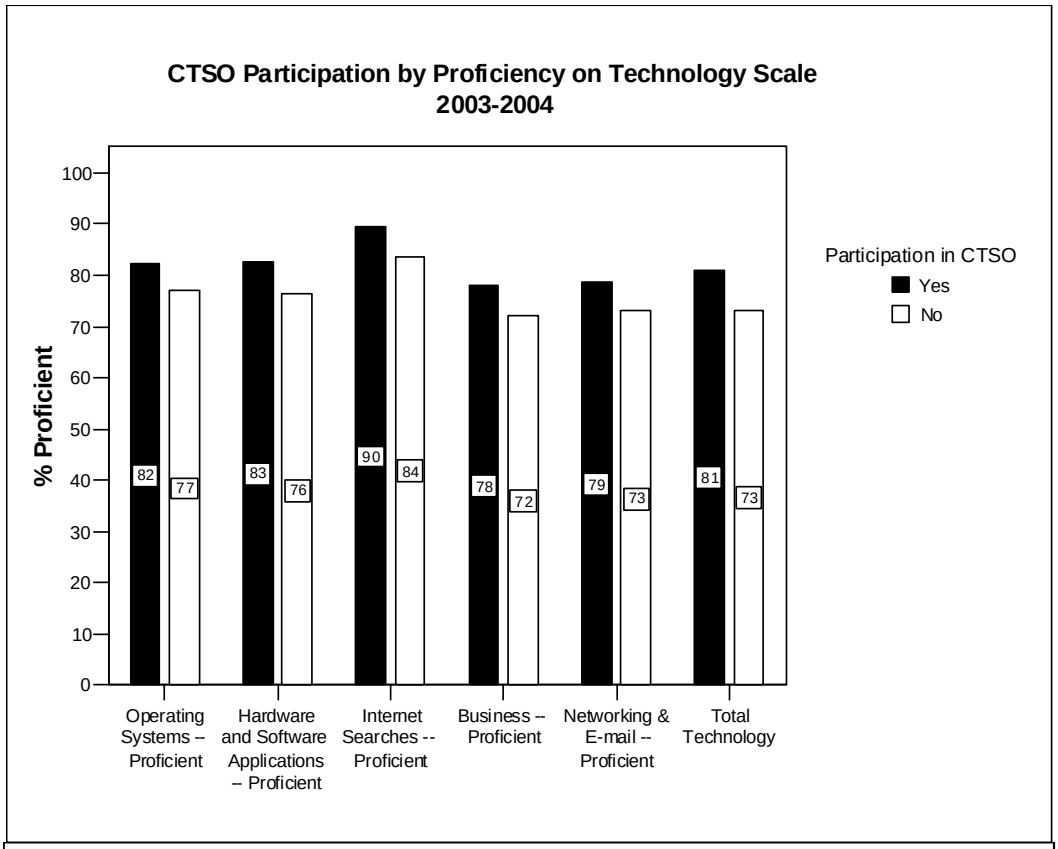


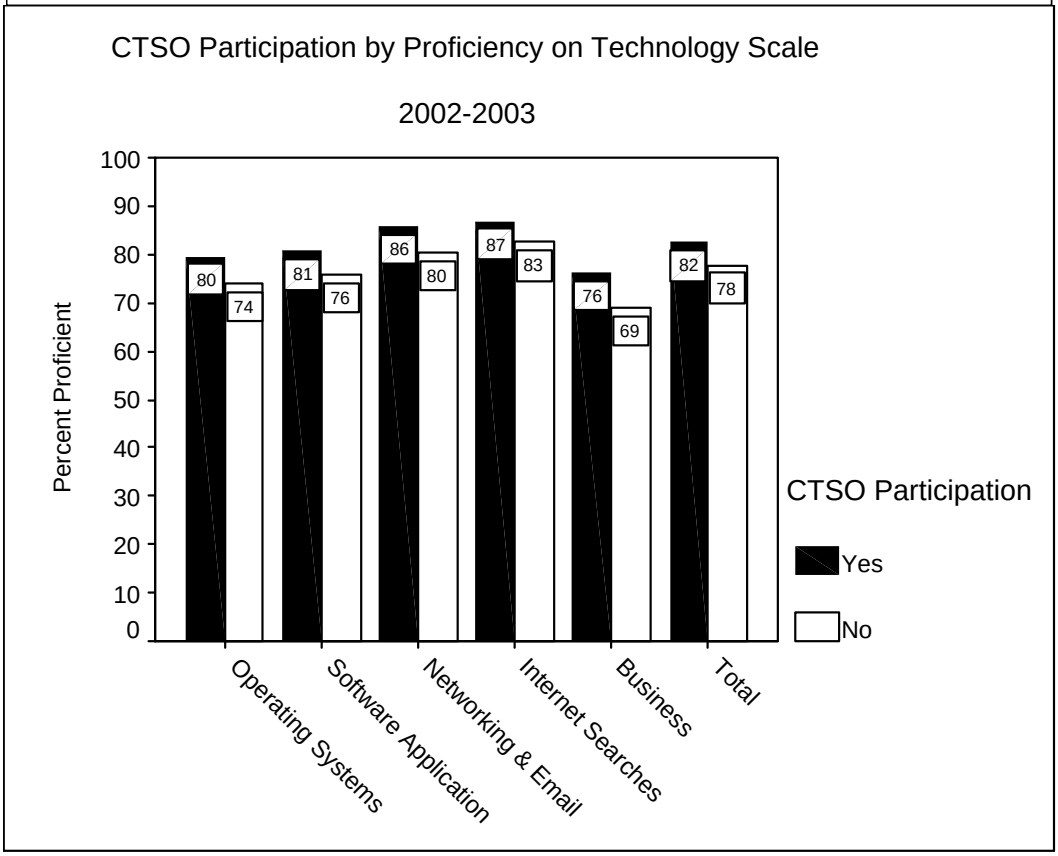


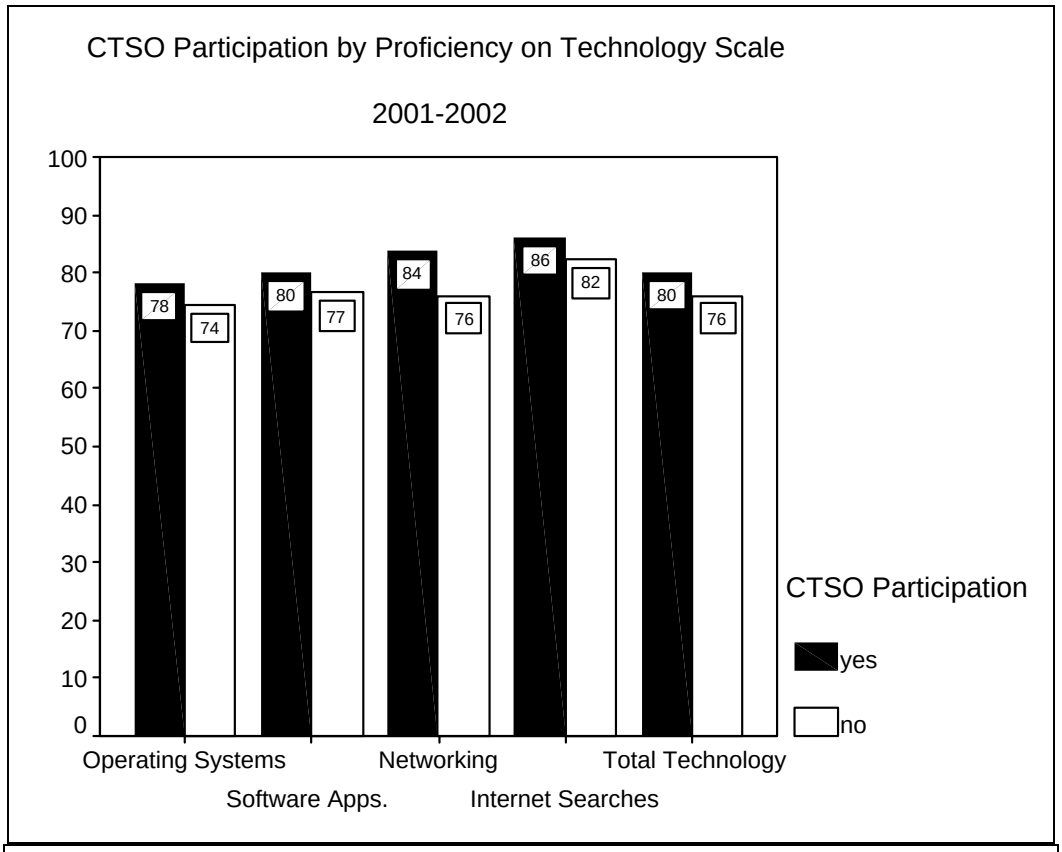

CTSO Participation by Proficiency on Affective/Thinking Scale
2001-2002
100
90
80
70
60
50
40
30
20
10
0
78
71
77
69
78
73
83
78
75
69
Cooperation
Problem Solving
Work Ethic
Thinking
Total Affect/Think
CTSO Participation
yes
no

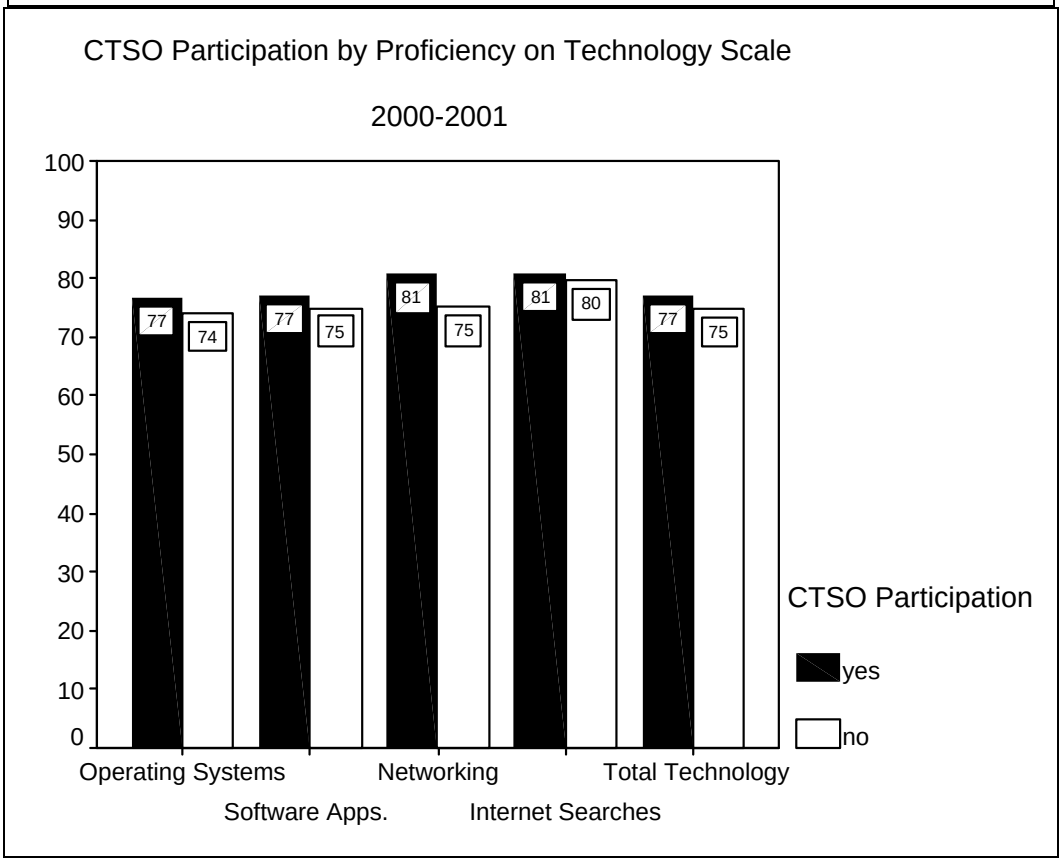

CTSO Participation by Proficiency on Technology Scale
2000-2001
100
90
80
70
60
50
40
30
20
10
0
77
74
77
75
81
75
81
80
77
75
Operating Systems
Software Apps.
Networking
Internet Searches
Total Technology
CTSO Participation
yes
no

