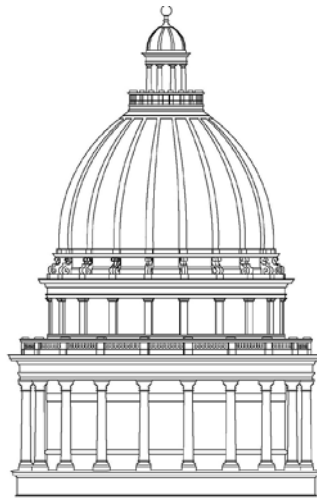


REPORT TO THE
UTAH LEGISLATURE

Number 2015-11



**A Performance Audit of
CTE Completion and Job Placement Rates**

November 2015

Office of the
LEGISLATIVE AUDITOR GENERAL
State of Utah



STATE OF UTAH

Office of the Legislative Auditor General

315 HOUSE BUILDING • PO BOX 145315 • SALT LAKE CITY, UT 84114-5315
(801) 538-1033 • FAX (801) 538-1063

Audit Subcommittee of the Legislative Management Committee

President Wayne L. Niederhauser, Co-Chair • Speaker Gregory H. Hughes, Co-Chair
Senator Gene Davis • Representative Brian S. King

JOHN M. SCHAFF, CIA
AUDITOR GENERAL

November 3, 2015

TO: THE UTAH STATE LEGISLATURE

Transmitted herewith is our report, **A Performance Audit of CTE Completion and Job Placement Rates** (Report #2015-11). A digest is found on the blue pages located at the front of the report. The objectives and scope of the audit are explained in the Introduction.

We will be happy to meet with appropriate legislative committees, individual legislators, and other state officials to discuss any item contained in the report in order to facilitate the implementation of the recommendations.

Sincerely,

John M. Schaff, CIA
Auditor General

JMS/lm

Digest of A Performance Audit of CTE Completion and Job Placement Rates

At the request of the Legislature's Education Task Force, we reviewed the rates of completion and job placement for career and technical education (CTE). Individual CTE programs at the Utah System of Higher Education (USHE) and Utah College of Applied Technology (UCAT) are so different that system-wide composite rates representing all programs are not comparable. USHE and UCAT also have many differences in methods, definitions, and data sources. Thus, reported CTE statistics should be used with caution.

Chapter II Broad Completion Definitions Make Composite Statistics Not Comparable

Key System Differences Make Summary Statistics Not Comparable. We identified the following key differences between UCAT's and USHE's summary completion statistics:

- The outcomes considered as completion are different.
- The programs that students graduate from in each system differ greatly in length.
- The providers use different methodologies to calculate completions.

Since the similarities between the two systems are so few, their completion statistics are not comparable. Consolidating programs is risky as dissimilar outcomes are combined and produce ambiguous results. Thus, analyzing completion rates is best at the program level.

UCAT Has Diluted Its Completion Statistics with Small Achievements.

Historically, UCAT's completion statistics were focused on students receiving program certificates. However since fiscal year 2013, statistics increasingly emphasize smaller student achievements, as illustrated by the following changes to UCAT's completion reporting:

- UCAT has retroactively reported 60-hour occupational upgrades as certificates despite no official certificates being issued and no records on student transcripts. These upgrades are also shorter than program certificates, which average 465 hours.
- Most of UCAT's reported completions are now for students who pass a course rather than finishing a program and receiving a program certificate.
- The majority of awarded program certificates now require less than a quarter year to complete, which is more apparent at some campuses than others.

To some extent, these changes reflect a desire to respond to industry needs and more fully recognize student efforts. However, these changes are also responding to the desire for more certificates, which is outlined in Utah's "66% by 2020" goal. Thus, UCAT's completion statistics are being diluted by a high-volume of smaller achievements.

USHE Could Report Completion Rates for Individual Programs. The Commissioner's Office of Higher Education cannot calculate system-wide CTE completion rates because students who intend to complete a program are being distorted by students seeking non-CTE credentials. While these issues apply to some USHE programs, others are not affected and completion rates can be calculated for these programs. Specifically, short programs and those that require students to apply before they enroll have reliable student counts where completion rates for an individual program can be calculated.

Chapter III

Provider Methods Make Job Placement Rates Not Comparable

UCAT Placements Exclude Some Students, Include Continuing Education, and Present Validity Concerns. We do not believe the placement rates reported by UCAT accurately reflect the extent to which students are finding employment. First, UCAT excludes some student groups from placement reports. Second, UCAT counts continuing education as a successful placement. Third, UCAT's survey methods focus on instructors reporting student placements, raising independence concerns that can affect data validity. While UCAT has implemented a few processes to address placement validity concerns, we do not believe they are sufficiently rigorous and independent.

USHE Placements Are Reported System-Wide and Have Data Limitations. After review of USHE's most recent job placement reporting, we do not believe it adequately addresses the audit request's objective for an accurate reporting of CTE job placement rates. First, USHE's job placement statistics are reported for its entire system and most are for non-CTE program graduates. Second, while use of DWS data to document employment may be cost effective, this methodology has three significant limitations:

- The data does not indicate if a student obtained training-related employment.
- The data does not indicate if employment was obtained before or after graduation.
- The data is not a comprehensive source of employment outcomes.

The impact of these limitations is unclear as the first two would overstate job placement while the third would understate. For some programs, USHE institutions collect additional detailed placement information that could be used to report training-related placement rates for some programs.

REPORT TO THE UTAH LEGISLATURE

Report No. 2015-11

A Performance Audit of CTE Completion and Job Placement Rates

November 2015

Audit Performed By:

Audit Manager	Richard Coleman
Audit Supervisor	Tim Bereece
Audit Staff	Candace Ware Katherine Stanfill

Table of Contents

Digest.....	i
Chapter I	
Introduction	1
The CTE Missions of USHE and UCAT Are Focused on Job Preparation.....	1
Three Entities Are Required to Provide CTE and Report on Outcomes.....	3
Audit Scope and Objectives.....	5
Chapter II	
Broad Completion Definitions Make Composite Statistics Not Comparable.....	7
Key System Differences Make Summary Statistics Not Comparable	8
UCAT Has Diluted Its Completion Statistics with Small Achievements	12
USHE Could Report Completion Rates for Some Individual Programs	23
Recommendations.....	28
Chapter III	
Provider Methods Make Job Placement Rates Not Comparable	31
Providers' Placement Calculations Have Significant Differences	32
UCAT Placements Exclude Some Students, Include Continuing Education, and Present Validity Concerns.....	34
USHE Placements Are Reported System-Wide and Have Data Limitations	40
Recommendation.....	46
Agency Responses	47

This Page Left Blank Intentionally

Chapter I

Introduction

At the request of the Legislature's Education Task Force, we reviewed the rates of completion and job placement for career and technical education (CTE). We found that individual CTE programs at the Utah System of Higher Education (USHE) and Utah College of Applied Technology (UCAT) are so different that system-wide composite rates representing all programs are not comparable. USHE and UCAT also rely on dissimilar definitions of completion and job placement. Thus, reported CTE statistics should be used with caution.

USHE and UCAT missions regarding CTE are focused on preparing students for a career. In contrast, the Utah State Office of Education (USOE) places a primary focus on preparing students for post-secondary programs rather than a career. Each provider plays a unique role in CTE and annually reports to the Legislature and the Governor regarding their performance. This audit's scope and objectives are focused on the completion and job placement rates that are reported by the three providers. Because USOE's completion and placement rates were focused on continuing education rather than students obtaining a job, they were omitted from detailed analysis in Chapter II regarding completion rates and Chapter III regarding job placement rates.

The CTE Missions of USHE and UCAT Are Focused on Job Preparation

CTE is a portion of secondary and post-secondary curricula that focuses on providing students with the skills necessary for them to be employable. Specifically, the federal Carl D. Perkins Career and Technical Education Improvement Act of 2006 defines CTE as a sequence of courses that accomplishes the following:

- Provides individuals with coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in current or emerging professions

CTE is focused on providing students with the knowledge and skills required for current or emerging professions.

UCAT is solely focused on providing CTE.

- Provides technical skill proficiency, an industry-recognized credential, a certificate, or an associate degree
- May include prerequisite courses (other than remedial courses) that meet the requirements of this subparagraph

This definition highlights two key characteristics of CTE: 1) that the curriculum be related to “current or emerging professions,” and 2) that the curriculum leads to less than a baccalaureate degree. Utah’s three education providers adhere to this federal Perkins definition of CTE as they fulfill their roles in the delivery of this specialized education.

UCAT’s mission contains a clear focus on job acquisition by its students. Specifically, its mission states:

The mission of [UCAT] is to meet the needs of Utah’s employers for technically skilled workers by providing market-driven technical education to both secondary and adult students.

UCAT is unique in its sole focus on providing CTE. Its curriculum is narrowly focused on ensuring that students have sufficient CTE knowledge to result in job placements. In contrast, USHE is focused on a more comprehensive education experience. As its mission states:

The mission of [USHE] is to provide high quality academic, professional, and applied technology learning opportunities designed to advance the intellectual, cultural, social, and economic well-being of the state and its people.

CTE is only a portion of the educational opportunities offered by USHE institutions.

USHE institutions are focused on other types of education besides CTE, and its objectives go beyond satisfying only the economic needs of its students. Consequently, USHE and UCAT focus on different types of CTE credentials that their students earn.

In contrast to USHE and UCAT, USOE’s mission related to CTE is focused on preparation for post-secondary education. Specifically, the mission for its CTE department states the following:

The mission of Career and Technical Education is to provide all students with a seamless education system, from public education to postsecondary education, driven by a

College and Career Ready Plan, through competency-based instruction, culminating in essential life skills, certified occupational skills, and meaningful employment.

Rather than focusing on preparing students for job opportunities, USOE's CTE programs are tailored toward a seamless transition to post-secondary education. Since our audit request specifically focused on job placement, the results that USOE tracks are not applicable because they focus largely on continuing education. Thus, while it is important to recognize USOE's role in post-secondary preparation, their contribution to student employment is secondary.

USOE's CTE mission is preparing students for post-secondary education rather than focusing on jobs.

Three Entities Are Required to Provide CTE and Report on Outcomes

Each CTE provider must annually report to the Governor and the Legislature's Education Interim Committee on their CTE achievements. Specific reporting requirements for USHE (*Utah Code* 53B-1-103(2)(d)(iii)) and UCAT (*Utah Code* 53B-2a-104(2)(i)(iii)) are focused on performance outcomes for their programs, specifically on placement in the job market, but other relevant outcomes may be included. In contrast, USOE's reporting requirements in *Utah Code* 53A-15-202(6) focus on secondary student access to CTE programs at USHE and UCAT.

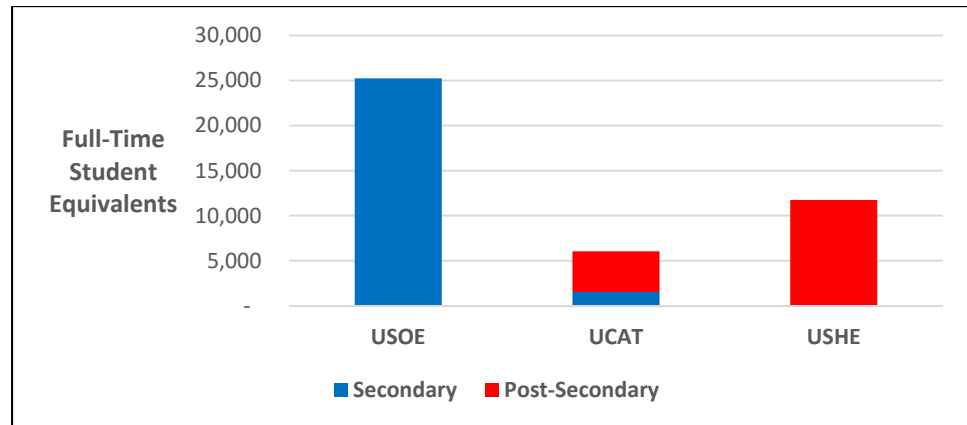
All three CTE providers annually report performance metrics.

