Wyoming State Department of Education

Carl Perkins IV State Report

Secondary Schools and Students
2013-2014

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Introduction to Carl Perkins IV

> *For all its importance, the role that CTE plays in building the nation's economic vitality often gets overlooked. Too many educators assume that career and technical training is for the last century, not this one. Many reformers treat CTE as old school--rather than as a potential source of cutting-edge preparation for careers. This narrow picture of CTE is surprising, given the size of our CTE system. More than 90 percent of high school graduates take at least one occupational course. About four out of ten students take at least three full-year courses. Nationwide, more than 15 million high school and post-secondary students are enrolled in CTE courses. And more than half of high school graduates who participate in CTE today now go on to some form of postsecondary education.*
>
> --US Secretary of Education, Arne Duncan, 2011

The Carl Perkins Act provides federal support for rigorous career and technical education (CTE) programs that provide students with knowledge and skills to keep the United States competitive. States are provided with funds which are in turn distributed to eligible recipients, such as local educational agencies (LEAs) and postsecondary institutions, to develop more fully the academic, and career and technical education knowledge and skills of secondary and postsecondary education students who elect to enroll in career and technical education programs.

In keeping with the evolving trends in career and technical education, the Perkins Act was revised in 2006. One of the notable provisions of the Carl D. Perkins Career and Technical Education Improvement Act (Perkins IV) is the call for "programs of study." The law requires states to offer high school students a new kind of career and technical education that helps prepare them for both college and career, not just for success in entry-level occupations. In addition to the programs of study, the Perkins Act of 2006 has several other features that have significantly impacted state and local recipients of Perkins funds. This includes, but is not limited to: a) an increased emphasis on local accountability; b) changes to federal performance measures and definitions of student populations; c) development and recognition of CTE Programs of Study[1]; d) an emphasis on increasing coordination between the different programs within CTE as well as integration with academics; and e) focusing CTE so that students are being prepared for future employment in high-demand, high-skill, and/or high-wage jobs.

The following report presents data collected during the 2013-14 school year from Wyoming high schools. The information contained in this report illustrates how CTE programs are working in the state of Wyoming and also provides invaluable data to inform future planning.

[1] Such Programs of Study should explicitly address: 1) connections between secondary and postsecondary education; and 2) integration of academic and technical skills.

CTE Concentrators and Participants

Demographic information was collected from 68 secondary schools with students participating in CTE programs in Wyoming during the 2013-14 school year. Specifically, this information was collected from CTE Concentrators and CTE Participants. The table below describes how these categories are defined under Perkins IV. The charts and tables in this section summarize the demographic information available for these CTE students.

Table 1. Perkins Student Definitions

Perkins IV Definitions
At the *secondary level*, a **CTE concentrator** is defined as a secondary student who has completed three or more courses in a CTE program, including those who may be currently enrolled in their third course.
At the *secondary level*, a **CTE participant** is defined as a secondary student who has *completed* one or more courses in a CTE program sequence.

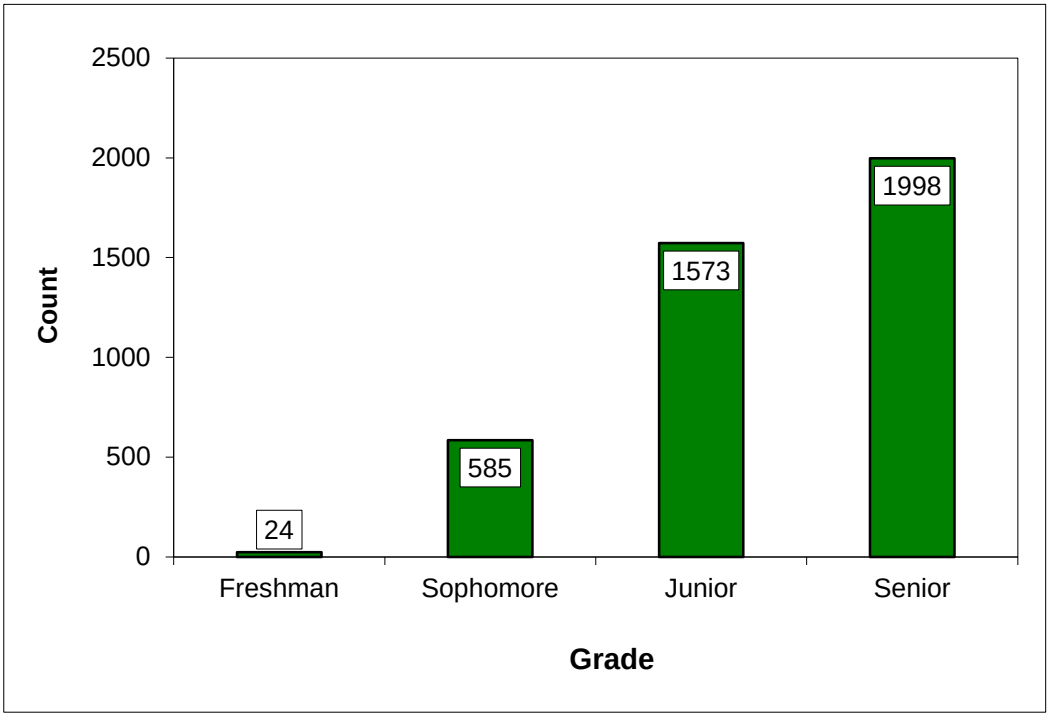
CTE Concentrators

At the secondary level, a **CTE concentrator** is defined as a secondary student who has completed three or more courses in a CTE program, including those who may be currently enrolled in their third course.

There were 4,180 total students reported as CTE concentrators during the 2013-2014 school year. The charts and tables that follow show the demographic information reported on CTE concentrators by grade level, gender, ethnicity, eligibility category, number of CTE program courses taken, and career cluster/program area.

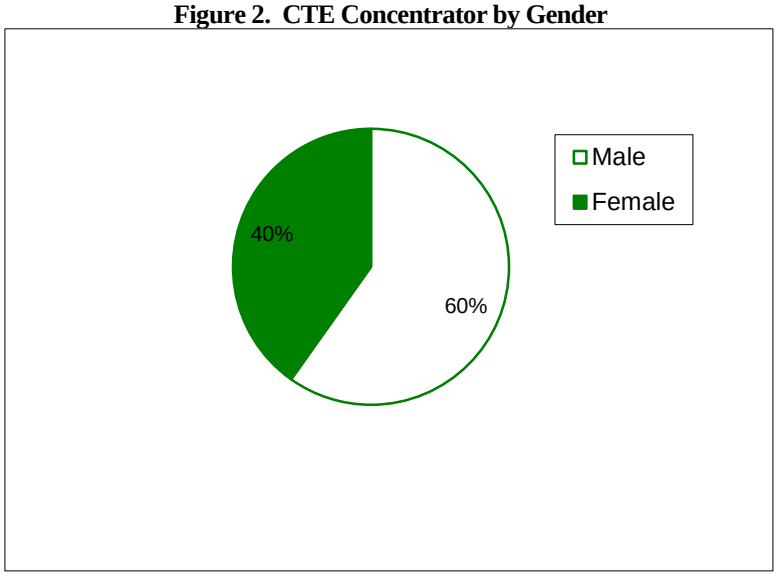
Grade Level. Among CTE concentrators, the majority of students (47.8%) were seniors, followed by 37.6% who were juniors. Only 14% of CTE concentrators were sophomores, and very few freshman students (0.6%) met the definition of a CTE concentrator. Such a grade level distribution is to be expected given that CTE concentrators must have at least completed 2 courses and currently enrolled in a 3rd course.

Figure 1. CTE Concentrator by Grade



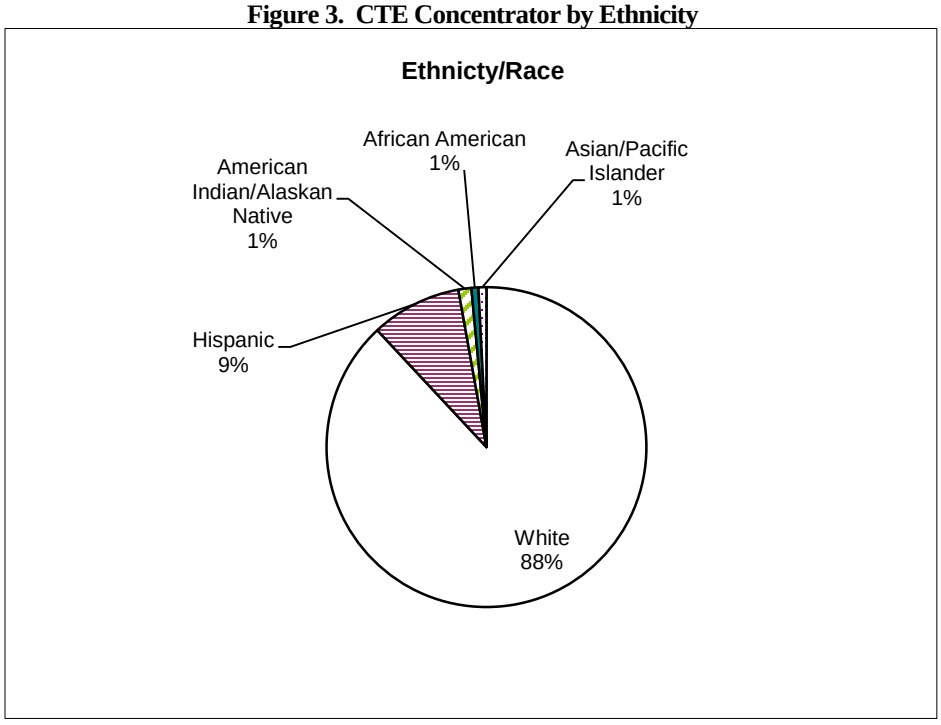
Gender. During the 2013-2014 year, it was reported that 2,506 (60%) CTE concentrators were male and 1,674 (40%) were female. The proportion of males to females was very consistent with what was reported during the 2012-13 (60% males; 40% females), 2011-12 (61% males; 39% females), 2010-2011 (60% males; 40% females) and 2009-2010 (59% males; 41% females) school years.

Figure 2. CTE Concentrator by Gender



Ethnicity. The majority of CTE concentrators are White (87.6%), followed by Hispanics (9.1%). Note that these figures are consistent with the ethnic/racial distribution of the student population statewide. Thus, although there are relatively few minority CTE concentrators, this is consistent with the statewide composition and has remained stable over the years.

Figure 3. CTE Concentrator by Ethnicity



* Two or More Races = .4%

Eligibility Category. Within the subpopulations, most concentrators fell into the economically disadvantaged category (17.2% of total concentrators). In addition, compared to last year's eligibility category composition, the distribution of the subpopulations has remained stable.

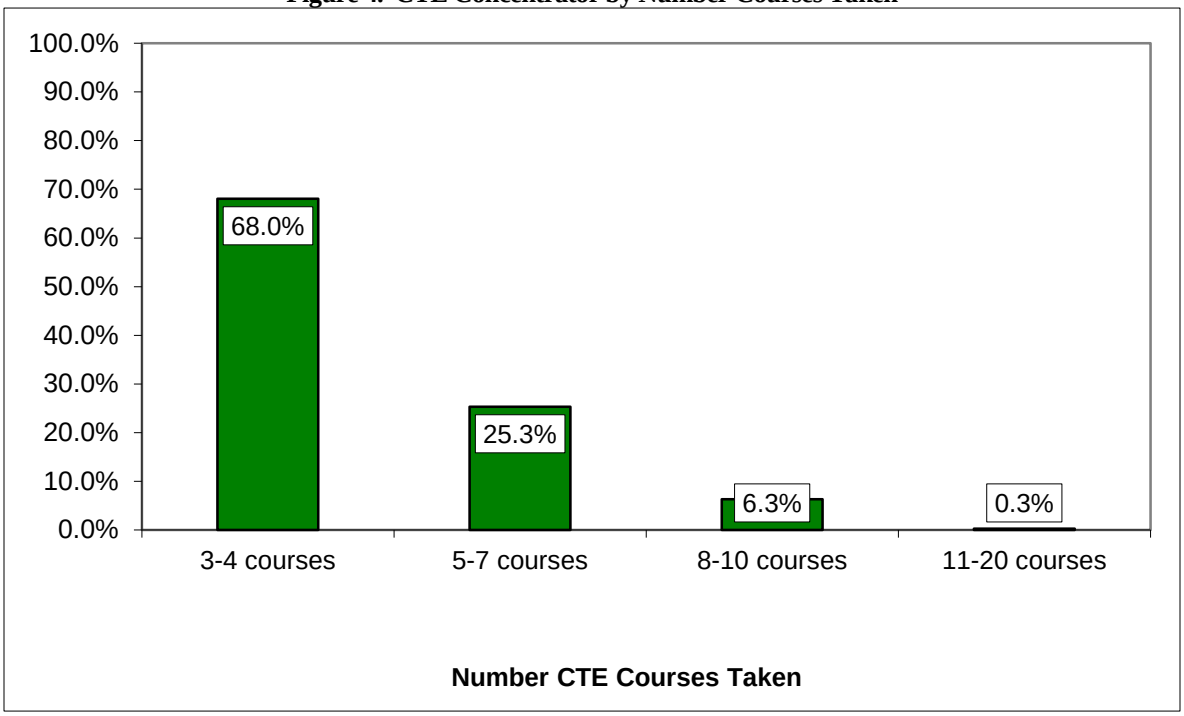
Table 2. CTE Concentrator by Eligibility Category

Category*	Count	Percent of Total
Economically Disadvantaged	629	61.7%
Disability	223	21.9%
Single Parent	115	11.3%
Other Educational Barriers	32	3.1%
Limited English Proficiency	14	1.4%
Displaced Homemaker	7	0.7%
Corrections	0	0.0%
Migrant	0	0.0%

*Students may have been eligible under more than one category.