Technology

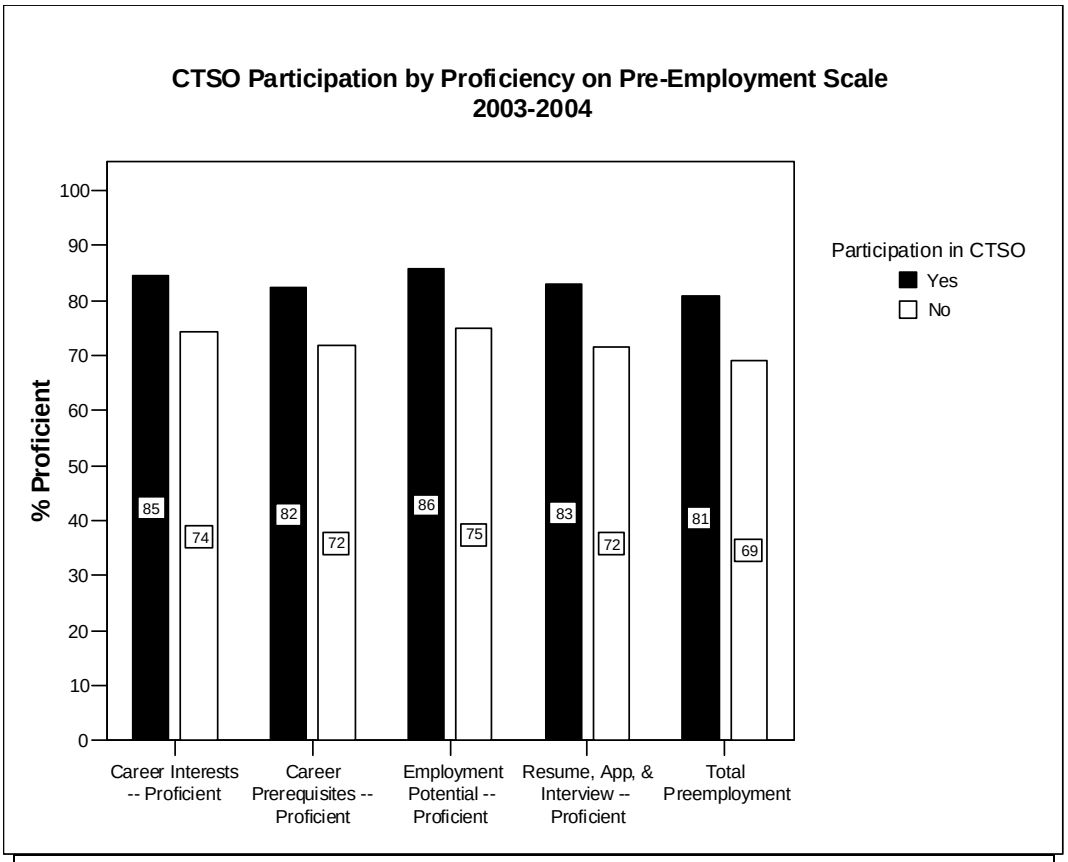

CTSO Participation by Proficiency on Technology Scale
2003-2004
% Proficient
100
90
80
70
60
50
40
30
20
10
0
82
77
83
76
90
84
78
72
79
73
81
73
Operating Systems -- Proficient
Hardware and Software Applications -- Proficient
Internet Searches -- Proficient
Business -- Proficient
Networking & E-mail -- Proficient
Total Technology
Participation in CTSO
Yes
No

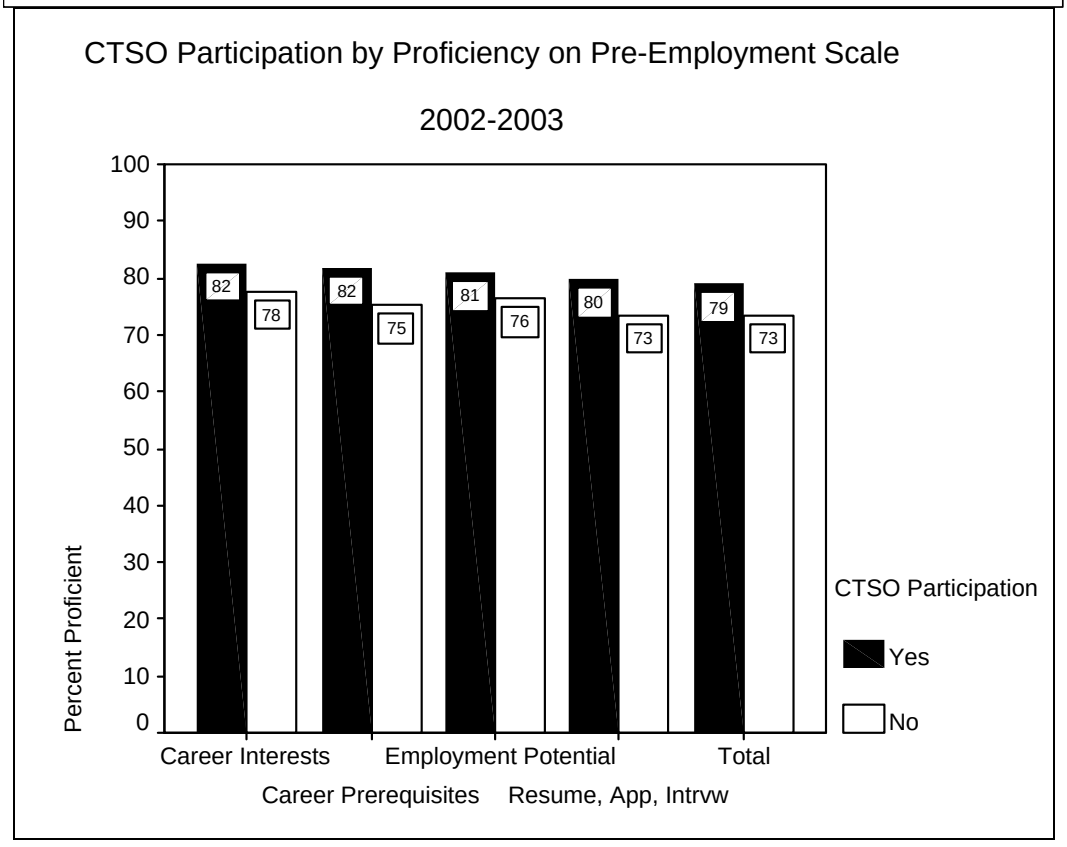

CTSO Participation by Proficiency on Technology Scale
2002-2003
Percent Proficient
100
90
80
70
60
50
40
30
20
10
0
80
74
81
76
86
80
87
83
76
69
82
78
Operating Systems
Software Application
Networking & Email
Internet Searches
Business
Total
CTSO Participation
Yes
No

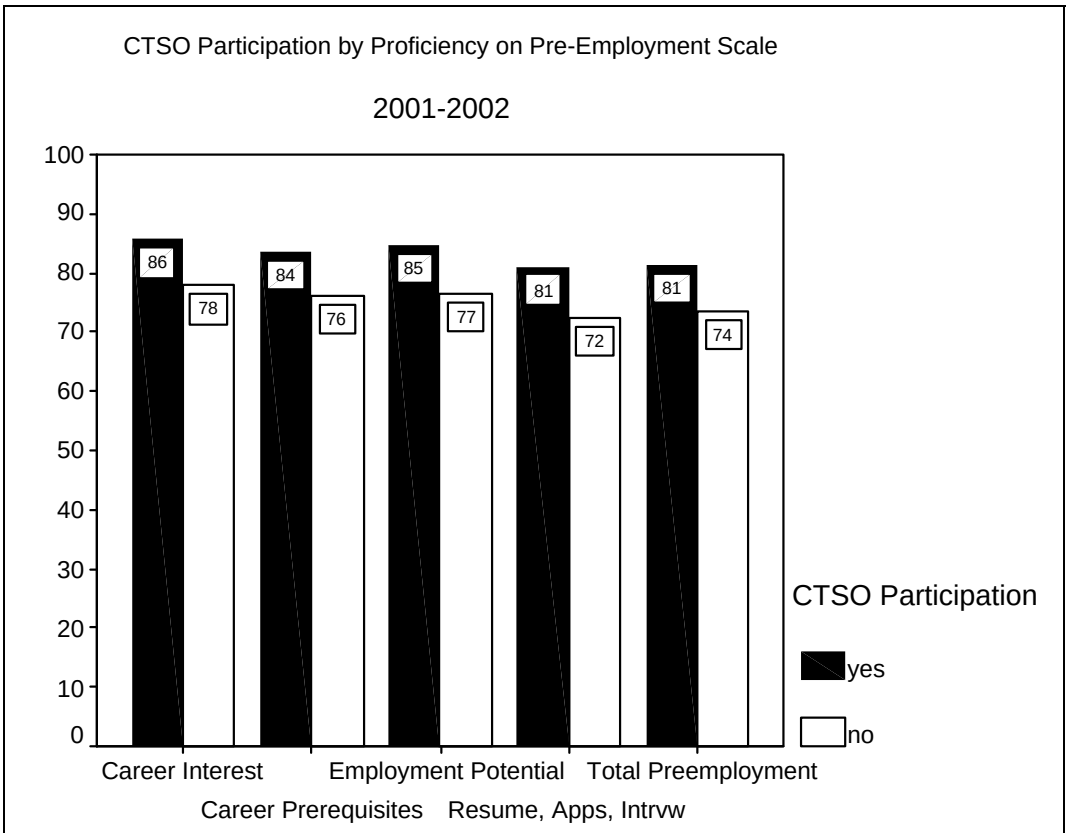

CTSO Participation by Proficiency on Technology Scale
2001-2002
100
90
80
70
60
50
40
30
20
10
0
78
74
80
77
84
76
86
82
80
76
CTSO Participation
yes
no
Operating Systems
Software Apps.
Networking
Internet Searches
Total Technology

