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## Student Withdrawals in a Job Training Program

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**STUDENT WITHDRAWALS IN A JOB TRAINING PROGRAM**

by

Amy Lawrence

A Thesis Quality Research Paper  
Submitted in Partial Fulfillment of the  
Requirements for the  
Masters Degree

in

**PUBLIC ADMINISTRATION**

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## **BACKGROUND**

American society values education. The inherent benefit to both the individual and society at large led to compulsory education being legislated nationally by the early 1900s (“Compulsory”, n.d.). In today’s context advanced education beyond the compulsory, or primary and secondary, levels, is especially important because higher educational attainment leads to better individual economic outcomes, opportunities for advancement in the workforce, and a stronger economy overall (Ma, Pender, & Welch, 2016). Therefore, assisting students in completing post-secondary education is an ongoing mission for all types of educational institutions and can be especially true for institutions serving low-income and/or minority populations. Within the context of a competitive market, shifting funding sources, and a new regulatory environment, the purpose of this paper is not to examine educational attainment, but rather to research student drop out, or withdrawal, at the post-secondary job training institution of Center for Employment Training (CET). The foremost research questions to be answered are what are the characteristics of students who withdraw from job training programs provided by Center for Employment Training, and what factors may influence withdrawal.

### **Center for Employment Training**

Located in a region where the impact of wage disparity and a housing shortage frequently makes news (Murphy, 2018, Hansen, 2018 Louie, 2018), CET’s main campus and corporate offices are located in San Jose, California. In one of the most expensive cities in the U.S., CET provides job training to low-income individuals with multiple barriers to employment. Founded in 1967, CET was faced with the challenge of how to provide job training to underserved populations, such as seasonal migrant farmworkers or individuals who had been chronically unemployed, under-employed, or may not have not earned a high-school diploma. According to its website page entitled *50<sup>th</sup> Anniversary*, CET took on the task of organizing a way out to lift people out of

poverty during a time of rapidly changing employment sector needs characterized by a change from agricultural work to manufacturing (Center for Employment Training, n.d). Over the course of its history, CET has seen in the last few decades yet another significant change in workforce needs from manufacturing to high-tech.

Focused on labor and related policy issues, Working Partnerships USA (WPUSA), also based out of San Jose, points out that for every tech sector job created in the region, four service sector jobs are needed (Meherns, 2017). Further, the State of California Employment Development Department noted that the unemployment rate for the Metropolitan Statistical Area that includes San Jose was at 3.0% for the monthly period of September 2017 to October 2017, and the sectors of education, healthcare, and construction gained the most jobs (Shriver, 2017). Often overlooked is the fact that jobs in these sectors require an advanced education. For example, according to the website O\*Net Online, a database application developed by the U.S. Department of Labor (n.d.), jobs in education, healthcare, and construction sectors can require advanced certifications. Consequently, a starting question of inquiry can be, if individuals want to improve economic outcomes and advance in the workforce, what educational systems are available to help them?

Center for Employment Training (CET) is a job training program which does offer post-secondary certificates to adults over the age of 18. CET is a private not-for-profit institution, and currently operates 11 locations in California, with its largest training center and corporate administrative offices located in San Jose. CET also has locations in El Paso, Texas and Alexandria, Virginia. CET offers job training programs in the construction and manufacturing industries, healthcare, business and services, transportation and service sectors (Center for Employment Training, n.d.). CET is a competency-based program which integrates both

occupational job training with practical hands-on practice. As a competency based system, students show mastery by earning a score of 70% or better before moving on to the next competency. Students can take a competency test as many times as needed until the 70% is reached. An effective program will provide occupationally specific theoretical foundations and complement this with hands-on practice with job specific tools, supplies and projects (E. Harms, personal communication, June 4, 2018). If basic skills are lacking, students are offered additional support through occupationally focused instruction to improve literacy. For example, a construction program will teach safety theory in a lecture format and then students will practice this concept in a hands-on, work-simulated environment with tools used in the industry. If a student needs assistance with reading and math, construction-related materials are the focal topic (N. Divalova, personal communication, July 6, 2018).

#### *Traditional Institutions and Supporting Legislation*

When considering higher education, people most frequently associate post-secondary education with 2- and 4-year degree-conferring institutions, such as community colleges and universities. As an underlying premise, it is important to understand that some individuals do not have the same aptitudes, interests or motivations (Krafft, 2016; Plank, 2008; Spaulding, 2015). Because access to the social and economic capital needed to succeed is not always readily available, removing barriers and increasing access to higher education is a long-standing goal of federal and state government. For example, Olson (1973) reports that the G.I. Bill passed in 1944 was originally conceived “as an anti-depression measure” and provided 5.5 billion dollars’ worth of aid for veterans to advance their education (596 - 597). By 1969, in an effort to “provide access to economically and socially disadvantaged students who display the potential for academic success”, California State Senate Bill 1072 established the Educational Opportunity Program

(EOP) within the California State University System (“History”, n.d., p. 4). These legislative interventions improved access for veterans, and promoted student retention for non-traditional students such as older students, working students, or single parents. Codified in the California Education Code, interventions such as these seek to improve retention and completion rates of those students experiencing “language, social or economic handicaps” by providing supportive services, which may include academic counseling, grants or stipends or workshops to develop study skills, and the ability to navigate resources in support of the student success (Community, 1976). Title IV of The Higher Education Act (HEA) of 1965 provided increased access to post-secondary education through financial aid, primarily in the form of Pell Grants (Protopslatis, 2017).

### **An Alternative to Public Post-Secondary Schools**

In addition to the Higher Education Act of 1965, another important piece of educational legislation was passed in 1963. The Vocational Education Act refocused the nation towards workforce development through occupationally focused education. According to the National Education Center Statistics (NCES), vocational education falls into two general categories – secondary and post-secondary (National, n.d., p.4). Secondary education is considered to be the last four years of compulsory education (e.g. grades 9<sup>th</sup> through 12<sup>th</sup>). Post-secondary education is considered to be any education beyond high school. The U.S. Department of Education classifies Center for Employment Training (CET) as post-secondary vocational education, which CET interchangeably refers to as occupational, career, technical and, most simply, job training, because the outcome is ultimately a job with career prospects (H. Sapien, personal communication, January 4, 2018).

Forced into desperation and rising unemployment during the Depression of the 1930s, President Franklin D. Roosevelt engaged the federal government in promoting workforce development with federally funded programs such as the Civilian Conservation Corps aimed at relieving the growing poverty and getting to work (Speulda, 2003). By the early 1960s, the “War on Poverty” was declared, and with it the passage of the Economic Opportunity Act of 1964. UC Santa Barbara (n.d.) provides President Lyndon B. Johnson’s remarks made at the time of signing. President Johnson specifically commented on how the act addresses programs for out-of-school youth, unemployed adults, under employed heads of households and rural farmers. In his comments, the President said,

We will work with them through our communities all over the country to develop comprehensive community action programs--with remedial education, with job training, with retraining, with health and employment counseling, with neighborhood improvement. We will strike at poverty's roots (para. 12).

One federal program which is synonymous with job training and education is Job Corps. Founded in 1964 and funded through the U.S. Department of Labor (DOL), Job Corps focuses on low-income youth (16 – 24) with or without a high school diploma, providing both academics and job skill preparation, as well as on-the-job paid training in a residential environment. Although Job Corps is still in operation nationwide, and offers programs at no cost to enrolled students, participation is restricted by age range (Office of Job Corps, 2016).

#### *The CET Model – A Hybrid of Higher Education and Vocational Training*

According to CET’s Director of Financial Aid, similar to community colleges and universities, CET is classified as a “Title IV” program under the U.S. Department of Education (DoEd), maintaining accreditation under the Council of Occupational Education. As such, CET meets specific criteria, and thus has the ability to provide Pell Grants and subsidized loans to students to off-set the cost of attendance. CET also provides grants to eligible seasonal migrant

farmworkers or their dependents, covering the full cost of tuition through funding provided by the U.S. Department of Labor (DOL) (Garcia De Leon, personal communication, January 4, 2018).

### **Legislative Impacts on CET**

CET has maintained job-focused programs during 50 years of different iterations of federal policies. CET began receiving federal funding for job training programs under the Manpower Development and Training Act (MDTA) of 1962 (H. Sapien, personal communication, January 4, 2018). Although its original intent was to develop programs in the face of growing concern over structural unemployment due to shifts in the economy towards increasing automation, MDTA was expanded to provide training in an effort to create equity. and focused on youth and African-Americans as the predominant under-served populations (Holzer, 2012). Just five years into MDTA, CET was founded in 1967. Its strategic focus was to help agricultural workers gain the skills needed to transition from field work to entry-level positions in non-agricultural occupations, such as the manufacturing sector developing in Santa Clara County (Birth, n.d.). Hired as its first executive secretary in 1967, CET's President/CEO Hermelinda Sapien stated how CET's mission aligned with MDTA's focus on underserved populations. In the early 1970s, the Comprehensive Employment and Training Act (CETA) replaced MDTA. With a component focused on providing training to youth and migrant workers, CET, under CETA, was able to expand its services to additional locations in rural communities in California. In San Jose, CET was able to broaden its original targeted population of displaced agricultural workers to non-traditional students, such as low-income individuals, high-school drop outs, dislocated workers, single parents and other populations often left without educational options. Under both MDTA

and CETA, the federal government provided full funding for participants and did not burden students with a post-training debt (H. Sapien, personal communication, January 4, 2018).

By the 1980s, CETA was replaced by Job Training Partnership Act (JTPA). The Code of Federal Regulations states the purpose and scope of JTPA:

To establish programs to prepare youth and adults facing serious barriers to employment for participation in the labor force by providing job training and other services that will result in increased employment and earnings, increased educational and occupational skills, and decreased welfare dependency, thereby improving the quality of the work force and enhancing the productivity and competitiveness of the Nation (section 2).

