Colorado Helps Advanced Manufacturing Program

Years One and Two

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RUTGERS
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SMLR was originally established by an act of the New Jersey legislature in 1947 as the Institute of Management and Labor Relations (IMLR). Like its counterparts created in other large industrial states at the same time, the Institute was chartered to promote new forms of labor–management cooperation following the industrial unrest that occurred at the end of World War II. It officially became a school at the flagship campus of the State University of New Jersey in New Brunswick/Piscataway in 1994. For more information, visit smlr.rutgers.edu.

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INTRODUCTION

The Colorado Helps Advanced Manufacturing Programs (CHAMP) is a United States Department of Labor (USDOL) Trade Adjustment Assistance Community College and Career Training (TAACCCT) funded grant intended to facilitate the redesign or creation of degree and certificate programs that respond effectively to the needs of the 21st-century manufacturing sector. Under the grant, academic institutions partner with manufacturing industries to develop and/or refine academic programs that can meet changing employer requirements and more quickly and efficiently prepare and credential displaced workers. Strategies to be used include the involvement of industry and workforce partners, credit for prior learning, articulation to four-year institutions, and the establishment of campus navigators to support and assist students.

The CHAMP consortium of nine Colorado colleges includes Aims Community College (AIMS), Community College of Denver (CCD), Emily Griffith Technical College (EGTC), Front Range Community College (FRCC), Lamar Community College (LCC), Pikes Peak Community College (PPCC), Pueblo Community College (PCC), and Red Rock Community College (RRCC). Metro State University – Denver (MSU) is also participating and has been designated as the four-year university where students can apply CHAMP credits toward earning a bachelor's degree in engineering.

CHAMP OUTCOMES YEAR 1 AND 2

The quantitative data came from data administrators at Colorado Community College System (CCCS), and the three non-CCCS CHAMP schools (AIMS, EGTC, and MSU). Ten data sets were used for this report:

1. Student unit of analysis – contains students' demographic information;
2. Academic Study unit of analysis – has information on students' registration;
3. Course unit of analysis – has information on CHAMP courses only;
4. Course History unit of analysis – contains information on all courses taken by CHAMP students over time;
5. Military unit of analysis – reports on students who are veterans or family members of veterans;
6. Pell unit of analysis – reports on students who are eligible for Pell grant;
7. Disability unit of analysis – contains information on students who reported having some type of disability;
8. Degree unit of analysis – contains student-specific data on when, where, and for which program a student was awarded a degree or certificate;
9. National Student Clearing House data set – reports the transfer of students from CHAMP to non-CHAMP schools.
10. Wage data – reports student income for each quarter in 2014 and the first two quarters in 2014.

Each of the three non-CCCS schools were asked to provide data on student demographics (such as age, race, and gender), financial aid status, military background, registration information, enrollment status, and academic background, for the period from the beginning of CHAMP to the most recently available semester (spring 2014 to the end of summer 2015). Nevertheless, there are missing data from EGTC and MSU because these data were not available at the time of the request. The missing data will be apparent in some of the tables below.

Wage data are also reported for 2014 and the first two quarters in 2015. Unfortunately, at the time of writing wage data were not yet available after the second quarter of 2015. This means we are unable to define employment status for students who graduated after the second quarter of 2015.

METHODS

This report is structured using the federal APR report as a guide and follows the coding definitions given by the Department of Labor (DOL). The details of formulation for each measure in this report are presented in Appendix A. Data for CCCS CHAMP schools and AIMS cover the period from spring 2014 to summer 2015. We also have enrollment/registration information for CCCS students at the beginning of October 2015. Data for EGTC are only available for fall 2014 and spring 2015.

Consistent with the APR report, we consider outcomes by the 2014 reporting year (which we have defined as spring 2014 and summer 2014) and the 2015 reporting year (which covers the period from fall 2014 through the end of summer 2016).

We define any student that registered for a CHAMP course as a CHAMP student. The first semester in which the student registered for a CHAMP course is the starting point of the student's CHAMP career. Any academic outcomes such as earning a degree or a particular number of credits would have occurred in or after the student's first semester taking CHAMP courses. As students, especially CCCS students, may take courses in multiple schools over time, we define the home school as the college where they took their first CHAMP course.

Major outcomes reported in this study include demographic information (gender, race, age), Pell status, disability status, registration status (full- or part-time), enrollment rate, earned credits, degree outcomes, and employment status.

ENROLLMENT

Unsurprisingly, the largest schools involved in the grant enrolled the most students in CHAMP: CCD, FRCC, LCC, PCC and RRCC. Generally speaking, the number of students enrolled in CHAMP increased over time; for example, 40 more students (around a 25 percent increase) enrolled in 2015 at PCC than in the previous year.

By the end of summer 2015, there were 2,279 CHAMP students in total. As table 1 shows, AIMS, PPCC, MSU, and PCC had over 300 CHAMP students. The smaller schools, such as EGTC, LCC, and RRCC, had fewer than 100 CHAMP students.

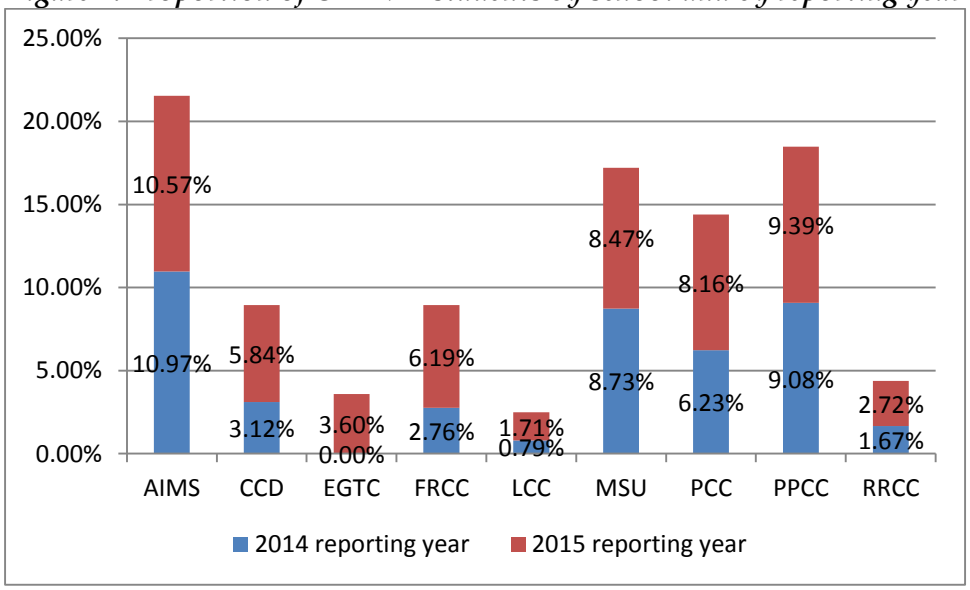
Number of Unique CHAMP Students

Table 1. Number of CHAMP students by schools and reporting year

CHAMP College	Cumulative enrollees as of summer 2015	Unique enrollees in 2014*	Unique enrollees in 2015*
AIMS	491	250	241
CCD	204	71	133
EGTC	82		82
FRCC	204	63	141
LCC	57	18	39
MSU	392	199	193
PCC	328	142	186
PPCC	421	207	214
RRCC	100	38	62

*The 2014 reporting year is considered to be the semesters of spring 2014 and summer 2014, while the 2015 reporting year is considered to be fall 2014, spring 2015, and summer 2015 semesters.

Figure 1. Proportion of CHAMP students by school and by reporting year



DEMOGRAPHIC CHARACERTISICS OF CHAMP STUDENTS

Demographic information on 2,279 unique students registered for at least one CHAMP course is presented in this section.

Gender

CHAMP schools varied with respect to the proportion of students by gender, but the majority of CHAMP students were male. This is possibly not surprising, given the historic trends in manufacturing. The cumulative proportion of male students was 86 percent. At most schools, over 90 percent of students were male in 2014. Aims Community College is the exception to this, with only 70 percent of CHAMP students being male. In future data collection we will investigate whether this is a result of any specific policies and practices at AIMS. In 2015, the proportion of male students dropped slightly, from 87 percent in 2014 to 86 percent in 2015. Of course, the proportion of female students increased accordingly from 2014 to 2015. However, there have been far fewer female than male students in CHAMP to date. Some schools have made recruiting females into CHAMP programs a priority and so we will look to see if changes occur over time. In the CHAMP schools, CCD, LCC, PCC, and RRCC have shown some increase in the percentage points of female students from 2014 to 2015. However, the increase in the actual number of female students is still limited.

Table 2. CHAMP students by gender

CHAMP College	Cumulative male enrollees as of summer 2015	Unique male enrollees in 2014*	Unique male enrollees in 2015*	Cumulative female enrollees as of summer 2015	Unique female enrollees in 2014*	Unique female enrollees in 2015*
AIMS	347	181	166	140	69	71
CCD	178	68	110	26	3	23
EGTC	72		72	10		10
FRCC	183	56	127	16	6	10
LCC	51	17	34	6	1	5
MSU	356	180	176	34	17	17
PCC	300	131	169	28	11	17
PPCC	381	188	193	39	19	20
RRCC	91	37	54	9	1	8

*The 2014 reporting year is considered to be the semesters of spring 2014 and summer 2014, while the 2015 reporting year is considered to be fall 2014, spring 2015, and summer 2015 semesters.