Number of CTE program courses taken. The majority of CTE concentrators (68.0%) have taken 3-4 CTE courses.

Figure 4. CTE Concentrator by Number Courses Taken



Career/cluster/program area. For the tenth year in a row, Architecture and Construction and Agriculture were the most popular program areas with the highest enrollment among CTE concentrators. However, for the first time, Hospitality and Tourism has replaced Manufacturing as the third most popular program and Manufacturing has become the fourth most popular program. Over half (57.2%) of all CTE concentrators were enrolled in these four program areas.

Note that in line with these results, Wyoming prioritized the development of the new assessment system by first developing CTE assessments for pathways within the Architecture and Construction, Manufacturing, Agriculture, and Hospitality and Tourism program areas.

Table 3. CTE Concentrator Enrollment by Program Area

Program Area	Count	Percent
Agriculture, Nat. Resources	812	19.4
Architecture & Construction	690	16.5
Hosp. & Tourism	455	10.9
Manufacturing	433	10.4
Transportation, Distribution & Logistics	312	7.5
Health Science	299	7.2
Arts, AV Tech & Comm.	272	6.5
Human Services	220	5.3
Sci. Research & Engineering	173	4.1
Business Admin.	164	3.9
Retail & Wholesale Sales	119	2.8
Finance	117	2.8
Info. Technology	115	2.8
Education & Training	--	--
Gov. & Public Admin.	--	--
Law & Public Safety	--	--

Results by CTE pathway show that the Agriculture (General), Cabinet & Woodworking, Welding, and Auto Tech were among the most popular pathways among CTE concentrators, with over 45% of concentrators being in these pathways.

Pathway	Frequency	Percent
Agriculture - General	639	17.5
Cabinetmaking & Woodworking	401	11.0
Welding	341	9.3
Auto Tech: Gen. Serv. Tech.	266	7.3
Hosp. & Tourism	178	4.9
CNA	160	4.4
Food, Nutrition & Wellness	156	4.3
Pre-Engineering	152	4.2
Child & Human Development	137	3.7
Agriculture - Mechanics	113	3.1
Business Computer Applications	110	3.0
Video Production	105	2.9
Health Science	105	2.9
Marketing, Management, Entrepreneurship	103	2.8
Carpentry	83	2.3
Accounting	80	2.2
Graphic Design	80	2.2
Hospitality Foods	64	1.8
Drafting	51	1.4
Architectural Drafting	45	1.2
Programming & Software Development	33	.9
Finance	26	.7
Textiles	26	.7
Web, Digital, Multimedia & Info. Resources	24	.7
Digital Photography	23	.6
Information Support Services	17	.5
Business Admin.	14	.4
Architecture & Construction	14	.4
Network Systems	13	.4
Computer Animation	13	.4
Business Management and Technology	12	.3
Engineering Technology	12	.3
Precision Machining	9	.2
Communication - Journalism/Broadcasting	9	.2

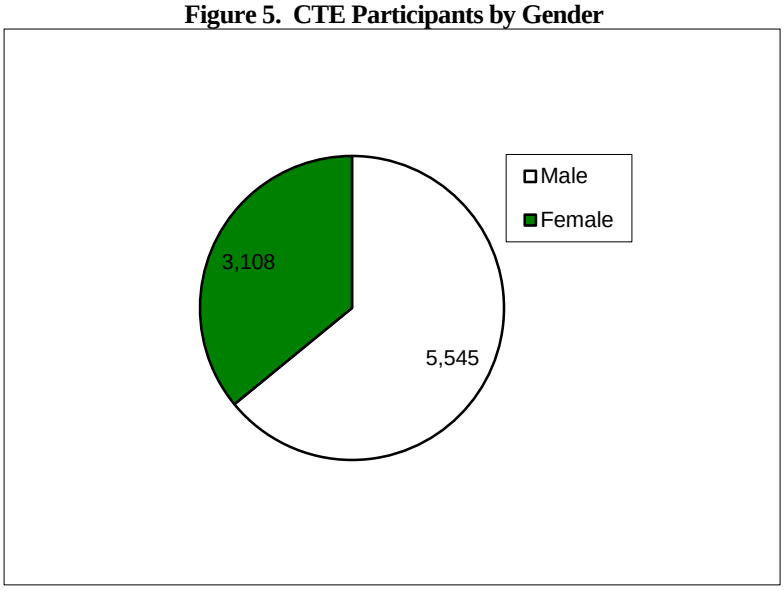
Pathway	Frequency	Percent
Sports Medicine	6	.2
Agriculture – Natural Resources	5	.1
Desktop Publishing	5	.1
Arts, AV Tech & Comm.	5	.1
Manufacturing	4	.1
Energy	4	.1
STEM	4	.1
Auto Tech: Auto Body	2	.1
Technology	2	.1
Computer & Information Sciences	2	.1
Info. Technology	1	.0

CTE Participants

At the secondary level, a **CTE participant** is defined as a secondary student who has *completed* one or more courses in a CTE program sequence.

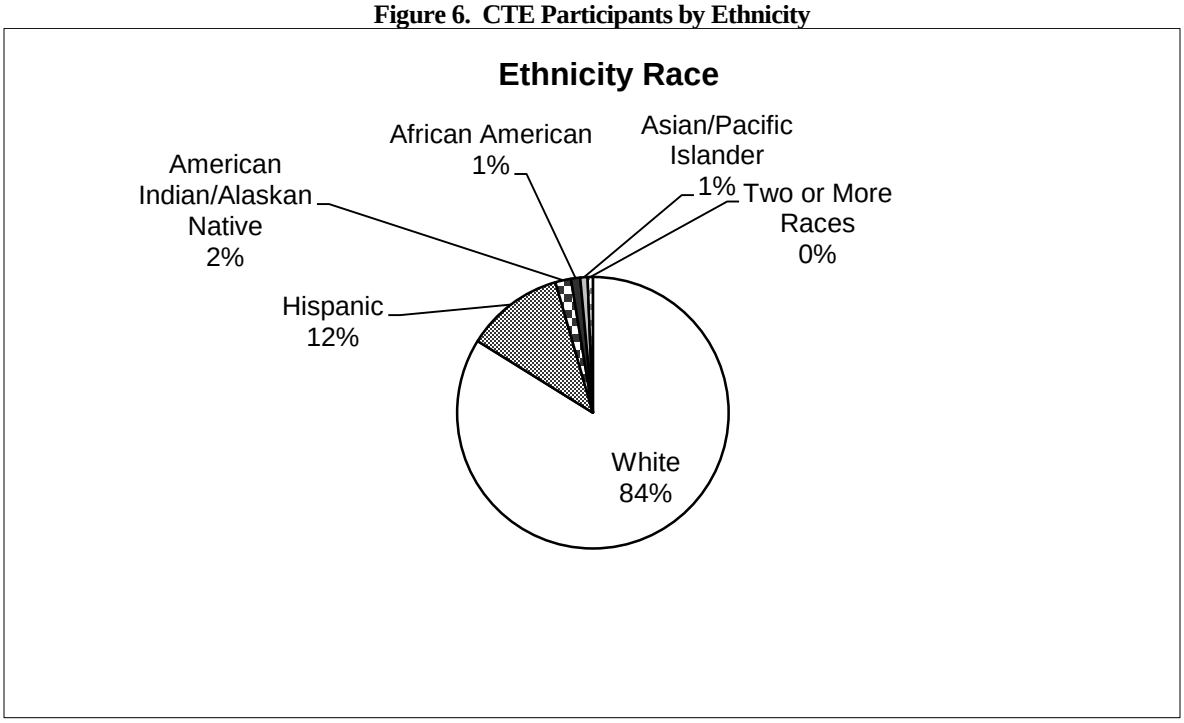
Gender. During the 2013-2014 school year, it was reported that 5,545 (64.1%) males and 3,108 (35.9%) females were CTE participants, for a total of 8,653 participants.

Figure 5. CTE Participants by Gender



Ethnicity. As noted previously, due to limited ethnic diversity overall in Wyoming, the ethnic distribution of CTE participants consists of 84% White students.

Figure 6. CTE Participants by Ethnicity



Eligibility Category. Most CTE participants in a special population were categorized as non-traditional enrollees (46.4% of total).

Table 4. CTE Participants by Eligibility Category

Category*	Count	Percent of Total
Nontraditional Enrollees	2733	46.43%
Economically Disadvantaged	1770	30.07%
Disability	897	15.24%
Single Parent	336	5.71%
Limited English Proficiency	82	1.39%
Other Educational Barrier	61	1.04%
Migrant Status	4	0.07%
Displaced Homemakers	3	0.05%

Federal Indicators

Summary of Results

The following table shows an overall summary of results statewide by each of the federal Perkins IV indicators. The sections that follow describe results for each of these indicators in more detail and by subgroup. As noted, targets for 2S1, 3S1, 4S1, 5S1, 6S1, 6S2 were met.

Table 5. Summary of Federal Perkins IV Indicator Results: Statewide

Indicators	Perkins IV Measurement Definitions	2013-2014 Results	2013-2014 Targets
(1S1) Academic Attainment: Reading	Percent of CTE concentrators who have met the proficient or advanced level on the ACT reading assessment administered by the State of Wyoming under Section 1111(b)(3) of the Elementary and Secondary Education Act (ESEA) as amended by the No Child Left Behind Act based on the scores that were included in the State's computation of adequate yearly progress (AYP)	30.00*	100*
(1S2) Academic Attainment: Math	Percent of CTE concentrators who have met the proficient or advanced level on the ACT math assessment administered by the State of Wyoming under Section 1111(b)(3) of the Elementary and Secondary Education Act (ESEA) as amended by the No Child Left Behind Act based on the scores that were included in the State's computation of adequate yearly progress (AYP)	38.00*	100*
(2S1) Technical Skill Attainment	Percent of CTE concentrators who passed technical skill assessments that are aligned with industry-recognized standards, if available and appropriate, during the reporting year.	73.40	68.00
(3S1) Completion	Percent of CTE concentrators who earned a regular secondary school diploma, earned a General Education Development (GED) credential as a State-recognized equivalent to a regular high school diploma (if offered by the State) *or* other State-recognized equivalent (including recognized alternative standards for individuals with disabilities), *or* earned a proficiency credential, certificate, or degree, in conjunction with a secondary school diploma (if offered by the State) during the reporting year.	96.70	95.00
(4S1) Graduation Rate	Percent of CTE concentrators who, in the reporting year, were included as graduated in the State's computation of its graduation rate as described in Section 1111(b)(2)(C)(vi) of the ESEA	93.90	85.00
(5S1) Placement	Percent of CTE concentrators who left secondary education and were placed in postsecondary education or advanced training, in the military service, or employment in the second quarter following the program year in which they left secondary education.	96.30	95.00
(6S1) Non-Traditional Participation	Percent of CTE participants from underrepresented gender groups who participated in a program that leads to employment in nontraditional fields during the reporting year.	31.60	35.00
(6S2) Non-Traditional Completion	Percent of CTE concentrators from underrepresented gender groups who completed a program that leads to employment in nontraditional fields during the reporting year.	30.60	30.50

For the Spring 2014 testing period, proficiency cuts for the ACT were revised resulting in a more challenging exam (cut was set at a higher level). Thus, these results should be viewed as baseline from which future targets should be set.

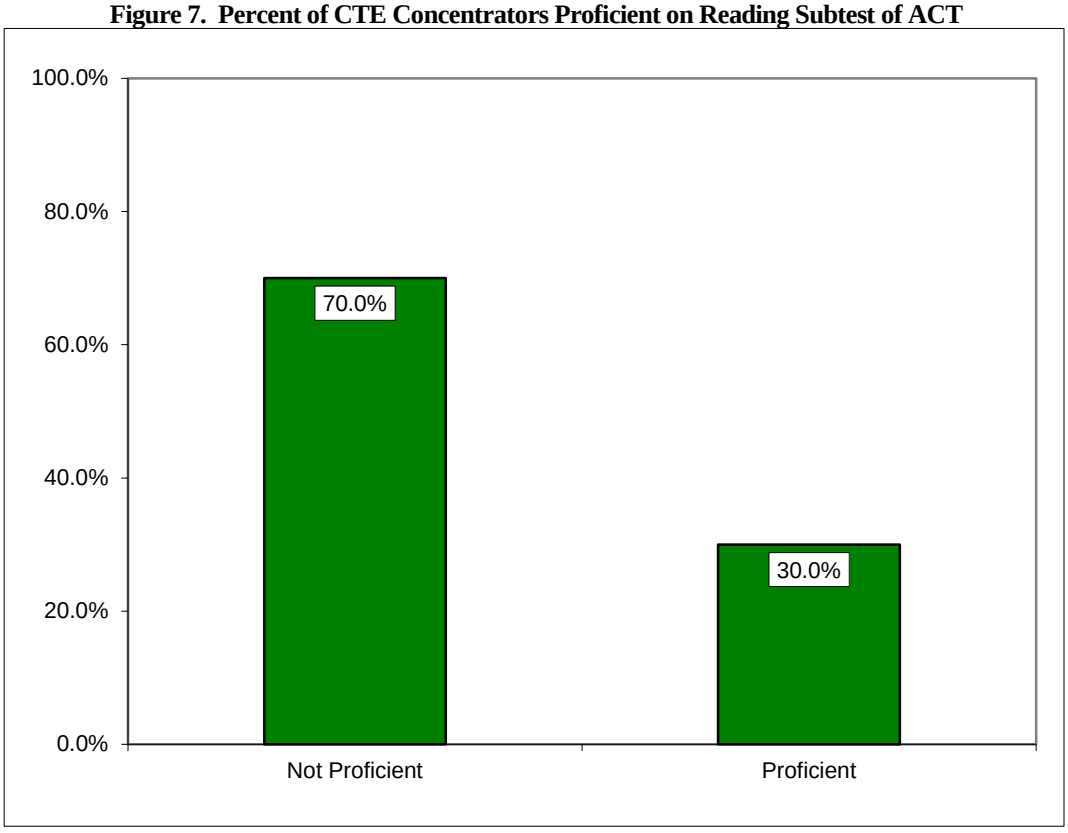
Note: Columns highlighted in yellow indicate that target goals were met for the 2013-2014 school year.