Under JTPA, CET was able to expand to locations in urban centers and maintained its contractual relationship with the DOL. Like its predecessors, under JTPA, students did not incur post-training debt because program costs were covered by grants. The vast majority of students at CET fell under JTPA, thus it was a primary source of program funding for CET (H. Sapien, personal communication, January 4, 2018).

Undoubtedly influenced by the New Public Management approach adopted by the Clinton Administration (Rosenbloom, Kravchuk, & Clerkin, 2009), by 1998 Congress shifted its workforce development policy, as job training skeptics questioned cost-effectiveness of programs and long term gains for participants. Under the Workforce Investment Act (WIA), funding was more directly tied to labor market demands and implemented through Workforce Investment Boards (WIBs), which by statute are composed of local employers (Holzer, 2012). WIBs are based on a regional structure at the local level. Sapien noted that this changed CET's direct relationship with the federal government. Up until this point, CET earned program funding directly from the federal level based on a cost reimbursement structure. Revenues were earned in full as students incrementally completed a percentage of training, and the guidelines for earning tuition allowed for the capturing of the majority of JTPA funds awarded. Under the WIB

regional structure, direct federal funding per student was substantially reduced. The result was that increased training costs not covered by federal funding would be incurred by the student. Additional impacts resulted from federal policy spreading out funding for employment training to other departments, such as the U.S. Departments of Health and Human Services and the U.S. Department of Education (DoEd). Sapien explained that it was during this timeframe, to continue providing services to its target populations, that CET adapted to the new ways funding was allocated. To secure a funding option to offset increasing costs to students, CET applied for accreditation to participate in DoEd administered funding under Title IV of the Higher Education Act (H. Sapien, personal communication, January 4, 2018).

CET gained its accreditation and began its shift from a U.S. Department of Labor (DOL) funded program to a DoEd, Title IV program, in which eligible students were enrolled and qualified for federal grants and loans. Since this shift, CET has become increasingly reliant on Title IV financial aid, and the student burden has increased in the face of rising costs. As these shifts have occurred, CET has been able to maintain grants to farmworkers through targeted DOL funding under the National Farmworker Job Programs (NFJP) administered by the Department of Labor's Employment Training Administration (DOL-ETA). This DOL-ETA funding, however, represents a significantly smaller proportion of CET's operational revenue than under MDTA, CETA and JTPA (H. Sapien, personal communication, January 4, 2018).

### **CET's Current Status**

Despite maintaining DOL grants for its original agricultural clients, CET's viability as an alternative path of post-secondary education hinges upon enrolling and retaining students accessing Title IV financial aid. As a non-profit public benefit corporation, keeping programs

affordable and accessible to low-income individuals is its strategic objective, and remains part of core organizational values (H. Sapien, personal communication, January 4, 2018).

According to the Chief Financial Officer, CET earns its funding through a fixed-cost structure, and from a financial perspective, this creates tension between earning revenue and retaining students, because CET's program is based on the completion of hours. Therefore, grant funds are earned as students complete a set schedule of program clock hours. For example, a qualifying program is a minimum of 600 hours, and revenue is earned only once a student has completed a percentage of the total. When students withdraw from CET programs early, a refund from both the student and CET may be required. Therefore, student enrollment and retention has a direct impact on the revenue stream. With a focused mission, retention is equally important to CET because of the socio-economic benefits that educational attainment provides. With the mission of maintaining affordability while serving those in poverty, and the pressure of retention, CET strives to be able to achieve a balance point where it delivers the programmatic services needed to retain students through completion (M. Aryanpour, personal communication, January 4, 2018).

CET must also comply with regulatory standards set by the U.S. Department of Education, including meeting minimum graduation rates and gainful employment outcomes. For over 30 years, CET's institutional knowledge and experience was based on Department of Labor administered programs in a cost reimbursement structure. Title IV funding and the associated regulatory requirements now present challenges for CET. Unlike public institutions which receive additional state funding derived from the tax base, CET is reliant on retaining students to earn revenue, while providing integrated services to those facing the largest barriers to success (H. Sapien, personal communication, January 4, 2018).

CET's Director of Education states that public sector competition in the post-secondary job training market has been steadily increasing as community colleges offer career-focused credentials that do not require two years of academics. With an institutional knowledge and longevity of meeting DoEd regulations, community colleges are positioned to be responsive to meet any changes in market demands for occupationally specific programs. Community colleges may have an additional advantage over CET because they can provide occupational programs while leveraging existing supportive service programs aimed at underserved, high-risk students in degree programs. Not to be forgotten are private, for-profit institutions which meet the same standards and confer credentials or degrees but do not have access to public tax revenues. They can be considerably more expensive than community colleges and use profit margins to provide supportive services to students (L. Aguilar, personal communication, January 4, 2018).

### **Student Retention in Education**

The aforementioned examples of federal legislation have improved access to post-secondary education. As a result, examining the factors related to - and which contribute to - student retention has been of interest to educational institutions. Swail (2006) proposes and discusses seven questions to guide institutions in the inquiry regarding student retention:

1. Is the nature of the problem understood?
2. Does the institution know why students leave?
3. What is the institution already doing to address the issue?
4. Does the institution know how effective these programs are in addressing the problem?
5. What programs are worth considering?
6. Is there support for retention programs on campus by faculty and staff?
7. Is the process of institutional change well understood in order to implement effective retention programs and services?

Each of these questions is relative to CET. Aspects of retention programs seen in traditional institutions are integrated into CET's program design, such as offering a financial aid program and support for basic skills. Additionally, CET can leverage emergency services grants

for those students who are eligible for U.S. Department of Labor grants. CET's mission is to provide training in the job skills that will improve self-sufficiency and thus contribute to solving the problem of poverty. Over fifty years and with changes in the regulatory, and consequently funding environment, looking at the students who leave the programs can provide CET with the feedback needed to understand whether its program model continues to support post-secondary educational and job focused skill attainment for its targeted population.

## **LITERATURE REVIEW**

### **Persistence and Retention in Job Training**

Literature on persistence and retention in U.S. secondary schools can be found through a wide variety of resources. At the 2- and 4-year college levels, scholarly articles exploring the application of different retention models are readily available (Bailey, 2004; 2005; Hirschy, 2011; Reason, 2009). For specific workforce development programs funded by government grants, including internationally, there is outcome information available on participants who complete the available programs (Caliendo, 2016; Cho, 2015; Cornwall, 2016; Eichhorst, 2015). However, this study focuses on why students withdraw, or drop out, from the unique classification of a less-than-one-year private, non-profit post-secondary vocational institution. Consequently, locating literature addressing the topic in the exact or similar educational classification is challenging, and a lack of studies focusing solely on reasons for withdrawals has been noted by scholars (Cho, 2015; Eichhorst, Rodriguez-Planas, Schmidl, & Zimmerman, 2015; Van der Steeg, 2015; Volodina, 2015).

### **Types of Programs**

Vocational education programs are implemented throughout the world. In the U.S. they are referenced as career technical education (CTE), trade schools, occupational programs, workforce development and job training (Bremer, 2011; Eichhorst, 2015; Elliot, 2015; Fernandez-Alcantran, 2015). For this study, U.S. terminology will be used interchangeably, with the common theme being that the education provided is grounded in the theory of developing vocational skills primarily and academic skills secondarily. Internationally, a common reference is vocational education training (VET). Both CTE and VET programs primarily serve the level corresponding to U.S. high school, with some exceptions. Both international and domestic programs serve people in older demographics and reference either post-secondary in the U.S. at

18 years of age or internationally at the upper-secondary about the age of 16. Therefore, examining age as a factor in program withdrawal is not a primary focus in the review. Rather, understanding common themes on why students drop-out within the CTE/VET programs is an emphasis.

### **Theoretical Models**

This literature review represents a cross section of papers found on both U.S. educational classifications and international classifications as they relate to dropouts, or the often comparable goal of retention. Evolving over the last 30 years, two theoretical models are often referred to – Tinto’s *Student Integration Model* and Bean’s *Student Attrition Model* (Demetriou, 2011). Tinto’s theory suggests that the degree of student success, or lack thereof, is influenced by the student’s connections to staff, faculty and the social environment. Students’ goals should also align with the institution’s goals. Bean’s model posits that students’ intentions, and external factors such as family approval, affect persistence. In addition, students’ experiences and internal processes influence outcomes (Bailey, 2004). Despite coming from slightly different perspectives, both Bean and Tinto point to an integrated educational process. A greater level of success can be obtained by understanding the context of the self as well as those immediately influencing the student.

### **Studies Support Models**

Interdisciplinary studies on the social and psychological influences and impacts of both engaging in and dropping out of school are numerous. The transition to a formal training program can be a time of upheaval for the student, and success can be a tentative process. In a randomized experiment, Van der Steeg (2015) concludes that intensive one-on-one coaching of students enrolled in a German VET program reduced dropout rates. Yi’s (2015) study in China shows that

dropout rates climb if a student's mother migrates for work, but a father's status is insignificant. Separating from parents, redefining social relationships, questioning direction, and examining self-worth are all processes that influence integration into a new educational environment (Gerdes, 1994). Furthermore, according to Eicher (2014), the decision to drop out is a process and not an event, in that there is an intention to dropout prior to the actual act, and intentions change over time. Going back to Tinto and Bean, Elffers (2012) looks at how emotional engagement with both teachers and peers is more important than a challenging curriculum, and who is engaged is different between genders.