As part of its annual reports, the three CTE providers report on student participation and the number of credentials they awarded. USHE and USOE offer a broad spectrum of instruction to their large student populations, as reflected in their high CTE participation. In regards to CTE credentials, it is important to avoid confusing program certificates and associate's degrees (awarded by UCAT and USHE) with industry certifications that are awarded by third parties.

CTE Programs at USHE and USOE Experience Broad Participation

One performance outcome common to all CTE providers is student participation. Following each school year, UCAT, USHE, and USOE report on how much CTE their students received. Using conversion factors, Figure 1.1 shows the number of full-time student equivalents that participated in CTE for each provider.

Figure 1.1 Providers Teach Significant Amounts of CTE to Utah Students. Participation statistics in providers' 2014 annual reports were converted to full-time student equivalents using agreed-upon conversion rates.



Source: Providers' 2014 CTE reports presented to the Legislature's Education Interim Committee
Note: Custom Fit and Short-Term Intensive Training (STIT) hours were excluded from this figure.

Figure 1.1 shows that more USOE students participated in CTE programs than did students at the other two providers. Its high level of participation can be attributed to high school graduation requirements that make CTE participation mandatory for all secondary students, which is a larger population base for USOE than for USHE or UCAT. Thus, some of USOE participation is generated by students who do not focus on a full CTE area of study, but participate only to meet graduation minimums.

Similarly, high participation at USHE is due in part to participation from students who do not intend to earn a CTE credential. Specifically, some CTE courses are classified as general education and can serve as foundation courses for a bachelor's degree, which is not a CTE credential. In contrast, UCAT only offers CTE, so students with non-CTE aspirations do not increase their participation counts.

Program Credentials Should Not Be Confused with Industry Certifications

Program credentials are awarded by UCAT and USHE, but industry certifications are not. UCAT awards certificates to students who graduate from programs approved by governing boards and monitored by its accrediting body, the Council on Occupational Education (COE). Similarly, USHE awards associate's degrees or certificates for completion of CTE programs approved by governing

CTE is required for high school graduation, which makes every student a participant.

Some USHE students participate in CTE even though they do not intend to earn a CTE credential.

CTE associate's degrees and program certificates are awarded by state entities, whereas industry certifications are not.

bodies. In contrast, industry certifications depend on standards outside the control of state education officials.

For the most part, an associate's degree or program certificate issued by USHE or UCAT represents a significant skill acquisition. For example, a student who graduates from an automotive technology program is skilled in a variety of areas, including transmissions, engine performance, brakes, suspensions, and others. Because of the broad scope of skills taught in most CTE programs, associate's degrees and program certificates should not be confused with potentially less rigorous industry certifications that relate to a particular skill.

As an example, a student enrolled in an automotive program at a USHE institution or UCAT campus is eligible to earn eight Automotive Service Excellence (ASE) industry certifications by the end of the program. Thus, the scope of instruction covered by an industry certification is less than for a program credential awarded to a student who completes a full USHE or UCAT program. In the remaining chapters of this report, our analysis focuses on program certificates and associate's degrees as the main completion statistic that should be analyzed for UCAT and USHE.

Students can earn multiple industry certifications while completing a CTE program.

Audit Scope and Objectives

The Legislature's Education Task Force included the following in its audit request regarding CTE in Utah:

The task force would like to know the extent to which the state's career and technical education (CTE) needs are being met through each of the entities that are required to provide [CTE] in Utah (the Utah College of Applied Technology, the Utah System of Higher Education, and the Utah State Board of Education). Specifically, the task force is interested in the rates of completion and job placement across the entities.

Our audit request was specifically interested in rates of completion and job placement.

Responding to the task force's request, our audit objectives were to evaluate how USHE and UCAT are defining, measuring, and reporting completion rates and subsequent job placement rates.

CTE programs offered by USHE institutions and UCAT campuses vary by subject matter and the amount of instruction necessary to

Since USOE focuses on continuing education rather than job placement, detailed analysis is not provided.

prepare students for their chosen professions. For example, a certified nursing assistant program is four credit hours at Dixie State University, but its associate degree in nursing is over 60 credit hours. Chapter II of this report evaluates the reliability of reported completion rates, given that programs are so significantly different. In addition, Chapter III evaluates the various student outcomes, such as continuing education and jobs unrelated to student training, that are included in job placement rates reported by USHE and UCAT.

Since the request specifically mentions job placement, USOE's rates will not be discussed in detail because its mission is focused on continuing education. Unlike USHE and UCAT programs that vary in length based on industry needs, USOE's definition of completion requires a standardized three-credit requirement for all programs. These three credits help prepare students for post-secondary training. As previously noted, rather than job placement, USOE is focused on continuing education, which was not the focus of the Education Task Force's request. Because USOE's mission and corresponding metrics are so different, the remainder of this report focuses on the completion and job placement rates reported by USHE and UCAT.

Chapter II

Broad Completion Definitions Make Composite Statistics Not Comparable

The completions tracked by the Utah College of Applied Technology (UCAT) and the Utah System of Higher Education (USHE) are very broadly defined. For example, a student who passes an eight-hour career and technical education (CTE) course and a student who finishes a two-year CTE program with a program certificate or an associate's degree can each qualify to be counted in completion statistics. Since our audit request was focused on evaluating the rates of completion, each system's definition of completion became the focus of our review. UCAT specifically considers so many student outcomes as completion that we focused on evaluating what completion statistics are most relevant. Overall, we believe that composite CTE completion statistics become more ambiguous as additional dissimilar student achievements are included. Consequently, program-level statistics that focus on program completions are the most reliable.

For the 2013-2014 school year, UCAT reported a system-wide completion rate of 87.6 percent, but we think that this rate inappropriately mixes program and course completions. We think it is better to just look at program completions, which was 72.3 percent. However, that statistic also mixes programs that vary so widely in length that it becomes biased toward short programs. In contrast, USHE did not report a system-wide completion rate because it lacked an appropriate basis to judge its completions against. We identified three key differences in the student achievements and methodologies used to track completions in each system. Thus, system-wide completion rates are ambiguous and not comparable. Instead, program specific completion rates that do not combine dissimilar completions are preferable when their calculation is feasible.

Over time, UCAT has diluted its completion statistics by adopting a broader definition of completion that increasingly recognizes small student achievements as completions. Consequently, the significance of a UCAT completion is becoming progressively diminished. In contrast, USHE has maintained a definition that has been solely focused on graduations. However, its institutions place different

Since completion is broadly defined, composite statistics include dissimilar achievements.

UCAT has diluted its completion statistics by increasingly recognizing small student achievements as completions.

USHE remains focused on recognizing CTE certificates and associate's degrees as completion.

UCAT recognizes early hires and students who pass a course as completions.

amounts of emphasis on certificates and associate's degrees, which make composite statistics at the institution level not comparable. Thus program-level details are necessary to best understand the significance associated with reported completions.

Key System Differences Make Summary Statistics Not Comparable

Summary completion statistics reported by UCAT and USHE are not comparable because of three key differences: (1) the outcomes considered as completion are different; (2) the programs that students graduate from in each system differ greatly in length; (3) each system adheres to different methodologies to calculate completions. Since the similarities between the two systems are so few, analysis of completion rates is best done at the program level. Consolidating programs is risky as dissimilar outcomes are likely to be combined and produce ambiguous results.

USHE Only Counts Graduates as Completions, While UCAT Includes Other Outcomes

In their reports to the Legislature, both UCAT and USHE recognize students who graduate from their CTE programs and receive a certificate or associate's degree as completions. However, UCAT has adopted a broader definition of completion that includes other student outcomes in certain circumstances. Figure 2.1 shows how many completers each system recognized.

Figure 2.1 UCAT Reports More Student Achievements as Completion than USHE Does. For the 2013-2014 school year, each system reported students achieving the following outcomes as completions.

Student Outcomes	UCAT	USHE
Program Graduates	4,697	4,879
Program Early Hires	770	Not Applicable
Passed a Course*	20,518	Not Applicable

Source: Reports provided to the Legislature's Education Interim Committee

** Includes occupational upgrade, other post-secondary, and secondary students.*

As Figure 2.1 shows, USHE does not recognize early hires and students who pass a course as completions. Staff from the Commissioner's Office of Higher Education have confirmed that these achievements by students are not included in its completion statistics.

In contrast, UCAT has recognized these smaller achievements as completions in certain circumstances for some of its students. In accordance with its mission to “meet the need of Utah’s employers for technically skilled workers,” UCAT counts early hires as completions, since these students obtained training-related employment. UCAT also counts students who are not seeking a program certificate as completers when they pass a course since they do not intend to complete an entire program.

We believe that students who graduate from their CTE programs are a more significant educational achievement than early hires and students who merely pass a course. Consequently, we believe that program graduates are the most reasonable completion metric reported by the two systems.

Different Program Lengths Make CTE Graduate Counts Dissimilar

Another factor that makes CTE completion statistics ambiguous is insufficient accounting for program length differences. For example, Figure 2.1 states that 4,697 students graduated from a UCAT program. This number includes a variety of programs. For example, Ogden Weber Applied Technology College (ATC) has an eight-hour program for electricians that generates program certificates. In addition, every UCAT campus has a certified nursing assistant (CNA) program that requires approximately 100 hours. In contrast, some campuses have longer programs, such as a plumbing apprentice program that requires 720 hours or a cosmetology program that requires 1,600 hours. Students who graduate from these very different programs count equally in certificate counts despite students spending different amounts of time (8 to 1,600 hours) earning a certificate for finishing their program. (It should be noted that according to its policy, UCAT calculates and reports average certificate lengths.)

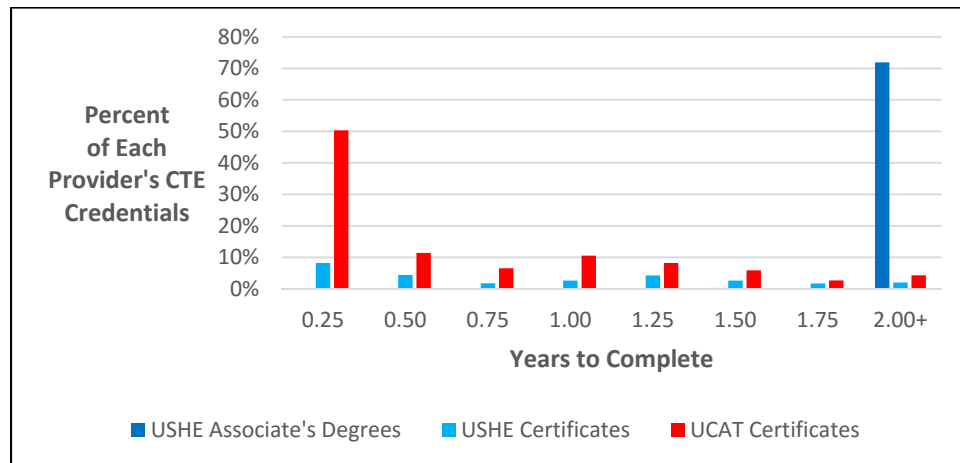
Figure 2.2 shows the percent of all post-secondary credentials (associate’s degrees and certificates) awarded by UCAT and USHE according to the length of their programs. Credentials are grouped by quarter-year increments to illustrate the system differences in credential lengths.

We believe graduates are a more significant educational achievement than early hires and students who pass a course.

UCAT CTE programs vary greatly in length, such as 100 hours for CNA and 1,600 hours for cosmetology.

A stark contrast exists in the typical length of CTE programs at UCAT and USHE.