Figure 2. Distribution of male CHAMP students by school

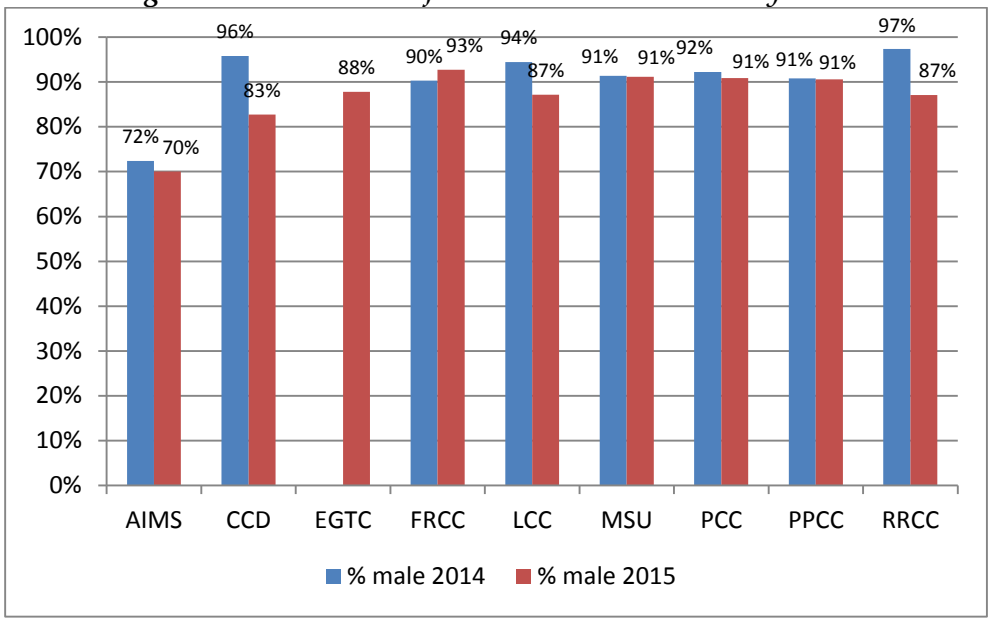
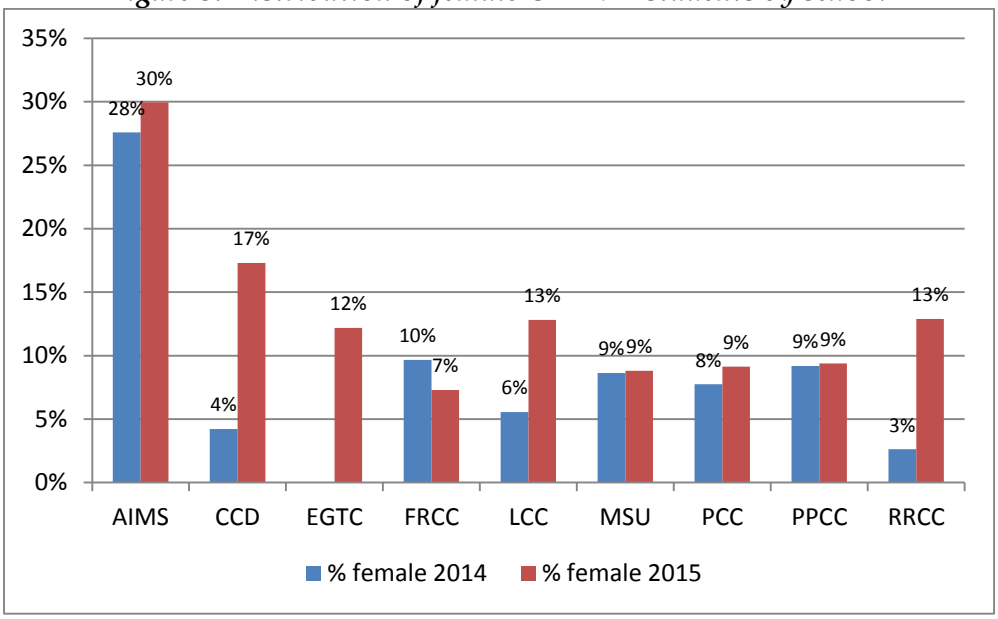


Figure 3. Distribution of female CHAMP students by school



Race

Racial and ethnic diversity varied among CHAMP colleges. The majority of CHAMP students were white, with fewer black, Hispanic, Asian, and American Indian or Alaskan students. The average proportion of CHAMP students who were white, non-Hispanic was 71 percent. RRCC had the largest percentage of white students (84 percent) while the proportion of white students at AIMS, PCC, and EGTC was around 60 percent. Comparing between years, there was only a 1 percent increase in the proportion of white CHAMP students from 2014 to 2015.

Table 3. CHAMP students by race

CHAMP College	Hispanic	American Indian or Alaskan	Asian	Black	White
AIMS	161	3	4	12	299
CCD	21	5	5	11	134
EGTC	19			8	40
FRCC	18	3	11	0	139
LCC	10	2	1	1	42
MSU	31	1	5	3	114
PCC	88	15	5	10	186
PPCC	44	12	10	20	306
RRCC	8	2	5	0	81