1S1 – Academic Attainment: Reading

To compute academic attainment, CTE concentrators entered in the WyCTA database are matched with state assessment data received from the Wyoming Department of Education (*NOTE:* Per Federal guidelines, only students whose scores were included in statewide AYP computation are included). For example, for the 2013-14 school year, CTE concentrators from the WyCTA database were matched with all 11th graders who took the ACT in Spring 2014. The indicator was then calculated by the number of CTE concentrators proficient on the reading portion of the ACT. Of note, the ACT was in its second year as a statewide assessment – in prior years, Wyoming used the state PAWS assessment. More importantly, for the Spring 2014 testing period, proficiency cuts on the ACT were revised resulting in a more challenging exam (cut was set at a higher level).

Overall, **30.0% of CTE concentrators were proficient on the reading** subtest as compared to 70.0% not proficient. This represents a large decrease from the prior year when 74.9% of concentrators were proficient. Such changes in proficiency levels are explained by the change in the assessment proficiency level cuts employed. Thus, these results should be viewed as baseline from which future targets should be set.

Figure 7. Percent of CTE Concentrators Proficient on Reading Subtest of ACT



Indicator 1S1 by Subpopulations:

Results for indicator 1S1 by the subgroups of gender, ethnicity and special populations are reported in the following table. Highlights and key finding include:

- 34% of females were proficient in reading as compared to 27% of males.
- Students in the White ethnicity category had the highest percentage of students meeting reading proficiency targets for reading at 31.9%.
- The highest proportion of special population students to meet this indicator were non-traditional (34.8%).

Table 6. Indicator 1S1 Results by Subpopulations

(1S1) Academic Attainment: Reading			
Gender	**# of Students in Numerator**	**# of Students in Denominator**	**Percent of Students Meeting Indicator**
Male	225	823	**27.3%**
Female	184	541	**34.0%**
Ethnicity			
American Indian	3	18	**16.7%**
Asian/ Hawaiian/Pacific Islander	*	*	*
Black	1	11	**9.1%**
Hispanic	17	117	**14.5%**
White	383	1,201	**31.9%**
Two or more races	*	*	*
Special Populations			
Individuals With Disabilities	8	65	**12.3%**
Economically Disadvantaged	39	203	**19.2%**
Single Parents	11	38	**28.9%**
Displaced Homemakers	*	*	*
Limited English Proficient	*	*	*
Migrant	*	*	*
Non-Traditional	86	247	**34.8%**
Corrections	NR	NR	NR

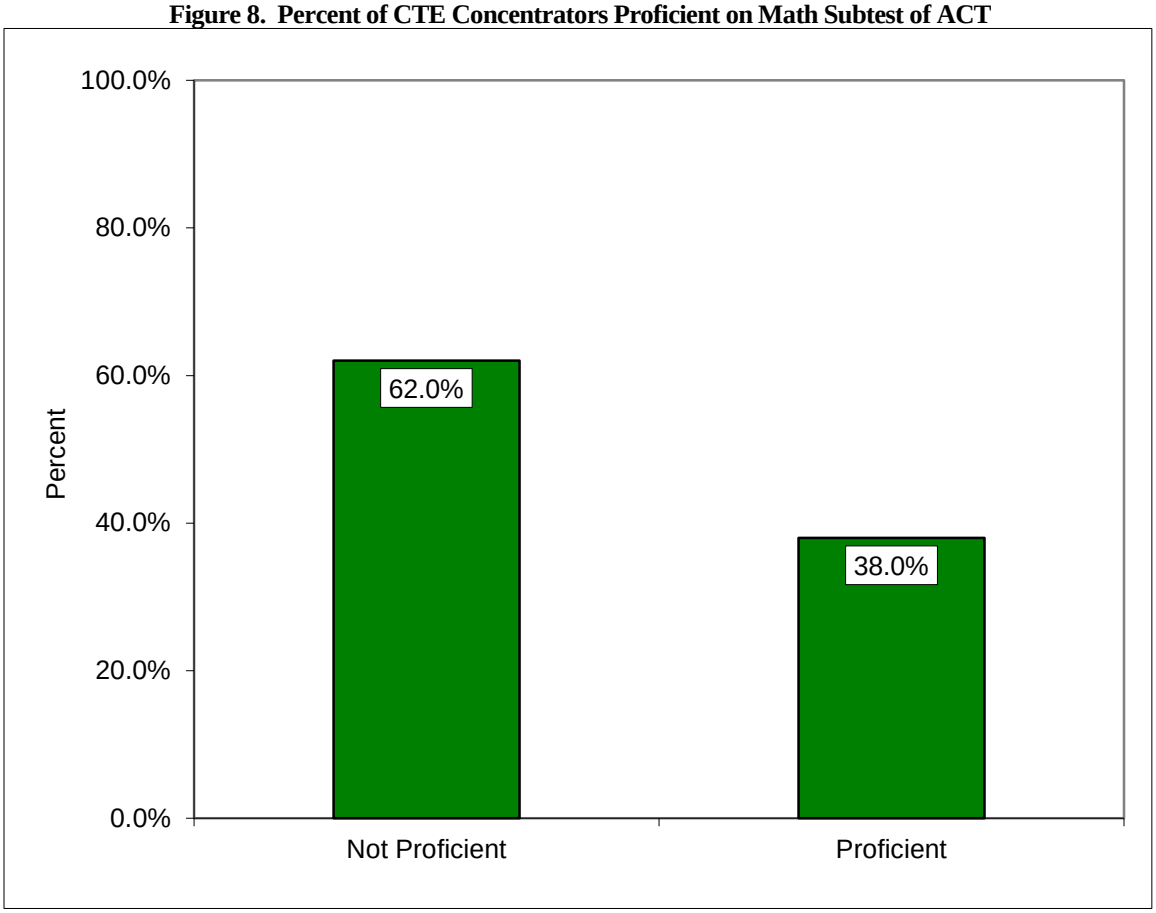
NR: Not Reported means that there were no concentrators, completers or participants reported in this category.
* An asterisk means that there were less than 10 concentrators, completers or participants reported in this category.

1S2 – Academic Attainment: Mathematics

Like indicator 1S1, in order to determine academic skill attainment in mathematics per Perkins IV guidelines, data from the ACT was obtained from the Wyoming Department of Education. The indicator is then calculated the same way (i.e. number of CTE concentrator's proficient on the mathematics portion of the ACT). Again, it should be noted that these results include concentrators assessed via the ACT during the 13-14 school year and that the proficiency cuts were set at a higher level. As a result, these findings should be viewed as baseline.

Statewide results show that 3**8.0% of CTE concentrators were proficient in math** as compared to 62.0% who were not proficient. This represents a large decrease as compared to last year (68%) when proficiency cuts were set at a lower level.

Figure 8. Percent of CTE Concentrators Proficient on Math Subtest of ACT



Indicator 1S2 by Subpopulations:

Results for indicator 1S2 by subgroups are shown in the table below. Highlights of these results include:

- Proficiency rates by gender show that the percent proficient was slightly greater for males (38.5%) than females (37.3%).
- For ethnicity, White students were most likely to meet the math proficiency targets (39.4%).
- Looking at special populations, students in the non-traditional (37.2%) category had the highest proportion of students meeting the proficiency target, while students with disabilities had the lowest percentage of students meeting the target (7.7%).

Table 7. Indicator 1S2 Results by Subpopulations

(1S2) Academic Attainment: Mathematics			
Gender	**# of Students in Numerator**	**# of Students in Denominator**	**Percent of Students Meeting Indicator**
Male	317	824	**38.5%**
Female	202	541	**37.3%**
Ethnicity			
American Indian	4	18	**22.2%**
Asian/ Hawaiian/Pacific Islander	*	*	*
Black	2	11	**18.2%**
Hispanic	33	117	**28.2%**
White	473	1202	**39.4%**
Two or more races	*	*	*
Special Populations			
Individuals With Disabilities	5	65	**7.7%**
Economically Disadvantaged	58	203	**28.6%**
Single Parents	11	39	**28.2%**
Displaced Homemakers	*	*	*
Limited English Proficient	*	*	*
Migrant	*	*	*
Non-Traditional	92	247	**37.2%**
Corrections	NR	NR	**NR**

NR: Not Reported means that there were no concentrators, completers or participants reported in this category.
* An asterisk means that there were less than 10 concentrators, completers or participants reported in this category.

2S1 – Technical Skill Attainment

Indicator 2S1 reports on the percent of CTE concentrators who passed technical skill assessments that are aligned with industry-recognized standards, if available and appropriate, during the reporting year. Wyoming continues to design a new assessment mechanism for programs that will allow measurement to occur at the industry-specific level to meet the requirement of the new Perkins law. Section 113(b)(A)(ii)) says that states must develop an indicator relating to "student attainment of career and technical skill proficiencies, including student achievement on technical assessments that **are aligned with industry-recognized standards**, if available and appropriate." While Wyoming has historically had a statewide assessment of technical skill attainment, the prior statewide assessment of CTE skills was designed to tap generic workplace skills[2] solely and is not industry-specific. Wyoming has developed a multi-step, multi-year, phase-in of a new CTE assessment system. The general process for development of this new system consists of the following:

- Convene an oversight coordinating group.
- Create criteria for updating program standards.
- Convene expert content teams (educators and business) to review content standards to be assessed.
- For each program area, determine if existing assessments are appropriate and affordable; determine where new assessments need to be developed.
- Select and/or develop assessments to measure the articulated skills and competencies.
- Create and/or pilot versions of the new assessments.
- Apply criteria for test security, administration and reporting features.
- Train pilot-group of teachers in new assessment standards and processes.
- Train teachers in developing formative assessments based upon the program's tested competencies.
- Implement new assessments with pilot group of teaches and faculty.
- Administer the test and report results.
- Conduct pilot professional development for teachers to reflect upon test data to improve and focus classroom teaching.
- Scale up use of new assessments and teacher training.

These processes began during the 2007-2008 school year for the program areas of Manufacturing, Agriculture and Natural Resources, and Architecture and Construction, three of Wyoming's highest enrollment program areas. Since Spring 2010, students who were CTE concentrators within the following pathways have been able to take assessments in the following areas:

- Agriculture Mechanics
- General Agriculture (includes Agriculture Business, Animal Science, Plant Science)
- Cabinetmaking & Woodworking
- Residential & Commercial Carpentry
- Technical Drafting
- Architectural Drafting

[2] It should be noted that the new assessment system may still include generic workplace skills that transcend individual program areas, however, it is no longer considered sufficient that this is the only dimension of technical skill attainment measured by the state assessment. Measures of industry-specific competencies must also be built into any statewide assessment system designed to measure technical skill attainment.

- Welding

In of Spring 2013, students were able to take online assessments for the following pathways:

- Business:
  - Accounting
  - Finance
  - Business Technology & Operations
  - Marketing, Management & Entrepreneurship
- Tourism, Hospitality, Foods & Nutrition:
  - Foods, Nutrition & Wellness
  - Professional Foods
  - Tourism, Hospitality & Lodging Management

Online assessments for the following Family & Consumer Science were developed, and piloted during the 2013-14 school year.

- Child Development
- Interior Design
- Textiles
- Life Management

As part of the assessment development process, the Agriculture and Manufacturing exams were reviewed in Fall 2014 to determine if adjustments needed to be made to items and proficiency cuts.

In addition to these industry-aligned assessments, data was obtained on students within a pathway that has an industry-certified exam available (e.g., Culinary ProStart, CNA certification, etc.). For Pre-Engineering concentrators, data on their performance in "Project Lead the Way", a course sequence specific for Pre-Engineering students was also obtained. Starting in 2012-13, Automotive Technology concentrators will be able to take Electrical Systems & Engine Performance industry-certified exams through National Institute for Automotive Service Excellence (ASE) Assessment. For the remaining CTE concentrators, the existing WyCTA skills assessment is being used.