Figure 2.2 USHE Emphasizes Long Credentials, While UCAT Emphasizes Short Credentials. This figure shows how long CTE credentials at USHE (blue) and UCAT (red) take to complete for the 2013-2014 school year.



Source: Data from UCAT and USHE
 * A full-time student equivalent consists of 30 credit hours or 900 membership hours.

As Figure 2.2 shows, the majority (72 percent) of CTE credentials awarded by USHE institutions are associate's degrees that take full-time students over two years to complete. In contrast, 50 percent of post-secondary UCAT credentials are CTE certificates that take less than a quarter year to complete. Similar to the prior example involving CNA and cosmetology programs, the length of programs completed by students at UCAT and USHE are clearly different.

Graduate counts are ambiguous without sufficient disclosure about the length of included programs.

When program lengths are considered, it is clear that the two systems are focused on serving different student needs for CTE education. UCAT is focused on short-term training solutions that can quickly lead to a job. Whereas USHE's two-year associate's degrees are better for those students whose need for a job can be balanced with better preparing them for pursuing a potential bachelor's degree. Consequently, graduate counts are ambiguous without sufficient disclosure about the length of those programs producing the graduates.

The Availability of Student Objective Data Affects Completion Methodologies

In addition to recognizing different student achievements and specializing in programs with different lengths, USHE and UCAT also rely on different methodologies to calculate their completion statistics. UCAT has grouped students based on their enrollment

objective, which takes into account whether they intend to complete a program. Since certificate seekers are the only students who actively work toward earning a certificate, their completion rate, which is based on program completion, is the most relevant. In contrast, USHE does not know how many students intended to earn its CTE credentials. Thus, it does not express completions as a rate.

UCAT Completion Rate Calculations Are Based on Student Objectives. UCAT classifies its students into the following four groups that are specified in UCAT policy 205.5:

- **Certificate-Seeking Student:** A post-secondary student who is enrolled in an approved program and intends to complete a program certificate
- **Occupational Upgrade Student:** An employed post-secondary student who is not a certificate seeker but intends to upgrade job skills, increase job security, or receive training at the request of an employer
- **Other Post-Secondary Student:** A post-secondary student who does not qualify as another classification and has other intentions, like acquiring basic skills or personal interests
- **Secondary Student:** A student who is currently enrolled or eligible to enroll in grades 7-12 in a public or private school

As these definitions indicate, each group of students has different objectives. Only certificate-seeking students indicate they intend to complete a program certificate, which makes them the only group whose completion rate is measured in completed programs. In contrast, the other three objectives are focused on finishing less than a program, so their completion rates are focused on course completions that generally require smaller amounts of educational effort relative to program completions. Consequently, it is important to recognize that the program completion rate reported by UCAT for certificate seekers is the most relevant metric reported by UCAT. All other completion metrics represent relatively small achievements and overshadow program certificates when all are reported in a composite rate.

USHE Does Not Report a Completion Rate Because the Number of Students Intended to Earn CTE Credentials Is Unknown. Staff from the Commissioner's Office of Higher

UCAT is able to calculate completion rates because it tracks student objectives.

Since completion rates for certificate seekers are based on programs rather than courses, their rates are the most relevant UCAT metric.

USHE does not report system-wide completions as a rate because student objective data is not adequate.

UCAT has increased its count of certificates by supplementing program completions with smaller achievements

UCAT's short programs are growing faster than its longer programs.

Education cited three key reasons why system-wide completion rates are not calculated. First, new students enrolling at USHE institutions claim general studies or unknown as their program of study 38 percent of the time. Second, students make subsequent changes to their program of study. Third, some students who intended to earn a non-CTE bachelor's degree cash out their credits and earn an associate's degree that qualifies as a CTE completion. Because of these issues with identifying students who intended to earn CTE credentials, USHE only reports its completions rather than stating them as a rate. While these reasons justify not calculating system-wide rates, later in this chapter we will discuss how completion rates can be calculated for some CTE programs where student intentions are more clearly documented.

UCAT Has Diluted Its Completion Statistics with Small Achievements

In fiscal year 2011, UCAT's completion statistics were focused on students who received a program certificate. Since then, UCAT has increased its count of certificates by supplementing program completions with smaller achievements. Most reported completions are now for passing a course rather than for finishing a larger program. Overall, statistics increasingly emphasize smaller student achievements. This section discusses these three issues:

- UCAT has retroactively reported 60-hour occupational upgrades as certificates despite no official certificate being presented to the student and no record of them appearing on student transcripts.
- Most of UCAT's reported completions are now for students who pass a course, but do not finish a program. Doing so detracts attention from more significant program completions.
- More program certificates are being awarded by UCAT's short programs. Especially at some campuses, new programs of short duration or partial-program completions qualify for program certificate awards.

To some extent these changes reflect a desire to respond to industry needs and/or a desire to more fully recognize student efforts.

However, all of these additions to completion rates over the past four years have diluted UCAT's traditional program certificate completions with a high volume of smaller student achievements.

Occupational Upgrades Inflate UCAT's Certificate Counts

In its annual reports, UCAT reports its contributions to Utah's "66% by 2020" goal, which was initiated by the Governor's Education Excellence Commission in 2011. The goal is to have 66 percent of Utah's adults holding a post-secondary degree or certificate by 2020 in order to meet projected workforce demands.

Initially, UCAT only reported program certificates. However, beginning with its 2013 annual report, UCAT's certificate counts began supplementing program certificates with occupational upgrades. Classifying occupational upgrades as certificates seems inappropriate as students did not receive an official certificate and occupational upgrades did not appear on student transcripts. Occupational upgrades were merely 60 hours of instruction in a single program taken by already-employed students. In contrast, the average program certificate length is 465 membership hours. Thus, treating occupational upgrades as certificates and counting them toward the "66% by 2020" goal is a concern.

Rather than reporting 24,165 program certificates awarded from fiscal year 2011 to 2014, UCAT now reports 43 percent more total certificates (34,620), which includes occupational upgrades. Beginning with its 2013 annual report, UCAT retroactively adjusted its total certificate counts to include occupational upgrades for previous years in its historical tracking of progress toward the 2020 goal. We also found that reported counts are unreliable, as reported counts could not be replicated for fiscal years 2013 and 2014.

For the 2015 fiscal year, occupational upgrades have been restructured in UCAT policy. In addition to undergoing a name change to "occupational skills certificates," the amended UCAT policy should make certificate counts more reliable. Nonetheless, we believe that certificate counts are inflated by including these smaller student achievements.

UCAT Retroactively Identified Extra Certificates. Starting in fiscal year 2013, UCAT began including occupational upgrades in its

In its 2013 annual report, UCAT began reporting occupational upgrades as certificates.

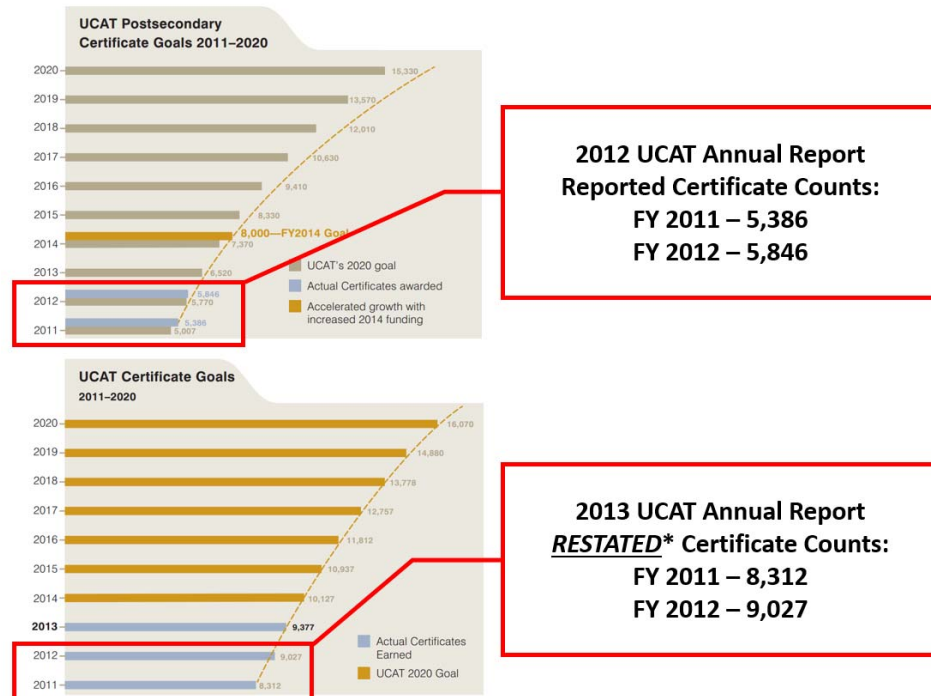
Occupational upgrades do not show on student transcripts and no official certificate was awarded.

Occupational upgrade counts are unreliable as reported counts for fiscal year 2013 and 2014 cannot be replicated.

certificate counts. Prior to then, UCAT only included program certificates in its certificate counts, as shown in Figure 2.3.

Figure 2.3 Occupational Upgrades Were Not Included in Certificate Counts Prior to FY 2013. In its 2013 annual report, UCAT restated prior certificate counts to include occupational upgrades.

In its 2013 annual report, UCAT restated its certificate counts to include occupational upgrades.



Source: UCAT's 2013 and 2012 Annual Reports

* Includes completers of program certificates and occupational upgrade students who completed 60+ hours within a board-approved program

The 2013 annual report shows many more certificates for the fiscal years 2011 and 2012 than had been previously reported. According to UCAT, occupational upgrades were included because the Governor's Education Commission was evaluating progress toward the "66% by 2020" goal during fiscal year 2013. They determined that program certificates alone did not sufficiently reflect "some college," which was the basis of the "66% by 2020" goal. Thus, 60-hour occupational upgrades was included. By including occupational upgrades, UCAT increased its certificates from 5,846 to 9,027 for fiscal year 2012 and from 5,386 to 8,312 for fiscal year 2011.

By including occupational upgrades and changing what is being measured, we question if the progress being reported by UCAT is what was intended when the goal was adopted. Initially, UCAT's performance focused on increases in program certificates, but now includes occupational upgrades, which are smaller achievements.

Occupational Upgrade Certificate Counts Are Unreliable. In its 2014 annual report, UCAT reported the following total certificates for the prior four years, which consist of a mix of program certificates and occupational upgrades.

Figure 2.4 Total Certificate Counts Include Many Occupational Upgrades. In its 2014 annual report, UCAT reported the following total certificates, which combined program certificates and occupational upgrades.

Fiscal Year	Program Certificates	Occupational Upgrades	Total Certificates	Percent Occupational Upgrades
2014	6,971	933	7,904	12%
2013	5,918	3,459	9,377	37%
2012	5,846	3,181	9,027	35%
2011	5,430	2,882	8,312	35%

Source: UCAT's 2014 Annual Report

As Figure 2.4 shows, occupational upgrades accounted for about one third of UCAT's total certificates from 2011 to 2013, but then declined to 12 percent in 2014. The number of occupational upgrade certificates reported dropped precipitously from 3,459 in 2013 to 933 in 2014.

We found the reported counts of occupational upgrades to be unreliable. First, UCAT could not document how the 933 occupational upgrades for the 2014 school year were calculated. Second, significant program changes that would justify the 73 percent drop in occupational upgrades were not identified. Thus, the number of occupational upgrades reported by UCAT should not be relied upon and included in UCAT's total certificate counts.

New Policy Should Improve Tracking, but Raises Questions about Meaningfulness of Certificates. Since occupational upgrades have historically been loosely defined and tracked, UCAT has attempted to increase their formality in policy during the past year. Occupational upgrades are being replaced by occupational skill certificates for fiscal year 2015. According to UCAT policy 200.4.4, occupational skill certificates will now be defined as:

Including occupational upgrades changed the basis for measuring UCAT's contribution toward Utah's "66% by 2020" goal.