Figure 4. Cumulative CHAMP students by race

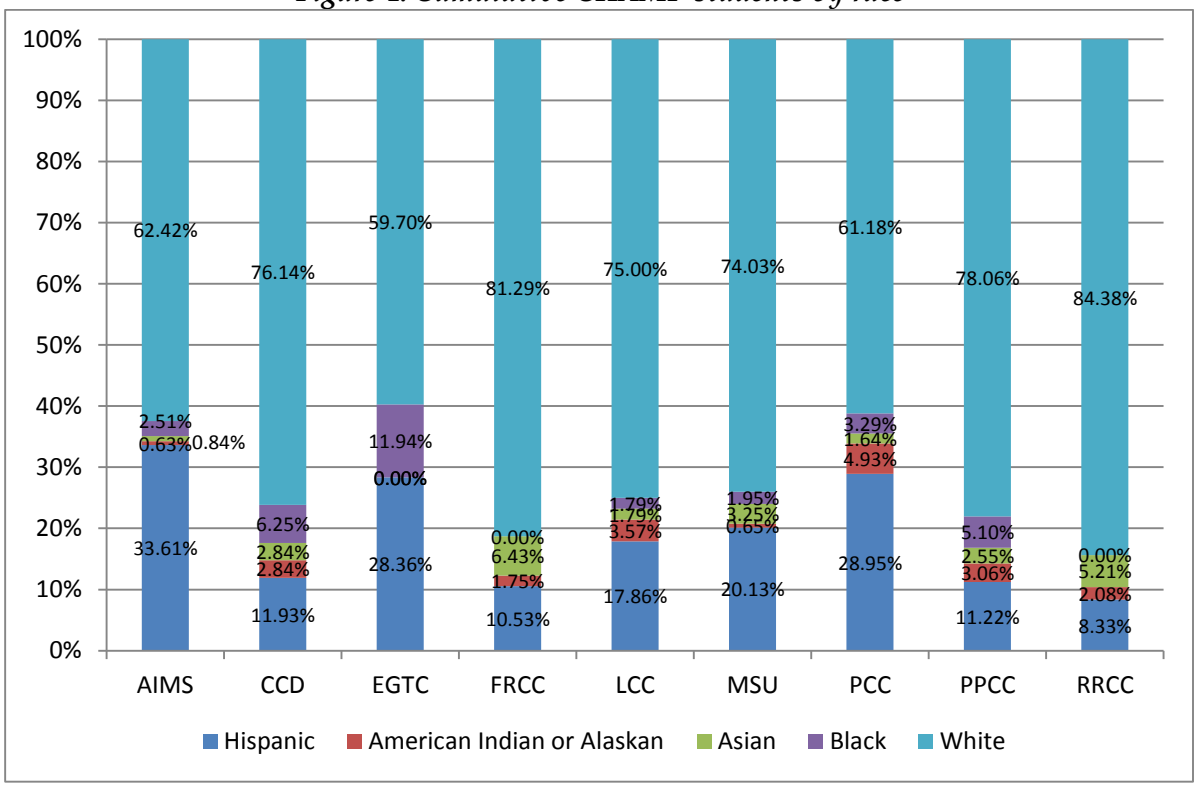


Figure 5. Cumulative CHAMP students by race in 2014

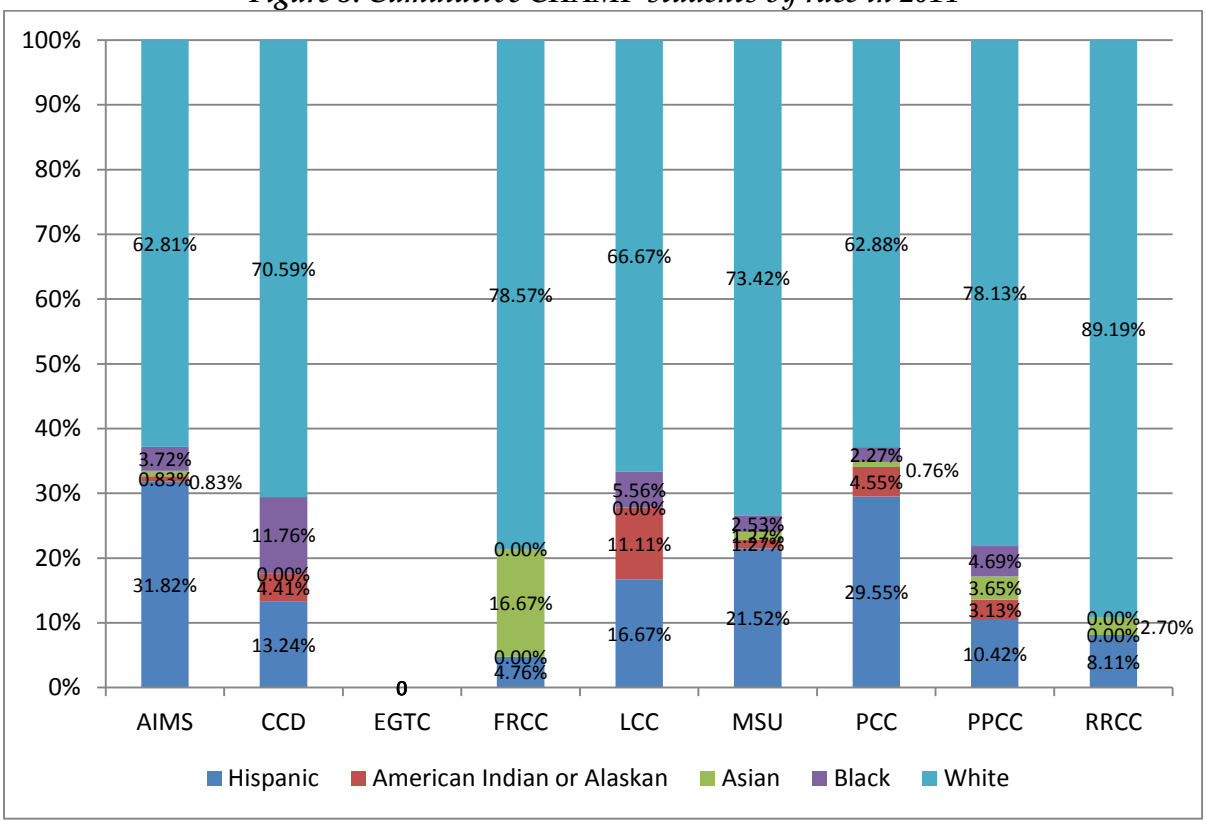
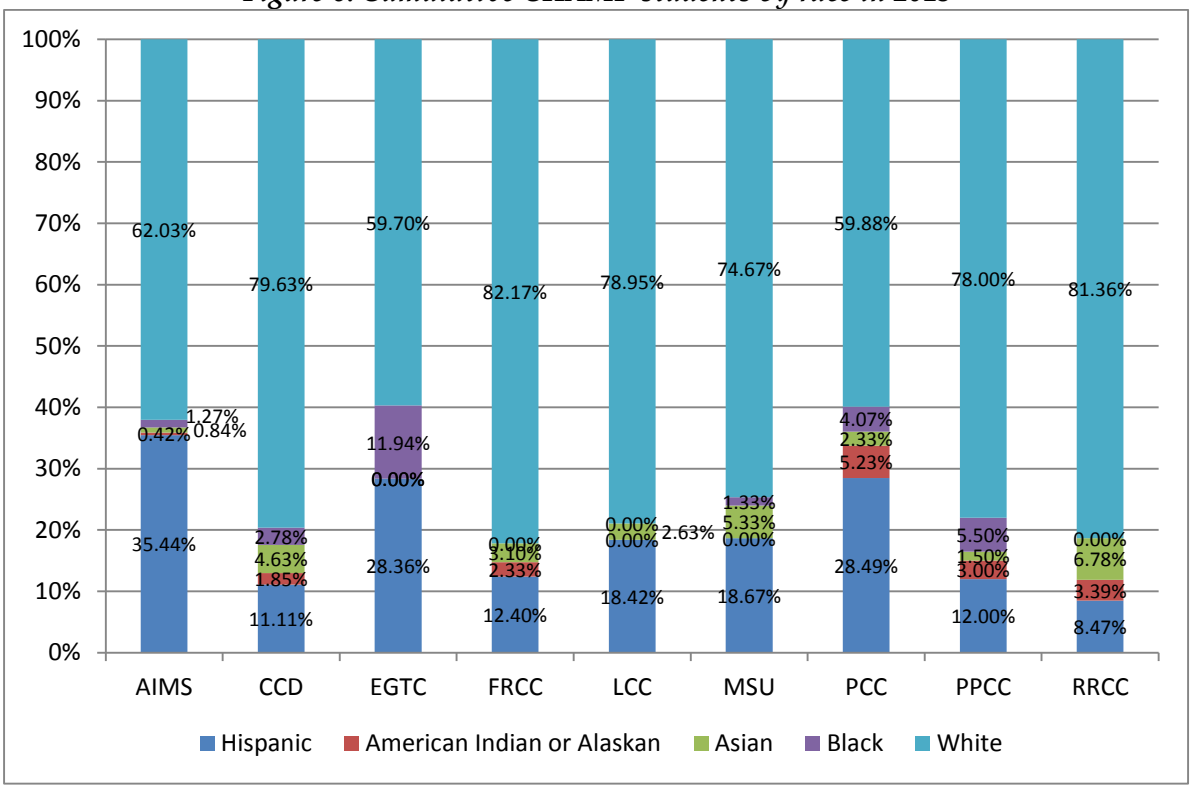


Figure 6. Cumulative CHAMP students by race in 2015



Age

The average age of CHAMP students differs by school. On average, students at FRCC were older than students in other schools, while LCC, MSU, and RRCC had younger CHAMP student populations. The average age of CHAMP students at FRCC was 34, while the average age of CHAMP students at LCC, MSU, and RRCC was 24, 26, and 24 respectively. The average age of CHAMP students in other CHAMP colleges was around 30.

Table 4. Average age of champ students' age by school

CHAMP college	Average age / cumulative	Average age in 2014	Average age in 2015
AIMS	29	30	28
CCD	28	31	27
EGTC	28		28
FRCC	34	36	34
LCC	24	25	24
MSU	26	26	25
PCC	29	30	28
PPCC	31	31	31
RRCC	24	22	26

Disability status

In total, 42 out of 2,279 CHAMP students reported disability conditions since the start of the program.

Table 5. Number of students reporting disability conditions by school

CHAMP College	# Students with disability	# Students with disability 2014	# Students with disability 2015
AIMS	7	6	1
CCD	10	4	6
EGTC	0		0
FRCC	1	0	1
LCC	2	0	2
MSU	0	0	0
PCC	14	5	9
PPCC	4	2	2
RRCC	4	1	3

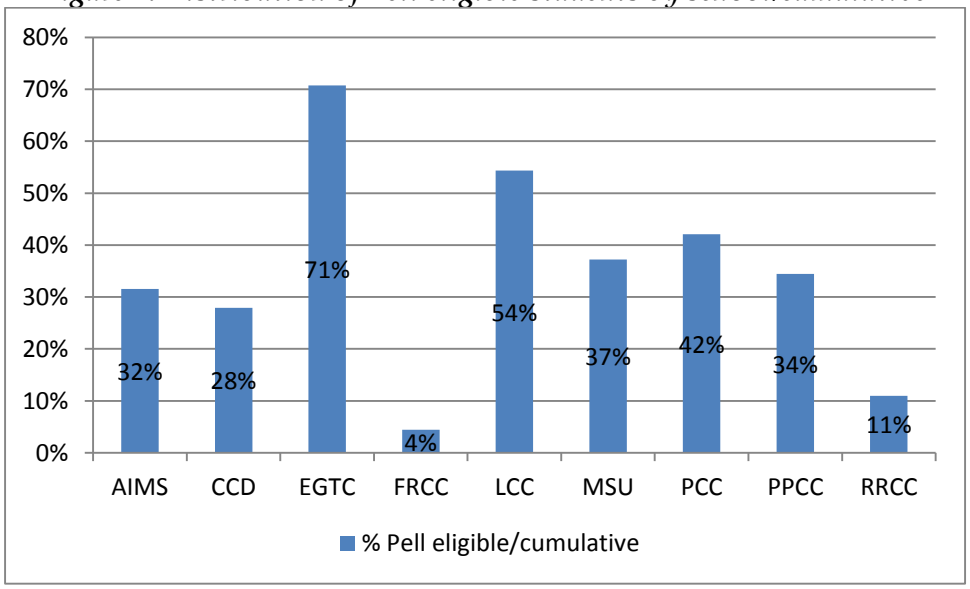
Pell status

Only those students who were reported as Pell eligible were documented in the data sets from hosting schools. We do not have data on those who were ineligible for Pell. As such, we assume those without Pell information were the students ineligible for Pell. Among all CHAMP students, 33 percent were Pell eligible. However, the proportion of Pell eligible students varied from 4 percent at FRCC to 71 percent of the 82 students at EGTC.