Similar to the prior three years, during the 2013-14 reporting year determination of technical skill attainment was based on which CTE program area concentrators participated in and was calculated accordingly. See below:

1) ***If in a pathway that has CTE online assessment (i.e., General Ag, Ag Mechanics, Technical Drafting, Architectural Drafting, Residential & Commercial Carpentry, etc.):***

   Calculation based on:

$$\frac{\text{Concentrators over proficiency cut score}}{\text{Concentrators who took CTE online assessment}}$$

2) If in the Engineering pathway and completed Project Lead the Way:

Calculation based on:

$$\frac{\text{Number of concentrators with GPA >= than 3.0 in Project Lead the Way classes}}{\text{Number of concentrators who completed Project Lead the Way}}$$

3) If in a pathway that offers an industry-certified assessment:

Calculation based on:

$$\frac{\text{Concentrators who passed an industry certified test}}{\text{Concentrators who took an industry certified test}}$$

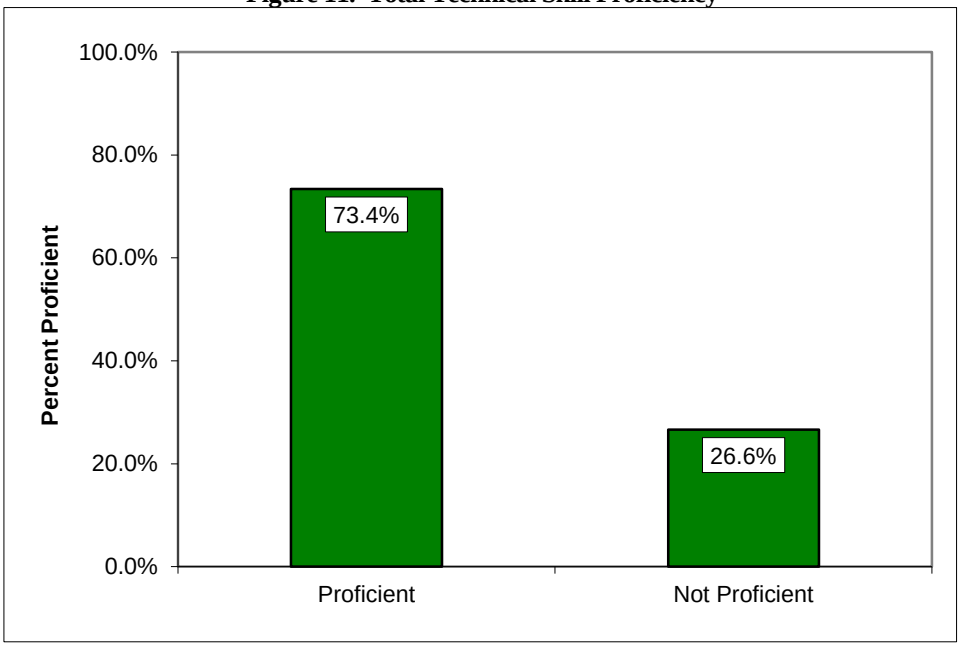
4) If in a pathway that is not listed above (i.e., no CTE online assessment is available, did not complete Project Lead the Way, or did not offer an industry-certified assessment):

Calculation based on:

$$\frac{\text{Concentrators who were proficient on 2 out 3 WyCTA Content Areas}}{\text{Concentrators who took WyCTA Assessment}}$$

Results showed that 73.4% of CTE concentrators were proficient in technical skills compared to only 26.6% who were not proficient. This represents an increase in proficiency from the 2012-2013 school year where 67.6% of CTE concentrators were proficient in technical skill attainment.

Figure 11. Total Technical Skill Proficiency



The table below shows results for proficiency in the various assessment categories. CTE concentrators did well on the WyCTA rubric, and industry certified exams. In contrast, students had more difficulty on the new online assessments and the ASE automotive assessment. However, this is to be expected during the initial years of a new, more rigorous and industry aligned assessment system.

Figure 12. Overall Proficiency by Type of Assessment

	# Who Passed	# Who Took	Percent Proficient
WY CTE Online Assessment	1150	1694	67.9%
Project Lead the Way Courses (Pre-Engineering)	39	49	79.6%
Industry-certified exam			
A+ Certification	1	1	100.00%
AutoDesk	7	7	100.00%
Basic Emergency	1	1	100.00%
CNA	29	29	100.00%
Culinary ProStart	18	19	94.74%
H2S Certification	36	36	100.00%
Microsoft Offic	10	10	100.00%
NOCTI - Basic A	1	1	100.00%
OSHA 10 Hour	48	49	97.96%
PHLB	24	25	96.00%
SENSE Welding	2	2	100.00%
ServSafe Food	85	112	75.89%
SolidWorks	2	2	100.00%
TestOut Pro Cert	5	5	100.00%
WY Private Pest	10	10	100.00%
ASE Auto Assessment	54	93	58.1%
WyCTA	566	687	82.4%
TOTAL*	**2066**	**2832**	**73.0%**

*Total is not sum of above categories. This is because students may have taken multiple tests (e.g., online assessment and WyCTA). In calculating technical skill attainment, preference was given to industry-aligned exams.

The following table shows the number and percent of concentrators who were proficient in each of the CTE online pathway assessments. As shown, Agriculture students (taking Ag Mechanics and General Ag) were the most proficient. Technical Drafting students were the least proficient.

Table 8. Technical Proficient by CTE Pathway Test

	Not proficient		Proficient	
	Count	**Row N %**	**Count**	**Row N %**
Agriculture Mechanics	7	6.7%	97	93.3%
Architectural Drafting	5	38.5%	8	61.5%
Cabinetmaking & Woodworking	57	19.3%	239	80.7%
Child Development	20	32.8%	41	67.2%
General Agriculture	59	17.1%	287	82.9%
Residential and Commercial Carpentry	32	45.7%	38	54.3%
Technical Drafting	37	77.1%	11	22.9%
Welding	145	49.5%	148	50.5%
Wy. Accounting	22	27.2%	59	72.8%
Wy. Business Technology & Operations	25	28.4%	63	71.6%
Wy. Finance	8	57.1%	6	42.9%
Wy. Food, Nutrition & Wellness	33	51.6%	31	48.4%
Wy. Marketing, Management & Entrepreneurship	16	27.6%	42	72.4%
Wy. Professional Foods	73	48.7%	77	51.3%
Total	**544**	**32.1%**	**1,150**	**67.9%**

Among CTE concentrators assessed, the program areas with the highest percent of proficient students were Science Research and Engineering (88.9% proficient), Health Science (85.5% proficient) and Info Technology (84.3% proficient). The lowest percent proficiency was in the Manufacturing program area with 53.2% proficient.

Table 9. Technical Proficiency by Program Area

	Number Assessed	Percent Proficient
Sci. Research & Engineering	135	88.9%
Health Science	262	85.5%
Info. Technology	89	84.3%
Agriculture, Nat. Resources	465	84.1%
Business Admin.	111	79.3%
Arts, AV Tech & Comm.	230	77.8%
Human Services	122	77.0%
Retail & Wholesale Sales	63	71.4%
Architecture & Construction	413	69.7%
Finance	90	65.6%
Hosp. & Tourism	312	61.5%
Transportation, Distribution & Logistics	128	57.0%
Manufacturing	252	53.2%
Education & Training*	--	--
Gov. & Public Admin.*	--	--
Law & Public Safety*	--	--

*Proficiency levels not provided for program areas with less than 10 participants

Indicator 2S1 by Subpopulations:

Highlights of results for technical skill attainment by subpopulation include:

- Results by gender show that a higher percentage of females (75.8%) met the technical skill proficiency skill targets than males (71.7%).
- The highest percentage of students meeting technical skill proficiency targets were Asian (88.9%) and White (74.7%) students.
- Non-Traditional CTE concentrators showed the highest proficiency level at 76.7%.

Table 10. Indicator 2S1 Results by Subpopulations

(2S1) Technical Skill Attainment			
Gender	**# of Students in Numerator**	**# of Students in Denominator**	**Percent of Students Meeting Indicator**
Male	1,115	1,555	**71.7%**
Female	847	1,117	**75.8%**
Ethnicity			
American Indian	19	35	**54.3%**
Asian	24	27	**88.9%**
Black	12	21	**57.1%**
Hispanic	156	248	**62.9%**
White	1743	2,332	**74.7%**
Two or more races	*	*	*
Special Populations			
Individuals With Disabilities	81	153	**52.9%**
Economically Disadvantaged	305	458	**66.6%**
Single Parents	61	82	**74.4%**
Displaced Homemakers	*	*	*
Limited English Proficient	1	11	**9.1%**
Migrant	*	*	*
Non-Traditional	371	484	**76.7%**
Corrections	NR	NR	**NR**

NR: Not Reported means that there were no concentrators, completers or participants reported in this category.

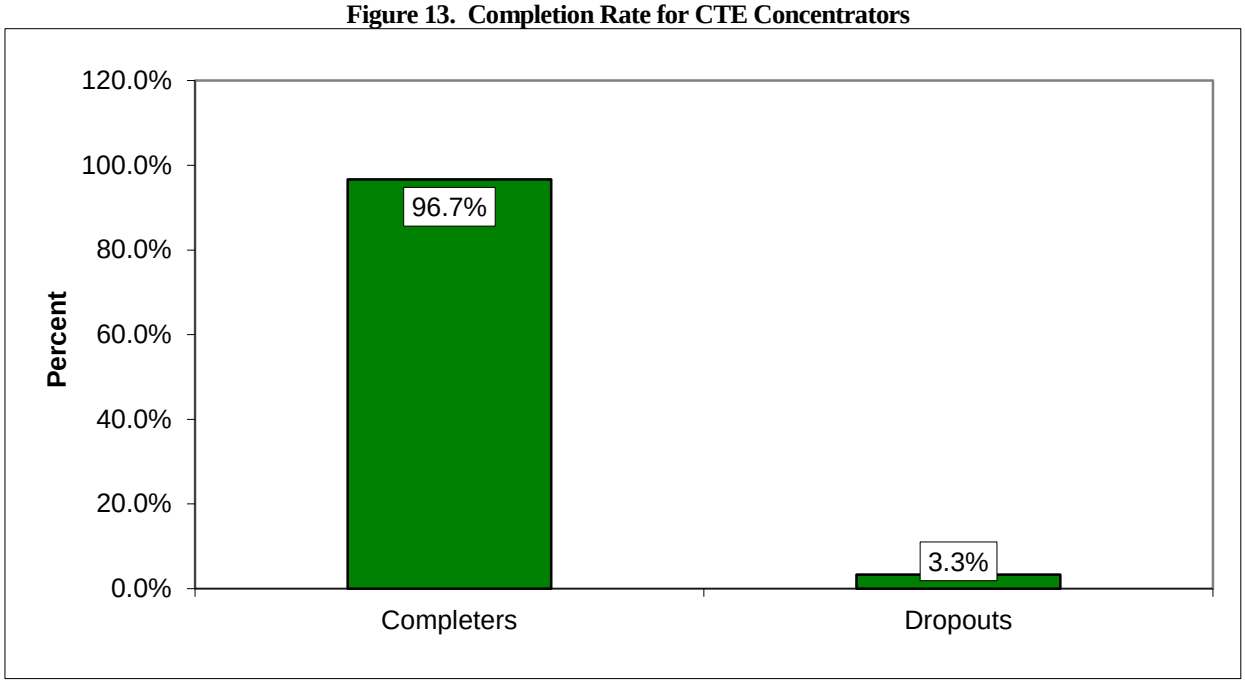
- An asterisk means that there were less than 10 concentrators, completers or participants reported in this category.

3S1 – Secondary School Completion

The indicator is calculated by identifying CTE concentrators who were noted as earning a diploma or dropping out of secondary education during the reporting year (2013-14). Students noted as receiving a diploma are included in the numerator while all students noted as leaving secondary education are included in the denominator.

Results show that 1,706 CTE concentrators left secondary education during the 2013-2014 school year. This included 1,650 completers and 56 dropouts. Thus, 96.7% of CTE concentrators who left secondary education were reported as graduating during the 13-14 school year. This represents a slight increase of 0.3% as compared to the prior year (96.4%).

Figure 13. Completion Rate for CTE Concentrators



Indicator 3S1 by Subpopulations:

Results by subpopulations for indicator 3S1 show a higher percentage of students meeting the indicator. Highlights of the results shown in the table below include:

- 97.4% of females met indicator 3S1, which was only slightly higher than males at 96.2%.
- For ethnicity subgroups, 100% of African American students meeting the indicator while American Indian students (90.9%) showed the lowest completion rate.
- Non-traditional enrollees (98.7%) had the highest completion rates.

Table 11. Indicator 3S1 Results by Subpopulations

(3S1) Secondary School Completion			
Gender	**# of Students in Numerator**	**# of Students in Denominator**	**Percent of Students Meeting Indicator**
Male	968	1,006	**96.2%**
Female	682	700	**97.4%**
Ethnicity			
American Indian	20	22	**90.9%**
Asian	18	19	**94.7%**
Black	10	10	**100.0%**
Hispanic	156	162	**96.3%**
White	1443	1490	**96.8%**
Two or more races	*	*	*
Special Populations			
Individuals With Disabilities	117	121	**96.7%**
Economically Disadvantaged	314	328	**95.7%**
Single Parents	60	62	**96.8%**
Displaced Homemakers	*	*	*
Limited English Proficient	*	*	*
Migrant	NR	NR	**NR**
Non-Traditional	303	307	**98.7%**
Corrections	*	*	*

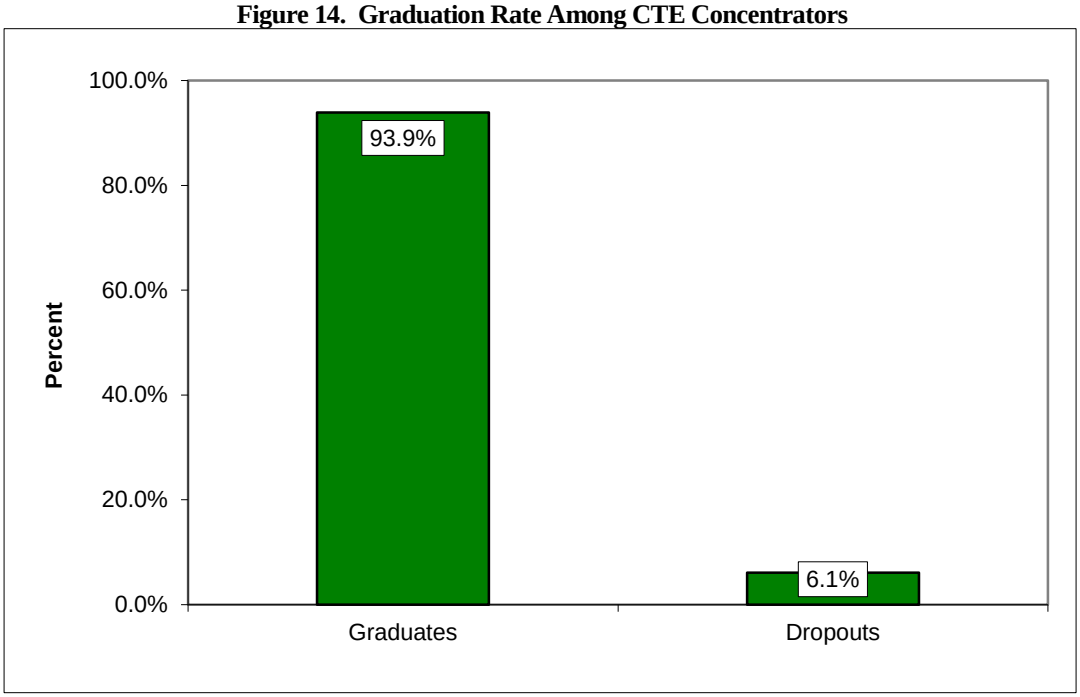
NR: Not Reported means that there were no concentrators, completers or participants reported in this category.
* An asterisk means that there were less than 10 concentrators, completers or participants reported in this category.