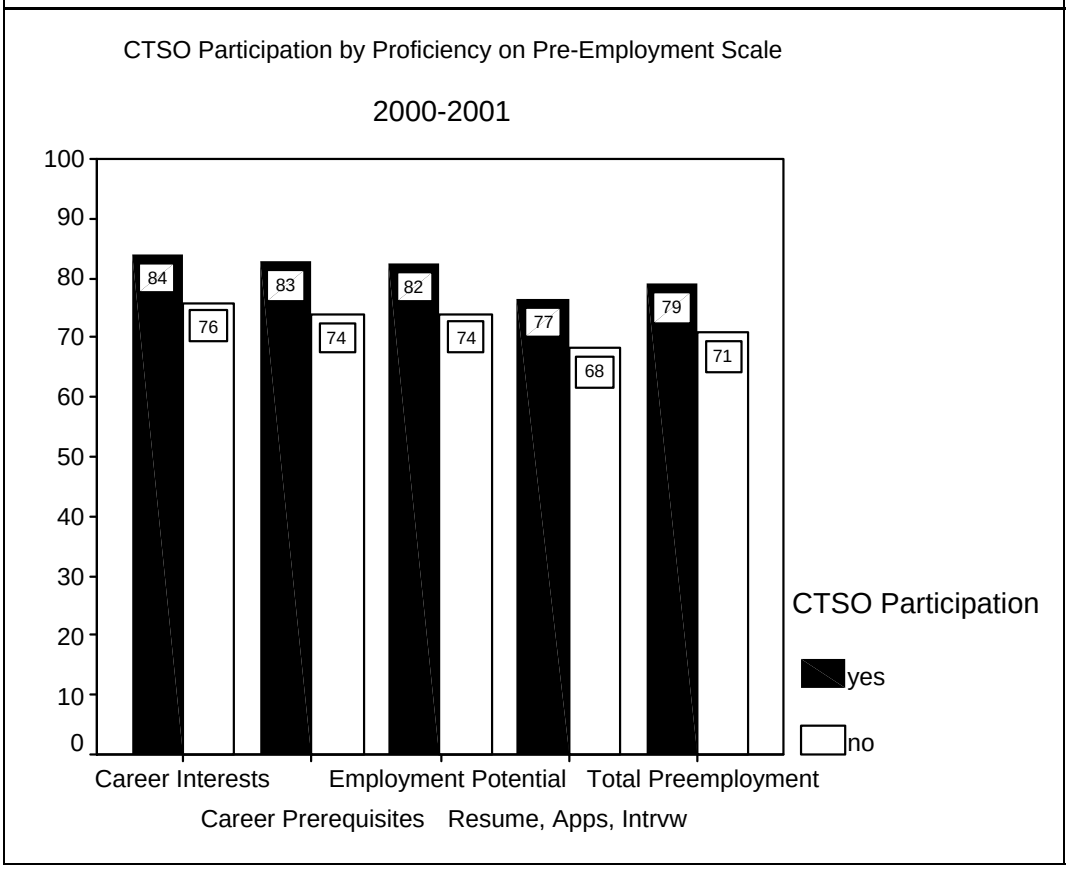

CTSO Participation by Proficiency on Technology Scale
2000-2001
100
90
80
70
60
50
40
30
20
10
0
77
74
77
75
81
75
81
80
77
75
CTSO Participation
yes
no
Operating Systems
Software Apps.
Networking
Internet Searches
Total Technology