Table 6. Number of Pell eligible students by school

CHAMP College	Total # students Pell eligible / Cumulative	# Students Pell eligible 2014	# Students Pell eligible 2015
AIMS	155	106	49
CCD	57	44	13
EGTC	58		58
FRCC	9	1	8
LCC	31	10	21
MSU	146	73	73
PCC	138	87	51
PPCC	145	98	47
RRCC	11	5	6

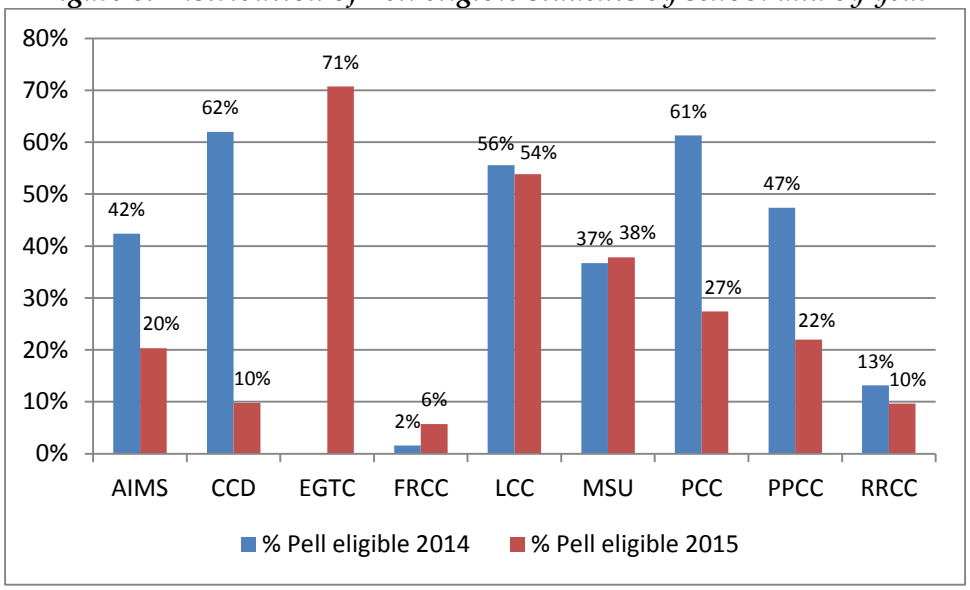
Figure 7. Distribution of Pell eligible students by school/cumulative



The percentage of Pell eligible students also varied between years. Figure 8 indicates a large drop in Pell eligible students from 2014 to 2015 at CCD, PCC, AIMS, and PPCC. The drop in percentages of Pell eligible students ranged from over 20 percentage points at PPCC and AIMS,

to about 40 percentage points at PCC, and over 50 percentage points at CCD.

Figure 8. Distribution of Pell eligible students by school and by year



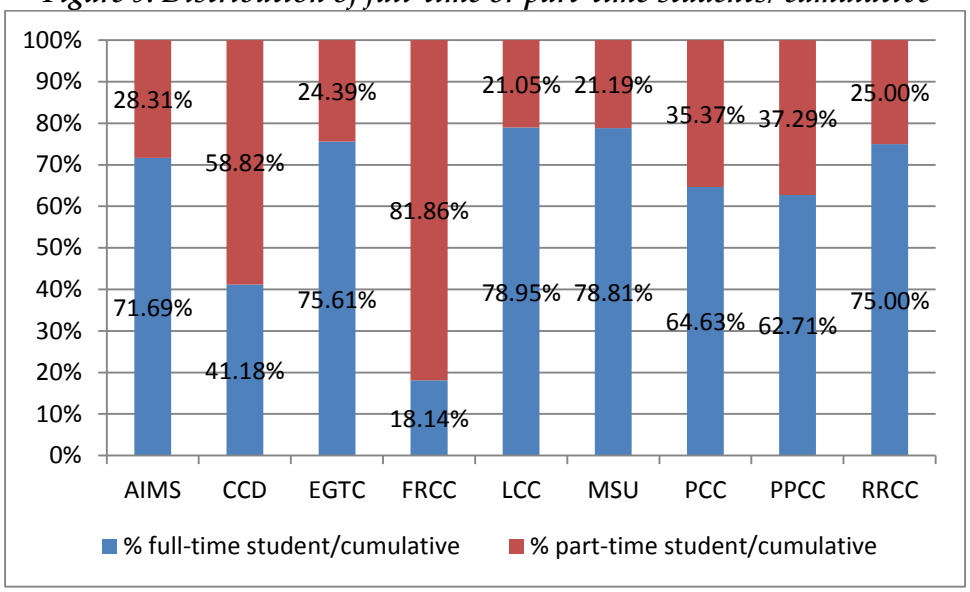
Full-time/part-time status

The proportion of full-time CHAMP students was around 63 percent. Of note, the proportion of full-time students varied greatly among CHAMP colleges, from 18 percent at FRCC to 79 percent at MSU. The high percentage of full-time students at MSU is not surprising, as it is a four-year institution. CCD also had fewer full-time students than part-time students. However, full-time students outnumbered part-time students at other CHAMP colleges.

Table 7. Number of full-time or part-time students

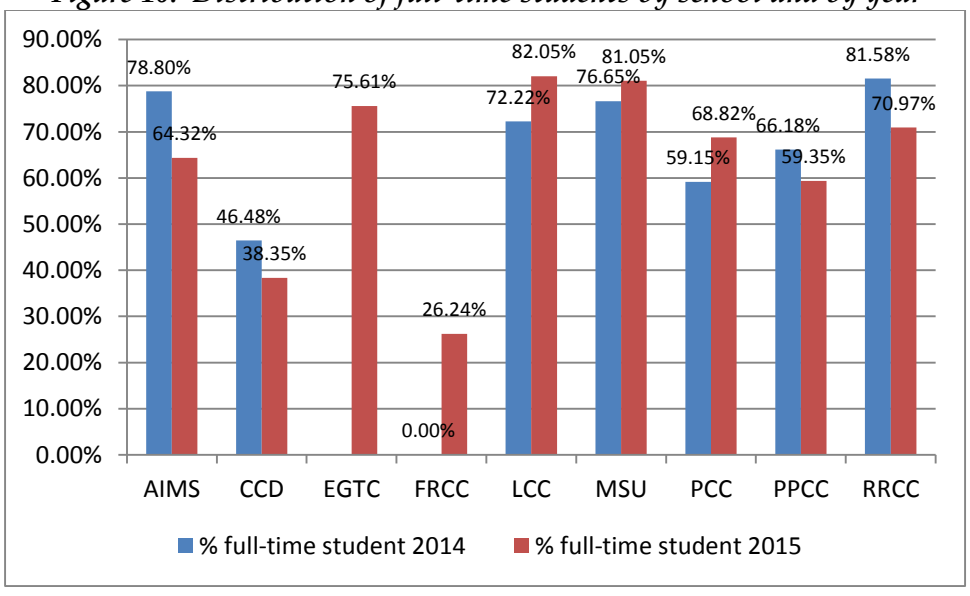
CHAMP College	Full-time	Part-time	Total
AIMS	352	139	491
CCD	84	120	204
EGTC	62	20	82
FRCC	37	167	204
LCC	45	12	57
MSU	305	82	387
PCC	212	116	328
PPCC	264	157	421
RRCC	75	25	100

Figure 9. Distribution of full-time or part-time students/ cumulative



The percentage of full-time students in each college also varied over time. As shown in figure 10, there was a decrease in full-time students at AIMS, CCD, PPCC, and RRCC between 2014 and 2015. Nevertheless, the proportion of full-time students at LCC, MSU, and PCC increased. There were no full-time CHAMP students at FRCC in 2014. All of the students taking CHAMP courses at FRCC in 2014 were registered as part-time students. This was because their full-time program had not yet launched. After the full-time program launched, 26 percent of FRCC's CHAMP students in 2015 were full-time. EGTC did not have data to submit for the 2014 reporting year.

Figure 10. Distribution of full-time students by school and by year



Military service

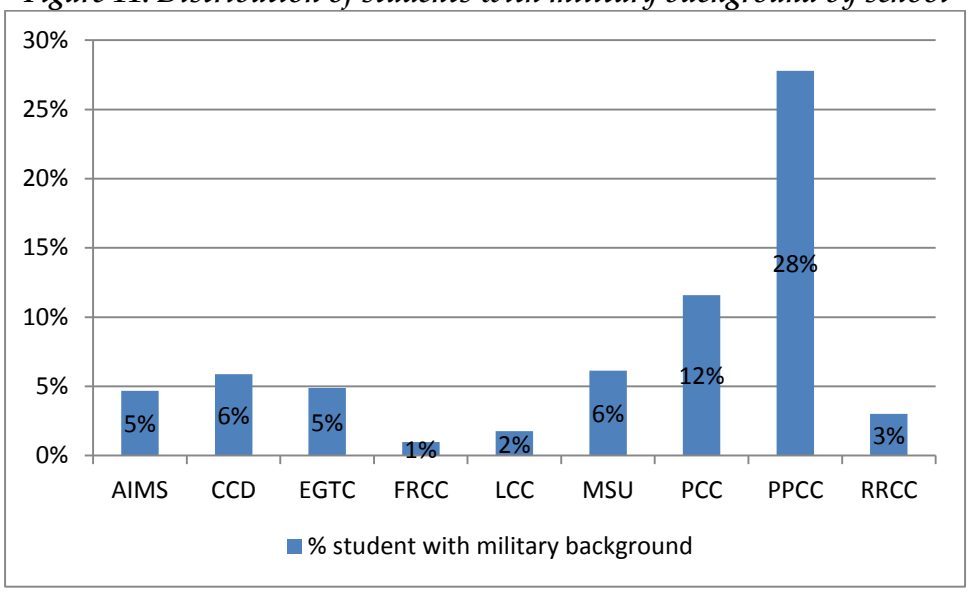
Of all the students in CHAMP since spring 2014, 10 percent reported having some military background or experience. We assume that students who did not report a military background did not have any military background. PPCC had the largest percentage of CHAMP students with a military background, 28 percent. Twelve percent of students at PCC also had military exposure. In contrast, only 1 percent of FRCC students had military background.

PPCC's relatively high percentage of students with military exposure is unsurprising given the school's proximity to military bases. The number of students with a military background who registered for CHAMP courses over the years did not differ much in most of the schools. There was a drop in the number of veteran students at AIMS from 2014 to 2015.