UCAT cannot replicate its occupational upgrade counts or justify why they dropped in fiscal year 2014.

UCAT's new policy should make occupational skill certificate counts more reliable, but concerns about their meaningfulness still persist.

An official credential issued to a student by a campus registrar documenting that the student has completed a pre-defined course or set of courses approved as an occupational skills certificate by the campus board of directors in accordance with this policy. An occupational skills certificate shall provide mastery of a set of competencies that are documented as needed by one or more Utah employers.

We believe that this new policy address two issues with classifying occupational upgrades as a certificate. First, students will be receiving and official certificate, and second, the certificate should show on student transcripts. Since these achievements are now an official certificate, we anticipate that tracking and documentation will be more reliable.

Occupational skill certificates still represent significantly less instruction than program certificates.

While the prospect of more reliable tracking is an improvement, questions about the meaningfulness of different types of certificates remain. Compared to programs, occupational upgrades represent smaller achievements, and unlike programs, are not approved by the Council on Occupational Education. Historically, occupational upgrades required 60 hours of instruction, which is significantly less than the average of 465 hours for program certificates. (The wide range of hours required to earn a program certificate is discussed later.)

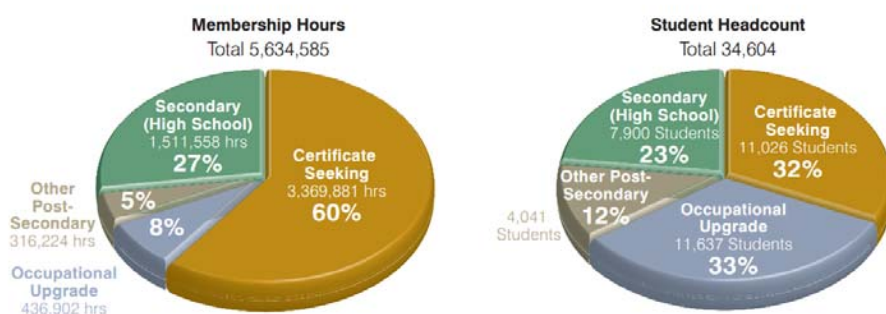
Since the policy quoted above is new, we could not assess its impact. However, the impetus behind the occupational skills certificate is to help meet the state's goal of having 66 percent of adults with a post-secondary degree or certificate by 2020. Obviously, the intent of the goal is to achieve a more highly trained and capable workforce. However, inherent in that type of goal is a risk that we achieve it in part by reducing the value of a certificate. Thus, UCAT and campus boards of directors will need to ensure that these certificates represent significant student achievements.

Completion Rates Are Only Meaningful for Program Certificate Seekers

Like certificates, completions is another measure of student achievement that requires careful understanding of its meaning. As described earlier, UCAT has four types of students. Although UCAT reports completion rates for all students, we think they are only meaningful for certificate seekers. Completion by certificate seekers means they have successfully finished an accredited program. For other types of students, including secondary, occupational upgrade, and other post-secondary, completion means they passed a course.

Students enroll in CTE programs to satisfy various objectives, which was discussed earlier in this chapter. Some students seek to finish their programs to become more employable, while others participate in a single course to acquire a required job-related skill or for personal interest. Figure 2.5 indicates that some types of students receive much more intensive training than others.

Figure 2.5 Membership Hours and Student Headcounts by UCAT Student Types. Program certificate seeking students account for 60% of teaching effort, but only 32% of students.



Source: UCAT Annual Report (December 2014)

As Figure 2.5 shows, program certificate seeking students account for 60 percent of the membership hours at UCAT campuses. Since they receive the majority of UCAT instruction, completion statistics should similarly focus on certificate seekers. However, UCAT's composite statistics rely on headcounts, and only one third of UCAT students are certificate seekers. Thus, other objectives overshadow the completion rates for certificate seekers who are focused on completing programs rather than courses.

Certificate seekers are the only group of students whose completion rate is based on finishing programs.

While UCAT's program completion rate is 72.3 percent, course completions inflate the rate to 87.6 percent.

Combining course completions with program completions results in an 87.6 percent composite completion rate reported by UCAT. Program completions, which are the most relevant completion metric, were significantly lower at 72.3 percent. As Figure 2.6 shows, course completions (in red) were added to the large program completions (in blue) to generate an inflated composite completion rate (in green).

Figure 2.6 High Completion Rates for Course Completions Overshadow UCAT's Program Completion Rate. Adding course completions to program completions combines dissimilar student achievements in the composite rate for the 2013-2014 school year.

Completion Basis	Programs	Courses	Mixed
<i>Included Classifications:</i>	<i>Certificate Seekers</i>	<i>Occupational Upgrades Other-Post Secondary Secondary</i>	<i>Composite</i>
Completers	5,467	20,518	25,985
Non-Completers	2,093	1,595	3,688
Completion Rate	72.31%	92.79%	87.57%

Source: UCAT Board of Trustees Meeting Materials (January 12, 2015)

According to UCAT's policy 205, the three student classifications in red classify a completer as a student who has completed or demonstrated "sufficient competency" in a course. In contrast, the certificate-seeking students in blue must complete a series of courses that constitute a program. Thus, the composite rate in green combines dissimilar student achievements.

To illustrate the greater significance of program completions over course completions, Figure 2.7 shows the average membership hours that were taken by the two groups of students.

Figure 2.7 Course Completion Students Require Much Less Instruction. The total membership hours and headcount for each student classification is presented for the 2013-2014 school year.

Completion Basis	Program	Course
<i>Included Classifications</i>	<i>Certificate Seeking</i>	<i>Occupational Upgrades Other-Post Secondary Secondary</i>
Membership Hours	3,369,881	2,264,704
Headcount*	7,560	22,113
Hours Per Headcount	446	102

Source: UCAT Board of Trustees Meeting Materials (January 12, 2015)

** This headcount excludes students who are still enrolled because these students will be reflected in subsequent years' reports.*

As Figure 2.7 shows, completing a course is a much easier than completing a program. UCAT provides 446 hours of instruction on average to its program-completing students, while its course completion students receive significantly less at 102 hours of instruction. Therefore the green composite rate in Figure 2.6 inappropriately counts students who pass a course the same as students who finish a program. We believe that their inclusion inflates the number of completions through a broad definition that includes course completions.

UCAT's composite rate is based on a methodology specified in its policy 205. Outcomes from dissimilar programs are combined and then reported to the Legislature. In contrast, the completion rates calculated for COE only apply to certificate seekers. Thus, we believe that the completion statistics reported to COE are more reliable than those calculated according to policy 205 because they are focused on program completions, which are the most relevant.

UCAT Has Relied on New Short Programs for Certificate Growth

Another trend that has diluted UCAT's completion statistics is that the number of certificates awarded for short programs has grown faster than those awarded for long programs. Much of the growth in UCAT's short program certificates comes from new programs added by some campuses in response to industry demand. However, each UCAT campus offers its own mix of programs and relies on short program certificates to different extents.

Because programs vary widely, UCAT's accrediting body focuses on program-level reporting rather than composite statistics. Evaluating UCAT's program certificates at the program level prevents short programs with a high-volume of certificates from diluting the results of longer traditional programs. Analysis of individual programs is an approach that UCAT campuses currently rely on to report completion statistics to its accrediting body.

Short Program Certificates Have Grown Faster Than Others.

In 2011, program certificates that took less than a quarter year (225 membership hours) for a full-time student to complete were 44 percent of all program certificates. By 2014, these short program certificates became the majority, representing 53 percent of all UCAT certificates awarded. Figure 2.8 shows the trends in the number of

While certificate seekers require 446 hours of instruction on average, other objectives only take 102 hours on average.

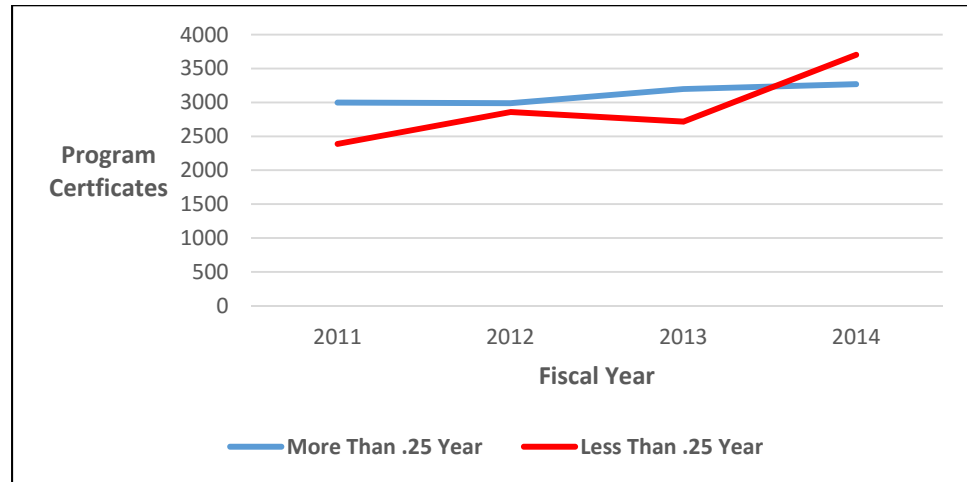
UCAT campuses exclude course completions in their rates reported to their accrediting body.

UCAT's short programs are growing faster than its longer programs.

The majority of UCAT program certificates now require less than a quarter year to complete.

program certificates awarded by UCAT, based on whether they took more or less than a quarter year to complete. This figure includes secondary and post-secondary certificates, because UCAT's data did not distinguish between the two groups prior to fiscal year 2014.

Figure 2.8 Short Program Certificates Have Surpassed Those from Longer Programs. The graph shows how the two groups of certificates have grown over time for all students.



Source: Data from UCAT Administration

As Figure 2.8 shows, the growth in short certificates is higher than in longer programs. From 2011 to 2014, the number of short certificates increased significantly from 2,389 to 3,703, representing a 55 percent increase. Over the same time period, longer certificates grew at a much slower rate, increasing by 9 percent from 2,996 to 3,268.

New Program Certificates Are Shorter than UCAT's Average Historically. UCAT's total program certificates experienced the most growth in Figure 2.8 from fiscal year 2013 to 2014, increasing by 1,053 certificates. Short certificates requiring less than a quarter year to complete accounted for 987 (93 percent) of the additional certificates. Contributing most to these gains were campuses' new short programs.

Utah Basin Applied Technology College's (ATC) industrial safety programs, which were introduced for fiscal year 2014 and produced 317 certificates, take between 40 and 100 hours to complete. In addition, Dixie ATC introduced 8 new programs for fiscal year 2014 that generated 195 program certificates, and nearly all (187) of them required less than a quarter year to complete. Thus,

Since fiscal year 2011, short program certificates have grown by 55 percent while other programs have grown by 9 percent.

Short program certificates accounted for 987 of the additional 1,053 certificates that were earned in 2014 compared to 2013.

New programs at Uintah Basin and Dixie ATC generated 504 short program certificates.

UCAT is increasingly creating opportunities for post-secondary students who are seeking short training programs rather than longer training programs.

UCAT Campuses Rely on Short Programs to Different Extents. Figure 2.9 shows the average program certificate length, certificates awarded, and membership hours associated with those certificates for each UCAT campus during the 2013-2014 school year. This figure only shows statistics associated with post-secondary students. Post-secondary students earned most of the new short program certificates at Uintah Basin and Dixie ATC.

Figure 2.9 The Average Length of Certificates Vary Greatly among UCAT Campuses. Campuses with a similar number of membership hours are grouped to show the differences in the average number of hours required for each campus's certificates.