### **Underserved Populations**

Many students enter traditional post-secondary education ill-prepared for the academic rigors even at the vocational level. For example, in *Relative Impact of Interventions to Improve Achievement and Retention in Postsecondary Occupational Programs*, the authors examine the effectiveness of intervention programs, such as bridge programs for those just entering school immediately following high school, supportive counseling for those at risk of dropping out, and programs focused on increasing basic skills such as adult remedial education or English as a Second Language (Bremer, 2011). While these programs do support students, the effectiveness of some interventions is called into question due to the lack of empirical research about the process (Calcagno, Bailey, Jenkins, Kienzl & Leinbach, 2005).

Armed with this knowledge, in the last decades there has been a shift toward understanding persistence for low-income, minority and non-traditional populations, but it is aimed at success in four-year institutions. The U.S. Department of Education does collect some data on retention in shorter-term occupational programs. Through the National Center for Educational Statistics (NCES), the DoEd provides some answers to key questions about

vocational education (National Center for Educational Statistics [NCES], n.d.a). The NCES collects data on all sub-baccalaureate programs which participate in Title IV. According to the NCES, students seeking an occupational certificate have a higher attainment rate than those seeking an academic associate degree (NCES, n.d.b). Using data from a longitudinal study, NCES also provides a comprehensive analysis of the persistence and attainment of non-traditional students, yet even the NCES focuses its persistence analysis on longer term (e.g. a year or more) degree granting public institutions.

As Holzer (2012) points out, federally funded occupational programs for workforce development do not take a one-size-fits all approach. For U.S. based programs falling within the same type of classification as CET, requiring less than a year's attendance for completion, scholarly literature is scarce, and the majority of studies are conducted by consultants evaluating programs funded by the government and evaluated against different standards. For example, Job Corps provides services to adults up to the age of 24 but is aimed at the achievement of a secondary level diploma and job skills. Thus, the literature which is available focuses more on specific projects or programs aimed at increasing employment and wages for specific sub-populations (Caliendo, 2016; Cornwall, 2016; Echorst, 2015; Hanushek, 2017; Hiershliefer, 2016). The literature available is as a result of evaluating the success of programs funded by government, not examining which students drop out or why.

In a report to the Washington State legislature, the Workforce Training and Education Coordinating Board (2006) ranks the cost of tuition as the number one barrier to completing employment training programs, and lack of information about training opportunities is the second leading cause. The report recommends increasing assistance to participants through grants which cover unmet needs above costs covered by Pell Grants, as well as working with

local community colleges and technical colleges to create certificate programs. This leads to the conclusion that schools providing short-term programs and Title IV funds are increasingly in demand. Little information addresses the reasons why students drop out.

CET's model seemingly meets the demand and need put forth, combining the need for integrated services in occupational training. Traditionally, enrollment in the program begins with little to no prescreening and provides training in a work simulated environment. Students are required to commit full-time for an average of 6-9 months, and receive integrated instruction which includes basic skills. CET also provides instruction on a competency based system where progress is made through mastery of subject matter without set testing schedule requirements (Miller, 2005). A study looking at Minority Single Parent Demonstration project found CET program graduates made short-term gains in employment outcomes (Zambroski, 1993). CET was also studied in relationship to a program replication grant provided by the Department of Labor (DOL) in the late 1990s. This study showed that program fidelity rates in sites which replicated the CET model and which had the closest links to CET had the best performance outcomes (Miller, 2005). However, dropouts were not a focus, and therefore not addressed other than as a reduction in the number of participants.

### **Literature on CET**

In 2011 CET was awarded a grant by the U.S. Department of Labor Employment and Training Administration. The Green Jobs Innovation Fund (GJIF) required an evaluation which was conducted in 2013 by Harder+Company. In the internal report, the evaluators examined the CET model as it relates to implementing green technology, its job training program design, and fidelity to the training approach. Program elements were examined across a set of locations, and evaluation of program fidelity was an objective (Harder+Company, 2014).

CET's program model uses several key elements that mirror community colleges, and includes basic skills integration, occupationally specific programs, and supportive services in the form of both financial stipends and/or referrals to other organizations for other services, such as childcare or healthcare. Additionally, job placement linkages to industry through the participation of employers is a critical element to the program.

A final element which acts as an intervention and may influence retention in the CET program is the use of a "unit team" that evaluates student progress and advises on action steps and coaching to keep students progressing. Findings suggest that those participating locations with the highest fidelity to the job training approach were the most successful with program participants (Harder + Company, 2014).

CET's unit team consists of both faculty and staff who meet on a regular basis to discuss and evaluate students' progress through the training program. The unit team meeting may result in recommended interventions for struggling students. This unit team facet is most in alignment with Tinto's model of integration through student interaction with faculty. In the report, *Paths to Persistence*, Bailey and Alfonso (2005) suggest that while there is a problem studying causality, students who interact with faculty persist and graduate at higher rates. Volodina (2015), Van der Steeg (2015) and Elffers (2012) also conclude that relationships with staff are keys to success.

A major theme which emerges across the literature is access to financial aid. Illustrated by the Workforce Training and Education Board's (2006) report which identified financial needs as the number one barrier to enrollment, CET has concluded that students withdraw from programs, first and foremost, due to financial hardships. Financing education is a concern for students, and in the *Art of Student Retention: A Handbook for Practitioners and Administrators*, Swail (2004) proposes several approaches regarding how to perform outreach, educate and

counsel students about financial aid and obligations. For CET, this presents a question to their conclusion, because Pell Grants and other full-reimbursement grants pay for between 50% or all tuition.

With a move towards occupational training in community colleges, as well as an increased interest in competency-based learning (Lewis, 2014), CET's educational model, despite being in place for almost fifty years, is losing its uniqueness in the post-secondary world. Understanding the dynamics involved in why students withdraw will help CET remain a viable program and an option for low-income, non-traditional students.

## METHODOLOGY

### Research Design and Methodology

#### *Evaluation Model*

To examine this research question on student retention, Sylvia and Sylvia (2012) present a process intervention/evaluation model which occurs in four phases: problem identification, solution development, implementation, and feedback evaluation (p. 94). With a well-established problem statement, relevant solutions, longevity in implementation and comprehensive evaluation through regulatory bodies, this study will focus on the final phase in the CET model. The evaluation will be conducted by examining characteristics of students who withdraw from CET, and analyzing survey results on why students withdraw from job training programs. Table 1 represents this research in Sylvia and Sylvia’s Process Intervention/Evaluation Model.

Table 1: Evaluation Model

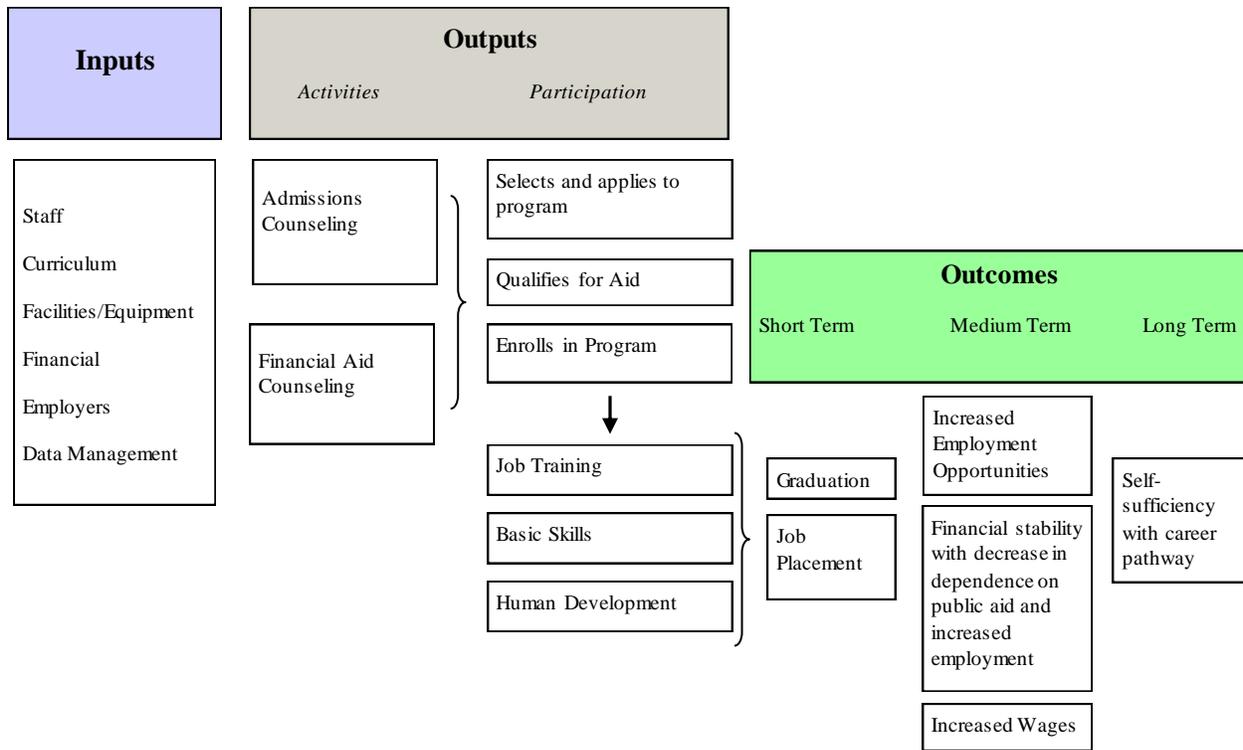
Problem Identification	Solution Development	Implementation	Feedback Evaluation
Poverty resulting from an unskilled workforce	Provide training and services to overcome socio-economic barriers	Job Training Basic Skills Support Soft Skills Development Job Placement Assistance	<i>What are the characteristics of students who withdraw and why do they withdraw?</i>

In order to provide a framework for the evaluation, Figures 1 and 2 are logic models representing the CET program to provide a structure for the area to be examined, and are associated with the variables used in analysis. Red brackets in the models represent the specific areas of data collection and analysis.