Table 8. Number of CHAMP students with military background

CHAMP College	Total veteran	Veteran in 2014	Veteran in 2015
AIMS	23	18	5
CCD	12	6	6
EGTC	4		4
FRCC	2	0	2
LCC	1	0	1
MSU	24	12	12
PCC	38	20	18
PPCC	117	62	55
RRCC	3	1	2

Figure 11. Distribution of students with military background by school



ACADEMIC OUTCOMES

In this section, we consider three major academic outcomes: number of credits earned, graduation outcome, and retention rate for the first two years of the CHAMP program.

Earned credits

Only students with grades equal to or higher than C are considered to be students earning credits. The first column in table 9 shows the number of unique CHAMP students earning any credits. The second and third columns show the number of students earning credits in each reporting year. There were more students earning credits in 2015 than in 2014. Moreover, as indicated by the lower number of students earning credits than students enrolled in CHAMP (see table 1), we can see that some of the students enrolled in CHAMP programs did not earn any credits. In some cases, this may be a result of non-credit offerings in the CHAMP programs.

Table 9. Number of CHAMP students earning any credits

CHAMP colleges	# Unique CHAMP students earning credits	# Students earning credits 2014	# Students earning credits 2015
AIMS	438	222	345
CCD	195	67	163
EGTC	82		82
FRCC	48	2	48
LCC	49	16	40
MSU	355	181	323
PCC	308	132	264
PPCC	386	184	322
RRCC	92	35	76

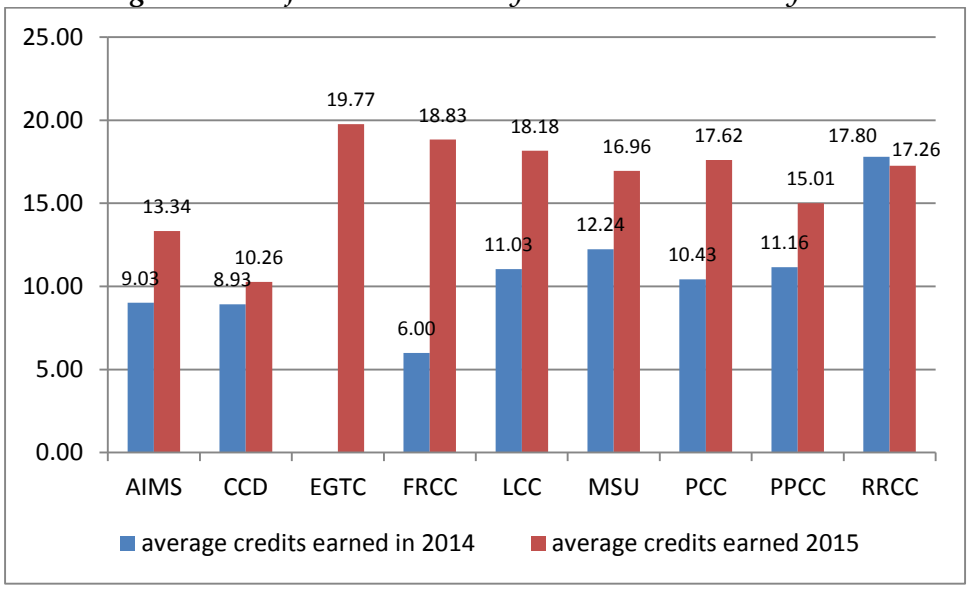
The total number of credits earned by CHAMP students is presented in table 10.

Table 10. Number of earned credits by school and by year

CHAMP colleges	# Earned credits	# Earned credits 2014	# Earned credits 2015
AIMS	6606	2004	4602
CCD	2271	598	1673
EGTC	1621		1621
FRCC	916	12	904
LCC	903.5	176.5	727
MSU	7694	2216	5478
PCC	6028	1377	4651
PPCC	6886	2054	4832
RRCC	1935	623	1312

The average credits earned by CHAMP students to date was about 14. Figure 12 presents the average number of credits earned by students at each college in 2014 and 2015. Unsurprisingly, on average a higher number of credits was achieved by students in 2015.

Figure 12. Average number of credits earned by CHAMP students by school and by year



When we restrict the earned credits to CHAMP courses, we can see similar patterns of more students earning CHAMP credits in 2015 than in 2014. This reflects both the development and launch of programs and the greater number of semesters available for study.

Table 11. Number of students earning CHAMP credits by school and by year

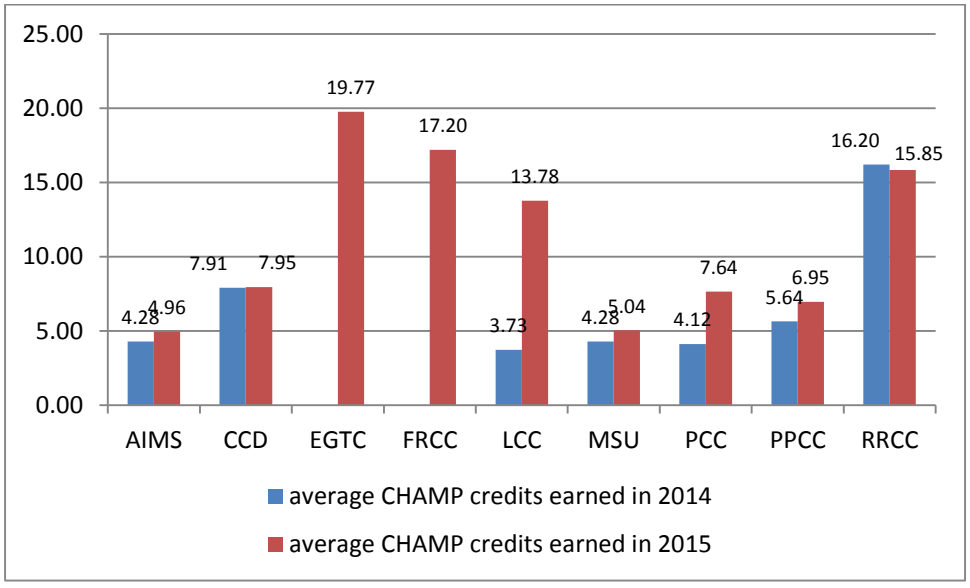
CHAMP colleges	# Students earning CHAMP credits	# Students earning CHAMP credits 2014	# Students earning CHAMP credits 2015
AIMS	401	202	272
CCD	189	66	153
EGTC	82		82
FRCC	40		41
LCC	47	15	36
MSU	320	169	245
PCC	292	125	216
PPCC	356	169	256
RRCC	92	35	71

Table 12. Total CHAMP credits earned by school and year

CHAMP colleges	Total CHAMP credits	CHAMP credits 2014	CHAMP credits 2015
AIMS	2213	865	1348
CCD	1738	522	1216
EGTC	1621		1621
FRCC	705		705
LCC	552	56	496
MSU	1959	723	1236
PCC	2165	515	1650
PPCC	2734	954	1780
RRCC	1692	567	1125

On average, 7 CHAMP credits were earned by students. Students at AIMS, MSU, and PPCC earned fewer than the average CHAMP credits in both years. This likely is the result of the types of CHAMP programming offered at those institutions and the rollout of those programs.

Figure 13. Average CHAMP credits earned by CHAMP students by school and by year



Graduation outcomes

Number of unique students earning credentials

Because students might have earned multiple credentials in both the 2014 and 2015 reporting year, the total unique credential earners is not equal to the combination of credential earners in 2014 and 2015. Over both years, there were 545 unique CHAMP students who earned at least one credential. Generally, more CHAMP students earned a credential in 2015 than 2014. This is

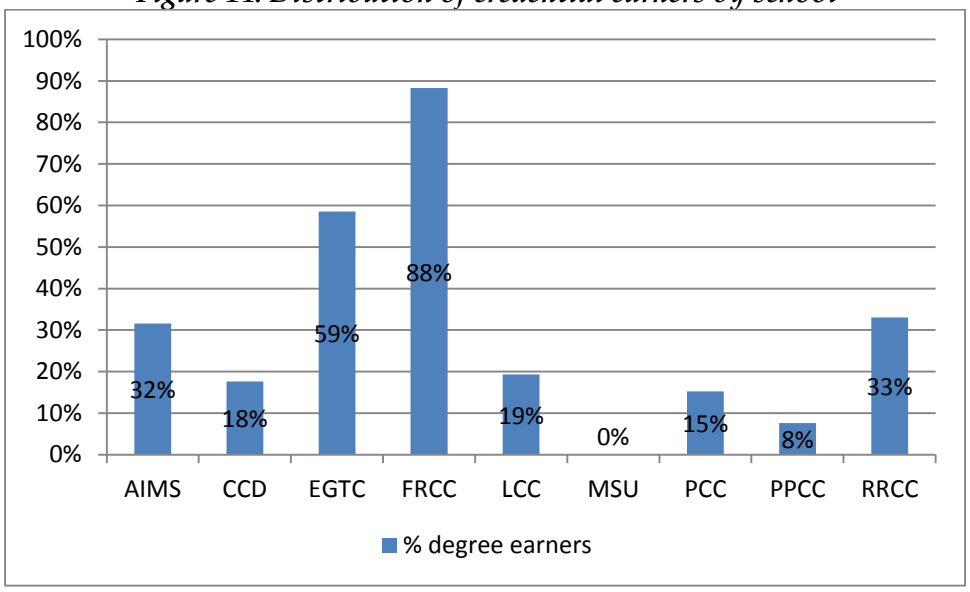
not surprising: students who registered early in 2014 had a longer observational time and increased likelihood of earning credentials in 2015, contributing to the higher total count of credential earners in 2015. Additionally, more programs had been launched by 2015.