Campus	Membership Hours for Certificates	Certificates Awarded	Average Hours Per Certificate
Ogden-Weber (OWATC)	691,308	999	692
Davis (DATC)	755,769	1,241	609
Bridgerland (BATC)	419,062	809	518
Mountainland (MATC)	415,948	988	421
Southwest (SWATC)	86,284	212	407
Tooele (TATC)	72,954	193	378
Dixie (DXATC)	152,040	420	362
Uintah Basin (UBATC)	154,336	742	208

Source: Data from UCAT Administration

In Figure 2.9, two pairs of UCAT campuses provide insight on the impact of short program certificates on certificate counts and membership hours.

The relationship between UBATC and DXATC is intriguing as both campuses provide similar amounts of membership hours that go toward program certificates. However, UBATC generates 77 percent more certificates because its certificates are so much shorter. UBATC's certificate count has benefitted from new short programs required by the oil and gas industry in the Uintah Basin.

Similarly, MATC and BATC provided similar membership hours for their program certificates, roughly 416,000 and 419,000 respectively. However, their certificate counts are significantly different, with MATC generating 22 percent more certificates. MATC has developed partial program certificates that are allowed according

Despite similar hours of instruction for certificates at two ATCs, short programs generate higher program certificate counts at one ATC.

UCAT reports composite rates to the Legislature, but program-level rates to its accrediting body.

Program-level completion rates avoid short, high-volume programs from overshadowing longer programs with fewer graduates.

to UCAT policy. In addition to earning a program certificate in its welding program, students can earn several individual certificates for different welding processes. For the 2013-2014 school year, one student in MATC's welding program earned six partial-program certificates and one full-program certificate, and another earned both full-program certificates (pipe welding processes and welding technology) as well as two partial-program certifications. Other campuses provide similar opportunities to earn multiple partial-program certificates, which are all included in annual certificate counts.

Program Level Reporting Helps Prevent Short Programs from Diluting UCAT Statistics. While short-term certificates provide value, it is insightful to understand their increased use among UCAT campuses. Since campuses are relying on them to different extents, it is again important that completion analysis avoids consolidating them into a single composite rate. UCAT has adopted two methodologies to report completions. The major difference in these methodologies is that the statistics reported to the Legislature via UCAT policy 205 focus on composite completion statistics, but the statistics reported to the Council on Occupational Education (COE), the accrediting body for UCAT campuses, focuses on program level statistics.

As discussed in our prior audit, *A Performance Audit of UCAT Programs and Funding (February 2013)*, prior to fiscal year 2011, COE evaluated completion rates on a campus-wide basis. The change to program-level reporting promoted better accountability. Composite statistics allowed short programs with a high volume of completions to overshadow longer programs with fewer completions. Because COE wanted each program to stand on its own merits, its methodology now requires program-level completion rate calculations. We still agree that program-level completion rates are the better option, so short, high-volume credential programs do not overshadow programs that produce fewer credentials that take longer to earn.

USHE Could Report Completion Rates for Some Individual Programs

Earlier in this chapter, we summarized reasons why the Commissioner's Office of Higher Education could not calculate system-wide completion rates. In this section, we detail how the count of students who intend to complete a program are being distorted by students seeking non-CTE credentials. While these issues apply to some USHE programs, others are not affected and completion rates can be calculated for these programs. Specifically, short programs and those that require students to apply before they enroll have reliable student counts where completion rates can be calculated. Thus, we believe that completion rates can be reported for some USHE CTE programs. Since institutions already offer unique mixes of CTE programs, program-level analysis of completions that can use completion rates when available seems more beneficial than composite completions currently being reported.

While USHE cannot report completion rates system-wide, rates can be calculated for some programs.

Counts of Students Intending to Complete CTE Programs Are Distorted by Non-CTE Students

The number of students who participate in courses required for a CTE program seems like a good measure of students who intend to earn a CTE credential. However, these participation statistics are increased by students who are seeking non-CTE credentials, including students seeking bachelor's degrees. Thus, the number of students who are truly seeking a CTE credential (certificate or associate's degree) is difficult to determine for some USHE CTE programs.

Specifically, we identified two instances in which non-CTE students are increasing participation counts. The first includes those instances where a non-CTE bachelor's degree and CTE associate's degree programs require the same course. Participation in these courses creates confusion as to whether individual students intend to earn a bachelor's degree or an associate's degree. The second instance is when CTE courses are classified as general education. In these cases, the number of students who intend to earn the particular CTE degree is also distorted.

Based on these instances, we agree with the Commissioner's Office of Higher Education that the number of students who intend to earn CTE credentials in some programs is not clearly identified. Thus, a completion rate would not be accurate or reliable.

Bachelor's degrees are not CTE credentials, but some require CTE courses.

Some CTE courses satisfy general education requirements for associate's and bachelor's degrees.

CTE Courses Required for Bachelor's Degrees Increase

Participation. Some bachelor's degree programs, which are not CTE programs, require foundational courses that are classified as CTE because they are required by CTE credentials. For example, foundation accounting courses at Utah Valley University (UVU), such as Accounting 2010 - Financial Accounting, are considered CTE because UVU offers an associate's degrees in accounting. However, bachelor's degree students are also required to take these courses. For institutions, such as Weber State University, that do not offer a CTE associate's degree in accounting, similar foundation accounting courses do not affect CTE participation counts.

During the 2013-2014 school year, 851 UVU students took Accounting 2010, and all were included in UVU's CTE participation. However, only 36 students earned associate's degrees, which is the CTE credential. Thus, 96 percent of the students in this class are earning a bachelor's degree or may not finish any credential, which increases CTE participation but not the corresponding CTE credentials. Consequently, discerning the intentions of the 851 students who took this course is unrealistic and will change over time. Thus, programs like this, where CTE credential programs share courses with bachelor's degree programs, make it difficult to identify how many students intended to earn a CTE credential.

CTE Courses Classified as General Education Also Increase

Participation. Some institutions include CTE courses as options to fulfill general education requirements for associate's and bachelor's degrees. For example, Southern Utah University (SUU) has 143 approved CTE courses, and one course fulfills the institution's computer literacy component of its general education. The course is classified as CTE because it is required by the Geographic Information Systems (GIS) certificate. During the 2013-2014 school year, however, 1,340 SUU students passed the course, but only 3 did so to earn the GIS certificate. Again, the 1,340 students who took this course complicate the task of identifying how many students intended to earn the CTE certificate.

Some USHE Programs Can Generate Completion Rates

While identifying the number of students who intend to earn a CTE credential is difficult for some programs, other programs make the task feasible. Specifically, we identified two program characteristics that can make identifying students who intend to earn a CTE credential easier and more reliable. First, some USHE programs require program acceptance to enroll. For these programs, students clearly document their intentions by applying for the program. The second scenario is for non-credit CTE programs. These programs are shorter in duration and students must declare their program of study. Consequently, clearly documented lists of students who intend to complete CTE programs become available to calculate completion rates for some USHE programs. Thus, while USHE cannot calculate completion rates for all CTE programs, it could do so for some CTE programs.

Program Acceptance Requirements Document Students' Intentions. Students planning to enroll in Weber State University's (WSU) associate's degree nursing program must be admitted to the university and then also apply for admission into the program. Through this process, WSU's associate's degree nursing program ascertains how many students enroll and intend to complete the program. Consequently, the program is able to report completion rates to the school of nursing's advisory board. For the 2013-2014 school year, the program reported 343 potential graduates and 339 actual graduates, which results in a completion rate of 98.8 percent.

Medical-related associate's degree programs at other institutions, such as Salt Lake Community College's dental hygiene program, and non-medical programs, such as the cosmetology program at Snow College, also have program acceptance processes that clarify who intends to complete the program. With more reliable information about students' intentions, completion rates can be calculated for these programs.

Students Must Declare Their Program of Study for Short Programs. The school of applied technology at Salt Lake Community College (SLCC), which provides the institution's non-credit instruction, requires that students declare a program of study as part of the application process. This includes SLCC programs such as professional truck driving and network administration. Since these

The number of students who intend to earn a CTE credential can be identified for some programs.

Students declare their objectives when they must apply and be accepted to some CTE programs.

Students in short programs have less time to transfer to another program.

non-credit programs are so short in duration, unlike associate's degree programs (see Figure 2.2 on page 10), the likelihood that students will transfer to other programs or change their program of study is lower.

To illustrate how this can work beyond SLCC, we reviewed the CNA program at Dixie State University (DSU). This program requires a single four-credit course. For the 2013-2014 school year, 229 students took this class and 197 students earned a CNA credential. Consequently, we calculate a completion rate of 86 percent for DSU's CNA program. Other short programs, where students declare their program of study, or a unique course required for completion, could be scenarios where completion rates might be calculated.

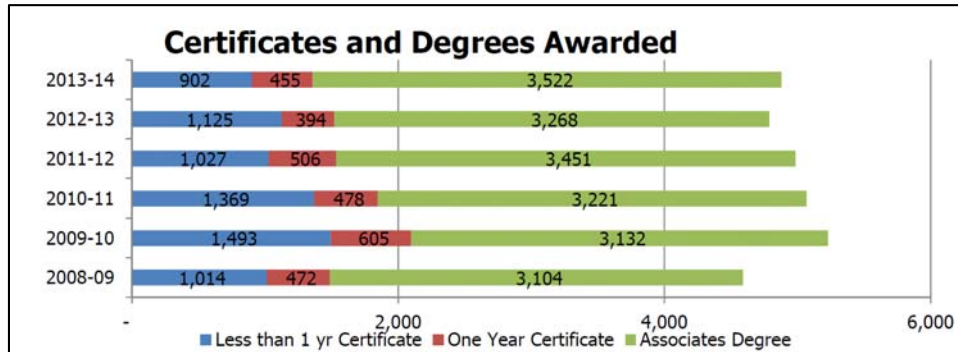
Unique Program Mixes Necessitate Focus on Program-Level Statistics

As was shown in Figure 2.2, associate's degrees are the most common form of CTE credentials that are awarded by USHE institutions. Each institution awards its own mix of these credentials, but even those that seem similar rely on different CTE programs to generate their credentials, which are the only outcome that USHE considers a completion. Knowing the significance of a program based on the number of students who complete it is an important quality measure of a CTE program. Combining completion numbers with completion rates (when available) provides a more comprehensive evaluation of a program. Thus, individual program analysis, rather than institution or USHE completion statistics and rates, is more insightful.

As part of its annual CTE report to the Legislature's Education Interim Committee, the information in Figure 2.10 shows that associate's degrees have been its primary CTE credential awarded over the past six years. Since USHE does not consider early hires and other student outcomes as completion, these credential counts represent USHE's completion counts.

Each institution offers a unique mix of CTE credentials.

Figure 2.10 USHE's Annual Report Includes Certificates and Associate's Degrees in Completion Counts. UHSE's October 2014 annual report shows historically how many CTE certificates and associate's degrees were awarded by its institutions each year.



Source: USHE's Career and Technical Education Annual Report (October 2014)

As Figure 2.10 shows, associate's degrees were the majority of CTE credentials awarded by USHE institutions, accounting for 72 percent (3,522 of 4,879) of credentials awarded during the 2013-2014 school year. This trend has existed for the previous five years.

USHE institutions each focus on a different mix of credentials that causes some to rely heavily on associate's degrees while others are focused more on certificates. Figure 2.11 shows the mix of CTE certificates (less than one year and one year) and associate's degrees (two years or more) awarded during the 2013-2014 school year.

Some USHE institutions still award a high number of CTE certificates.

Figure 2.11 Each USHE Institution Awards Different Amounts of CTE Credentials. This figure allocates the certificates and associate's degrees in Figure 2.10 to the individual institutions.