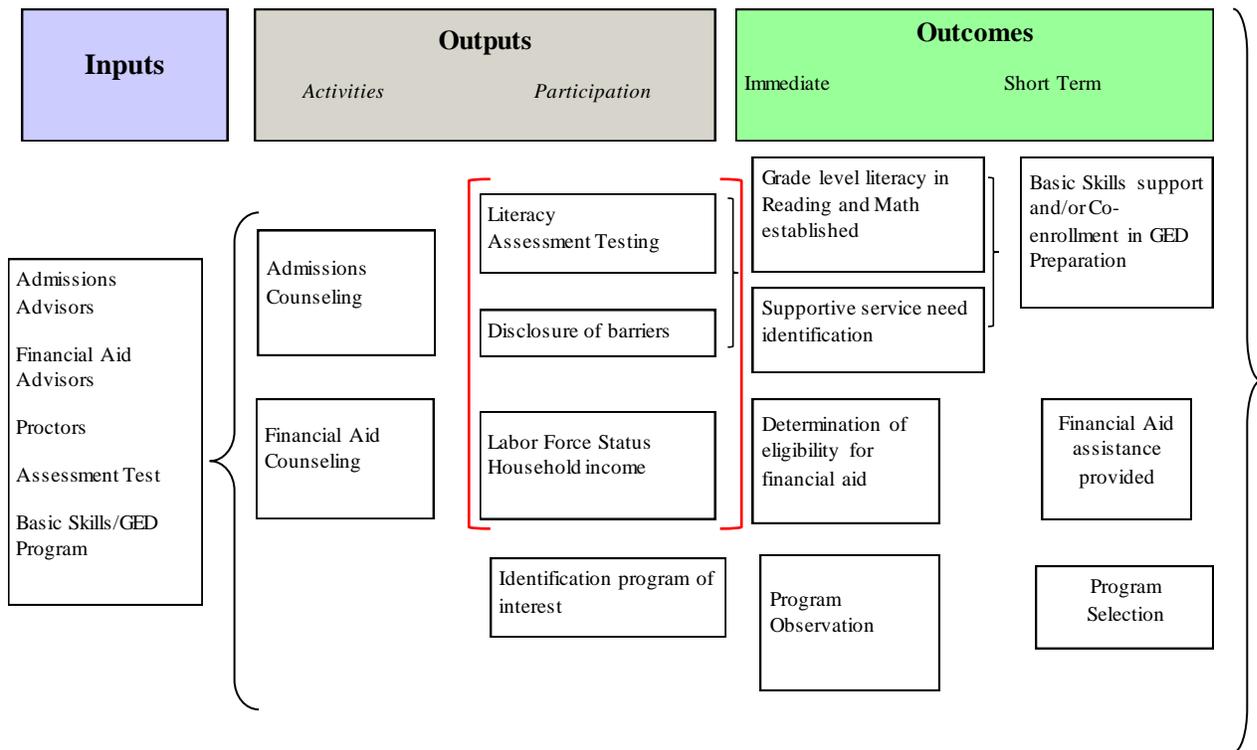
During enrollment, admissions and financial aid activities provide variables for analysis. Thus, the research will analyze data collected during these processes and after enrollment has been completed to better understand the students’ circumstances. This research will look at quantitative data up to the point of withdrawal. In addition to using quantitative data collected

from enrollment to withdrawal, qualitative data collected from a survey of students who withdrew from the program after enrollment will be analyzed to explore whether previously unidentified barriers influenced withdrawal. For example, CET’s goal is to provide services to all individuals regardless of educational attainment. Assessment testing is used to determine whether students need basic skills remediation. This study will look at this variable to see whether the students with lower assessment scores withdraw more frequently.

**Figure 1: Program Overview**



**Figure 2: Enrollment**



**Research Methods**

The design for this research is a non-experimental program implementation evaluation. Looking retrospectively, descriptive statistics of percentage distribution and frequency will be used to develop an understanding of characteristics of students who withdraw from the program compared to those who graduate from the program. Cross tabulation utilizing Pearson’s Chi-square test of independence to determine significance will be employed.

**Data Collection**

Anonymized primary data was requested and collected by CET, with all personally identifiable information (PII) removed by the organization prior to allowing access to the researcher. Only a numerical code to was used to identify each student record. Organizational permission to use anonymized student records and survey results has been obtained. Microsoft Excel was used to perform statistical analysis.

### *Student Records*

CET implemented a proprietary student records system beginning October 1, 2014 named Client Information Management System (CIMS). Student information is entered into the CIMS during the enrollment process, including demographic information, assessment testing results, labor force status, household composition and income. Additionally, the CIMS system is used to record student progress through a job training program. This information includes academic progress up to the point of graduation from the program. While representing an adequate number of records for analysis, a challenge in using the data is the inability to segment students by cohort years as defined by the U.S. Department of Education (DoEd) or U.S. Department of Labor-Employment Training Administration (DOL-ETA). Therefore, the range of data requested represents three calendar years collected from the CIMS implementation date beginning October 1, 2014 through October 1, 2017. Using Excel, descriptive statistics will be used for frequency and percentage distributions. Using cross tabulation, records will be grouped by variables to examine the relationship between withdrawals and literacy levels, household income, labor force status and demographics to understand the drivers of withdrawal in an attempt to develop a strategy to prevent withdrawals.

CET provided an Excel spreadsheet with a total of 8,274 records for the study period of October 1, 2014 – October 1, 2017. The records were examined by start date and subsequently grouped by that calendar year. Records included students who had started after the October 1, 2017 and resulted in a sample size reduction to  $n = 8108$ . Appendix A shows CET student status definitions and this study's grouping of the definitions into categories. The three groups were defined as Graduates and Current for those counted as presently enrolled during the study period and Withdrawals. In coding the records, two additional status code entries were identified, but

not included in the CET definition sheet. Student records listing CN or CL as a status definition as explained below represented 15% of the total ( $n = 1305$ ).

These records with CN and CL statuses were included in the data set, but definitions were not, so further examination was conducted. All records labelled CN provided two definitions of student status – an overall status code and a reason for exiting the program. Appendix A provides CET’s list of reasons for exit. Additionally, an identifying characteristic on CN records was that all students had an exit date indicating that they completed less than ten days of attendance. Finally, there was no record of reported progress towards achieving a training competency. CET’s 2017-2018 Student Catalog defines a cancellation period in which, “Either the student or CET may cancel the enrollment at any time during the ten-day cancellation period with no financial obligation incurred by the student” (p. 13). Consequently, the student records with a status code of CN were considered cancellations.

Records with a CL status code were examined and it was found that these records did not have a second variable such as an exit date, as with the CN records. The total CL records were under 100, and all records showed 0% completion to training competencies. Therefore, these records were also included in the category of cancellation. Based on this information, records coded with a CN or CL were removed ( $n = 1305$ ). This resulted in 6,803 records for examination.

Current students records ( $n = 1089$ ) were reviewed, and progress towards completion of the program ranged from 95% to 5%. Progress towards completion was contingent upon enrollment date. These records were removed because of the clear difference of frequency across the years and complexity of data categorization.

A final segmentation occurred as a result of variations with enrollment patterns. According to CET's Director of Management Information Systems (MIS) and Contracts, even with an open, year round program entry point, the various CET centers show seasonal enrollment peaks across locations similar to institutions like community colleges which run on quarter or semester calendar systems. With funding through the U.S. Department of Labor Employment and Training Administration (DOL-ETA), CET serves farmworker populations in what are considered "rural" locations, and enrollment patterns are influenced by geographic seasonality related to agriculture. Between 2014 and 2017, CET had eight locations classified as "urban" and seven locations classified as "rural", for a total of 15 job training centers (M.J. Smith, personal communication, June 3, 2018). Considering the complexity of analysis required to factor in the effects of seasonality during the incomplete calendar years, all records ( $n = 2493$ ) occurring in the years of 2014 and 2017 were removed. This last reduction resulted in 4,677 records, representing the calendar years of 2015 and 2016 with students whose enrollment status could be classified as a graduate or a withdrawal.

### *Survey Results*

As with student record data delivery, organizational permission for student surveys was obtained and anonymization of student survey data prior to delivery to the researcher was performed. CET conducted surveys of students who withdrew during the period of July 1, 2017 and August 18, 2018. Students included were those who were classified as either "cancellations", meaning they enrolled but left the program within a 10 day period, or "withdrawal", defined as a student who left after the 10 day period but before completing the program's required clock hours for graduation. In seeking to answer the question of why students leave CET and to solicit qualitative data directly from the students, the organization administered a student survey to

three groups of students who withdrew from the program or were cancellations. Questions in the survey included when students left the program, if they spoke to anyone such as a family member or staff person about the decision to leave, possible reasons for leaving, information about resources for overcoming barriers, current activities and whether the student would return to CET.

The survey was conducted by email based on student records between October 1, 2014 and October 1, 2017. Only records which contained a valid email address were in the first and subsequent survey groups. The second survey that CET administered contained records from October 2, 2017 to December 31, 2017. CET determined that the response rate in the first two surveys were too low to be considered valid for analysis. CET ran a third survey of records between July 1, 2017 to August 18, 2018. This was the data delivered for examination in this study.

Table 2 shows Strengths and Drawbacks to the validity of both data sources.

Table 2 : Application of mixed methods

<u>Student Records Strengths:</u>	<u>Survey Results Strengths:</u>
<ul style="list-style-type: none"> <li>- Identification of frequencies in characteristics of students who withdraw</li> <li>- Available and relatively costless to collect</li> <li>- Useful for making comparison across years</li> </ul>	<ul style="list-style-type: none"> <li>- Direct identification of reasons for withdrawal</li> </ul>
<u>Student Records Drawbacks:</u>	<u>Survey Results Drawbacks:</u>
<ul style="list-style-type: none"> <li>- Large Volume</li> <li>- Time-consuming analysis</li> <li>- Unable to align data against standard cohort years for institutional comparisons</li> </ul>	<ul style="list-style-type: none"> <li>- Small pool of respondents</li> <li>- Retrospective back one year, responses may have been influenced by time</li> <li>- Possibility of low number of respondents</li> </ul>

## FINDINGS

### *Frequency and Percentage Distributions for Student Records*

To determine whether there was a difference in withdrawal rates by year, the first characteristic examined was geography, as seen in Table 3. An overall withdrawal rate of 20% was equivalent for total enrollments in both 2015 and 2016.