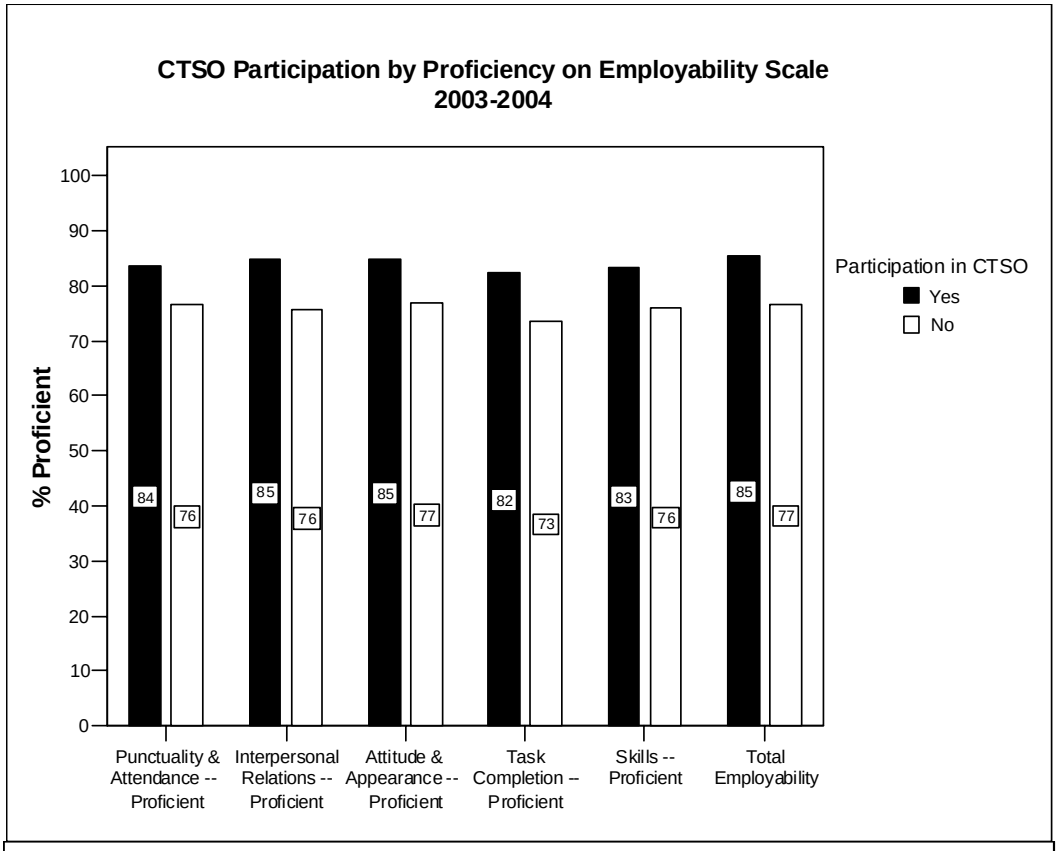
Pre-Employment

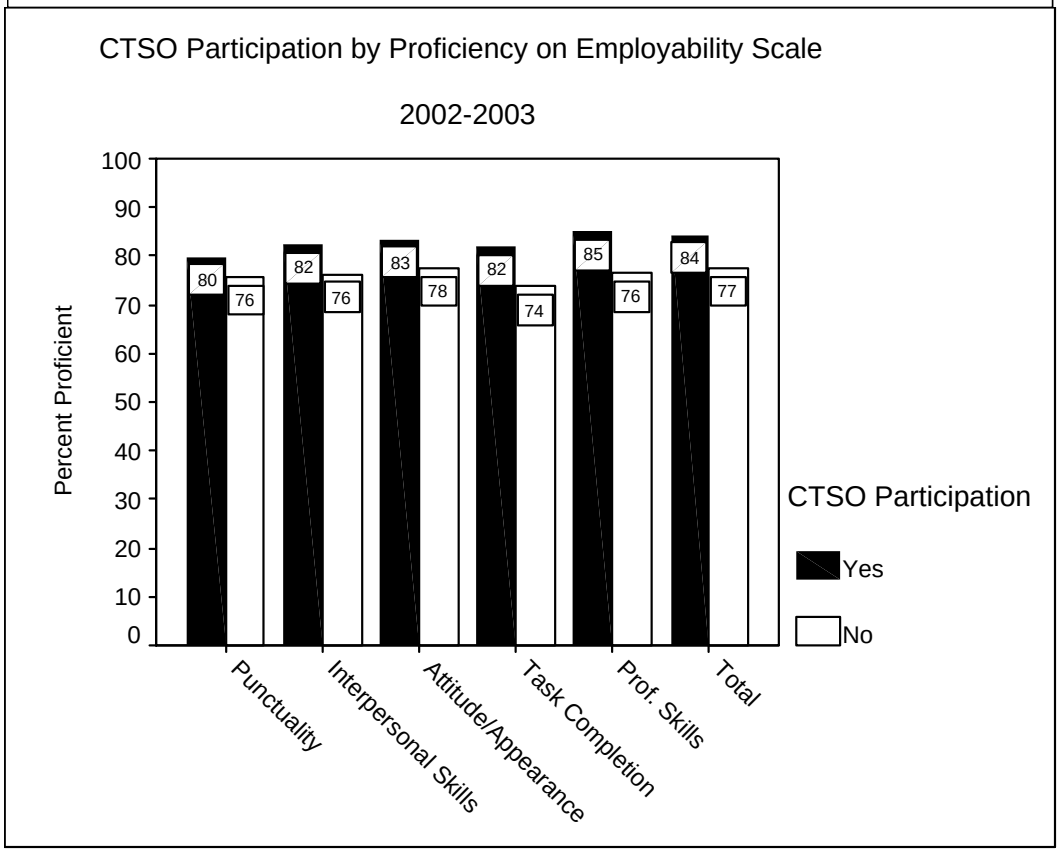


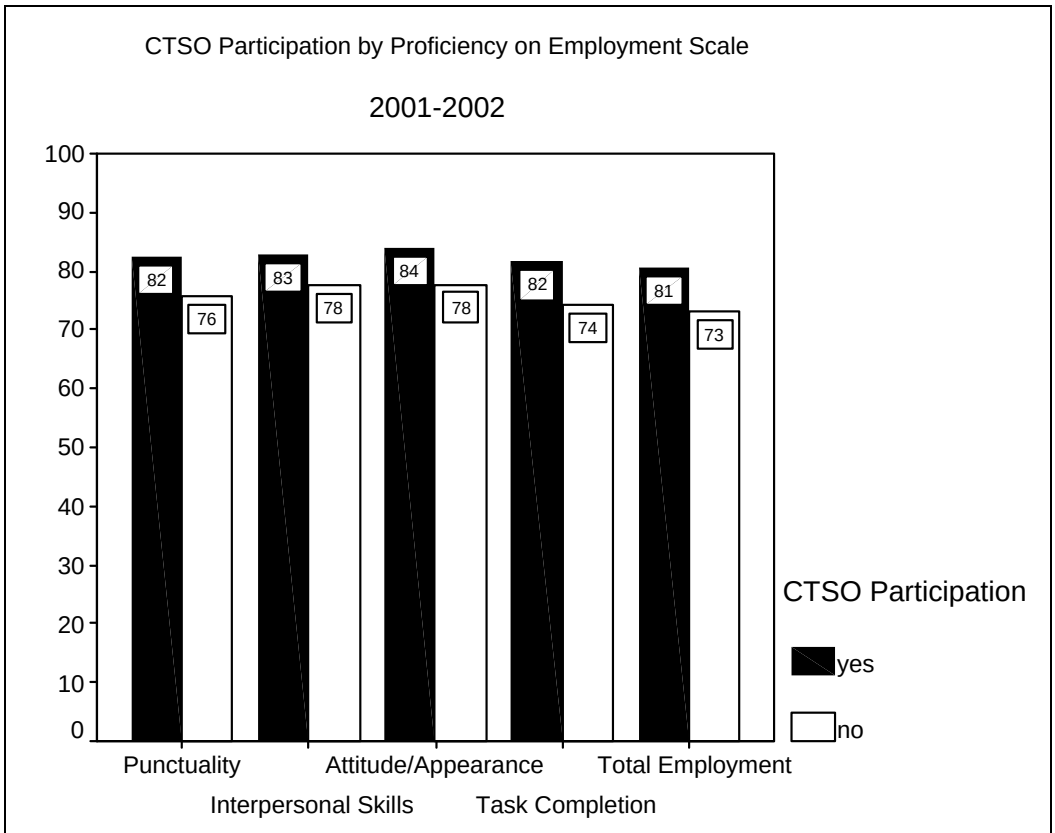


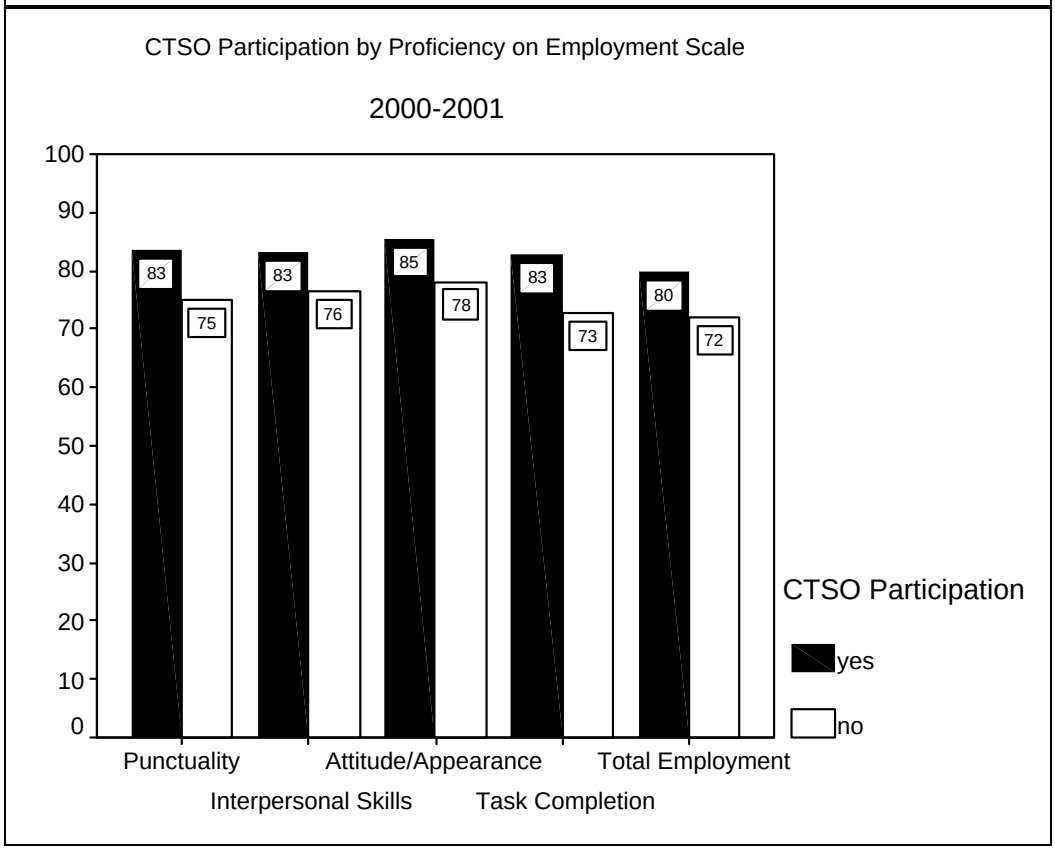

CTSO Participation by Proficiency on Pre-Employment Scale
2001-2002
100
90
80
70
60
50
40
30
20
10
0
86
78
84
76
85
77
81
72
81
74
CTSO Participation
yes
no
Career Interest
Career Prerequisites
Employment Potential
Resume, Apps, Intrvw
Total Preemployment


CTSO Participation by Proficiency on Pre-Employment Scale
2000-2001
100
90
80
70
60
50
40
30
20
10
0
84
76
83
74
82
74
77
68
79
71
CTSO Participation
yes
no
Career Interests
Career Prerequisites
Employment Potential
Resume, Apps, Intrvw
Total Preemployment

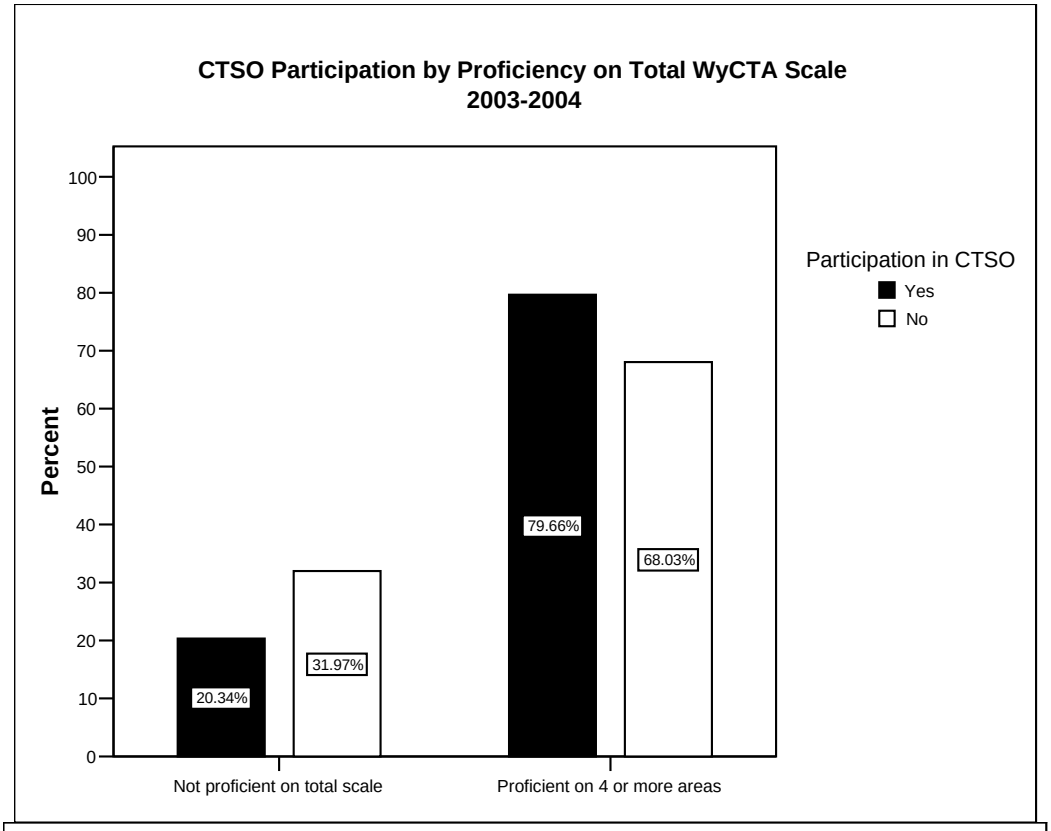

CTSO Participation by Proficiency on Employability Scale
2003-2004
% Proficient
100
90
80
70
60
50
40
30
20
10
0
84
76
85
76
85
77
82
73
83
76
85
77
Participation in CTSO
Yes
No
Punctuality & Attendance -- Proficient
Interpersonal Relations -- Proficient
Attitude & Appearance -- Proficient
Task Completion -- Proficient
Skills -- Proficient
Total Employability

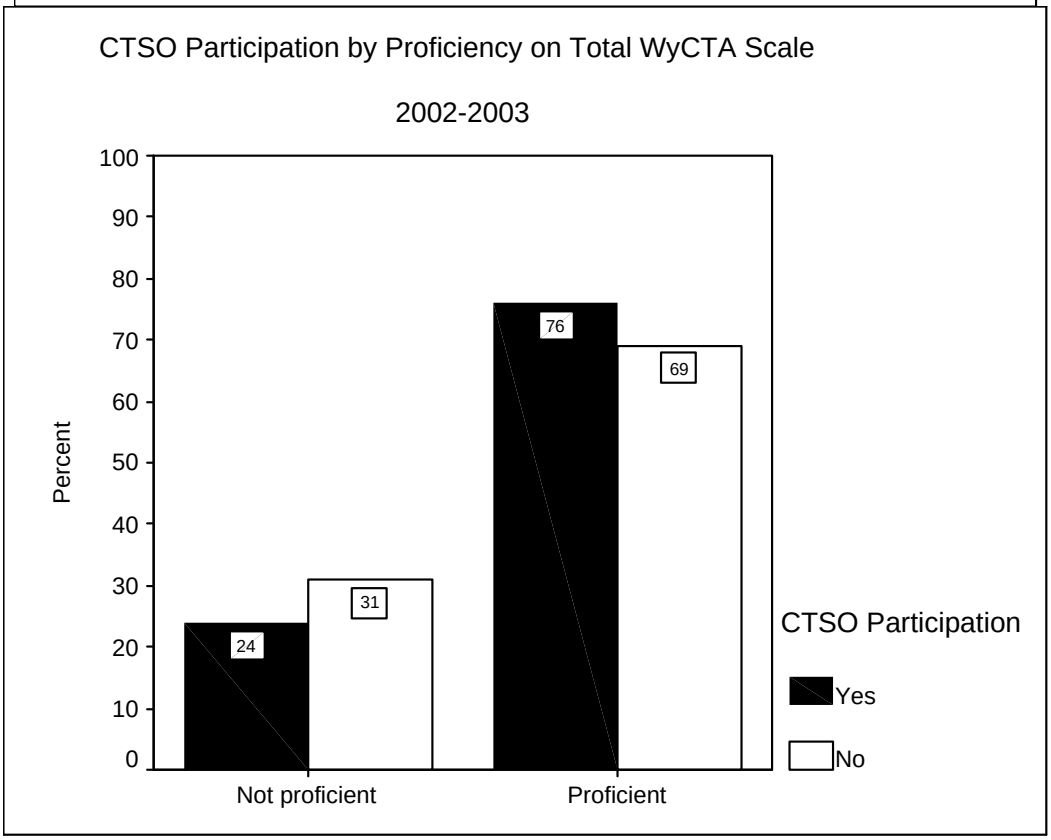

CTSO Participation by Proficiency on Employability Scale
2002-2003
Percent Proficient
100
90
80
70
60
50
40
30
20
10
0
80
76
82
76
83
78
82
74
85
76
84
77
CTSO Participation
Yes
No
Punctuality
Interpersonal Skills
Attitude/Appearance
Task Completion
Prof. Skills
Total