Table 13. Number of students earning credentials

CHAMP College	Total unique credential earners	Total credential earners 2014	Total credential earners 2015
AIMS	155	55	131
CCD	36	2	34
EGTC	48		48
FRCC	180	150	30
LCC	11		11
MSU	0		
PCC	50	7	46
PPCC	32	14	18
RRCC	33	14	22

About 24 percent of CHAMP students had earned credentials by the end of summer 2015. If we do not consider the 150 non-credential earners who passed the CHAMP courses, we see that EGTC had higher completion rate (59 percent) than other CHAMP colleges. This is likely due to the short length of their programming. Almost one in three RRCC and AIMS students had earned a credential by the end of summer 2015. We will continue to look at credential completion throughout the next two years of the grant.

Figure 14. Distribution of credential earners by school



Number of credentials earned

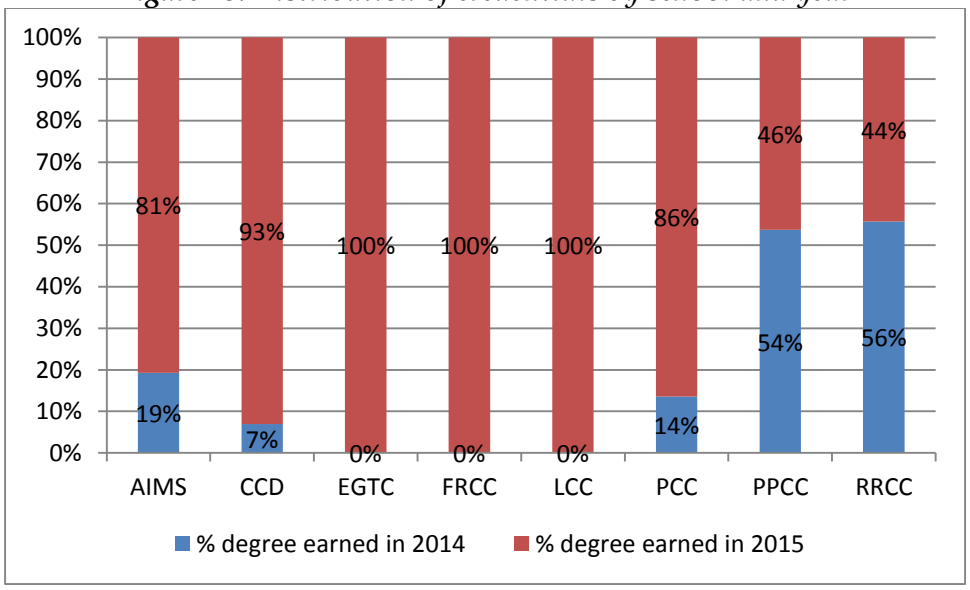
By the end of summer 2015, 545 CHAMP students had earned 648 credentials. As noted above, MSU did not report any credentials earned by CHAMP students. This is likely because there has not yet been enough time for MSU students touched by the grant to complete the program. Additionally, as noted EGTC did not provide credential data in 2014. None of the LCC students earned a degree in 2014.

Table 14. Number of credentials earned

CHAMP colleges	Total credentials	Number of credentials 2014	Number of credentials 2015
AIMS	265	51	214
CCD	72	5	67
EGTC	48		48
FRCC	63		63
LCC	17		17
PCC	59	8	51
PPCC	54	29	25
RRCC	70	39	31

More credentials were awarded in 2015 than 2014 at the majority of CHAMP schools. PPCC and RRCC were the exceptions. At both of those schools, a slightly higher proportion of CHAMP credentials was awarded in 2014 than in 2015.

Figure 15. Distribution of credentials by school and year



Number of unique students earning credentials by type

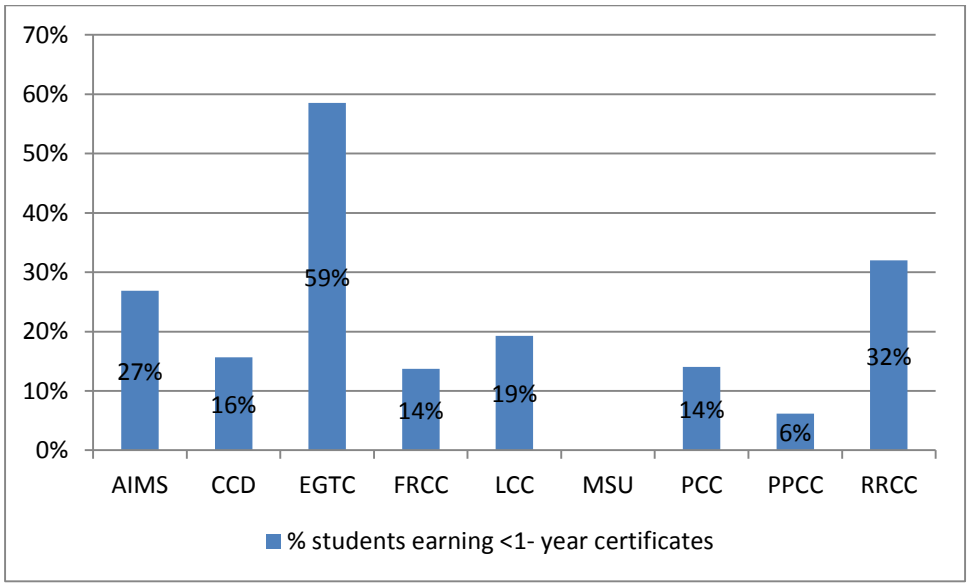
Many CHAMP students earned certificates in less than one year. At this stage, few students have earned certificates between one and two years. However, there were some students that earned associate degrees. AIMS had a higher rate of CHAMP students earning an associate degree.

Table 15. Credential earned by type by school

CHAMP colleges	< 1-year certificate	> 1, < 2-year certificate	Associate degree
AIMS	132		38
CCD	32	11	10
EGTC	48		
FRCC	28	8	3
LCC	11		
MSU			
PCC	46		5
PPCC	26	5	9
RRCC	32		4

Around 60 percent of the CHAMP students at EGTC earned a certificate that was less than one year. AIMS and RRCC had completion rates that were higher than the CHAMP average of 24 percent.

Figure 16. Distribution of students earning < 1-year certificate



The breakdown of credentials earned by CHAMP students by year is presented in tables 16 through 18. The tables show the unique number of students earning certificates of less than one-year certificates, one- to two-year certificates, and associate degrees in 2014 and 2015. Most of the credentials conferred to CHAMP students were one-year certificates. At this stage in the grant, few students have earned one- to two-year certificates or associate degrees. As noted above, most schools had a higher number of students earning degrees in 2015 than 2014.

Number of < 1-year certificates earned over time

Table 16. Number of students earning < 1-year certificates

CHAMP colleges	Total # students earning < 1-year certificate	# Students earning < 1-year certificate 2014	# Students earning < 1-year certificate 2015
AIMS	132	40	107
CCD	32	1	31
EGTC	48		48
FRCC	28		28
LCC	11		11
PCC	46	6	43
PPCC	26	12	14
RRCC	32	13	21

Number of > 1 and < 2-year certificates earned over time

Table 17. Number of students earning >1 and <2-year certificates

CHAMP colleges	Total # students earning > 1, < 2-year certificate	# Students earning > 1, < 2-year certificate 2014	# Students earning > 1, < 2-year certificate 2015
CCD	11	1	10
FRCC	8		8
PPCC	5	4	1

Number of associate degrees earned over time

Table 18. Number of students earning associate degrees

CHAMP colleges	Total # students earning associate degree	# Students earning associate degree 2014	# Students earning associate degree 2015
AIMS	38	6	33
CCD	10	1	9
FRCC	3		3
PCC	5	1	4
PPCC	9	5	4
RRCC	4	2	2

Retention in CHAMP

A key question for the grant is whether CHAMP students remained in school and registered for courses before graduation. We examined CHAMP student retention rates by looking at the registration status among the non-completers in fall 2014 for the 2014 reporting year and the registration status among the non-completers in fall 2015 for the 2015 reporting year. Since fall registration data were only available for CCCS students and students at AIMS, we examined retention rates only for these seven schools (AIMS, CCD, FRCC, LCC, PCC, PPCC, and RRCC). Table 19 shows the number of non-completers by the end of summer 2014 and 2015. Table 20 presents the number of non-completers registered in fall 2014 and 2015 respectively.
At all seven colleges, the number of non-completers almost doubled from 2014 to 2015. This may be due to the increasing enrollment rates of CHAMP students in 2015 and the lack of follow-up time for them to complete credentials/degrees, or the real increase in drop-off rate.

In all seven colleges, the number of non-completers almost doubled from 2014 to 2015. This may be due to the increasing enrollment rate of CHAMP students, the right censoring of registration data as some students may re-register in spring 2016, or the increase in drop-off rate. As we cannot tell who dropped out of school from the administration data in these schools, the students who dropped out of school in fall 2014 were counted again in 2015 as non-completers. Consequentially, in schools with high drop off rates, we would expect to see lower retention rate in 2015 compared with that in 2014.