Table 3  
Starting Year and Status Percentage Distributions by Center Geography  
(Frequencies in Parentheses)

Year	Geography	Withdrawal ( <i>n</i> = 971)		Graduate ( <i>n</i> = 3706)	
2015 ( <i>n</i> = 2409)	Urban Centers	61.5	(305)	52.1	(997)
	Rural Centers	38.5	(191)	47.9	(916)
2016 ( <i>n</i> = 2268)	Urban Centers	58.7	(279)	48.4	(868)
	Rural Centers	41.3	(196)	51.6	(925)

Using the CET student catalog to compare job training program titles to the U.S. Bureau of Labor Statistics' Standard Occupational Classification system (SOC), CET's training programs were grouped into seven occupational sectors: Business, Education, Healthcare, Manufacturing, Service, Trades and Transportation (U.S. Bureau of Labor Statistics, n.d.).

Descriptive statistics for occupational sectors along with enrollment status and gender distributions are shown in Table 4. The majority of the withdrawals are in the healthcare and trades industries.

Table 4

Gender Characteristic and Sector by Percentage Distribution (Frequencies in Parentheses)

No. of CET Programs	Withdrawals (n = 971)				Graduates (n = 3706)				
	Female		Male		Female		Male		
Business (n = 526)	3	9.9	(96)	4.4	(43)	8.2	(305)	2.2	(82)
Education (n = 41)	1	0.5	(5)	0	(0)	1.0	(36)	0	(0)
Healthcare (n = 1072)	4	20.8	(202)	3.3	(32)	20.8	(770)	1.8	(68)
Manufacturing (n = 724)	2	0.8	(8)	15.9	(154)	0.7	(26)	14.5	(536)
Service (n = 265)	3	1.8	(17)	3.0	(29)	3.5	(129)	2.4	(90)
Trades (n = 1468)	6	1.3	(13)	29.2	(284)	1.4	(52)	30.2	(1119)
Transportation (n = 581)	2	0.7	(7)	8.3	(81)	0.9	(32)	12.4	(461)

The characteristic of age are shown in Table 5. The majority of withdrawals fall in the 18-24 year old range.

Table 5

Characteristic of Age by Percentage Distribution (Frequencies in Parentheses)

Age	Withdrawal (n = 971)		Graduate (n = 3706)	
< 18	1	(5)	1	(52)
18-24	47	(459)	46	(1,714)
25-31	24	(231)	22	(828)
32-38	13	(125)	12	(459)
39-45	5	(53)	8	(281)
46-52	5	(49)	6	(224)
53-59	4	(38)	3	(114)
60 <	1	(11)	1	(34)

Students pre-training educational attainment as shown in Table 6 reveals the majority of total program participants had earned a high school diploma or GED in the US or an international equivalent. The next largest distribution was for students categorized as Dropouts.

Enrollments who were both drop outs and attended a rural center had a noticeably larger percentage distribution in comparison to urban centers.

Table 6  
Educational Attainment by Geography as Percentage Distributions  
(Frequencies in Parentheses)

	Urban Centers				Rural Centers			
	Graduate (n = 1865)		Withdrawal (n = 584)		Graduate (n = 1841)		Withdrawal (n = 387)	
College Graduate	.04	(8)	0.2	(1)	0.3	(6)	0	(0)
Dropout	10.5	(195)	15.4	(90)	24.8	(457)	35.4	(137)
H.S. Equivalency other country	12.2	(228)	4.3	(25)	7.9	(145)	2.1	(8)
H.S. Graduate/GED (USA)	73.6	(1373)	76.0	(444)	65.0	(1197)	61.5	(238)
In School	0	(0)	0	(0)	0.4	(7)	0	(0)
Post H.S. Attendee	3.2	(60)	4.1	(24)	1.6	(29)	1.0	(4)
Unknown	0.1	(1)	0	(0)	0	(0)	0	(0)

Reading and math grade level assessment scores as percentage distributions are shown in Table 7. The dashed line groups students who assessed at or below 8<sup>th</sup> grade in reading and math.

Table 7  
Grade Level Assessment Testing Characteristic as Percentage Distributions  
(Frequencies in Parentheses)

	Reading Level				Math Level			
	Withdrawal (n = 971)		Graduate (n = 3706)		Withdrawal (n = 971)		Graduate (n = 3706)	
0	0.3	(3)	0.2	(8)	0.2	(2)	0.3	(10)
1-2	1.9	(18)	3.2	(117)	2	(19)	4.6	(169)
3-4	4.3	(42)	5.6	(208)	7.9	(77)	8.1	(302)
5-6	12.7	(123)	13.6	(504)	24	(233)	21	(779)
7-8	24.6	(239)	22.7	(841)	30	(291)	28.1	(1042)
9-10	31	(301)	32.3	(1198)	20.7	(201)	22.2	(822)
11-12	22.2	(216)	21.5	(797)	11.7	(114)	12.4	(460)
13	3	(29)	0.09	(33)	3.5	(34)	3.3	(122)

Table 8 shows the distributions of identified barriers that CET collects binary data for and included the availability of transportation, participation in a food stamp program and limited

English language. Because there is no clear definition of what availability of transportation means, further explanation is warranted for understanding any patterns of withdrawal within this category.

Table 8  
Identified Barriers Characteristics as Percentage Distributions  
(Frequencies in Parentheses)

	Withdrawal (n = 971)		Graduate (n = 3706)	
Availability of Transportation				
Yes	83.4	(810)	86.6	(3208)
No	16.4	(159)	13.2	(490)
Unknown	0.2	(2)	0.2	(8)
Participation in Food Stamp Program				
Yes	35.2	(342)	25.4	(943)
No	64.8	(629)	74.6	(2763)
Limited English				
Yes	6.7	(65)	11.5	(426)
No	93.3	(906)	88.5	(3280)

Labor force participation is shown in Table 9. The majority of students are unemployed which could be a result of the majority of students being between the ages of 18 and 24 years old and the possibility of residing at home with parents.

Table 9  
Labor Force Participation as Percentage Distributions (Frequencies in Parentheses)

	Withdrawal (n = 971)		Graduate (n = 3706)	
Employed	22.8	(221)	24.4	(906)
Employed, but received layoff notice	0	(0)	0.01	(4)
Not in Labor Force	9.1	(88)	11.4	(423)
Underemployed	1.5	(15)	1.3	(47)
Unemployed	66.6	(647)	62.8	(2326)

Income percentage distributions in Table 10 showed 71% of total enrollments had an income level below \$12,140 a year.

Table 10  
Applicant Income as Percentage Distributions (Frequencies in Parentheses)

	Withdrawal (n = 971)		Graduate (n = 3706)	
0 - \$12,140	79.7	(774)	69.4	(2571)
\$12,141 - 16,460	7.6	(74)	10.6	(393)
\$16,461 - 20,780	4.5	(44)	6.7	(248)
\$20,781- 25,100	3.9	(38)	5.0	(187)
\$25,101 - 29,420	2.3	(22)	2.5	(91)
\$29,421 - 33,740	0.8	(8)	1.9	(70)
\$33,741 - 38,060	0.1	(1)	1.1	(42)
\$38,061 - 42,380	0.04	(4)	1.0	(36)
\$42,381 or more	0.06	(6)	1.8	(68)

*Cross Tabulations for Student Records*

Using Microsoft Excel, cross tabulation tables were created and Pearson’s Chi Squared test of independence was used to determine significance. Table 11 shows the results of testing with enrollment status as the independent variable (IV).

Table 11  
Chi Square Test of Independence

	$\chi^2$	d.f.	p value	Outcome
Status vs Occupational Sector	27.2278	6	0.000131	Reject $H_0$
Status vs Educational Attainment	57.6059	6	< .00001	Reject $H_0$
Status vs Reading Level Assessment	24.0366	7	0.001123	Reject $H_0$
Status vs Availability of Transportation	2284.418	1	< .00001	Reject $H_0$
Status vs Food Stamp Participation	36.9040	1	< .00001	Reject $H_0$
Status vs Limited English	18.8725	1	0.000014	Reject $H_0$
Status vs Income Level	51.7577	8	< .00001	Reject $H_0$
Status vs. Geography	6.6348	1	29.7471	Reject $H_0$
Status vs Age	14.5770	7	0.041821	Accept $H_0$
Status vs Gender	0.1151	1	0.734522	Accept $H_0$
Status vs Math Level Assessment	18.3814	7	0.010364	Accept $H_0$
Status vs Labor Force Participation	7.0573	4	0.132891	Accept $H_0$

Significance Level  $\alpha = .01$

Status is enrollment status and is the Independent Variable (IV).

Of the 12 characteristics tested, four showed no significance and the null hypothesis of status as an independent characteristic was accepted. The remaining eight showed significance and therefore the alternate hypothesis that status had a relationship to the dependent variable was accepted.

### *Student Survey Results*

CET administered a survey to a total of 488 students with 68.9% categorized as withdrawals and 30.7% as cancellations. The response rate was 8.4% ( $n = 41$ ) of the total. Of the respondents, 88% ( $n = 36$ ) were withdrawals. Drawing conclusions from such a limited data set presents threats to validity. Nonetheless, CET can glean some information from the results and therefore they are presented.