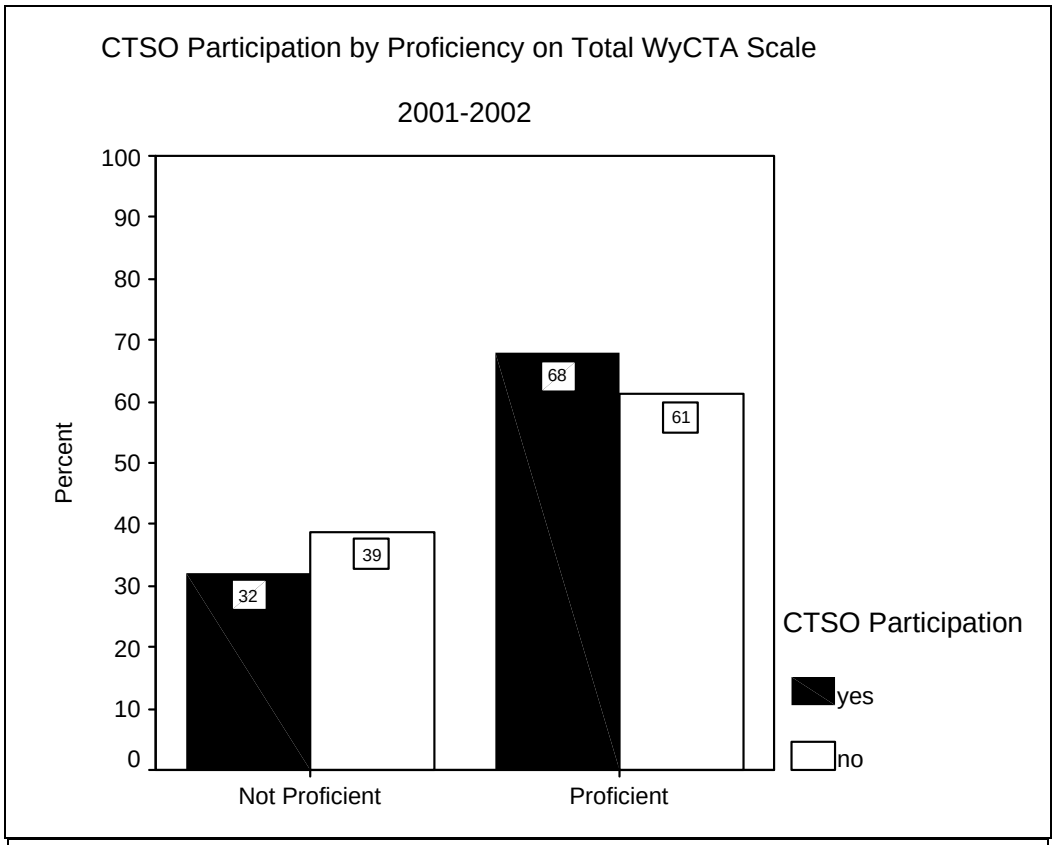

CTSO Participation by Proficiency on Employment Scale
2001-2002
100
90
80
70
60
50
40
30
20
10
0
82
76
83
78
84
78
82
74
81
73
CTSO Participation
yes
no
Punctuality
Attitude/Appearance
Total Employment
Interpersonal Skills
Task Completion

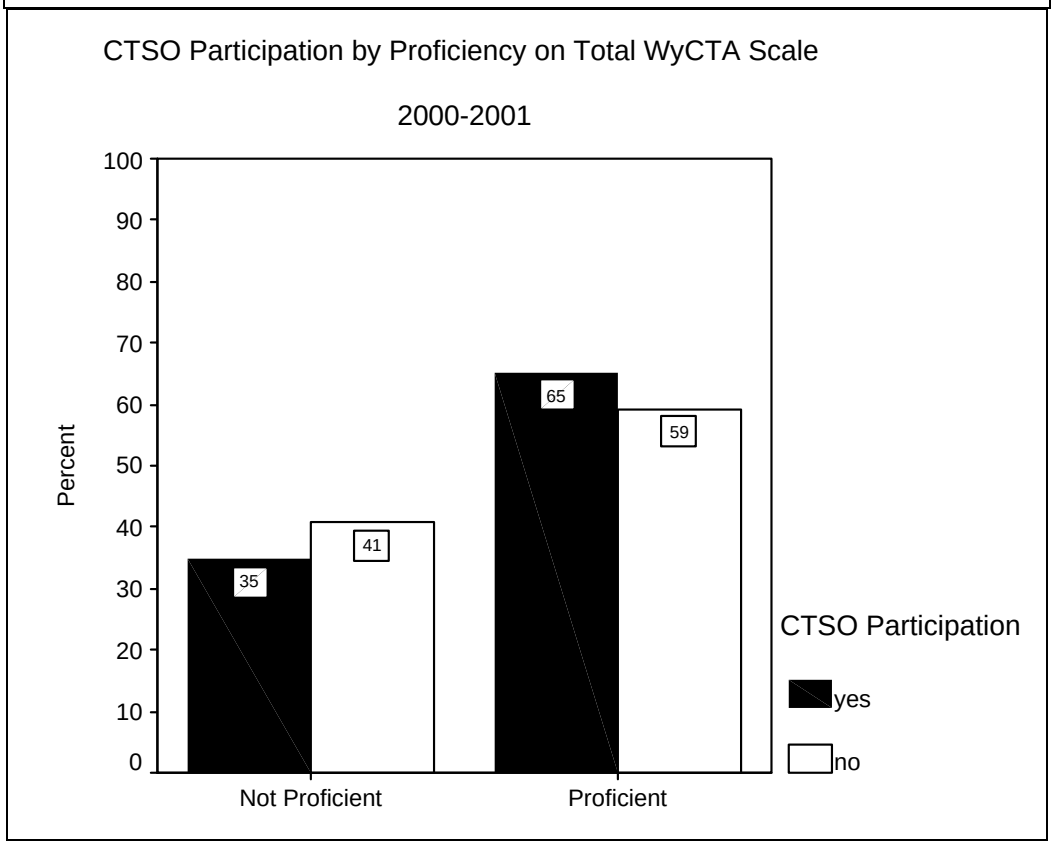

CTSO Participation by Proficiency on Employment Scale
2000-2001
100
90
80
70
60
50
40
30
20
10
0
83
75
83
76
85
78
83
73
80
72
CTSO Participation
yes
no
Punctuality
Attitude/Appearance
Total Employment
Interpersonal Skills
Task Completion

Total WyCTA Scale





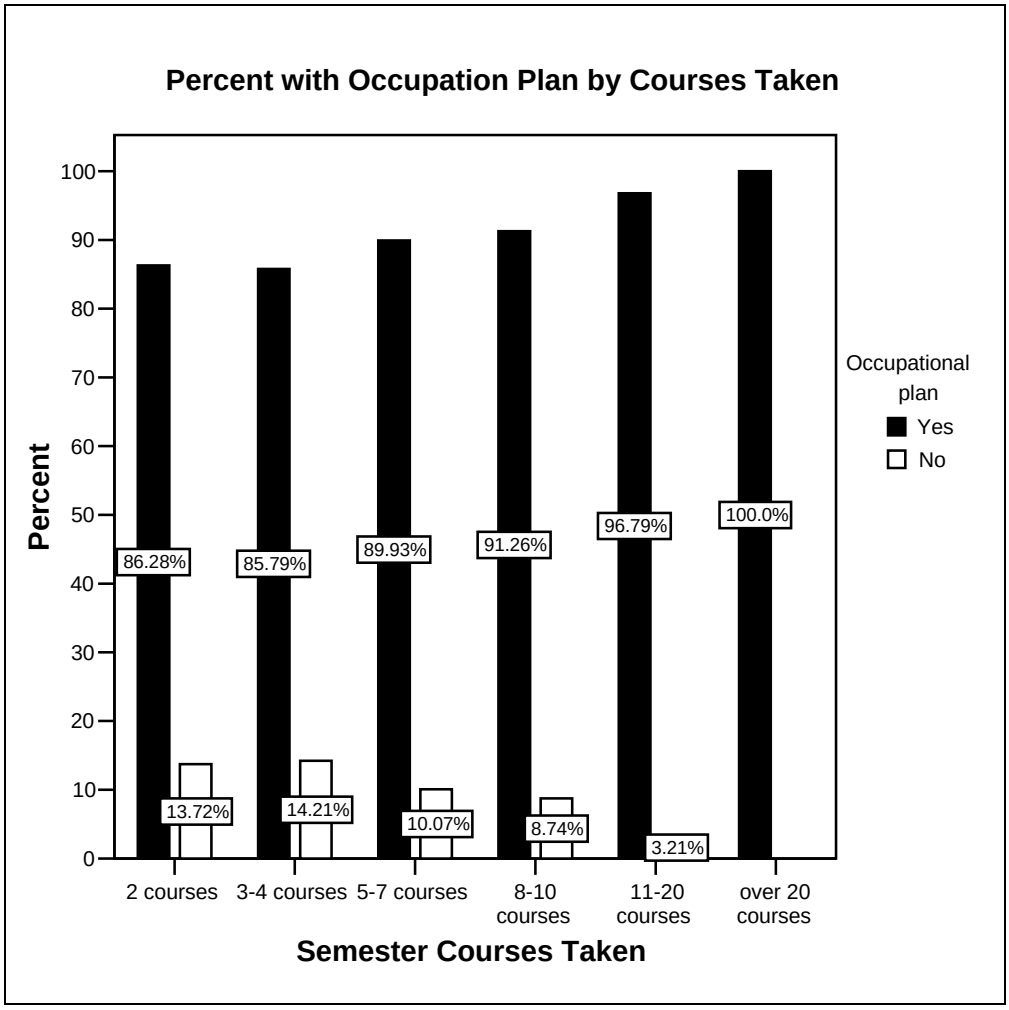

CTSO Participation by Proficiency on Total WyCTA Scale
2001-2002
Percent
100
90
80
70
60
50
40
30
20
10
0
32
39
68
61
Not Proficient
Proficient
CTSO Participation
yes
no