4S1 – Student Graduation Rates

To calculate indicator 4S1, graduation and dropout data was obtained from the Wyoming Department of Education and matched with identified CTE concentrators who in the reporting year, were included as graduated in the State's computation of its graduation rate as described in Section 1111(b)(2)(C)(vi) of the ESEA. This indicator varies from 3S1 in that the cohort of CTE concentrators used in the calculation of this indicator consists of last year's (2012-13) graduates. This is consistent with how the WDE calculates and reports graduation rates under NCLB for the reporting year.

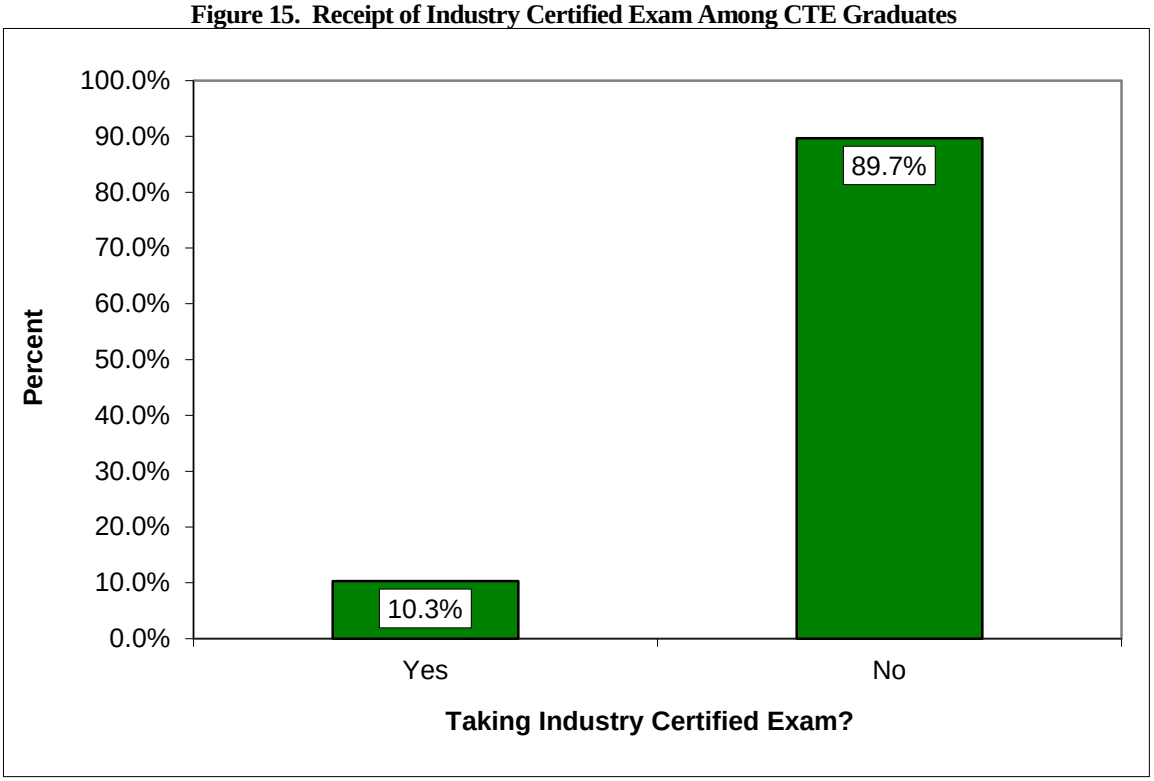
Results show that 93.9% (2,126 out of 2,263) of eligible CTE concentrators were reported as graduating as compared to 6.1% who were noted as dropping out. This represents a slight decrease from last year (94.4%).

Figure 14. Graduation Rate Among CTE Concentrators



Among CTE concentrators who graduated, 10.3% attempted to pass an industry certified exam.

Figure 15. Receipt of Industry Certified Exam Among CTE Graduates



The types and amounts of industry certified exams were consistent with past years. The majority of industry certified exams Wyoming students attempted to pass are in the culinary field (210 individual exams attempted).

- ServSafe Food (66)
- CNA /Emergency (29)
- Culinary ProStart (19)
- SENSE Welding (10)
- WY Private Pest (7)
- Microsoft Office (11)
- OSHA (37)
- PHLB (23)
- NOCTI – Basic (1)
- H2S Certification (1)
- SolidWorks (2)
- A+ Certification (1)
- TestOut Pro (1)
- AutoDesk (2)

Indicator 4S1 by Subpopulations:

Results for indicator 4S1 by subgroups of gender, ethnicity and special populations are shown in the table below. Highlights of these results include:

- Overall, females showed higher graduation rates (95%) than males (93.3%).
- "Two or More Races" students had the highest rate with 100% of CTE concentrators graduating. This was closely followed by White students with 94.5%.
- Examination of special populations showed that single parent students had the highest proportion of concentrators who graduated (96.2%), while students with disabilities constituted the lowest percentage of concentrators who graduated (84.7%).

Table 12. Indicator 4S1 Results by Subpopulations

(4S1) Student Graduation Rates			
Gender	**# of Students in Numerator**	**# of Students in Denominator**	**Percent of Students Meeting Indicator**
Male	1,218	1,307	93.3%
Female	908	956	95.0%
Ethnicity			
American Indian	25	28	**89.3%**
Asian	14	15	**93.3%**
Hawaiian/Pacific Islander	6	6	**100%**
Black	20	27	**74.1%**
Hispanic	186	203	**91.6%**
White	1,865	1,974	**94.5%**
Two or more races	10	10	**100.0%**
Special Populations			
Individuals With Disabilities	122	144	**84.7%**
Economically Disadvantaged	370	411	**90.0%**
Single Parents	101	105	**96.2%**
Displaced Homemakers	*	*	*
Limited English Proficient	*	*	*
Migrant	*	*	*
Non-Traditional	433	458	**94.5%**
Corrections	NR	NR	**NR**

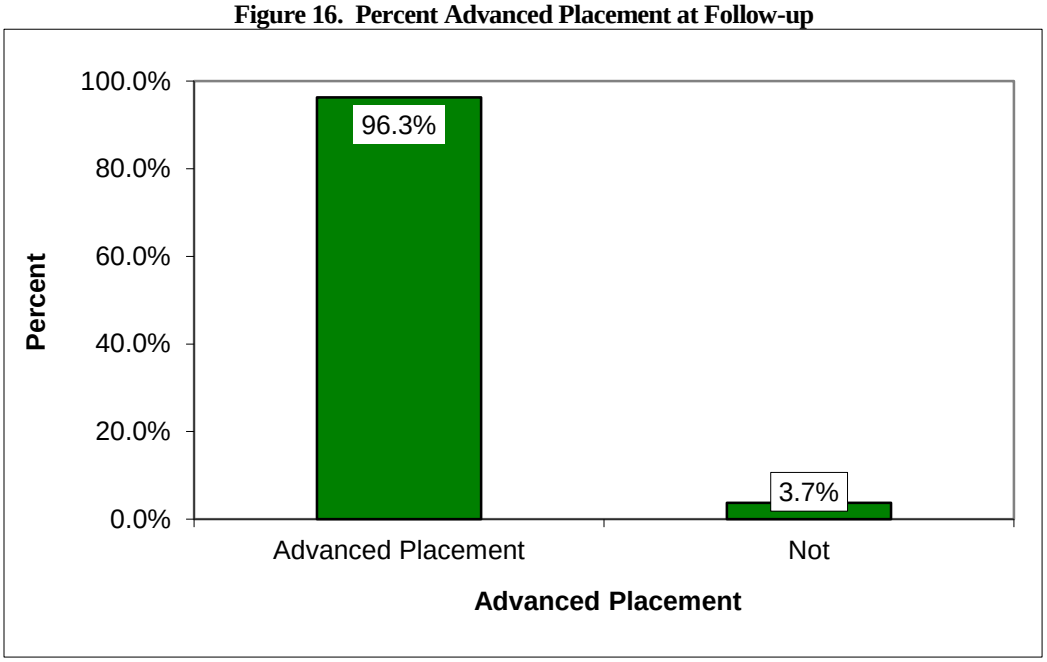
NR: Not Reported means that there were no concentrators, completers or participants reported in this category.
* An asterisk means that there were less than 10 concentrators, completers or participants reported in this category.

5S1 – Secondary Placement in employment, post-secondary/advanced education, or the military at follow-up

Under Perkins IV guidelines, follow-up data was required to be collected during the second quarter of the year (e.g., between October 1, 2013 to December 31, 2013 for students leaving secondary education in the 2012-13 school year). Data was collected on all students who left secondary education, not only graduates. CTE concentrators who left secondary education during the prior year and were followed up are included in the calculation of this indicator (students for which follow-up was not completed are excluded).

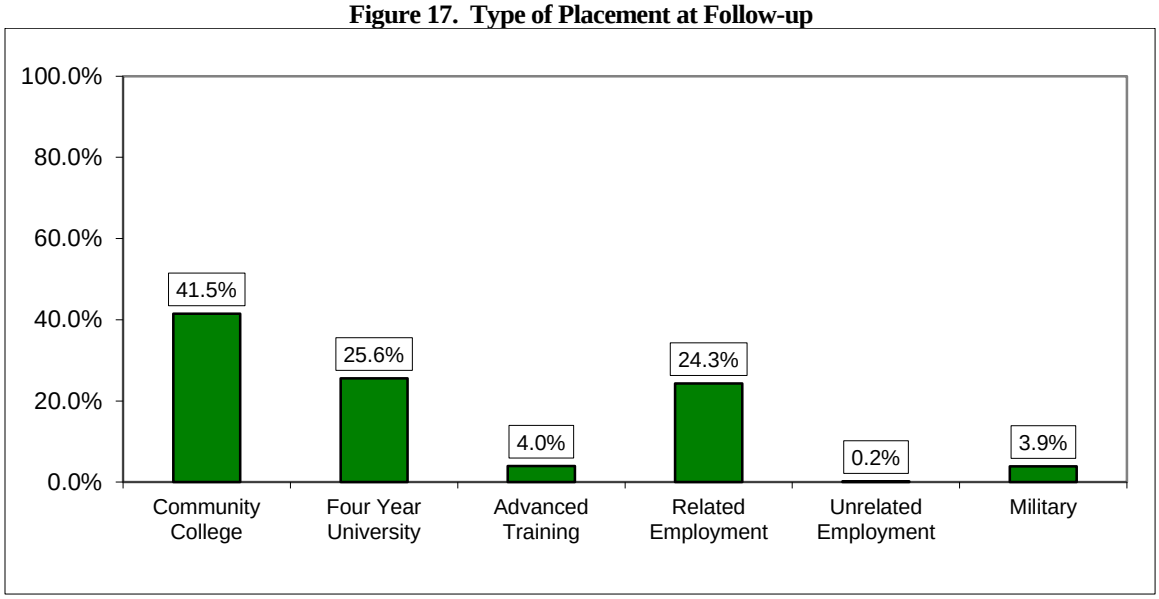
The following graph shows the percent of students in Advanced Placement (i.e. employment, post-secondary education, advanced training, or military) after leaving secondary education. Data was collected the second quarter of 2013 on 1,495 students who had left secondary education in 2012-2013. As shown, 96.3% of students were in advanced placement during the second quarter. This is only slightly lower than the prior year's placement result of 97.4%.