In Figure 1 the results show an equal distribution of respondents leaving CET within 1 – 2 months, 3 – 5 months or after 5 months.

Figure 1

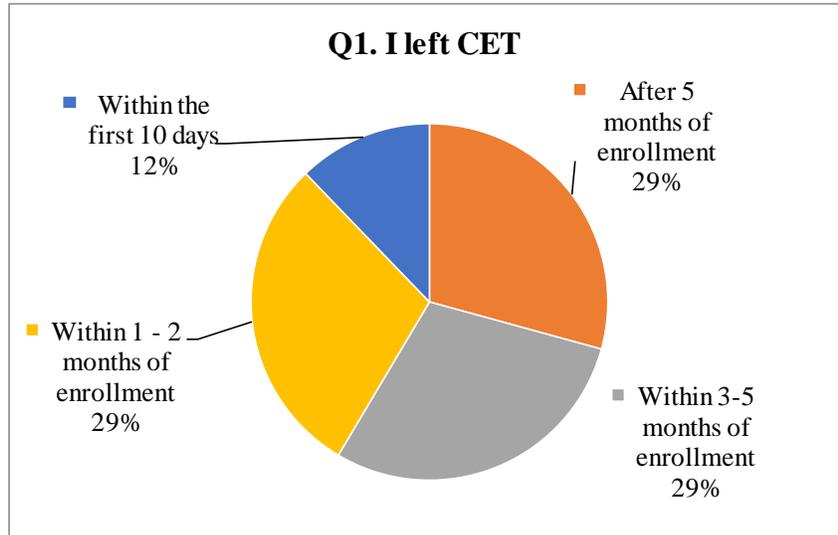


Figure 2 shows when asked who respondents spoke to prior to leaving CET. Under the open-ended Other category for question two, 12% used the open-ended response to state they did not speak to anyone.

Figure 2

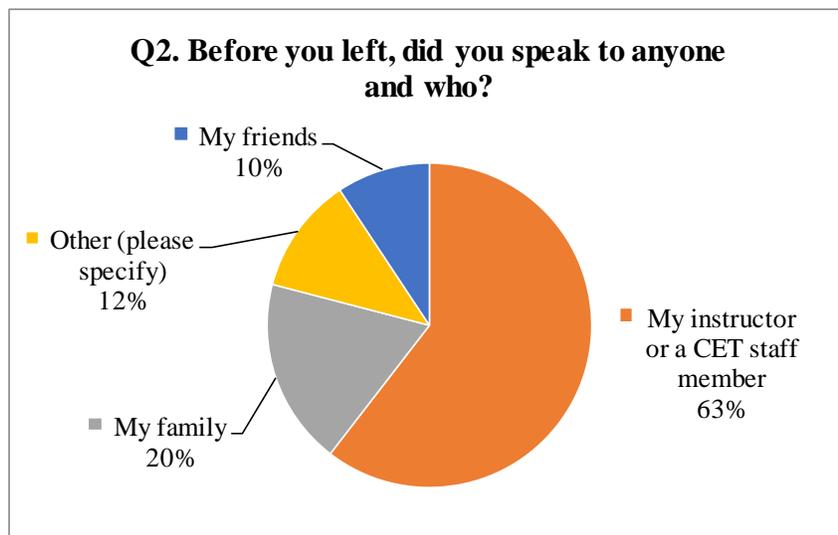
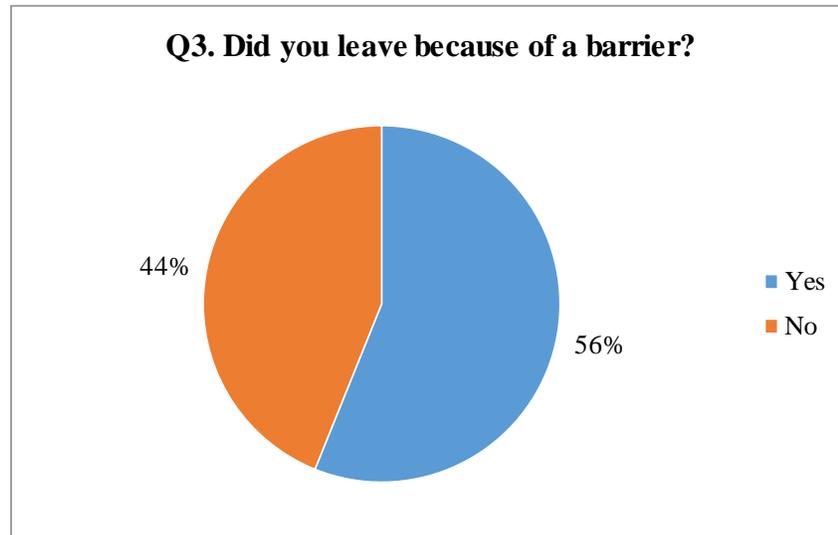


Figure 3 shows just over half of respondents reported they left because of a barrier.

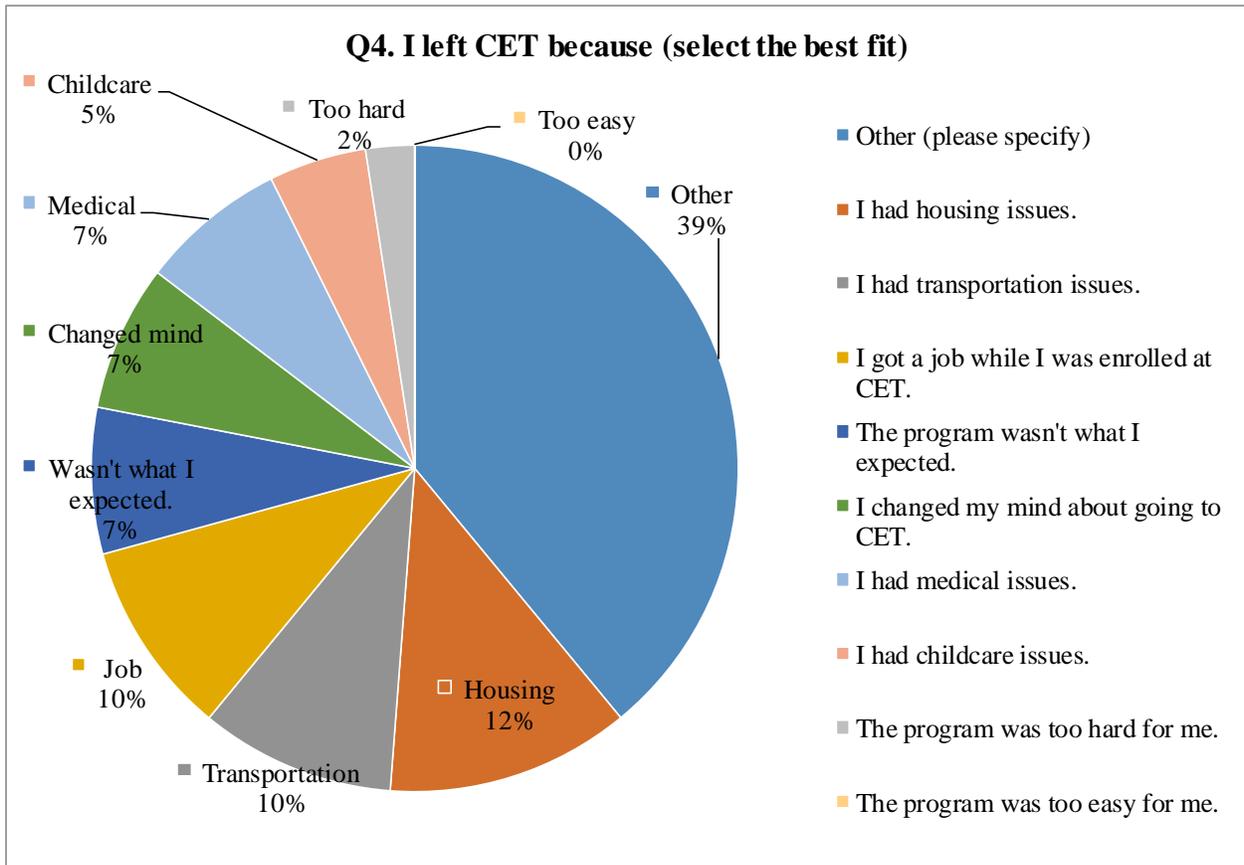
Figure 3



Survey question four asked respondents to select the best fit from a list of barriers, including categories leaning towards individual value judgements (e.g. changed mind, too hard, too easy, or wasn't what was expected) or circumstantial conditions (e.g. housing, transportation, health and family, and employment). There was an additional open-ended selection to provide responses. Figure 4 shows 39% of respondents selected the option of Other in response to the question. These open ended responses were coded to topical categories based on the information provided. Five response groups were identified. These were related to attendance, dissatisfaction, family or financial matters, and self-reported cancellations. Five of the 16 cited dissatisfaction with an aspect of the program and 4 of the 16 reported leaving due to an attendance issue. Housing issues and transportation issues represented the next largest percentage at an aggregated

22% of responses. Interestingly, respondents were not given an option regarding food security despite a large number of students reporting they did not participate in a food stamp program.

Figure 4



Figures 5 and 6 reveal the responses to questions five and six were related and questions centered on communication of circumstances and identification of available resources.