Institution	Certificates		Associates Degrees		Total Credentials
	Count	Percent	Count	Percent	
Salt Lake Community College (SLCC)	645	31%	1,408	69%	2,053
Utah Valley University (UVU)	82	9%	786	91%	868
Weber State University (WSU)	47	6%	806	94%	853
Dixie State University (DSU)	344	64%	197	36%	541
Utah State University (USU)*	190	61%	120	39%	310
Snow College (SNOW)	44	19%	193	81%	237
Southern Utah University (SUU)	5	29%	12	71%	17
Total	1,357	28%	3,522	72%	4,879

Source: Data from the Commissioner's Office of Higher Education
 *Utah State University's statistics include those for USU Eastern

The significance of CTE programs, like an associate's degree in nursing, varies by institution.

USHE institutions can provide completion rates for some of their programs.

Although Figure 2.11 shows that some USHE institutions offer similar mixes of associate's degrees and certificates, the significant programs that drive these counts vary from institution to institution. Thus, program-level analysis is insightful.

For example, CTE associate's degrees at UVU and WSU account for over 90 percent of their credential counts. However, the programs that contribute to those counts are different. At WSU, its largest CTE associate's degree program is in nursing, which accounts for 47 percent (378 of 806) of its associate's degrees. Thus, this program is the foundation program for WSU's CTE efforts. In contrast, the same program at UVU accounts for 10 percent (82 of 786) of associate's degrees, and two other programs, fire science and business administration, generate more associate's degrees. Consequently, it is important to understand what programs are generating completions.

Combining the significance of a program with an available completion rate can make program-level analysis quite insightful. Using the example of WSU's associate's degree in nursing program as an example, not only is it the foundation program for its CTE offerings, but as was discussed earlier, it also has a 98.8 percent completion rate. Consequently, the program is not only high quality in its credential output but is also doing well as it efficiently retains students who complete the program.

In certain instances, USHE could work with its institutions to supplement completion counts with completion rates. We recommend that USHE determine instances where completion rates can be calculated and would be insightful to the Legislature. As discussed earlier, not all programs will be able to generate reliable completion rates. However, in some situations, it is possible for completion rates to be calculated as was requested in this audit.

Recommendations

1. We recommend that UCAT report completion rates consistent with the significance of the accomplishments. Consequently, program graduates should not be mixed with less significant course completions. Also, program graduates counted in the completion rates should comprise an amount of student hours consistent with other programs.

2. We recommend that the UCAT Board of Trustees ensure that credentials awarded by UCAT campuses represent a significant accomplishment by students.
3. We recommend that USHE calculate completion rates for individual programs where the calculations are feasible.

This Page Left Blank Intentionally

Chapter III

Provider Methods Make Job Placement Rates Not Comparable

In the audit request, the Legislative Education Task Force asked for job placement rates across Utah's career and technical education (CTE) providers. A job placement rate is used to measure the relative success of CTE providers to prepare program graduates to enter the workforce. Two components must be known to calculate a job placement rate: (1) the number of students who complete programs, as previously detailed in Chapter II, and (2) the number of those same students who found new employment. However, during this audit we found that CTE providers' placement definitions or data reporting methodologies do not align with a straightforward placement rate calculation. Instead, significant differences in providers' placement calculation methods as well as data concerns make reported job placements not comparable.

The Utah College of Applied Technology (UCAT) and the Utah System of Higher Education (USHE) are Utah's two CTE providers that are responsible for reporting job placement rates to the Legislature. Across its eight-campus system for the 2013 to 2014 school year, UCAT reported a placement rate of 90 percent, following methods created by its campuses' accrediting body. For the same school year and according to its own chosen method, USHE reported an overall placement rate of 77 percent across its seven institutions that participate in providing CTE. Yet, because of different calculation methods and data concerns, we do not believe these reported placement rates adequately address the audit request's objective for a valid accounting of CTE job placement rates. Furthermore, a meaningful analysis of placement rates is best accomplished at a level where programs show similarities.

In response to the audit request, this chapter details placement calculations reported by UCAT and USHE. Specifically, provider differences in placement rate elements are first summarized in the first section of this chapter. Then we detail how UCAT placements exclude some students, include continuing education, and present validity concerns. Lastly, we detail how USHE job placements are reported system-wide and have data limitations.

Different calculation methods and data concerns make placement rates not comparable.

Providers' Placement Calculations Have Significant Differences

During this audit, we found that UCAT and USHE's job placement calculations include many notable differences. It is important for policymakers to recognize that these differences make the reported placements not comparable between CTE providers. Also, the reported placements may not adequately address the audit request's objective for a valid reporting of job placements for CTE programs.

UCAT's Placement Population Group Is Narrow While USHE's Is Broad

UCAT and USHE utilize different population groups to calculate their individual placement rates. Through the use of calculation exclusions, UCAT campuses have a more narrow definition of which CTE program completers should be included in placement tracking. In contrast, USHE produced placement rates comprised of a broad graduating group of students that come from all approved higher education programs (not just CTE programs).

UCAT excludes some CTE completers from consideration in placement rates.

UCAT Campuses Exclude Some Students from Completion Counts but USHE Does Not. UCAT campuses' accreditation body (The Council on Occupational Education or COE) instructs schools to exclude certain student groups from consideration in placement rate calculations. This, in effect, holds campuses harmless for unplaced students in situations deemed to be beyond the control of school officials. For the 2013 to 2014 school year reporting, 7 percent of all UCAT completers were excluded from the placement rate calculations. Students can be excluded for the following reasons: (1) completers waiting to take a license exam or receive exam results, (2) completers unavailable for employment (such as due to pregnancy or illness), or (3) completers who refuse employment. USHE institutions do not practice a similar exclusion policy but track the job placement status for all program completers.

USHE includes some non-CTE completers in placement rates.

Unlike UCAT, USHE Included Non-CTE Program Completions in Job Placement Reporting. Although USHE tracks the number of CTE-only completions at its institutions (as discussed in Chapter II), its recent reporting of job placements did not utilize this CTE-only value as the population group. Instead, USHE reported job placements system-wide. This means that any job placement is

counted by USHE, whether or not it is related to a CTE field of study. In contrast, UCAT campuses offer only CTE-designated programs and therefore calculate CTE-only placements.

UCAT and USHE Measure Placement Success Differently

In addition to UCAT and USHE defining placement population groups differently, they also use different measurement methods to define a successful student job placement. First, UCAT includes a student's continuing education as a successful placement while USHE does not. Second, USHE counts any job placement as a success while UCAT only counts a job if it is related to a student's field of study. Lastly, while UCAT's method of collecting placement data can capture various types of employment, USHE's reliance on state wage records misses many potential employment groups.

UCAT Counts Continuing Education as a Successful Placement but USHE Does Not. COE policy instructs UCAT campuses to include both job placement and continuing education in counts of successful student placements. In contrast, USHE institutions only track and report job placement outcomes as the measure of success. Thus, UCAT's placement rate should not be interpreted as a job placement rate consistent with the audit request. A limited review of one UCAT campus's data showed that continuing education accounted for 11 percent of that school's successful placements and that certain program types generally led to continuing education.

USHE Counts Any Employment as a Successful Placement but UCAT Does Not. According to USHE practice, any identifiable student employment following graduation is counted as a successful job placement. To identify the employment of its graduates, USHE relies on state unemployment insurance records. These records do not provide information such as job title or responsibilities. Thus, the records do not provide USHE with the ability to distinguish whether or not employment is related to student education. USHE also cannot distinguish if employment is new employment or if it existed before a student's graduation. Alternately, to be considered a successful job placement under COE policy, UCAT counts only job placements related to a student's educational program. UCAT accomplishes this by relying on surveys of students and employers following program completion to collect a student's job title and responsibilities. Also,

UCAT's placement rate should not be interpreted as a job placement rate consistent with the audit request.

Employment records do not provide USHE with the ability to know if employment is related to student education.

USHE's reliance on state wage records misses many potential employment groups.

UCAT's enrollment process is able to document existing employment for entering students.

USHE's Job Placement Data Only Captures a Subset of Possible Employment Groups but UCAT's Does Not. While the self-reported placement data tracked by UCAT can capture various types of employment, the state unemployment insurance records utilized by USHE do not capture certain segments of the employed population. This includes self-employed individuals, federal employees, and those employed out of state.

Considering these differences in UCAT's and USHE's reported placement data, we caution against placement rate comparisons between the two CTE providers. We also question the accuracy and reliability of the reported data and do not believe it adequately addressed the audit request objective. In the next sections, we will discuss the details of UCAT and USHE placement data and reporting methods.

UCAT Placements Exclude Some Students, Include Continuing Education, and Present Validity Concerns

UCAT campuses are required to annually calculate placement rates for each of their accredited programs. According to COE policy, placement data for each student must be "accurate and verifiable." To meet these requirements, campus staff follow up with students after program completion through survey methods to collect employment status. These survey methods include:

- Questionnaire responses from students
- Telephone logs created by school staff
- Emails, text messages, and social media posts

Following the end of any school year, UCAT campuses have six months to finalize placement reporting to COE.

After reviewing UCAT's placement report, we do not believe it adequately addresses the audit request objective for accurate job placement rates. First, UCAT follows policy that excludes some student groups from placement reports. Second, UCAT counts continuing education as a successful placement. Third, UCAT's survey

methods focus on instructors reporting student placements, raising independence concerns that can affect data validity. While UCAT participates in a few processes to address placement validity concerns, we do not believe they are rigorous.

As background, prior to fiscal year 2011, the Council on Occupational Education (COE), which accredits each UCAT campus, evaluated a school's placement outcomes on a campus-wide basis. In fiscal year 2011, COE began evaluating placement outcomes on an individual program basis. COE requires that each accredited program at the eight UCAT campuses must meet a minimum annual placement success rate of 70 percent or face disciplinary action of creating a corrective action plan.

The UCAT and USHE data presented in the following figures (Figure 3.1 to 3.4) are summarized by campuses. While this summary data provides an overall indication of job placement rates, it is important to note that CTE programs vary significantly in length and scope of instruction. Thus, a meaningful analysis of placement rates is best accomplished at a level where programs show similarities.

Policy Allows Some Students to Be Excluded From UCAT Placement Rate Calculations

COE policy identifies the reasons some unplaced completers are beyond the control of UCAT campuses. Therefore, placement calculations exclude students who fall within certain situations. Figure 3.1 shows the percent of students who were excluded from placement calculations at each UCAT campus following the 2013 to 2014 school year.

A meaningful analysis of placement rates is best accomplished at a level where programs show similarities.

Figure 3.1 Policy Allows Certain Students to Be Excluded from UCAT Placement Calculations. COE directs UCAT campuses to exclude students from placement rate calculations for certain reasons. For the 2013 to 2014 school year, campus exclusions ranged from 0.5 to 14 percent of total program completers.

Campus	Number of Students Who Completed Before Exclusions	Number of Students Excluded from Calculation	Percent of Students Excluded from Calculation
Bridgerland (BATC)	775	105	14%
Davis (DATC)	1,257	87	7
Dixie (DXATC)	138	2	1
Mountainland (MATC)	769	64	8
Ogden-Weber (OWATC)	1,435	99	7
Southwest (SWATC)	193	16	8
Tooele (TATC)	150	15	10
Uintah Basin (UBATC)	834	4	0.5
UCAT	5,551	392	7%

Source: UCAT Campuses' 2013-2014 CPL Reports

7% of program completers were excluded from UCAT placement rate calculations.

As Figure 3.1 shows, 7 percent of students completing UCAT programs were excluded from placement rate calculations for the 2013 to 2014 school year. COE policy indicates that completing students can be excluded for the following reasons:

- Completers waiting to take a licensure exam or receive results
- Completers unavailable for employment
- Completers refusing employment

The largest portion of students who are excluded from placement statistics are those who are waiting for licensure, which accounts for about 43 percent of total exclusions. For example, OWATC reports that, while 22 students passed a licensure exam following completion of its Real Estate Agent program, 36 other students were either waiting to take the exam or receive exam results at the time of placement reporting. Students are considered unavailable for employment if they are pregnant, dealing with serious health-related issues, or deceased, which accounts for about 36 percent of total exclusions. Lastly, schools that report students who refuse employment must document the students' failure to keep interview appointments or refusals of employment offers, which accounts for 21 percent of total exclusions.