Figure 16. Percent Advanced Placement at Follow-up



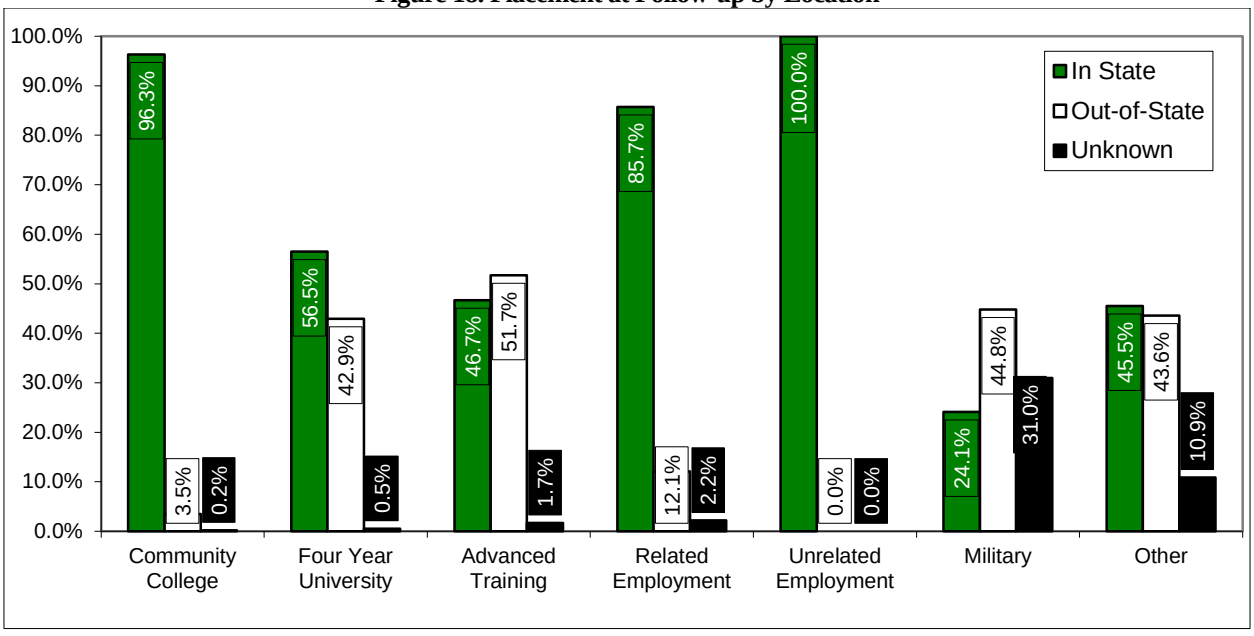
The majority of students were enrolled in community college (41.5%) or in a four year university (25.6%) after leaving secondary education. Additionally, 24.3% were in employment related to their CTE. The fewest students were in the military (3.9%), advanced training (4%) or employment unrelated to their CTE (0.2%).

Figure 17. Type of Placement at Follow-up



Generally, students were located in Wyoming at follow-up. Follow-up students most likely to be located out of state were in advanced training, a four year university or in the military.

Figure 18. Placement at Follow-up by Location



Indicator 5S1 by Subpopulations:

Results by the subpopulations of gender, ethnicity and special populations are shown in the table below. Highlights of these results include:

- Females (96.9) showed slightly higher rates of advanced placement than males (95.9%).
- American Indian and Asian/Pacific Islander students showed the highest rates for advanced placement (100%).
- Among subgroups, non-traditional students had the highest placement rates at 98.4%.

Table 13. Indicator 5S1 Results by Subpopulations

(5S1) Placement			
Gender	**# of Students in Numerator**	**# of Students in Denominator**	**Percent of Students Meeting Indicator**
Male	838	874	**95.9%**
Female	602	621	**96.9%**
Ethnicity			
American Indian	17	17	**100.0%**
Asian	10	10	**100.0%**
Hawaiian/Pacific Islander	*	*	**100%**
Black	*	*	*
Hispanic	119	122	**97.5%**
White	1278	1329	**96.2%**
Two or More	*	*	*
Special Populations			
Individuals With Disabilities	78	86	**90.7%**
Economically Disadvantaged	258	269	**95.9%**
Single Parents	92	96	**95.8%**
Displaced Homemakers	*	*	*
Limited English Proficient	*	*	*
Migrant	*	*	*
Non-Traditional	242	246	**98.4%**
Corrections	NR	NR	**NR**

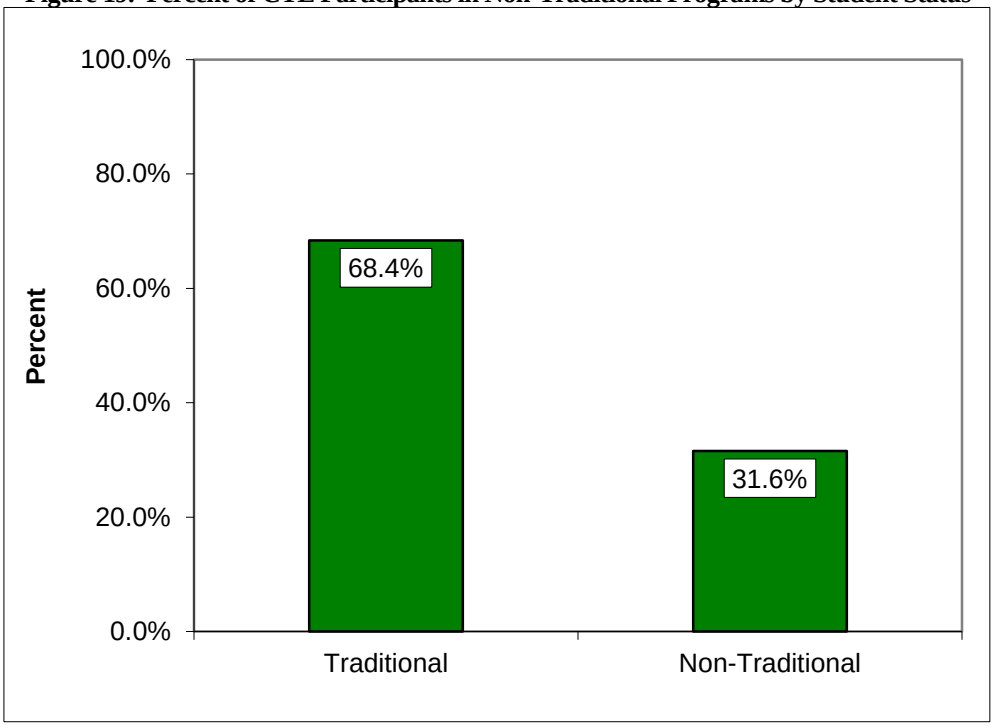
NR: Not Reported means that there were no concentrators, completers or participants reported in this category.
* An asterisk means that there were less than 10 concentrators, completers or participants reported in this category.

6S1 – Non-Traditional Participation

To calculate non-traditional CTE participation rates, data from the CTE Participant data table in the WyCTA database was analyzed. This data table required schools to report information on counts of CTE participants by CIP code and subpopulations. The total number of participants who were in a non-traditional occupational field (as determined by CIP code provided) were then counted. Note that the latest non-traditional 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. Participants whose gender matches those in a non-traditional program (e.g. females pursuing an engineering field) are considered non-traditional participants whereas participants whose gender does not match a non-traditional program (e.g. a male pursuing an engineering field) are considered traditional participants.

For the 2013-2014 reporting year, approximately 31.6% of students in non-traditional programs were in under-represented gender groups. This figure is slightly lower than last year's result of 33.5%.

Figure 19. Percent of CTE Participants in Non-Traditional Programs by Student Status



Indicator 6S1 by Subpopulations:

Results for indicator 6S1 are reported by subgroup in the table below. Data by gender, ethnicity and special populations is included. Key findings from these results include:

- A significant difference in results by gender was observed. While 72.6% of female students participated in a non-traditional program, only8.6% of males did so.
- Results by ethnicity were fairly comparable with the highest percent of students participating in a non-traditional program being of two or more races (44.4%).
- Single parent (38.1%) students had the highest rates of non-traditional participation.

Table 14. Indicator 6S1 Results by Subpopulations

(6S1) Non Traditional Participation			
Gender	**# of Students in Numerator**	**# of Students in Denominator**	**Percent of Students**
Male	478	5,545	**8.6%**
Female	2,255	3,108	**72.6%**
Ethnicity			
American Indian	54	161	**33.5%**
Asian/ Hawaiian/Pacific Islander	23	75	**30.7%**
Black	28	95	**29.5%**
Hispanic	320	1,012	**31.6%**
White	2284	7,256	**31.5%**
Two or more races	24	54	**44.4%**
Special Populations			
Individuals With Disabilities	233	897	**26.0%**
Economically Disadvantaged	562	1,770	**31.8%**
Single Parents	128	336	**38.1%**
Displaced Homemakers	*	*	*
Limited English Proficient	21	82	**25.6%**
Migrant	*	*	*
Other Educational Barrier	16	61	**26.2%**

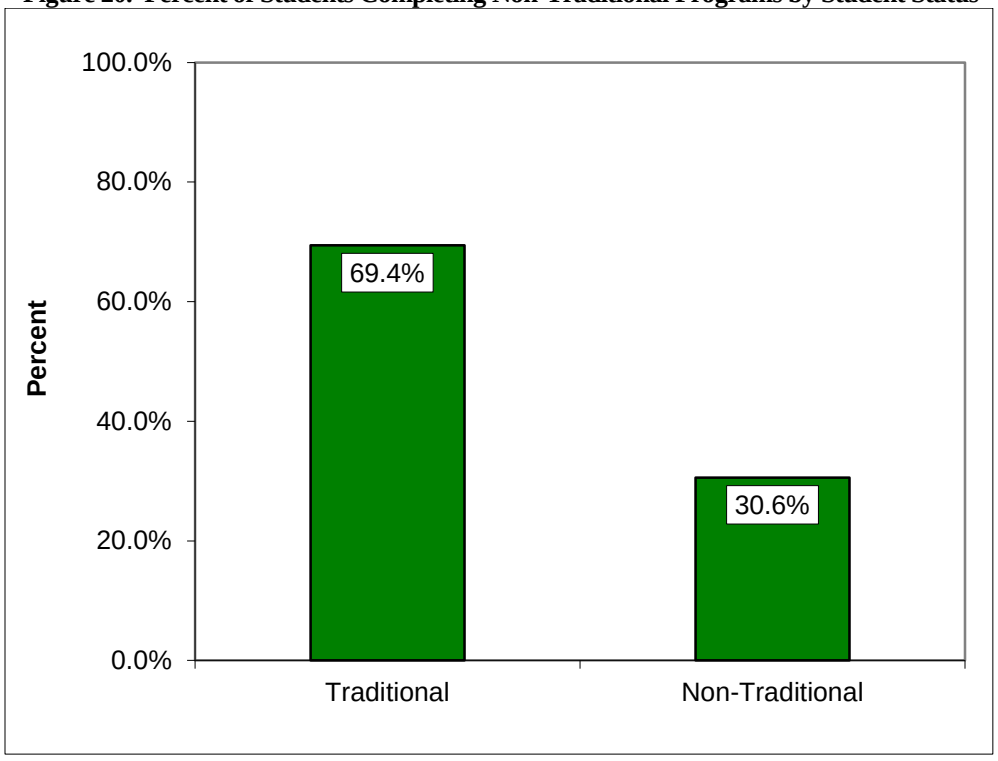
NR: Not Reported means that there were no concentrators, completers or participants reported in this category.
An asterisk means that there were less than 10 concentrators, completers or participants reported in this category.

6S2 – Non-traditional Completion

In order to calculate the non-traditional completion indicator, CTE concentrators who completed a non-traditional program during the reporting year were identified. The total number of concentrators in a non-traditional field (as determined by CIP code provided) was determined using the latest guidelines for occupational fields that are considered non-traditional for each gender. This is compared to each concentrator's gender to determine if a concentrator is a non-traditional student (see description of indicator 6S1 for examples).

Approximately 30.6% of students completing a non-traditional program were non-traditional students. This figure represents an increase from the 2012-13 school year in which 28.8% of non-traditional students completed a non-traditional program.

Figure 20. Percent of Students Completing Non-Traditional Programs by Student Status



Indicator 6S2 by Subpopulations:

Overall results by subpopulations are reported in the following table. Highlights of these results include:

- Similar to indicator 6S1, a significant difference in results by gender is observed. While 82.4% of female concentrators completed a non-traditional program, only 4.2% of males did so.
- Results by ethnicity ranged from 20.3% among Hispanic students to 38.9% among American Indian students.
- Single parent students showed the highest completion rates in programs (33.3%) while individuals with disabilities showed the lowest completion rates (11.6%)

Table 15. Indicator 6S2 Results by Subpopulations

(6S2) Non Traditional Completion			
Gender	**# of Students in Numerator**	**# of Students in Denominator**	**Percent of Students**
Male	29	698	**4.2%**
Female	294	357	**82.4%**
Ethnicity			
American Indian	7	18	**38.9%**
Asian/ Hawaiian/Pacific Islander	*	*	*
Black	*	*	*
Hispanic	16	79	**20.3%**
White	296	943	**31.4%**
Two or more races	*	*	*
Special Populations			
Individuals With Disabilities	8	69	**11.6%**
Economically Disadvantaged	64	204	**31.4%**
Single Parents	10	30	**33.3%**
Displaced Homemakers	*	*	*
Limited English Proficient	*	*	*
Migrant	*	*	*
Corrections	*	*	*

NR: Not Reported means that there were no concentrators, completers or participants reported in this category.
* An asterisk means that there were less than 10 concentrators, completers or participants reported in this category.

CTSO Participation

Approximately 32.5% of CTE concentrators (unduplicated N=1,208) participated in a CTSO during the 2013-2014 school year. This represents an increase in the percentage of students participating in CTSO as compared to 29.1% in 2012-13. The highest percent of concentrators participating in CTSO were members of FFA (53%), and this is consistent with past years. There was a small increase in USA-VICA participation from 16.25% for 2012-2013 to 17.13% in 2013-2014.