Figure 5

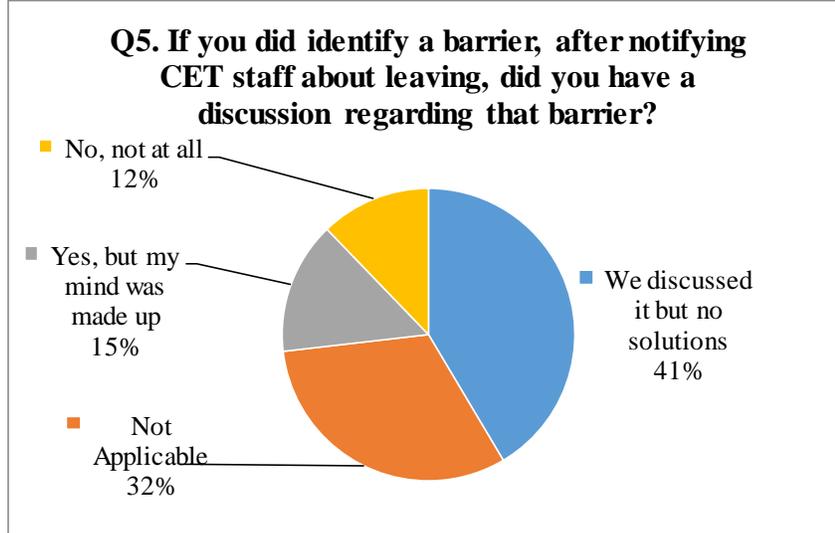
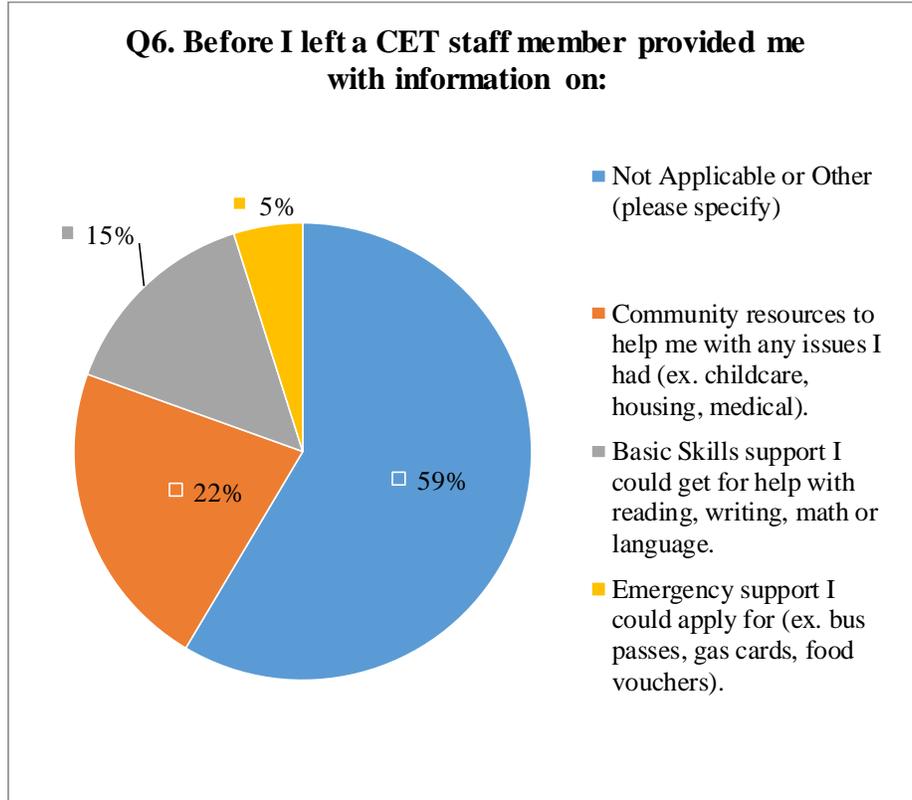


Figure 5 shows an aggregated 51% of respondents specify speaking to someone at CET. Just under a third reported that the question was not applicable to them. The survey made no distinction as to what possible solutions could be offered to overcome any barriers.

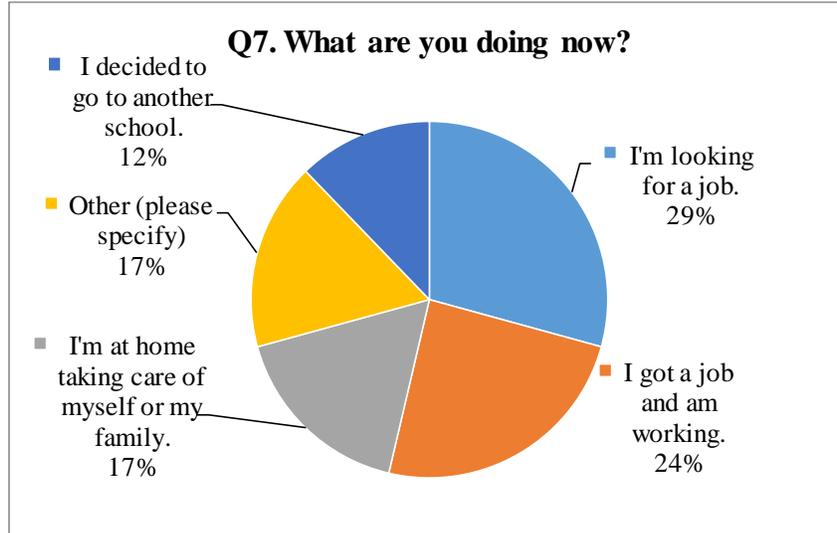
Question 6 asks survey participants what type of information was provided to them before leaving. Resources were both internal to CET (e.g. basic skills and emergency support) and external to CET (e.g. community resources). There was a response label of Not Applicable or Other which was 59% of responses. Of these responses, 17 reiterated the question was not applicable. However, four cited being provided information on attendance, job placement and financial aid policies while the remaining 3 responses were statements of general dissatisfaction.

Figure 6



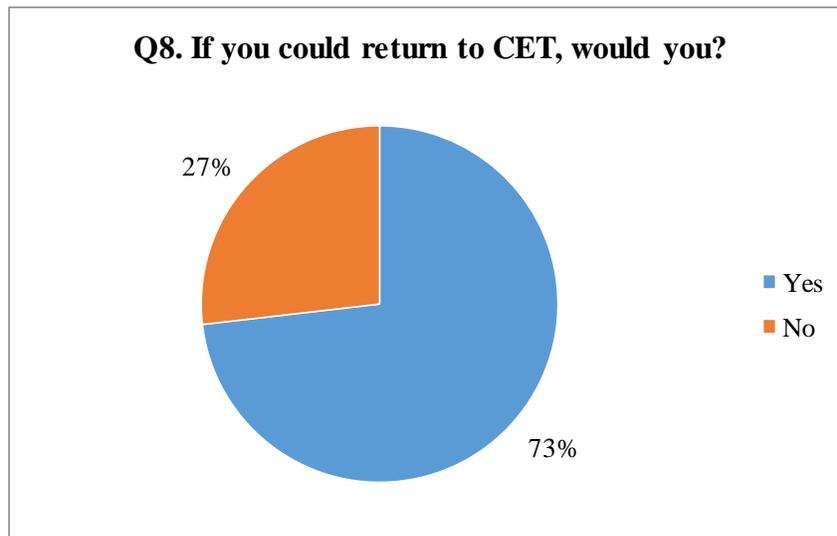
Question 7 asked what former CET students were doing presently. Figure 7 shows under a third and were in job search and 24% were employed. Interestingly, the rate at which students reported being employed after withdrawal is similar to those who reported being employed at the start of the program. Also provided was an Other option, and 3 of the respondents in Other cited continuing education. Therefore, the independent answer choice of deciding to go to another educational institution was actually greater versus the rate shown under the specific selection.

Figure 7



Question 8 as shown in Figure 8 shows 73% or 30 of 41 former CET students would return if given the opportunity.

Figure 8



Finally question 9 which is not illustrated in a chart in Appendix C, asked respondents: “Is there anything else we should know about why you left CET?” This was the only question which 3 respondents skipped. The remaining 38 provided answers which were grouped into the

following categories: Attendance Policy Dissatisfaction ( $n = 1$ ), Generalized Dissatisfaction ( $n = 3$ ), Dissatisfaction with Staff ( $n = 8$ ), Dissatisfaction with the Financial Aid package ( $n = 3$ ), Stated Employment ( $n = 2$ ) and those with no additional comments ( $n = 20$ ).

## ANALYSIS

### *Findings and the CET Program Design*

Reaching the same conclusions drawn by scholars, more study is needed in this area. According to a CET analyst, student records have more than 25 variables (M. Ignacio, personal communication, July 6, 2018). The findings only examine 12 of the total student characteristic variables available. With so many characteristics recorded, a comprehensive examination of the complex, non-linear relationships can be carried out. CET has ample data to analyze in its student record system, but more effort is needed in collecting survey data if stakeholder feedback is to be valuable. Being able to segment the data by geography could be very beneficial in understanding any differences and influences as a result of location. Although not included in the findings, it is worthwhile to mention a study may be needed of the characteristics of students who were classified as 10 day cancellations, as it may offer additional perspective from those opting out.

To answer the research question of what are the characteristics of students who withdraw and why do they withdraw, findings show that males in the trades who have a high school diploma, are between the ages of 18-24 and are low income are more likely to withdraw. Students who withdraw are less likely to have the need for English as a Second Language (ESL) support, or to participate in a social service food program. Students who withdraw have transportation available to them in some form, and are more likely to be unemployed. Being able to draw firm conclusions as to why students withdraw is not clear.

CET's program design shows a level of merit as an educational model when answering a first question – what percentage of students withdraw? CET's 2015 and 2016 rates showed that 20% of enrolled students leave, and this distribution remained exactly the same for the two-year study period. As a comparatively small organization, 20% may appear to be a large percentage.

Further research is needed to see if comparative withdrawal rates fluctuate for institutions such as Job Corps or community colleges. If research demonstrates that withdrawal rates do not change dramatically than by comparison, CET's rate is noticeably lower.