CTSO Participation by Proficiency on Total WyCTA Scale
2000-2001
Percent
100
90
80
70
60
50
40
30
20
10
0
35
41
65
59
Not Proficient
Proficient
CTSO Participation
yes
no

Other Services

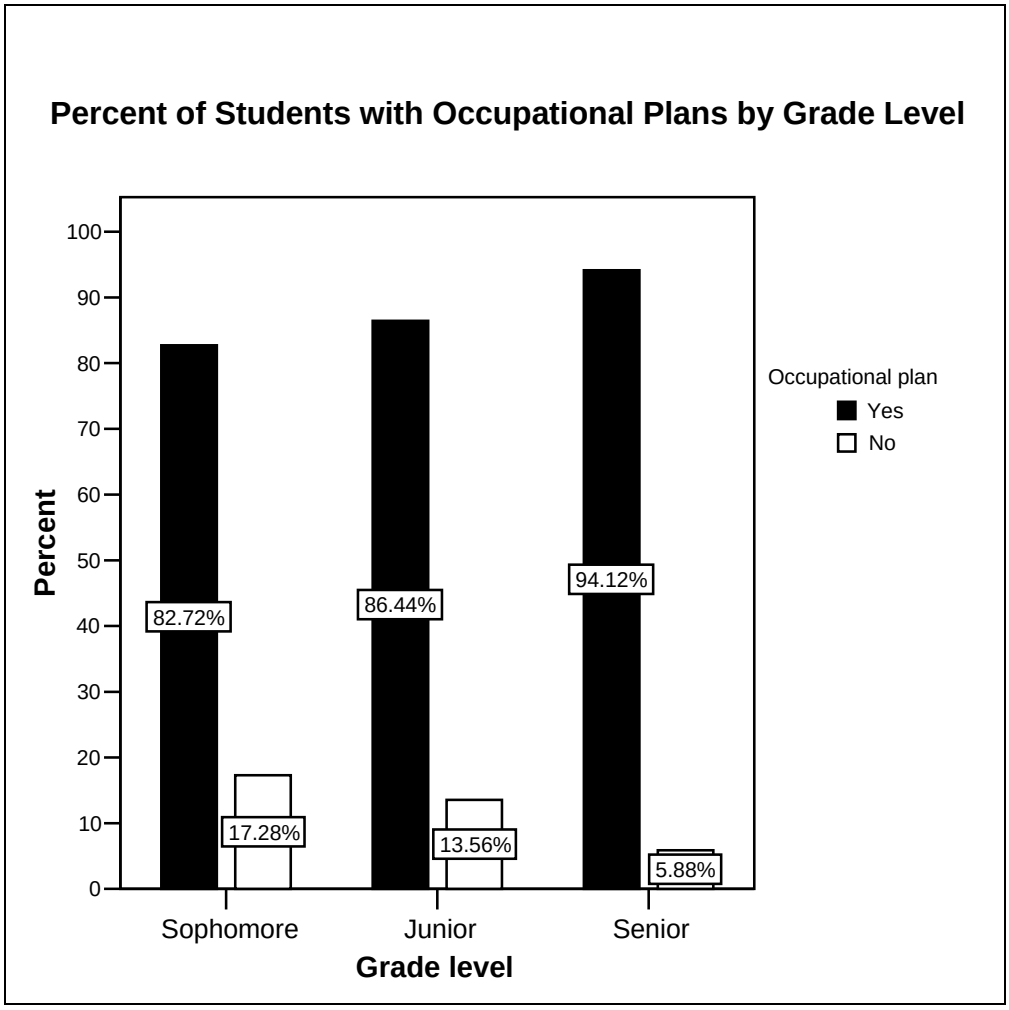
Occupational Plan by Length of Program

A total of 7326 students (87.6%) had occupational plans. Generally, the percentage of students with occupational plans increased with the number of vocational courses taken.



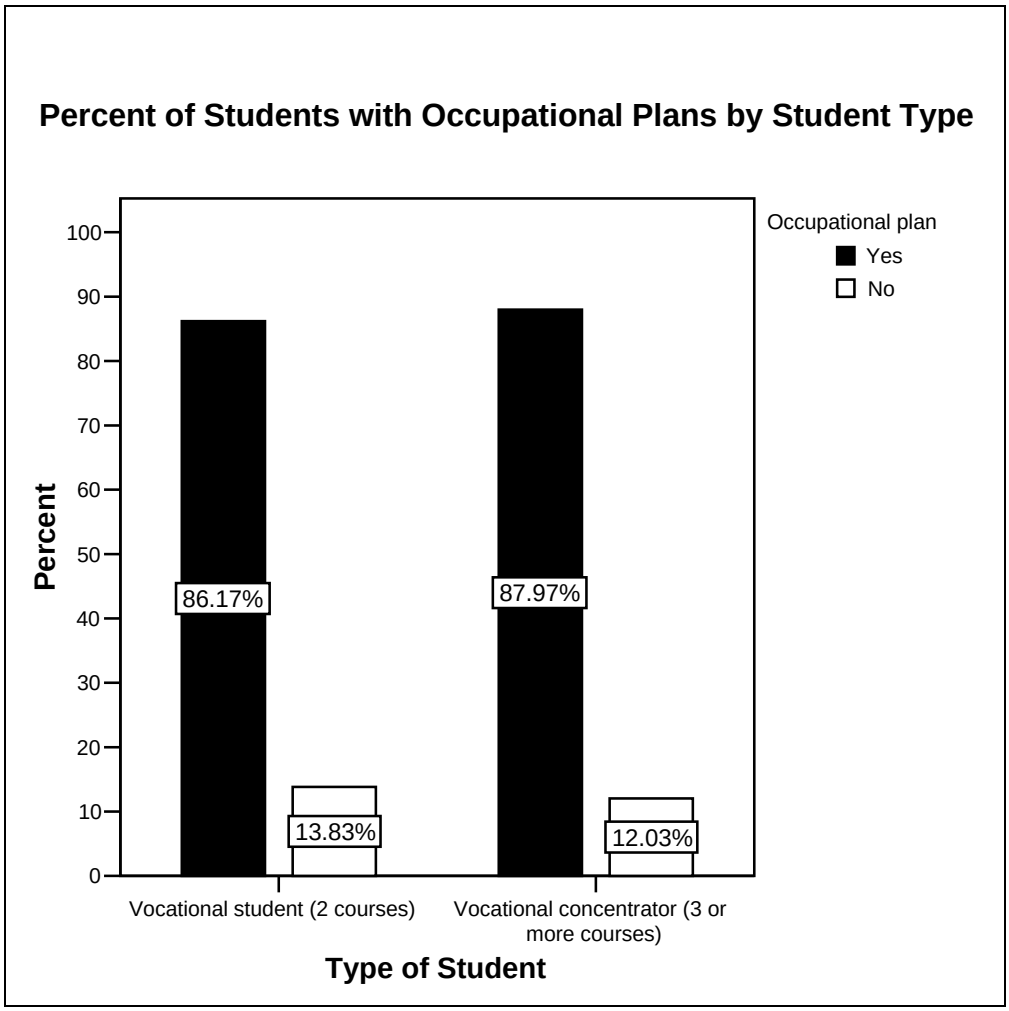
Occupational Plan by Grade

As expected, the higher the grade level, the greater the percentage of students with occupational plans.



Occupational Plan by Student Type

There was a 2% difference between the percentage of vocational concentrators (88%) and vocational students (86%) with occupational plans.



Participation in School-to-Careers Activity

The data indicates that 7566 students (90.6%) participated in school-to-career activities. Participation by type of activity for 2003-2004 is as follows.

Activity	Count*	Percent
Career Inventory	6688	80.0%
Career Fair	5112	61.1%
Career Counseling	5065	60.6%
Project-based Learning	2570	30.7%
Learning Related to Life	2370	28.3%

*Students may have participated in more than one activity.

Participation in Job Training/School to Work/Work-Based Learning

The following table shows the various job training activities students participated in. Job shadowing was by far the most popular form of job training.

Job Training Type	Count*	Percent
Job Shadowing	2126	20.1%
Community service learning	1244	11.8%
Work-experience internship	812	7.7%
Mentorship	561	5.3%
School-based enterprises	445	4.2%
Cooperative Education	111	1.1%
Other	35	0.3%
Apprenticeship	14	0.1%
WIA Placement	10	0.1%

*Students may have participated in more than one activity.

Integrated Instruction

The following table shows the various types of integrated instruction students received in 2003-2004. The most common form of integrated instruction was academics in vocational education.

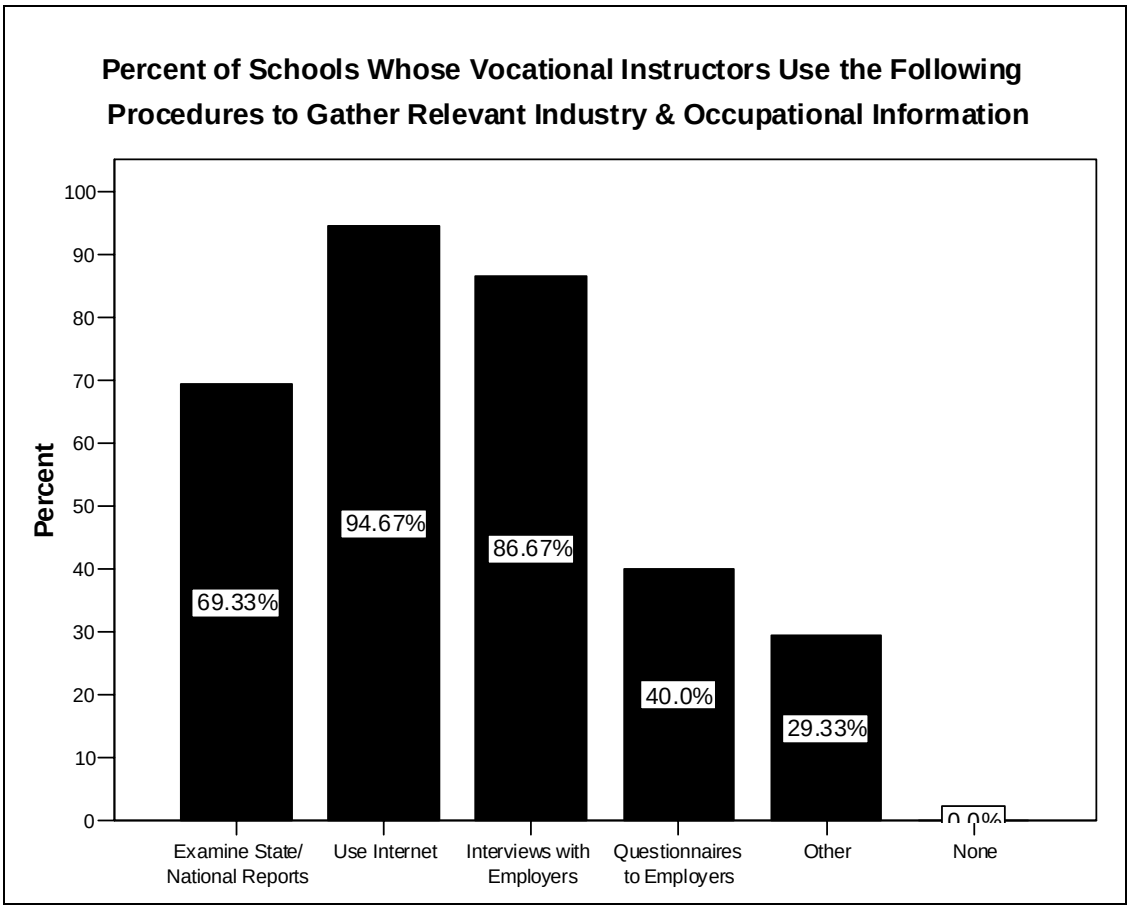
Integrated Instruction Type	Count**	Percent
Applied Classes*	582	5.5%
Biology/Chemistry	112	1.1%
Science	276	2.6%
Math	436	4.1%
Communication	224	2.1%
Technology	419	4.0%
Team Taught	261	2.5%
Academics in Vocational Education	3974	37.6%
Vocational Education in Academics	1458	13.8%
Other	83	.8%

*Total count is unduplicated.
**Students may have taken more than one integrated course.