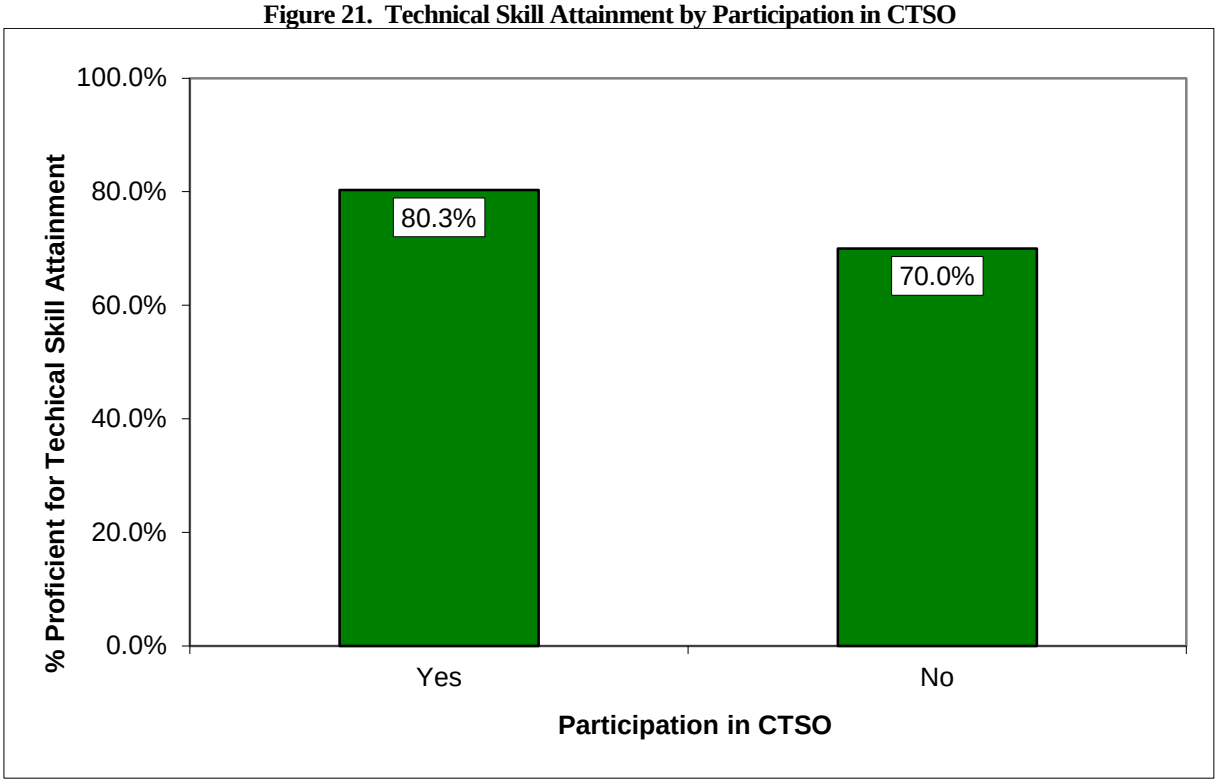
Table 16. CTSO Participation by Organization

Organization	Count*	Percent
FFA	690	53.00%
USA-VICA	223	17.13%
FBLA	207	15.90%
FCCLA	127	9.75%
DECA	55	4.22%
Total	**1302**	**100.0%**

*Students may have participated in more than one CTSO.

The following graph shows the percent of students proficient in technical skill attainment during the 2013-2014 school year by CTSO participation. As shown, CTE concentrators who participated in CTSO had higher overall technical skill proficiency (80.3%) than those who did not participate in CTSO (70%).

Figure 21. Technical Skill Attainment by Participation in CTSO



CTE Programs at Wyoming Schools

Participation in Job Training & Work Based Learning

The table below shows results for the types of job training activities CTE concentrators participated in. Job shadowing was the most common form of work based learning (34.15%) followed by community service learning (23.77%).

Table 17. Job Training by Type

Job Training Type	Count*	Percent
Job Shadowing	796	34.15%
Community service learning	554	23.77%
Work-experience internship	474	20.33%
School-based enterprises	229	9.82%
Mentorship	91	3.90%
Cooperative Education	38	1.63%
Other**	134	5.75%
Apprenticeship	15	0.64%

*Students may have participated in more than one activity.

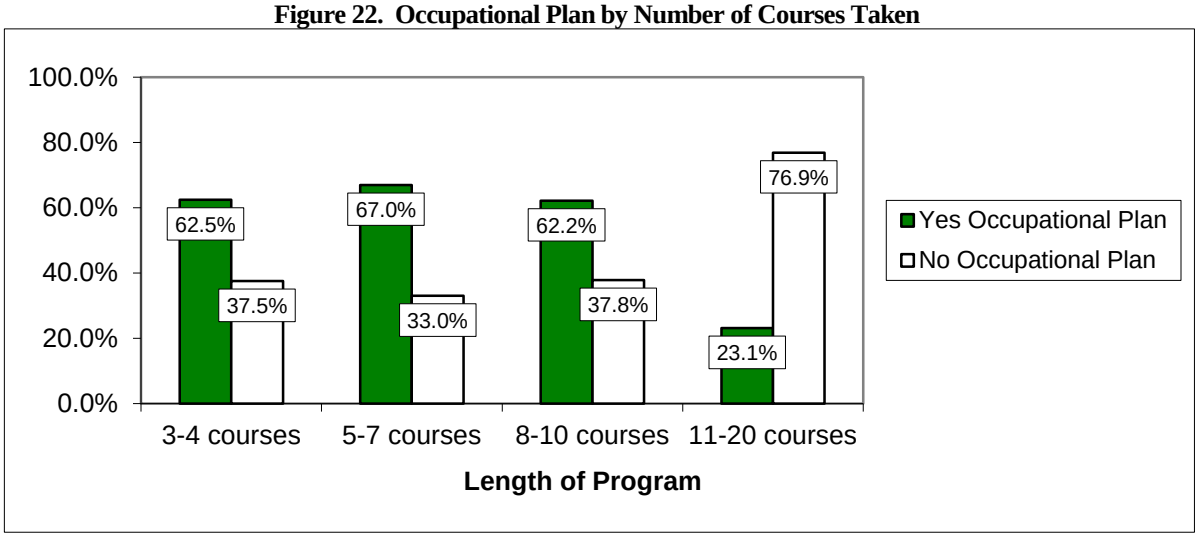
**Other types of job training specified included:

Jr. Interview (32)
LDS Mission (2)
Expert Project (90)
CNA (2)

Occupational Plan by Length of Program

During 2013-2014, 2,363 reporting CTE concentrators (63.4%) had an occupational plan. Results showed that generally there is a positive relationship between length in the program area and the likelihood of having an occupational plan. That is, the more courses a student has completed, the more likely they are to have an occupational plan.

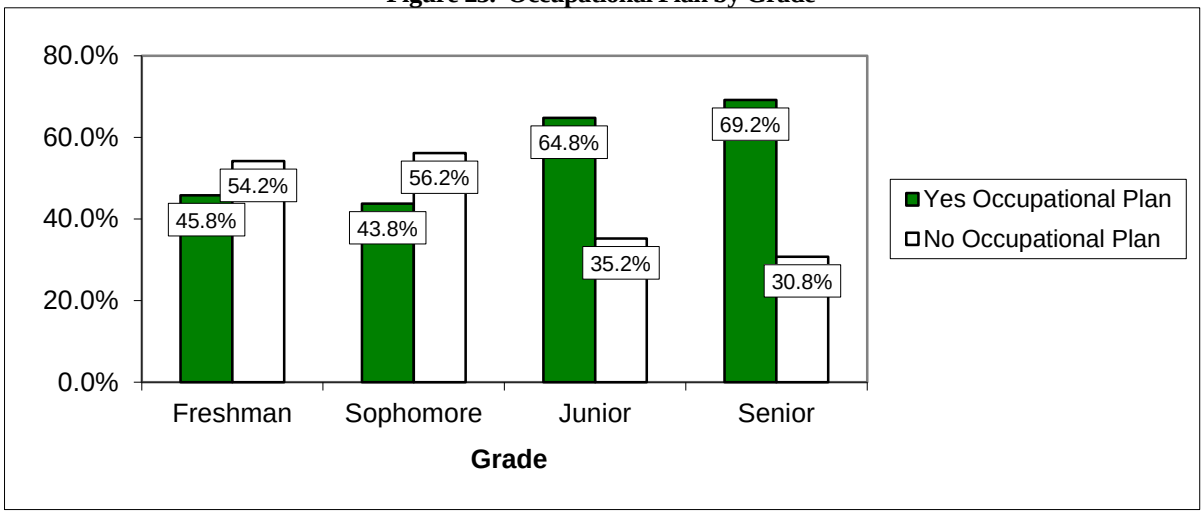
Figure 22. Occupational Plan by Number of Courses Taken



Occupational Plan by Grade

Senior CTE concentrators were most likely to have an occupational plan as compared to all other grade levels. This is expected as students have a greater opportunity to have an occupational plan as they progress in their schooling. Overall percentages of students at each grade level with occupational plans are similar with results from 2011-2012 and 2012-2013 with the exception of freshman and sophomore students who, unlike previous years, have a greater percentage of students without an occupational plan.

Figure 23. Occupational Plan by Grade



Integrated Instruction

Information on integrated instruction was also collected from secondary schools during the 2013-2014 school year. Schools were asked to describe the methods they use to provide integrated instruction to students. Schools reported a varied number of ways that they integrate CTE and academic instruction, however several themes emerged. In particular, as described in the following table, schools noted that they integrate instruction at multiple levels, including at the CTE level, Academic level and/or Teacher level. That said, it was also noted by several schools that academic teachers find it more difficult to incorporate career and technical aspects into their curriculum. Integration was much more likely to take place in CTE classes.

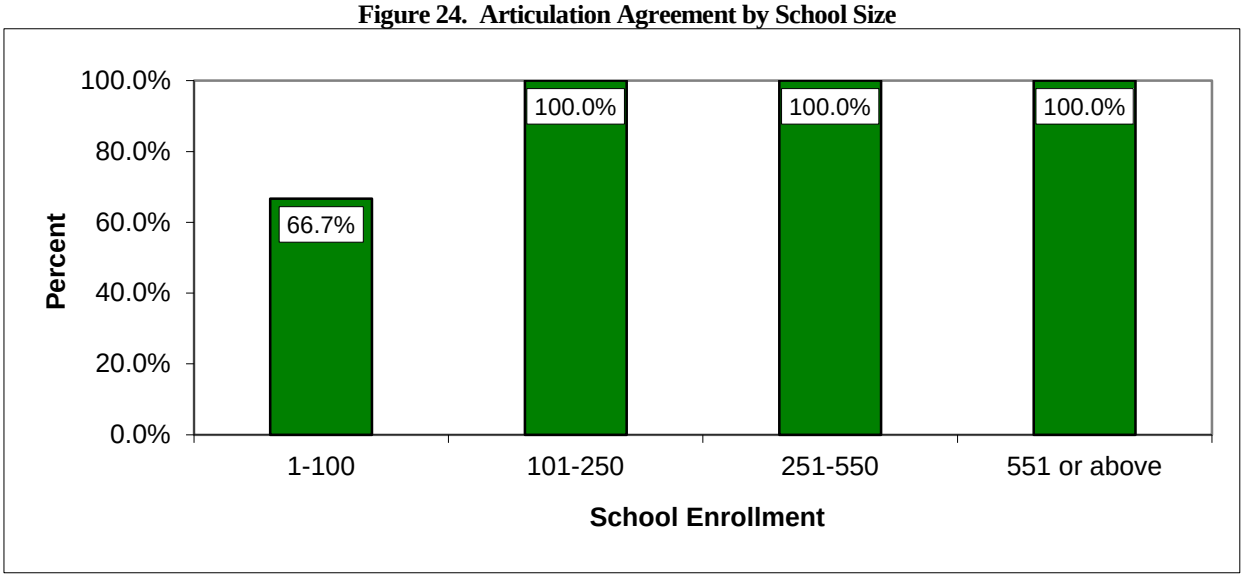
Table 18. Integrated Instruction Activities

CTE Level Integration	Academic Level Integration	Teacher Level Integration
o CTE classes incorporate reading and math in specific lessons. (examples included "profit projections, cash flow and loan payment schedule lessons in business classes, technical writing related to agriculture, etc). o Writing is required in a majority of CTE courses including journal keeping, report writing, and research writing. o Integrated through Professional Learning Communities and Individual projects. o CTE classes are aligned to the Common Core Standards.	o English classes incorporate resume writing and career writing opportunities. o Discussion and application of "real world" concepts in math and science classes. o Word processing and computer skills are incorporated in academic classes. o Integrate technology and multimedia to complete projects in academic classes.	o Teachers participate in groups that include a mix of CTE and academic teachers. They work together on various assessment and curriculum planning goals. o Team teaching of units between CTE and Academic teachers. o Collaboration on class assignments to provide cross curricular activities/lessons

Articulation Agreements and Coordination with Postsecondary Institutions

Data was collected on articulation agreements from 66 secondary schools. Of these schools, 89.4% (n=59) reported having an articulation agreement in place with one or more Wyoming community college. Schools with enrollment between 101-250, 251-550, and 551 students and above had 100% existing articulation agreements and schools with enrollment of 1-100 students had 66.7%.

Figure 24. Articulation Agreement by School Size



As would be expected, there is a direct relationship between school size and number of concurrent enrollment students. Larger schools with enrollment of 251 and above have a greater number of concurrent enrollment students. This is to be expected as larger schools have more students who can participate in concurrent enrollment classes.

Table 19. Number of Concurrent Enrollment Students by School Size

	Number of CEC Students		
School Size	*Minimum*	*Maximum*	*Average*
1-100	0	176	19
101-250	5	323	73
251-550	31	229	105
551 and above	120	587	287

Concentrators in Concurrent Enrollment:

In addition to data collected from schools, information on concurrent enrollment was also reported for CTE concentrators. Among CTE concentrators, 1,515 (36.2%) were enrolled in one or more courses where they were eligible to earn concurrent enrollment credit.