Table 19. Number of non-completers by the end of summer 2014 and 2015

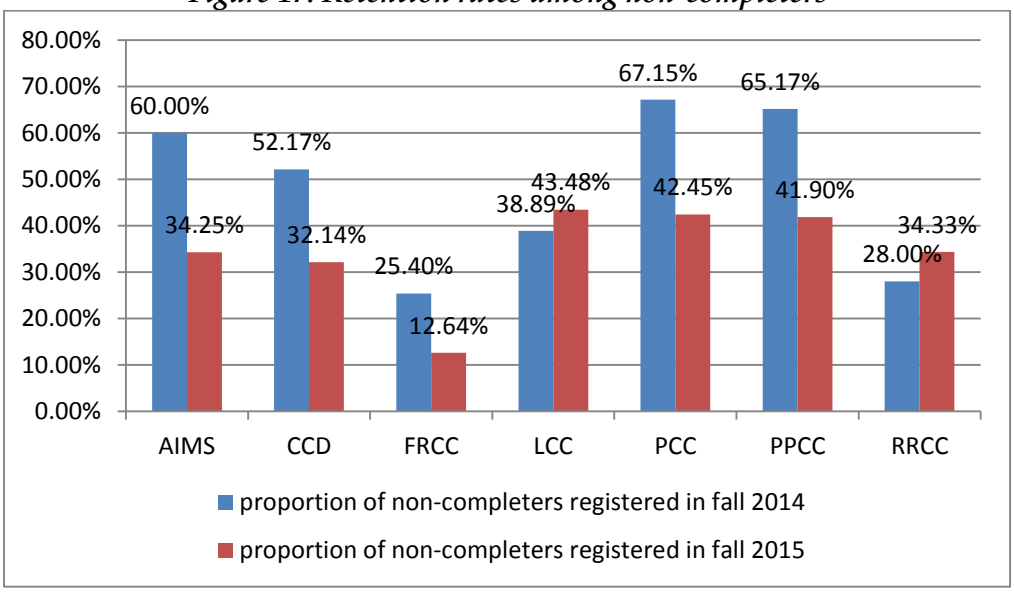
CHAMP colleges	# Non-completers by the end of summer 2014	# Non-completers by the end of summer 2015
AIMS	195	327
CCD	69	168
FRCC	63	174
LCC	18	46
PCC	137	278
PPCC	201	389
RRCC	25	67

Table 20. Number of non-completers registered in fall 2014 and 2015

CHAMP colleges	# of non-completer registered in fall 2014	# of non-completers registered in fall 2015
AIMS	117	112
CCD	36	54
FRCC	16	22
LCC	7	20
PCC	92	118
PPCC	131	163
RRCC	7	23

Figure 17 shows the retention rate among CHAMP non-completers. Except for LCC and RRCC, student retention rates were higher among 2014 non-completers than among 2015 non-completers. Retention rates among FRCC students were low in both years. Fewer than 25 percent of non-completers registered again in fall 2014; the rate dropped to 12 percent in 2015. Both PCC and PPCC had higher student retention rates in both years. Notably, over 65 percent students were retained in school in 2014 and over 40 percent were retained in school in 2015.

Figure 17. Retention rates among non-completers



EMPLOYMENT CONDITIONS

Incumbent workers at the beginning of CHAMP

Most colleges had incumbent workers at each year's enrollment. However, LCC did not have any incumbent worker at enrollment in 2014. EGTC did not have any data on CHAMP students in 2014.

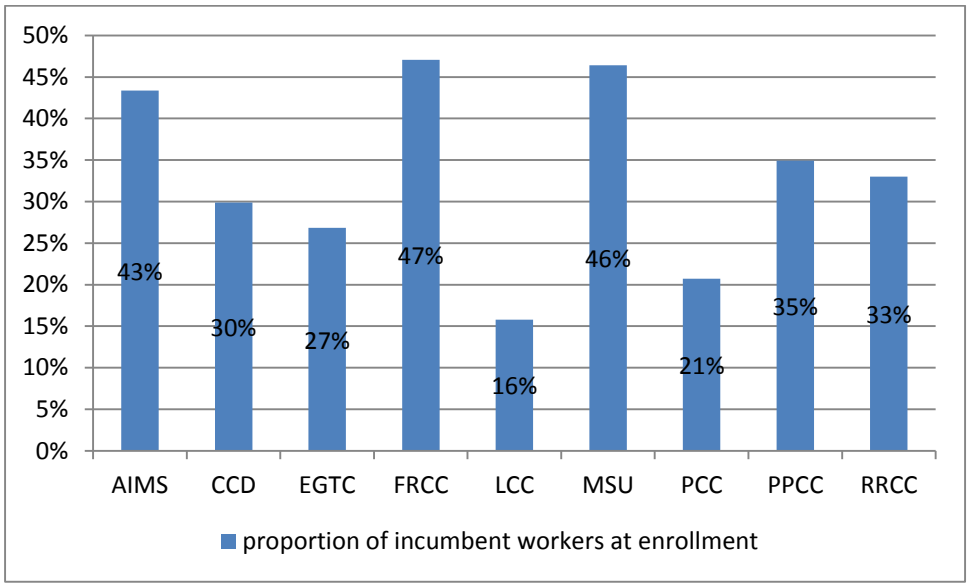
Table 21. Number of incumbent workers at enrollment

CHAMP colleges	Incumbent worker at enrollment	Incumbent workers at enrollment 2014	Incumbent workers at enrollment 2015
AIMS	213	100	113
CCD	61	23	38
EGTC	22		22
FRCC	96	30	66
LCC	9		9
MSU	182	89	93
PCC	68	26	42
PPCC	147	75	72
RRCC	33	9	24

A little over one third of all CHAMP students were incumbent workers at enrollment (36 percent). AIMS, FRCC, and MSU had higher than the average CHAMP proportion of

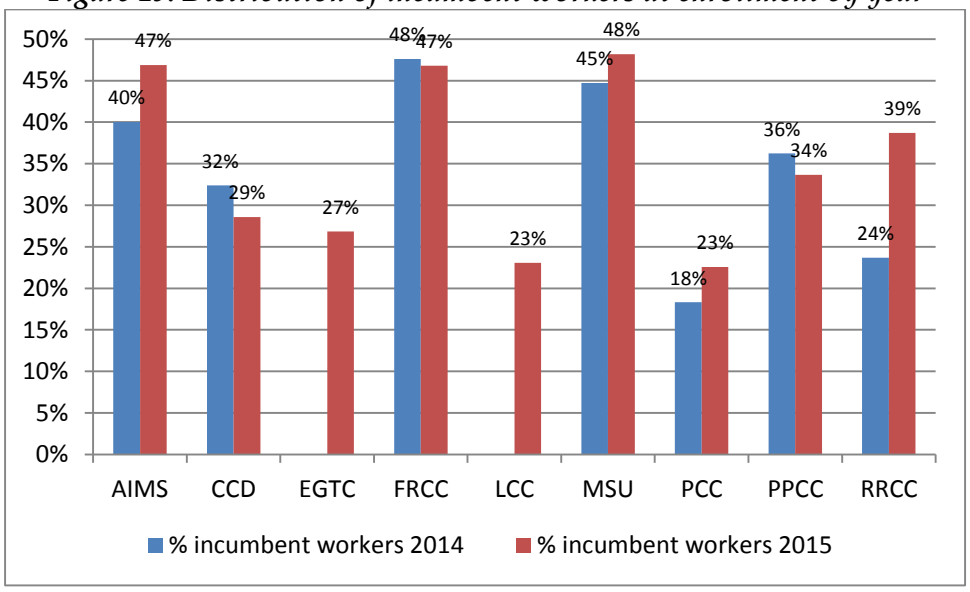
incumbent workers at enrollment. LCC had the smallest percentage of incumbent workers, with only 16 percent.

Figure 18. Distribution of incumbent workers at enrollment by school/cumulative



When we examine the proportion of incumbent workers in each school at each year's enrollment, we see that there was an increase at AIMS, MSU, PCC, and RRCC in the percentage of incumbent workers in 2015. None of the 18 LCC students (see table 1) who registered for CHAMP courses in 2014 were incumbent workers. CCD, FRCC, and PPCC had a 2-3 percentage point decrease in the proportion of incumbent workers at enrollment from 2014 to 2015.

Figure 19. Distribution of incumbent workers at enrollment by year



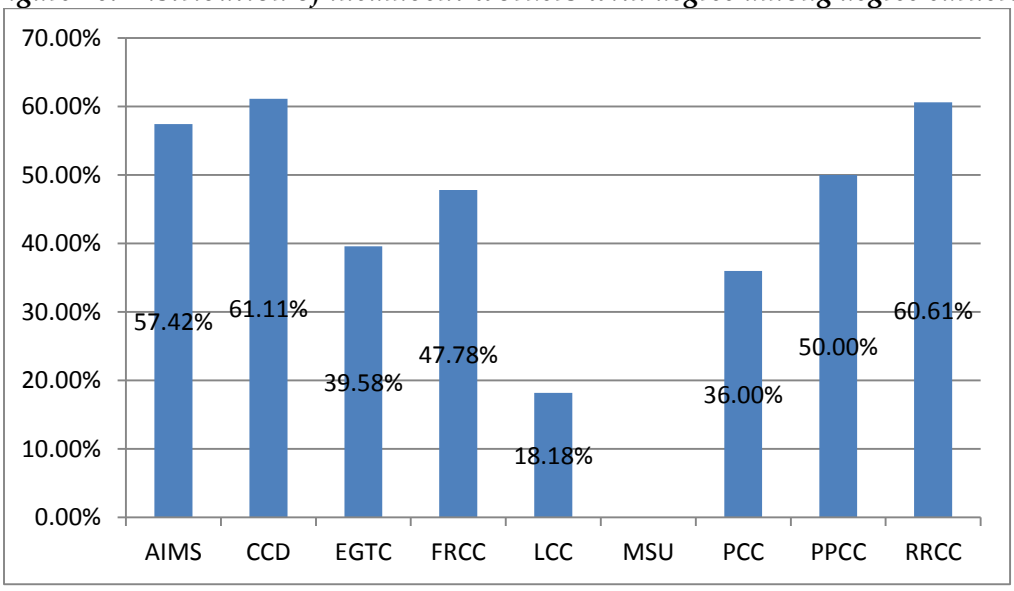
Number of incumbent workers among completers

On average over the two years, 50 percent of the incumbent workers earned credentials. The number of total incumbent workers and credential earners among them are presented in table 22. Since none of the CHAMP students at MSU earned a credential, there is no MSU data shown. AIMS, CCD, PPCC, and RRCC had higher than average proportions of incumbent workers earning credentials. At EGTC, FRCC, LCC, and PCC, the majority of the credential earners were non-incumbent workers.