Vocational Education in Schools

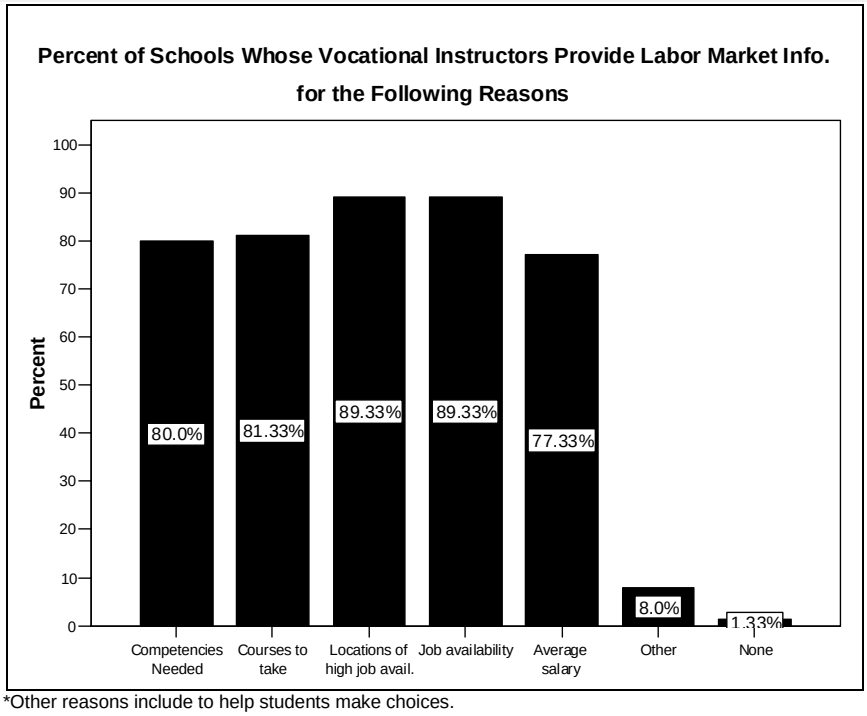
The following information was reported by 75 schools during the 2003-2004 school year. This section summarizes how vocational education is provided in schools and the professional development activities provided to vocational educators.

The graph below shows the percent of vocational instructors who use various procedures to gather relevant industry and occupational information. Instructors primarily use the Internet, conduct interviews with employers/industry persons, and examine state/national reports.



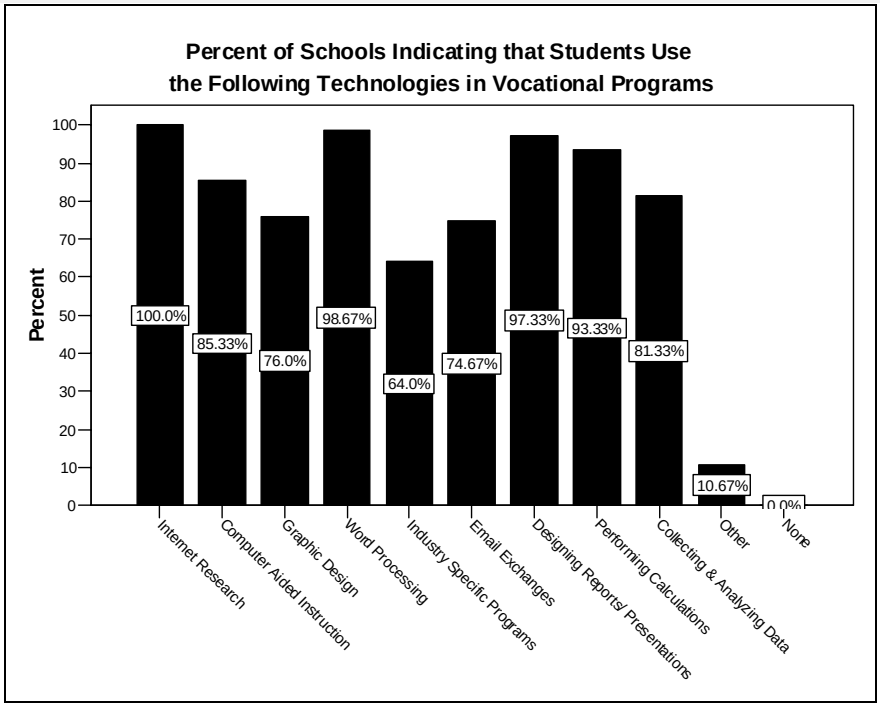
*Other procedures include advisory committees, professional conferences/meetings, and vocational associations.

For the most part, vocational instructors use labor market information to inform their students of job availabilities and the locations of these jobs.



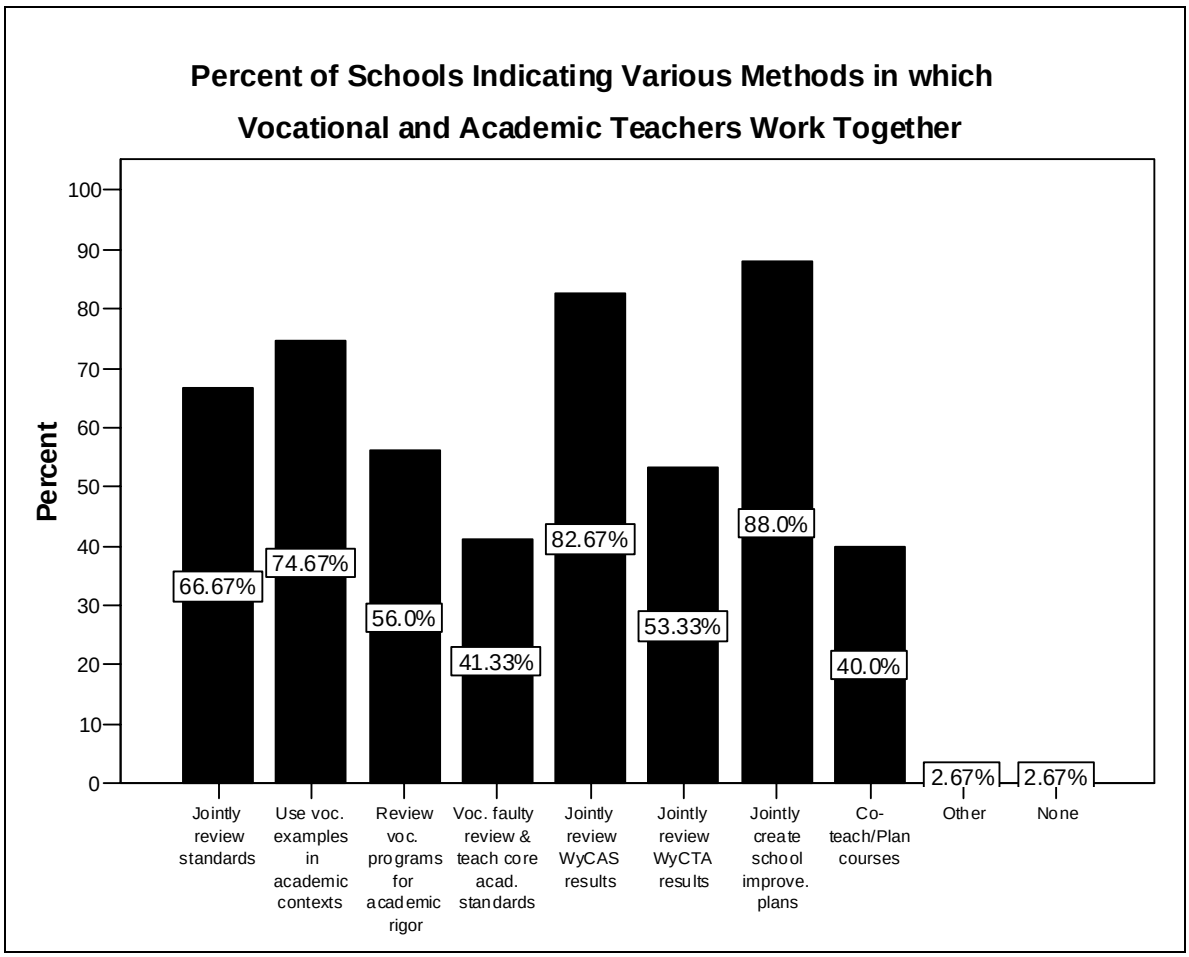
*Other reasons include to help students make choices.

Students use many forms of technology in their vocational programs. In particular, most schools indicated that their students use technology for Internet research, Word Processing, and designing reports/presentations.



In order to modernize the technology used by their students, 95% of respondents indicated that they used all or part of their Perkin's funds to purchase needed equipment and software for the purposes of upgrading.

Schools indicated that the majority of vocational and academic teachers work together by jointly creating school improvement plans and reviewing WyCAS results. The methods least used were cooperative teaching and/or planning of courses and vocational faculty teaching and reviewing core math, science and English standards.