Secondary schools had articulation agreements with a variety of Wyoming colleges. Sheridan College (18), Eastern WY Community College (16) and Central WY Community College (13) had the greatest number of articulation agreements with schools. All other community colleges had between 0 and 10 schools with articulation agreements.

Table 20. Number of High Schools with Articulation Agreements by College

Community College	# of High Schools with Articulation Agreements*
Sheridan College	18
Eastern Wyoming Community College	16
Central Wyoming Community College	13
Western Wyoming College	11
Laramie County Community College	9
Northwest College	8
Casper Community College	5
Gillette College	2
University of Wyoming	1
Chadron State College	1
Utah State University	1
Wind River Tribal College	0

*Schools may have had articulation agreements with more than one community college

Schools reported brief descriptions of their articulation process for concurrent enrollment (also referred to by some schools as "dual enrollment") classes. Generally, the following activities take place to make courses available for dual credit:

- Once a course is selected, the syllabus is aligned by the high school to fit the requirements of both the high school and college.
- Teachers instruction of concurrent high school courses and course syllabi must be approved by the college.
- Teachers of concurrent high school courses are approved by the college as concurrent teachers.
- Teachers collaborate with the colleges (instructors and department heads) on curricula content, methods, and skills.
- Ongoing communication between the high schools and colleges take place. Types of communication include: 1) regular yearly or semester meetings between high school and college staff; 2) site visits to concurrent classrooms for observation and feedback; 3) regular phone and/or email communications between college and high school staff.

Summary

During the 2013-14 reporting year, the State of Wyoming met Perkins accountability and reporting requirements and continued to undertake activities designed to address the requirements of Perkins IV. Wyoming has developed a multi-step, multi-year, phase-in of a new CTE assessment system that is aligned to industry-specific standards. These assessments are being developed by CTE workgroup members, consisting of Wyoming teachers, business leaders, and other professionals knowledgeable of the CTE pathway. These processes began during the 2007-2008 school year for the program areas of Manufacturing, Agriculture and Natural Resources, and Architecture and Construction, three of Wyoming's highest enrollment program areas. Since Spring 2010, students who were CTE concentrators in the following pathways have been able to take online assessments:

- Agriculture Mechanics
- General Agriculture (includes Agriculture Business, Animal Science, Plant Science)
- Cabinetmaking & Woodworking
- Residential & Commercial Carpentry
- Technical Drafting
- Architectural Drafting
- Welding

In Spring 2013, students were able to take online assessments for the following pathways:

- Business:
    - Accounting
    - Finance
    - Business Technology & Operations
    - Marketing, Management & Entrepreneurship
- Tourism, Hospitality, Foods & Nutrition:
    - Foods, Nutrition & Wellness
    - Professional Foods
    - Tourism, Hospitality & Lodging Management

Online assessments for the following Family & Consumer Science assessments were developed and piloted during the 2013-14 school year.

- Child Development
- Interior Design
- Textiles
- Life Management

In addition to these industry-aligned assessments, data was obtained on students within a pathway that has an industry-certified exam available (e.g., Culinary ProStart, CNA certification, etc.). For Pre-Engineering concentrators, data on their performance in "Project Lead the Way", a course sequence specific for Pre-Engineering students was also obtained. Starting in 2012-13, Automotive Technology concentrators were able to take Electrical Systems & Engine Performance industry-certified

exams through National Institute for Automotive Service Excellence (ASE) Assessment. For the remaining CTE concentrators, the existing WyCTA skills assessment has been used used while the new assessment system continues to be developed.

In addition to these activities, the state has collected all required Perkins data and it has been submitted via the online CAR (postsecondary) and EDFacts (secondary). The following provides a summary of results as well as historical data.

Data was collected and reported for 4,180 CTE concentrators in 68 Wyoming secondary schools. The total number of concentrators was very similar to the previous year, see Table 21 below. Among CTE concentrators, results showed that the program areas of Architecture and Construction, Agriculture, and Hospitality and Tourism were the most popular CTE program areas. In general, over the past 5 years, CTE concentrator counts have steadily reduced, but have remained fairly stable over the past two years. Note that data on participants from 2007-08 is not comparable because duplicated counts were provided from schools during that reporting year.

Table 21. CTE Concentrator and Participant Counts

Perkins IV Definitions	2007-2008 Results	2008-2009 Results	2009-2010 Results	2010-11 Results	2011-12 Results	2012-13 Results	2013-14 Results
At the *secondary level*, a **CTE concentrator** is defined as a secondary student who has completed three or more courses in a CTE program, including those who may be currently enrolled in their third course.	5,034	5,307	4,511	4,508	4,377	4,169	4,180
At the *secondary level*, a **CTE participant** is defined as a secondary student who has *completed* one or more courses in a CTE program sequence.[3]	22,544	14,524	14,444	14,978	15,311	13,201	8,653

In the area of academic attainment (1S1 and 1S2), the Perkins IV indicator was divided into two separate indicators for reading and mathematics under Perkins IV. Results showed that 30% of CTE concentrators were proficient in reading and 38% mathematics, see Table 22. Both proficiency rates did not meet the targets of 100% respectively. However, as noted, these targets were set based on proficiency cuts set in 2013 which are no longer applicable. As a result, these data should be viewed as baseline from which future targets should be set.

[3] Note that data quality issues were identified in that, in some instances, duplicated counts were provided by some schools for CTE participants in the 2007-08 school year. In contrast, the subsequent years' counts reflect primarily unduplicated data.

Table 22. Academic Attainment Results

Indicators	Perkins IV Measurement Definitions	2007-2008 Results	2008-2009 Results	2009-2010 Results	2010-11 Results	2011-12 Results	2012-13 Results	2013-14 Results
(1S1) Academic Attainment: Reading	Percent of CTE concentrators who have met the proficient or advanced level on the ACT reading assessment administered by the State of Wyoming under Section 1111(b)(3) of the Elementary and Secondary Education Act (ESEA) as amended by the No Child Left Behind Act based on the scores that were included in the State's computation of adequate yearly progress (AYP) in the reporting year.	65.35	62.15	66.37	74.50	78.50	74.85	30.0
(1S2) Academic Attainment: Math	Percent of CTE concentrators who have met the proficient or advanced level on the ACT math assessment administered by the State of Wyoming under Section 1111(b)(3) of the Elementary and Secondary Education Act (ESEA) as amended by the No Child Left Behind Act based on the scores that were included in the State's computation of adequate yearly progress (AYP) in the reporting year.	65.25	64.64	65.99	66.65	68.78	68.02	38.0

For technical skill attainment (2S1), Wyoming continued to use a composite assessment system comprised of:

- CTE online assessments in the areas of General Ag, Ag Mechanics, Welding, Residential & Commercial Carpentry, Cabinetmaking & Woodworking, Technical Drafting, Architectural Drafting, Accounting, Finance, Business, Technology & Operations, Marketing Management & Entrepreneurship, Foods, Nutrition & Wellness, Professional Foods and Tourism, Hospitality & Lodging Management; or
- State or nationally recognized industry certified exam; or
- For Pre-engineering, participation and performance (GPA) in Project Lead the Way; or
- If unable to assess using any of the above, WyCTA performance rubrics measuring three general employment skill areas (Affective & Thinking, Pre-employment and Employability).

All CTE concentrators must be assessed using one of the aforementioned methods and overall proficiency is determined based on their level of proficiency on the assessment taken.

As shown in Table 23, results showed that 73.4% of CTE concentrators assessed were proficient (i.e., passed the WY CTE online assessment, a state or nationally certified exam, Project Lead the Way, *or* the WyCTA). This proficiency level exceeds the target of 68%. Note that during the initial two years of Perkins IV (2007-2009), technical skill attainment was measured by the WyCTA alone as the state transitioned to industry-specific assessments. It should also be noted that as a new, more rigorous and industry aligned system is developed, it is expected that proficiency levels will be lower as compared to an assessment that measures general employment skills (in 2007-09).

Table 23. Technical Skill Attainment Results

Indicators	Perkins IV Measurement Definitions	2007-2008 Results	2008-2009 Results	2009-2010 Results	2010-11 Results	2011-12 Results	2012-13 Results	2013-14 Results
(2S1) Technical Skill Attainment	Percent of CTE concentrators who passed technical skill assessments that are aligned with industry-recognized standards, if available and appropriate.	81.94	82.01	76.49	72.28	71.11	67.61	73.4

The completion rate (3S1) for 2013-14, i.e. the percent of CTE concentrator students who indicated that they would graduate or otherwise complete secondary education in 2013-14, was 96.7%. This represents an increase of 0.3% as compared to the prior year, and exceeds the target of 95.0%.

Table 24. Completion Results

Indicators	Perkins IV Measurement Definitions	2007-2008 Results	2008-2009 Results	2009-2010 Results	2010-11 Results	2011-12 Results	2012-13 Results	2013-14 Results
(3S1) Completion	Percent of CTE concentrators who earned a regular secondary school diploma, earned a General Education Development (GED) credential as a State-recognized equivalent to a regular high school diploma (if offered by the State) *or* other State-recognized equivalent (including recognized alternative standards for individuals with disabilities), *or* earned a proficiency credential, certificate, or degree, in conjunction with a secondary school diploma (if offered by the State) during the reporting year.	89.50	94.00	95.57	98.10	95.75	96.41	96.7

Examination of the results for indicator (4S1-Student Graduation Rates) showed that 93.9% of eligible CTE concentrators were reported as graduating, exceeding the target of 85%. This is similar to last year's figure of 94.4%. Note that this indicator is calculated using 2012-13 data provided by the Wyoming Department of Education for students who graduated during the prior school year. The most common type of proficiency credential or certificate received was in the health and hospitality field.

Table 25. Graduation Rate Results

Indicators	Perkins IV Measurement Definitions	2007-2008 Results	2008-2009 Results	2009-2010 Results	2010-11 Results	2011-12 Results	2012-13 Results	2013-14 Results
(4S1) Graduation Rate	Percent of CTE concentrators who, in the reporting year, were included as graduated in the State's computation of its graduation rate as described in Section 1111(b)(2)(C)(vi) of the ESEA	90.35	91.31	94.25	94.99	94.01	94.40	93.9

Follow-up information was obtained in the second quarter, (October 1 to December 31, 2013) for concentrators who left secondary education in the 2012-13 school year. Results for 5S1 showed that among concentrators who left, 96.3% were in an advanced placement, i.e. postsecondary education, military, advanced training or employment. This is similar to last year's figure of 97.4%, see Table 26. In addition, this exceeds the target of 95%. The majority of students (71.1%) in advanced placement are enrolled in a community college, 4-year university, or in advanced training; 24.5% are employed; and 3.9% are in the military. Additionally, 96.3% of students enrolled in a community college remained in-state. Students most likely to be out of state at time of follow-up were in advanced training/technical school, 4-year university, or in the military.

Table 26. Placement Results

Indicators	Perkins IV Measurement Definitions	2007-2008 Results	2008-2009 Results	2009-2010 Results	2010-11 Results	2011-12 Results	2012-13 Results	2013-14 Results
(5S1) Placement	Percent of CTE concentrators who left secondary education and were placed in postsecondary education or advanced training, in the military service, or employment in the second quarter following the program year in which they left secondary education.	96.97	95.25	96.93	97.34	97.05	97.44	96.3

Examination of non-traditional participation (6S1) showed that 31.6% of students in nontraditional programs were in under-represented gender groups. This represents a slight decrease as compared to last year's results, and it exceeds the target of 35%. Similarly, 30.6% of concentrators completing a non-traditional program were in under-represented gender groups (6S2). This also exceeds the target of 30%; and is a slight increase from the prior year.

Table 27. Non-Traditional Results

Indicators	Perkins IV Measurement Definitions	2007-2008 Results	2008-2009 Results	2009-2010 Results	2010-11 Results	2011-12 Results	2012-13 Results	2013-14 Results
(6S1) Non-Traditional Participation	Percent of CTE participants from underrepresented gender groups who participated in a program that leads to employment in nontraditional fields during the reporting year.	35.94	33.99	35.55	33.15	34.88	33.47	31.6
(6S2) Non-Traditional Completion	Percent of CTE concentrators from underrepresented gender groups who completed a program that leads to employment in nontraditional fields during the reporting year.	28.26	30.37	33.12	31.61	28.75	28.83	30.6

With respect to other CTE activities occurring in the state, trends in CTSO participation were consistent with prior years with 32.5% of CTE concentrators reporting participation in CTSOs. Like last year, the highest proportions of concentrators participated in FFA (53.0%). In addition, a total of 63.4% of CTE concentrators had an occupational plan in place. Participation in job training remained consistent with the prior year, with job shadowing being the most popular (34.2%), closely followed by community service learning (23.8%). In terms of integrated instruction, schools reported a number of ways that integration is achieved. In particular, schools noted that they integrate instruction at multiple levels, including at the CTE level, Academic level and/or Teacher level: (a) at the teacher level, this typically includes cooperation between academic and CTE teachers on specific units of study; (b) at the CTE level, this typically includes reading and writing integrated into CTE courses; and (c) at the academic level; this typically includes “real world” application in academic math and science classes.

In conclusion, results show that the proposed targets were met, with the exceptions of 1S1 and 1S2; however, these targets are not applicable as these were set based on previously established ACT proficiency cuts. Excluding these two targets, results showed that WY met all its secondary targets in the areas of technical skill attainment, completion, graduation rate, placement, non-traditional participation, and non-traditional completion. Moreover, as a result of processes established for local Perkins negotiations and improvement plans, schools are being held more accountable for results which has served as an impetus for progress.