Table 22. Number of incumbent workers earned credentials

CHAMP College	Total incumbent workers w/ credential	Total credential earners
AIMS	89	155
CCD	22	36
EGTC	19	48
FRCC	86	180
LCC	2	11
MSU		0
PCC	18	50
PPCC	16	32
RRCC	20	33

Figure 20. Distribution of incumbent workers with degree among degree earners



Number of students employed after graduation

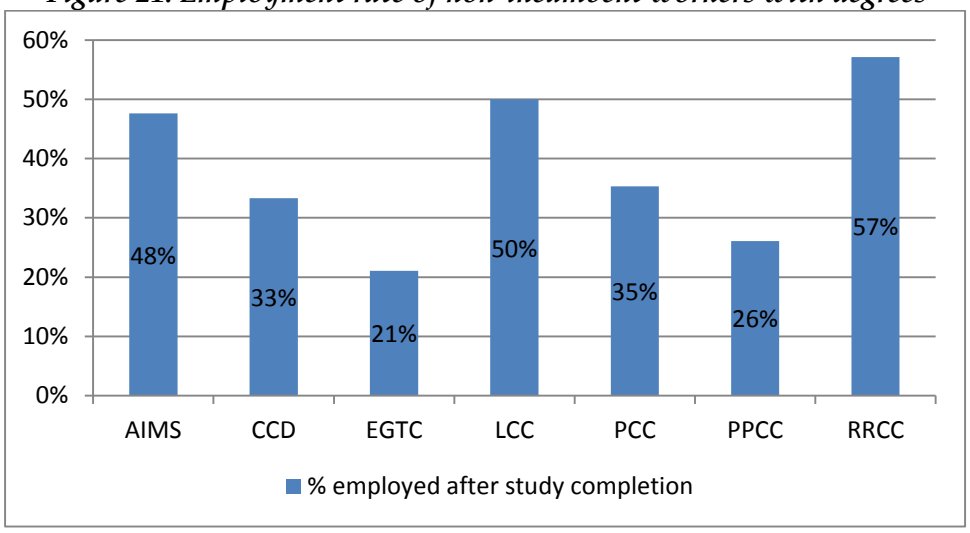
One of the goals of CHAMP is that the programming and efforts in the grant will lead to employment. For this section we focus on non-incumbent workers at CHAMP enrollment and examine their employment status after they exited from CHAMP. In this report, we define exit as completing the last credential. We consider the number of students employed after graduation as those students who earned wages in the first quarter after the quarter in which they graduated. The number of CHAMP students (non-incumbent workers) earning credentials and the number of students employed after graduation in 2014 and 2015 are presented in table 23.

Table 23. Number of non-incumbent workers with degree employed

CHAMP colleges	# Non–incumbent workers earning in the first quarter after the latest credential	# Non–incumbent workers with credential
AIMS	20	42
CCD	1	3
EGTC	4	19
LCC	1	2
PCC	6	17
PPCC	6	23
RRCC	4	7

Since we do not have quarterly wage data for students after the second quarter in 2015, students who graduated in spring 2015 and earned income in the third quarter are not included in our count. At this stage there are few students with earnings in the first quarter after the last earned credentials. The proportions of CHAMP students employed after leaving colleges are presented in figure 21.

Figure 21. Employment rate of non-incumbent workers with degrees



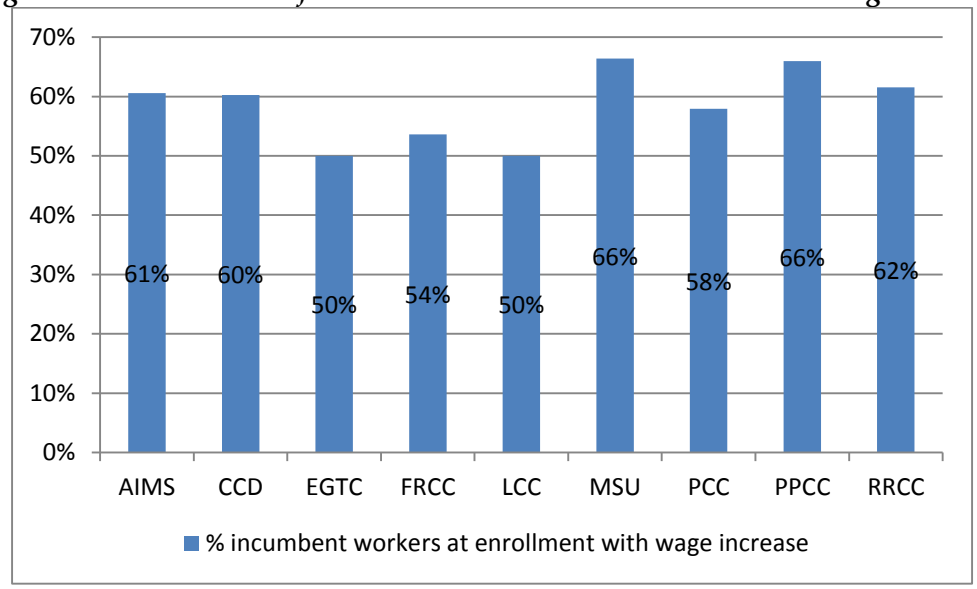
Number of incumbent workers with wage increase

Over half of the incumbent workers in CHAMP had a wage increase. Among all CHAMP colleges, CHAMP students at MSU and PPCC had a higher proportion of incumbent workers with wage increases (66 percent). Again, due to data limitations this analysis may be underestimating the number of wage increases.

Table 24. Number of incumbent workers at enrollment with wage increase

CHAMP colleges	# Incumbent workers with wage increase	Total number of incumbent workers
AIMS	169	279
CCD	53	88
EGTC	17	34
FRCC	59	110
LCC	10	20
MSU	160	241
PCC	73	126
PPCC	128	194
RRCC	32	52

Figure 22. Distribution of incumbent workers at enrollment with wage increase



APPENDIX A.

Enrollment – The number of unique students who have taken at least one CHAMP course between spring 2014 and summer 2015.

School – Students are classified into the school where he/she first took a CHAMP course.

Gender – Self-reported data in the Student Unit of Analysis data set.

Race – The DOL racial categories are Hispanic, American Indian or Alaskan Native, Asian, Black/African American, Native Hawaiian or other pacific islander, white, and more than one race. Information on students' race is reported in Student unit of analysis data set. Unlike the DOL's categories, Asian and Pacific Islander are reported together in CHAMP schools. Native Hawaiian was not specifically identified in the CHAMP data sets. All students had to choose one ethnicity and there was no report of more than one race.

Age – calculated by using the term when a student first took the CHAMP course minus his/her birth date. The actual starting data for each term was not available in the Course Unit of Analysis data set. Therefore, the starting date was defined by February 1st for the spring semesters, June first for summer sessions, and September 1st for fall semesters.

Disability status – Students self- reporting any kind of disability in the Disability Unit of analysis data set.

Pell status – Students self- reporting reporting Pell eligibility in Pell unit of analysis date set.

Full-time/part-time -- Follow the TAACCCT handbook and define full-time students as those who register for 12 or more credits in the spring or fall semester and 6 or more credits in summer session. Part-time students are defined by those who registered for less than 12 credits in spring and fall semester and less than 6 credits in summer session. In this report, we report the registration status in the first semester when a student took CHAMP course.

Veteran status -- All students self-reporting veteran status in 2014 or 2015 in the Military unit of analysis data file or student unit of analysis data file.

Incumbent worker – Students who had income in the quarter of the year when they first registered CHAMP courses. We consider spring semester the first quarter, summer semester the 2nd quarter, and fall semester the third quarter of the year.

Total number of credits – Number of all credits earned during the semester when a student registered for the first CHAMP course, not restricted to CHAMP courses. We only consider credits earned for courses a student passed with grade 'C' or better.

Total number of CHAMP credits – Total earned credits for CHAMP courses, restricted to courses a student passed with grade 'C' or better.

Number of unique students earning credentials – consider only the unique number of students earning credentials in both years. Some students might have earned credentials in both years and are counted as degree earners in both 2014 and 2015 separately.

Number of credentials earned – the number of credentials earned for all CHAMP students. The earned credentials are not restricted to CHAMP credentials.

Retention rates among non-completers – considers the CHAMP students who had not earned any credentials by summer 2014 and registered in fall 2014, and CHAMP students who had not received any credential and registered in fall 2015. Registration information for fall 2015 was only available for CCCS and AIMS students.

Number of students employed after graduation – considers the students what did not work (without any wage income) when first enrolled in CHAMP courses. Employment status is defined by earning wages in the first quarter after student last earned a credential/degree.

Number of incumbent workers with wage increase – considers incumbent workers at enrollment and compare the wages in the first quarter after final degree and that at enrollment.