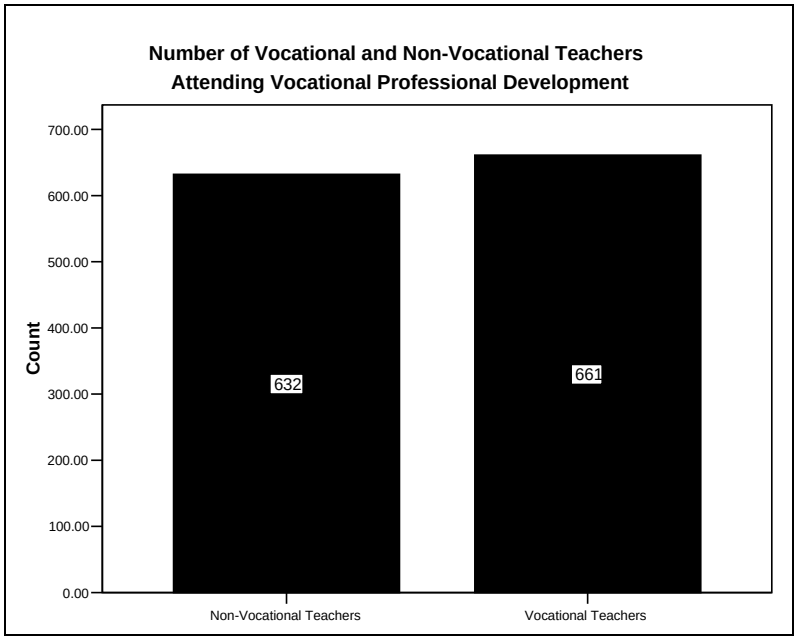


The following tables and graphs display the types of professional development related to vocational education that teachers attended, how may attended, and how useful they found the training to be.

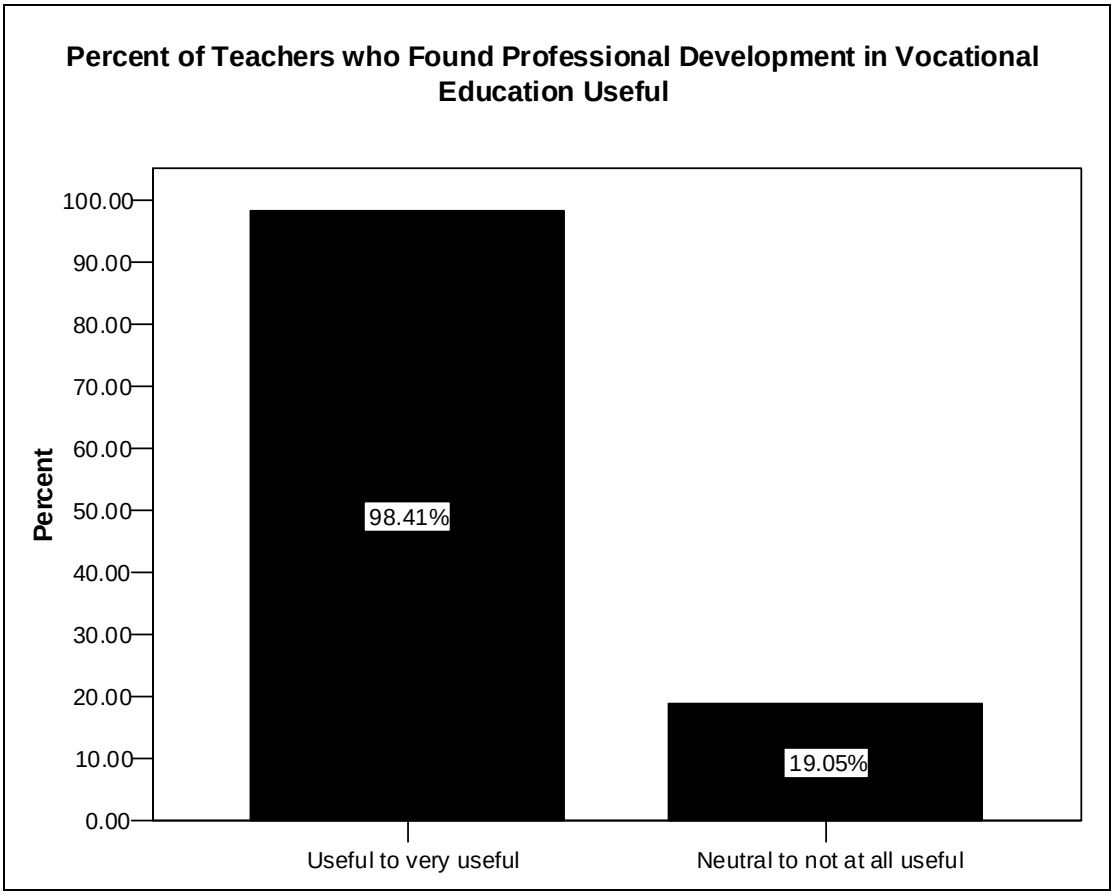
The following list illustrates what types of professional development training related to vocational education teachers participated in. Only trainings in which more than 2 schools participated in are included.

- WACTE Conference (19)
- WyCTA Training (16)
- National ACTE (5)
- AutoCad Conference (5)
- ACTE Region V (4)
- District Vocational Training (3)
- ProStart (3)
- FFA (3)
- Careers Conference (3)
- Choices Careers (3)
- CLSR (3)
- School Improvement (3)
- Automotive Conference (3)

The majority of teachers attending vocational education-related professional development were vocational instructors. However, a significant number of non-vocational teachers also attended.



The majority of teachers who attended a vocational education-related professional development session found it to be useful to very useful.



Summary

This section summarizes the key findings based on information obtained from the Wyoming Career and Technical Assessment (WyCTA). During the 2003-2004 school year, 75 secondary schools provided information on a total of10,558 students. Of these students, 8849 (84%) were vocational concentrators and 1709 (16%) were vocational students.

A comparison of the population of vocational students and concentrators according to demographic categories (e.g. gender, ethnicity, grade level, eligibility category) between 2003-2004 and 2002-2003 reveals that the population of vocational students and concentrators has remained fairly stable. In fact, the largest difference found was the 4% increase in students classified as "regular" under eligibility category.

Examination of career cluster participation showed that architecture and construction, business administration, agriculture, and arts-AV technology and communication were the most popular program areas. More than half of all students (55.12%) were enrolled in these four program areas. This pattern has been sustained over the past 2 years.

Overall, the performance of Wyoming vocational students on the Federal indicators is improving each year. In the area of academic attainment, statistical tests showed no significant difference between vocational concentrators and non-vocational students on the composite WyCAS score; however, there has been a steady increase of approximately 2% for the past 3 years in the percent of vocational concentrators who are proficient.

In the area of vocational and technical skills proficiency, results showed that 2076 seniors (81.2%) were proficient in at least 4 of the 6 WyCTA content areas (i.e. the Total WyCTA Scale). Furthermore, there was 3% increase in proficiency on the Total WyCTA among 12th grade vocational concentrators between 2002-2003 and 2003-2004. A steady increase in proficiency levels has been evident over the last five years. Analysis by subgroups showed that the percentage of students proficient on the Total WyCTA was higher than the previous year's for all subgroups, except females, Blacks, Asians/Pacific Islanders, and students with disabilities or in corrections. This indicates that efforts should be made to meet the vocational needs of these students, such as increased outreach and training as well as professional development on how to better meet the needs of these populations.

When the WyCTA content areas are examined, results show that senior vocational concentrators were most proficient in the areas of Employability (88%) and Math (86%) in 2003-2004. Although, vocational concentrators were least proficient in the Communication content area (83%), this percentage is still high. In addition, the subskill that most 2003-2004 vocational concentrators were proficient in was Internet Searches (93%) under the Technology content area. Results also show that compared to the previous year, the percent of 2003-2004 senior vocational concentrators who were proficient in each of the content areas was higher, except for the technology content area. In this content area, there was a 2% drop. The largest improvement was found in the Math content area (5% increase compared to the previous year).

Completion rates (i.e. percent of those graduating) also increased from 93% in 2002-2003 to 97% in 2003-2004. However, the percent of graduating 12th grade vocational concentrators

who received or completed the requirements for a proficiency credential remained the same as last year at 6%.

During 2003-2004, follow-up information was provided by 66 schools. Schools obtained information from students who graduated in 2001-2002 (N=2130) and 2002-2003 (N=2387). Results showed that across all follow-up data collected (2002-2004), 96.1% of students were in an advanced placement following graduation (i.e. post-secondary education, military, advanced training or employment). In addition, students who graduated in 2001-2002 showed a 3.5% drop in advanced placement at the second follow-up (in 2004) compared to the first follow-up (in 2003). It appears that the decrease in advanced placement during the second follow-up year among the 2001-2002 graduates is due to decreases in the number of students attending a college and being employed during the second year. For both graduating classes, the same pattern emerges; a higher percentage of students reports attending a community college or 4-year university, followed by employment, then advanced training or the military. Furthermore, the highest rates of retention among placements were 4-year universities (75.4%) and the military (82.1%).

Approximately 26% of students in non-traditional programs were in under-represented gender groups. This is a 6% increase from to 2002-2003. Similarly, approximately 31% of all students *completing* a non-traditional program were in under-represented gender groups, producing an 11% increase from last year.

Tech Prep and CTSO participation also increased between 2002-2003 and 2003-2004 (2% for Tech Prep and 1% for CTSO). In addition, over the last five years, there has been a steady increase in Tech Prep participation from year to year. Examination of Total WyCTA proficiency by Tech Prep and CTSO participation showed that while Total WyCTA proficiency for those who participated in a tech prep program was 3% lower than last year, proficiency levels for CTSO participants was 4% higher. In general, Tech Prep and CTSO participants have outperformed non-Tech Prep and non-CTSO participants over the past 4 years.

Participation in other vocational activities and services has also increased. For instance, the percent of students in participating in School-to-Career activities increased from 84% to 88%. Similarly, the percent of students in Applied Classes increased from 5.5% to 12%. The percentage of students with occupational plans is also on a rise, from 83.8% to 87.6%.

In terms of how vocational education is provided in schools, educators continue to rely on the Internet, interviews with employers/industry persons, and state/national reports to gather relevant industry and occupational information. Vocational instructors primarily use labor market information to inform their students of job availabilities and the locations of these jobs. Schools also indicated that the majority of vocational and academic teachers work together by jointly creating school improvement plans and reviewing WyCAS results. The methods least used were cooperative teaching and/or planning of courses and vocational faculty teaching and reviewing core math, science and English standards. Students also continue to use many forms of technology in their vocational programs. In particular, most schools indicated that their students use technology for Internet research, Word Processing, and designing reports/presentations.

There was an increase in attendance at vocational-related professional development sessions as well. During 2003-2004, 661 vocational teachers and 632 non-vocational teachers attended a vocational education-related professional development session, compared to last year's figures of 440 and 363 respectively. Of these teachers, 98.4% found it to be useful to very useful.

In conclusion, results for the 2003-2004 school year show that Wyoming students are continuing to progress at a steady pace. However, while Wyoming schools are to be commended for the continued improvement in the performance of their students, schools must take the steps necessary to ensure that all students are achieving at equal rates and that special attention is given to lagging subpopulations and their unique needs.

APPENDIX A - RUBRICS