It is important to note that the placement status of excluded students is not re-verified and reported at a later time. Thus, UCAT campuses are not ultimately held accountable for the placement of those students who are excluded. We believe it would be valuable to determine whether excluded students eventually obtain training-related employment. After exclusions are accounted for, UCAT campuses identify those remaining completers who either found successful placement or were unplaced.

UCAT Counts Training-Related Employment and Continuing Education as Successful Placements

The vast majority of placement outcomes reported by UCAT are considered successful placements. Figure 3.2 shows the UCAT placement calculation and the resulting placement rate for the number of completing students after exclusions for the 2013 to 2014 school year.

Figure 3.2 Most Students Completing UCAT Programs Obtain Successful Placements. UCAT reports that 90 percent of completing students during the 2013-2014 school year were successfully placed.

Campus	Number of Students Who Completed After Exclusions	Number of Successful Placements	Percent Successful Placements
BATC	670	571	85%
DATC	1,170	1021	87
DXATC	136	132	97
MATC	705	613	87
OWATC	1,336	1,251	94
SWATC	177	149	84
TATC	135	117	87
UBATC	830	799	96
UCAT	5,159	4,653	90%

Source: UCAT Campuses' 2013-2014 CPL Reports

As Figure 3.2 shows, UCAT reported an overall placement rate of 90 percent for the 2013 to 2014 school year. However, there are many calculation conditions to consider for this rate. For example, in addition to previously mentioned exclusions, a job placement is only deemed successful if the employment is related to the student's educational program. UCAT campus staff make this assessment based on a COE policy that states that a placement can be training related "regardless of whether the work title specifically references the program of study."

It would be valuable to know if UCAT's excluded students later obtain training-related employment.

UCAT campus staff assess whether jobs are related to the student's training.

UCAT's placement rate includes continuing education in addition to jobs.

During the audit, we conducted a limited review of student employment that was classified as training-related by UCAT campuses to determine if the classifications were reasonable. After we reviewed job titles associated with almost 2,000 reportedly related placements at three UCAT campuses (Ogden-Weber, Davis, and Mountainland), UCAT's related-placement counts appear to be reasonably valid, as the vast majority (almost 95 percent) appeared to be training-related based solely on job titles, which is a more stringent standard than that prescribed by COE.

In addition to counting training-related employment, COE policy allows UCAT campuses to count students who continue their education as successful placements. Thus, UCAT's reported placement rate should not be considered an accurate job placement rate as asked for in the audit request. In contrast, USHE does not count continuing education as a successful job placement.

While UCAT does not report to COE the number of students placed in jobs versus continuing education, we conducted a limited review at Ogden-Weber Applied Technology College (OWATC) to understand the extent of continuing education being counted as successful placements. We found that training-related job placement accounted for 89 percent of OWATC's successful placements and continuing education accounted for 11 percent.

Continuing post-secondary education at OWATC was most common in the nursing assistant program. The program had successful placements for 153 students, which was 12 percent of all successful campus placements. However, the program accounted for a disproportionately high percent of students who continued their education (47 percent). Similar observations were made regarding other nurse assistant programs, which appear to be a stepping stone for students' other post-secondary education endeavors.

UCAT Counts Students with Unrelated Employment or Unknown Status as Not Successfully Placed. UCAT reports that only 10 percent of program completers following the 2013 to 2014 school year were not successfully placed. COE instructions require students who are in the process of looking for employment to be considered unsuccessful placements. Students whose status is unknown are also included in this group. We believe this is an important distinction because campuses will be held accountable if

they lose track of students after program completion. Students still seeking employment or whose status is unknown account for 69 percent of unsuccessful placements.

As previously mentioned, only employment that is related to a student's training is considered a successful job placement by UCAT. Therefore, UCAT records show that students obtaining employment unrelated to their training is an unsuccessful job placement, accounting for 31 percent of total unplaced completers. USHE, on the other hand, does not have a process to identify whether employment is related or unrelated to a student's education. Thus, USHE counts all employment placements as successful placements.

UCAT's Data Lacks Independence And Rigorous Validation Methods

As previously mentioned, UCAT collects placement outcomes through institutional survey methods. Program instructors are typically tasked with conducting these surveys because of their classroom relationships with students. While we agree with UCAT officials that involving program instructors in placement surveys can improve student response rates, the process also lacks independence. Since it is the UCAT instructors' responsibility to prepare students for employment, tasking them with collecting placement outcomes essentially makes them responsible for reporting their own success or failure. This situation presents the risk of injecting bias into the reporting process, which can negatively impact the accuracy and reliability of UCAT's placement data.

It appears that COE recognizes this lack of independence in placement reporting and therefore requires the following two oversight processes:

- **COE Reaffirmation Reviews:** As part of each campus's accreditation review at least every six years, COE review teams verify placement records over the phone for five graduate completers and five non-graduate completers.
- **Employer Advisory Councils:** Twice a year, employers that hire students from UCAT programs provide guidance on program curricula and performance. UCAT campus staff report these councils provide an opportunity for employers to informally review reported student job placements.

Having instructors conduct placement surveys improves response rates, but risks injecting bias into the process.

These reviews that confirm students were employed with a specific employer can provide some assurance of the validity of student employment. However, we believe they are too infrequent, limited, or informal to provide a reasonable assurance of placement accuracy and reliability.

In addition to the two official COE validation methods, staff at one UCAT campus we visited during our audit indicated they have implemented an additional placement verification method. Mountainland Applied Technology College (MATC) staff explained that they conduct follow-up surveys of all student-reported employers to verify job placements. Campus staff said the response rate for employer surveys is only about 15 to 20 percent.

It appears that UCAT is also attempting to address data validity concerns. UCAT recently hired an independent auditor to review reported placement outcomes. However, the results of this review were not available during our audit, so we were unable to assess the findings and methodology of the independent auditor.

We also interviewed a sample of UCAT's COE-accredited peers in other states. We found that UCAT is generally consistent with its peers in collecting placement data through institutional survey methods.

USHE Placements Are Reported System-Wide and Have Data Limitations

USHE staff report employment outcomes for all graduates from approved higher education programs. Job placement data is compiled by matching student graduation information with the unemployment insurance (UI) database maintained by the Department of Workforce Services (DWS). This data match option is more cost effective than the labor-intensive survey process used by UCAT, which requires staff to follow up with every student. Unlike UCAT, USHE does not use a method that excludes some graduates from placement calculations.

After review of USHE's most recent job placement reporting, we do not believe it adequately addresses the audit request's objective for an accurate reporting of CTE job placement rates. First, USHE's job placement statistics are reported for its entire system and most are for non-CTE program graduates. Second, while utilizing DWS data to

It appears that UCAT is attempting to address data validity concerns.

UCAT's placement reporting method is similar to that of its peer institutions.

USHE's job placement data is compiled from the state unemployment insurance database.

document employment may be cost effective, this methodology has three significant limitations: 1) the data does not contain information to determine if a student obtained training-related employment, 2) the data does not indicate if employment was obtained before or after graduation, and 3) the data is not a comprehensive source of employment outcomes. The first and second limitations indicate USHE's reported job placements may be overstated. The third limitation indicates the reported job placements may be understated.

USHE's methodology is cost effective, but has significant limitations.

In addition, while USHE relies on state wage records for job placement reporting, individual institutions and internal departments collect additional placement information for program graduates. We believe USHE may find value in this institutionally-collected data and should determine if it merits incorporation into current system-wide job placement reporting.

USHE's Job Placement Outcomes Are System-Wide And Most Are Not for CTE Program Graduates

During the Legislature's 2015 General Session, USHE reported job placement rates for all graduates for the 2013 to 2014 school year. USHE submitted the report in response to intent language adopted by the Legislature's Higher Education Appropriations Subcommittee during the 2014 General Session. Specifically, the committee wanted to know "job placement rates following graduation by classification of instructional program (CIP) where feasible." CIP codes are a standardized program listing that includes CTE programs as well as academic programs. Therefore, USHE's job placement report was system-wide, including more than just CTE programs. In fact, we estimate that most reported employment placements are for graduates from non-CTE programs.

During the audit, staff from the Commissioner's Office of Higher Education told us that CTE-only placement information is not currently available because they do not regularly work with that data. However, if the Legislature wanted this level of analysis, staff indicated they could produce a response after defining the data request parameters.

USHE does not currently have CTE-only placement information.

Figure 3.3 shows the system-wide placement rates for all certificate program graduates that were reported by each of the seven USHE institutions that provide CTE credentials (the University of Utah does not participate in CTE programs). Unlike UCAT, which excludes

some students from placement calculations, all students completing USHE certificate programs, including non-CTE programs, are included.

Figure 3.3 USHE Job Placement Rates Reported for Certificates. For the 2013-2014 school year, USHE reports that 78 percent of all students graduating with a certificate had employment.

Institution	Certificate Graduates	Graduates Employed	Certificate Placement Rate
Utah State University (USU)*	302	217	72%
Weber State University (WSU)	64	45	70
Southern Utah University (SUU)	19	11	58
Snow College (SNOW)	204	160	78
Dixie State University (DSU)	383	302	79
Utah Valley University (UVU)	27	23	85
Salt Lake Community College (SLCC)	561	460	82
Total	1,560	1,218	78%

*Source: USHE Report Submitted to the Higher Education Appropriations Subcommittee (2/9/15).
* Utah State University's statistics include those for USU Eastern*

78% of USHE's students earning certificates had a wage record in the unemployment insurance database.

As shown in Figure 3.3, USHE institutions that provided CTE programs produced over 1,500 certificate graduates during the 2013 to 2014 school year. Over 1,200 of those graduates were found to have a wage record in the UI database maintained by DWS. Thus, USHE had a certificate job placement rate of 78 percent for that school year. Again, this job placement rate is reported system-wide – meaning it is not a CTE-only placement rate. Also, some important limitations to the data used to calculate this placement rate are discussed in the next section of this chapter.

In addition to certificate program credentials, USHE offers associate's degrees while UCAT does not. In the 2013 to 2014 school year, USHE produced over six times more associate's degree graduates at CTE-offering institutions than certificate graduates. However, most associate's degrees awarded do not come from CTE programs. Figure 3.4 shows the USHE associate's degree placement rate for that school year.

Figure 3.4 USHE Job Placement Rates Reported for Associate's Degrees. For the 2013-2014 school year, USHE reports that 76 percent of students who graduated with an associate's degree had a wage record in Utah's unemployment insurance database.

Institution	Associate's Degree Graduates	Graduates Employed	Associate's Degree Placement Rate
USU*	850	578	68%
WSU	1,965	1,551	79
SUU	420	279	66
SNOW	720	544	76
DSU	1,121	857	76
UVU	1,694	1,212	72
SLCC	3,474	2,797	81
Total	10,244	7,818	76%

Source: USHE Report Submitted to the Higher Education Appropriations Subcommittee (2/9/15).

** Utah State University's statistics include those for USU Eastern.*

76% of USHE's students earning associate's degrees had a wage record in the unemployment insurance database.

As shown in Figure 3.4, USHE CTE-offering institutions produced over 10,200 associate's degree graduates during the 2013 to 2014 school year. Just over 7,800 of the graduates had a wage record in the state's UI database. Thus, USHE had a 76 percent job placement rate for that school year. But again, this is not a CTE-only program rate and we have concerns with USHE's reported job placement rates.

In addition, we estimate that most of the job placements reported by USHE are for graduates of non-CTE programs. Figure 2.11, found on page 27 of this report, indicates that USHE awarded 1,357 CTE certificates in the 2013 to 2014 school year, and Figure 3.3 shows that total certificate awards were 1,560. Thus, we estimate that CTE certificate awards make up about 87 percent of total certificate awards. Yet, associate's degrees make up the vast majority of relevant credentials awarded by USHE institutions, with most of those coming from non-CTE programs. Figure 2.11 also shows that USHE awarded 3,522 CTE associate's degrees, while Figure 3.4 indicates that 10,244 total associate's degrees were awarded. Therefore, we estimate that CTE associate's degree awards account for about 34 percent of total associate's degree awards. Thus, combining both certificates and associate's degrees, CTE credentials make up about 41 percent of all such USHE credentials awarded during the 2013 to 2014 school year.

Only about one-third of the 10,244 associate's degrees shown in Figure 3.4 are for CTE programs.

Employment Data Used by USHE Has Important Limitations

While USHE's reliance on state UI records to identify employed graduates may be a cost-effective and consistent way to compile job placement outcomes, this method also has three significant limitations. First, the data does not identify a graduate's job title, which would be needed to assess whether the employment is related to educational training. Second, the data is unable to identify whether the documented employment was obtained before or after program graduation. These two limitations may cause USHE's reported placements to be overstated. Third, the data does not provide a comprehensive reporting on possible employment groups, which may cause USHE's reported placements to be understated.

DWS Wage Records Do Not Indicate Whether Employment Is Training-Related or Was Found Before or After Graduation.

To produce job placement reports, USHE utilizes UI data maintained by DWS. While this state wage data provides a cost-effective and consistent source of information, the data includes employers' industry codes but not graduates' occupation codes. An occupation code would be needed to assess whether a graduate's job is directly related to his or her educational program. In the absence of occupation codes, USHE counts any verifiable employment in the UI data as a successful placement. Also, the UI data does not indicate whether employment originated before or after the student graduated. This means that UI verified employment could be for a new job earned after graduation or could simply be a record of the job a student had while in school. Thus, this method of placement reporting could result in an overstatement of successful job placements. Since UCAT placement information is based on student surveys, which document job titles, it is possible to determine if employment is training related. Also, UCAT's program enrollment process categorizes students by educational objective, which identifies students with preexisting employment.

DWS staff confirmed that Utah currently does not have the ability to collect more than industry-level employment information – which it does according to the North American Industry Classification System (NAICS). Staff stated that Utah does not currently have the capacity to collect Standard Occupational Classification (SOC) codes, which would provide numerical coding of specific job categories and job

Unemployment insurance records do not indicate if employment is related to CTE training received.

Unemployment insurance records do not indicate whether a student was already employed before receiving CTE training.

titles. Staff also said that any change from NAICS to the SOC code system would be very costly to the state and burdensome for employers.

USHE's Data Match of Utah Wage Records Is Not Comprehensive. State wage records also do not provide a comprehensive collection of employment types. Specifically, DWS's UI records do not capture or maintain information for USHE graduates who are:

- Employed out of state
- Employed by the military or federal government
- Self-employed or agricultural workers

Without UI data records for graduates with employment in these areas and with no basis to exclude them, they are counted as not employed. Therefore, USHE has included a disclaimer with its placement rates as shown in Figures 3.3 and 3.4 that these rates could be understated.

In addition, USHE's method of placement tracking does not capture whether graduates continue on in their education or choose not to enter the labor force. This is an important distinction because UCAT's method counts continuing education as a successful placement and excludes those that refuse employment from placement calculations. In contrast, USHE does not have provisions in its job placement calculation method to track continuing education students or those graduates that refuse employment.

We contacted a sample of USHE's peers in other states that are also accredited by the Northwest Commission on Colleges and Universities (NWCCU). We found that USHE is generally consistent with its peers in collecting placement data through state employment records.

Several USHE Institutions Track Some Training-Related Outcomes

While USHE currently relies on the UI data match for system-wide placement reporting, a limited review shows that individual institutions collect placement data for internal use through various survey methods. These student survey methods are generally similar to those used by UCAT to track student job placements. The following

Unemployment insurance records miss some groups of graduates who are employed.

USHE's job placement reporting method is similar to that of its peer institutions.

Some programs at USHE institutions collect survey data on jobs similar to UCAT.

four institutions conduct student surveys to gather additional detail about student placement outcomes:

- Salt Lake Community College (non-credit CTE only)
- USU Eastern Campus
- Snow College
- Weber State University

Although we did not review the survey methods or resulting job placement data from these institutions in detail, we believe that such data may be a useful addition to USHE's UI data matching method, specifically regarding CTE job placement reporting. USHE would need to be the repository for such data and would need to develop adequate processes to ensure that data is reasonably consistent and reliable. Therefore, we recommend that USHE consider whether the value of training-related placement data exceeds the costs associated with efforts to standardize and collect training-related placement data.

Recommendation

1. We recommend that UCAT review its campuses' placement data collection methods and make improvements to ensure independence and data validity.
2. We recommend that USHE include a subset of CTE-only job placements in its annual system-wide job placement rate reporting.
3. We recommend that USHE review the available job placement data collected by its individual institutions and determine whether the data should be used in CTE program job placement rate reporting to identify whether or not placements are related to graduates' fields of study.

Agency Responses

This Page Left Blank Intentionally



**Utah College of
Applied Technology**

2801 Ashton Boulevard
Lehi, UT 84043

Office of the President

Direct • 801.341.6000
Fax • 801.341.6019
www.ucat.edu

October 26, 2015

Mr. John Schaff, CIA
Auditor General
Utah State Legislature
W315 Utah State Capitol Complex
Salt Lake City, UT 84114-5315

Dear Mr. Schaff,

We are pleased to provide an agency response on behalf of the Utah College of Applied Technology to "A Performance Audit of CTE Completion and Job Placement Rates", Report Number 2015-11.

We wish to thank Audit Manager Richard Coleman, Supervisor Tim Bereece and Staff Candace Ware and Katherine Stanfill for their thorough examination of completion and job placement rates in the Utah College of Applied Technology (UCAT) and the Utah System of Higher Education (USHE) systems. We recognize, as do the auditors, the vast differences between UCAT and USHE and in the methodologies used by each to determine and report completion and placement results of students.

UCAT agrees with the recommendations at the end of chapters two and three, and will report completion rates consistent with student accomplishments (Chapter II, Recommendation 1). UCAT will always make available separate completion numbers for each enrollment category, for individual campus programs/courses, and for campus-wide and system-wide statistics. The UCAT Board of Trustees accepts the responsibility to ensure that credentials awarded by UCAT campuses represent a significant accomplishment by students (Chapter II, Recommendation 2), and will work collaboratively with the eight campus boards of directors and their employer advisors who share the important responsibility of continuous improvement of student completion data and the appropriateness of credentials issued. UCAT will also review its campuses' placement data collection methods and make necessary improvements with respect to independence and data validity (Chapter III, Recommendation 1).

The report observed that composite completion rates may overshadow the size and scope of individual types of student achievements. Certificate programs for entry-level employment comprise the most substantial training efforts by campuses and students, and have long been a primary focus for UCAT student outcomes reporting. However, UCAT is also charged with serving secondary students and providing significant occupational upgrade training in addition to certificate programs. Through a process of continuous improvement, UCAT has recently adopted new policies to accurately report not only on those enrolled in certificate programs, but on all of our approximately 35,000 students per year.

Over the past two years, UCAT has responded to legislative intent language to identify completion definitions and rates accounting for all of its enrollment categories, resulting in UCAT Policy 205 (Student Enrollment and Completion Reporting). Our reporting has included a composite completion rate reflecting the total percentage of students in all enrollment categories who completed their defined enrollment objective in addition to separate completion rates for each category and average certificate lengths for each campus. Program-specific completion and placement rates for each certificate, as reported by the campuses to the Council on Occupational Education (COE) for accreditation, have also been reported to the Higher Education Appropriations Committee through information UCAT provides annually to the Office of the Legislative Fiscal Analyst.

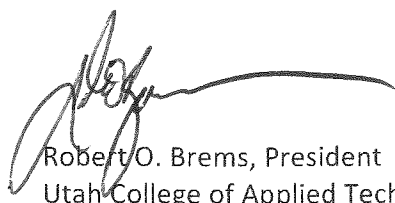
UCAT recognizes the importance and the challenge of accounting for the completion of each and every student, in certificate programs and other enrollment objectives. We will continue providing completion data for all categories of students, including program-level data that accounts for certificates of different lengths and scope. We will also continue to assist stakeholders to understand and utilize our data with a goal of continuous improvement.

The report observed that UCAT's placement rates include not only students who are placed in job-related employment but also those who continue in additional education. While UCAT programs are designed to prepare students for employment, continued education does provide opportunities for stackable credentials and articulation with "next step" programs for many students who have completed a certificate. UCAT and COE consider this an important and valid placement outcome. UCAT will continue to track and report placement in immediate employment as well as additional education and make data available for both outcomes.

In conclusion, we seek the continuing support of the Utah State Legislature to help us achieve our role and mission. By design, UCAT is focused on the needs of Utah's employers. UCAT's efficient and nimble structure quickly responds to the direction of 159 current employer advisory committees (EACs) consisting of 1,496 employer advisors. These employers work in partnership with our eight employer-focused campus boards of directors through the Utah College of Applied Technology Board of Trustees, also consisting mostly of employers. Following these employers' direction is critical to achieving essential workforce alignment between Utah's employers and UCAT programs. It often requires varying lengths of programs to be offered along with some complexity in reporting the data.

We thank you again for your attention to UCAT and for your identification of important reporting elements for Utah's technical education system.

Sincerely,



Robert O. Brems, President
Utah College of Applied Technology



Thomas E. Bingham, Chair
Utah College of Applied Technology Board of Trustees

October 26, 2015

Mr. John Schaff
Legislative Auditor General
W315 Utah State Capitol Complex
Salt Lake City, UT 84114 – 5315

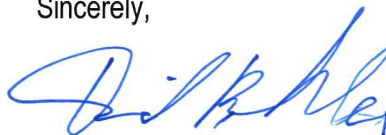
Dear Mr. Schaff,

Thank you for the opportunity to respond to the audit entitled **A Performance Audit of CTE Completion and Job Placement Rates (Report No. 2015-11)**. We appreciate the difficult task facing the auditors in preparing this report. The audit affirms the importance of presenting completion and job placement rates accurately and transparently to the Legislature, Governor and public. We appreciate that the audit affirms the Commissioner's Office's strong commitment to providing accurate data on the student completions and other outcomes.

USHE continues its commitment to provide the most accurate data that is available. As the audit points out, good data related to job placement rates can be difficult to obtain particularly given the wide range of options available to our students from certificates to graduate programs. Given these challenges, the Commissioner's Office is using the most accurate and complete data currently available by matching actual graduates to actual employment records. The same approach is being taken in many states.

Attached is our response to each of the recommendations in the audit. We look forward to responding to questions and suggestions as this audit report is presented to various legislative committees.

Sincerely,



David L. Buhler, PhD
Commissioner of Higher Education

Response to the Performance Audit of CTE Completion and Job Placement Rates

Chapter II

Recommendation 3: We recommend that USHE calculate completion rates for individual programs where the calculations are feasible.

Response: *The Commissioner's Office is currently exploring the feasibility of collecting completion rates for individual CTE programs.*

Chapter III

Recommendation 2: We recommend that USHE include a subset of CTE-only job placements in its annual system-wide job placement rate reporting.

Response: *The Commissioner's Office is in the process of implementing this recommendation.*

Recommendation 3: We recommend that USHE review the available job placement data collected by its individual institutions and determine whether the data should be used in CTE program job placement rate reporting to identify whether or not placements are related to graduates' fields of study.

Response: *The Commissioner's Office will review available data from individual institutions as recommended.*