According to the annual Job Corps Center Report Card for Region 6 – San Francisco, the Region has a 38% withdrawal rate (Outcomes, 2018; U.S. Department of Labor, 2016). Similarly in an online *Forbes* article, the author cites an annual report on retention by the National Student Clearinghouse (NCS), which points out that withdrawal rates for 2017 in community colleges top 47% (Cooper, 2017). Although the periods of time are not exactly equivalent, CET's lower withdrawal rate lends itself to concluding that there is benefit to the program design's focus on the integration of training, basic skills, and human development.

CET offered a total of 21 job training programs during the study period. Dividing the programs by gender participation, the program selection offered by CET is almost equally distributed with approximately 11 programs offered showing enrollments by a majority of females and the remaining 10 with a majority of males. The two sectors with the highest rates of withdrawal are in the female dominated healthcare field or the male dominated trades. The overall withdrawal rate for females is approximately 7% while males are at 13%. If the rates hold by gender, CET could consider offering additional programs that appeal to females. While not necessarily aimed to reduce the withdrawal rate, program diversification through the targeting of females may impact enrollment and graduation rates, but potentially not the withdrawal rate.

In the outcome of hypothesis testing, income level showed significance. With 71% of students recorded with income less than \$12,140 per year, further examination is required to understand if there is a relationship between students' dependency status and income. A main question which arises includes the relationship between age and household status. How does

CET measure income? Is income recorded by household income based on parents' income or is it calculated by the individual? Either way, with income levels so low, providing subsidized supportive services, such as emergency funding for housing assistance or transportation assistance, may be beneficial for students although a temporary fix in complex social and economic conditions. For example, unemployed students in San Jose who have housing issues may have more challenges in securing and maintaining housing than those in locations where the cost of living is lower and the availability of housing is higher. It is unknown whether CET has funding sources to meet the needs of a student population that cycles through program entry and exit in such a short period of time.

Data collected from the survey responses shows some students indicated that they were not aware of what help was available to them, or reported that resources did not apply to them or did not meet their needs. A potential subsidy to earned income, the findings showed that 72% of students do not participate in a food stamp program despite the level of poverty upon entry. With a younger demographic, it may be the case that students are still living at home and do not qualify. Still, more than half of the students are over the age of 25, and referrals to social service support may be warranted.

On National Public Radio's "All Things Considered" program, Edes (2018) produced an episode where 40,000 university and community college students were surveyed with questions about food and housing security. With no longitudinal data to compare results against, the survey results showed that one-third of participating students had food or housing insecurity. For lower income students, this makes graduation from two and four year institutions more challenging. Despite differences in the educational institutions, it is likely that CET students may be experiencing the same challenges as their close counterparts. Being able to leverage the unit

team structure with staff training a communication plan to inform students of internal and external emergency supportive services that are available, eligibility requirements, and process of application may have an impact by providing a short term safety net, mitigating the pressure to withdraw through the provision of resources.

With the percentage distributions showing data clearly skewing towards one response (yes or no), significance for the identified barriers related to availability of transportation and limited English skills was not surprising. Student records show that 86% of students have transportation “available”. Expanding what the definition of “availability” of transportation would be helpful in a future study, to see whether CET could improve outcomes if withdrawals were related to transportation. For example, understanding whether the student owns a reliable vehicle, uses public transportation or relies on others could assist in determining whether students are at risk of withdrawal within this category. With only 10% of student records showing limited English as a barrier, identifying whether there are any geographic trends to this barrier can help CET focus services for second language acquisition.

Significance testing in geography, educational attainment, and reading levels are the characteristics which call up the question of whether CET’s program design is as effective as it can be. Further examination with geographical segments is a must. With a service area in both rural and urban locations, and although urban centers enroll more students, withdrawal indicators such as high school dropout rates are higher in rural areas. With lower educational attainment, this indicates lower literacy levels in rural areas. Consequently, the characteristic of literacy level appears to be the most telling of characteristics for students who withdraw.

According to the highlights of a literacy survey for the NCES , people who had higher levels of literacy were more likely to have a job, work more often and earn more than those with

lower literacy levels. And although the survey showed a portion of individuals at the lower end of literacy levels who did have higher earnings, the authors concluded, “literacy can be thought of as a currency in this society. Just as adults with little money have difficulty meeting their basic needs, those with limited literacy skills are likely to find it more challenging to pursue their goals” (Kirsch, Jungeblut, Jenkins, Kolstad, 2002). Because students entering CET are assessed using standardized assessment tests to determine grade level literacy, those achieving a grade level score of 8<sup>th</sup> grade or below are referred to basic skills instructional support by their instructors (N. Divalova, personal communication, July 6, 2018). If a single withdrawal characteristic could be influenced by CET’s program design, it may be literacy levels. Because literacy is such an important factor further study is also warranted in this area to determine if there is any significance between those student who enroll in urban or rural locations.

## CONCLUSION

With the objective of preserving the holistic and integrated program design and aiming to reduce the withdrawal rate, CET can focus in on expanding basic literacy services, maintaining current emergency resource grants available for students, and developing strategic partnerships to develop new ways of addressing challenging problems for student retention.

Raising the basic skills literacy levels by engaging more students earlier could have a positive impact on withdrawals and represents the easiest and the most immediate adjustment. An inclusion into the program design could be an integrated bridge program focused on improving literacy. Similar to bridge programs aiming to prepare high school students for college or transitioning newly enrolled students into universities, a hybridized concept could be implemented by CET. Implemented in the first 10 days, students could be required to participate in a literacy refresher, including preparation with skill-related subject matter that supports basic skill development. The student is supported prior to entering the job training classroom with skill-related math and language. Inclusion of workshops that focus on the human development component of the CET model could focus students towards success with self-assessment tools and beginning job development activities. Once students complete the 10 days, and foundational academic skills have been more comprehensively assessed in conjunction with preliminary standardized assessment scoring, students requiring more support will be better identified. Students needing less support could periodically access the basic skill support service for training as needed. Respondents in CET's withdrawal survey show students have a connection to staff because they reported speaking to staff prior to withdrawal. A bridge program will nurture that connection to staff earlier in the training period along with supporting a sense of belonging

among students as demonstrated by Tinto's *Student Integration Model* and Bean's *Student Attrition Model* (Demetriou, 2011).

With an open-entry model and enrollment trends related to differences in geography, student need exists year round. Challenging outcomes for CET to achieve would be to improve food security and provide transportation subsidies for students, thus freeing up limited income for other expenses such as housing. Two areas CET could focus on to have a progressive impact on withdrawals would be to develop new strategic partnerships and expand available resources in those areas.

Community colleges are able to provide services to low income students through programs such as Fresh Success, a program which provides students more food security and emergency needs. Through the State of California's CalFresh program, qualifying students can enroll in Fresh Success programs to qualify for food assistance under the federally funded Supplemental Nutrition Assistance Program (SNAP), formerly called food stamps (Foundation for California, n.d.). Programs like Fresh Success also provide one-time emergency housing and household utility grants along with academically related supplies to participating students (Gavilan College, n.d.). Although the Fresh Success program is seen in community colleges, CET's students have the same income related challenges warranting participation in such programs. CET can strategically advocate for legislation to include students in non-traditional post-secondary institutions. Although CET is not a public institution and thus unable to receive tax derived and state allocated dollars, programs such as Fresh Success show expanding available resources is a possibility. With 64% of withdrawals not participating in a food program and no direct survey information, food security could be a retention barrier needing to be more directly addressed. Periodic informational campaigns aimed at educating students about food

program resources they may qualify for during training could alleviate this barrier to success. According to Yvette Avila, Center Director of CET's main campus in San Jose, CA, between 2007 and 2013 during the economic recession, CET partnered with Second Harvest Food Bank as a distribution center. Students needing assistance accessed food bank services regularly (Y. Avila, personal communication, July 6, 2018). Renewing this arrangement and replicating it in other counties could be the easiest partnerships to develop in the shortest amount of time without having to influence legislation as may be the case with aligning to programs directly funded by the state.

Addressing transportation barriers through emergency grants is a commonality shared by CET and other institutions. In Santa Clara County, CA programs such as Gavilan College's Fresh Success program offers students located in the more rural geography transportation assistance through gas cards and bus tokens, while San Jose City College, located in a densely urbanized area includes a transportation fee which subsidizes passes on local mass transit lines (Y. Avila, personal communication, July 6, 2018). Recent passage of AB19 in California provides funding to public community college districts provides and flexibility to colleges to use the funds for the greatest need of qualifying students, including transportation (Rose, 2018) . Although the findings in CET's student records showed a large percentage of students were categorized as having transportation available, the withdrawal survey conducted hints that the transportation barrier to student success may be underreported. As a private, non-profit institution CET cannot access the same program funding resources that public institutions can and is at a disadvantage. Maintaining grants for transportation, educating students to emergency grant availability, and encouraging ride-sharing and the use of public transportation where available is the most feasible. The transportation issue is not easily solved as the costs to

transportation providers is prohibitive and there is a lack of research on potential impacts (Gase, Kuo, Teutsch, & Fielding, 2014). CET could follow the lead of community colleges seeking to solve this issue by examining the ability to create new partnerships with transportation alternative types of providers such as Uber, helping increase students' ability to directly access transportation (Smith, 2016).

With 66% of CET's withdrawals characterized as unemployed, a logical agency to access potential resources are state unemployment offices. For qualifying persons, the California State Employment Development Department (EDD) can offer an Individual Training Account (ITA) to provide vouchers for training fees (State of California, n.d.). CET is listed as an eligible training provider (CalJobs, n.d.). Unfortunately, the EDD's training vouchers do not cover additional expenses such as food, transportation or shelter.

The most difficult challenge for CET may be in providing resources to participants who have housing barriers. A majority of CET's program enrollees live in California and the findings show almost 80% report incomes of just over \$12,000 a year which is defined as "extremely low income" for a one person household by the State Income Levels for 2018 (Department of Housing, 2018). According to a fact sheet provided by the Center on Budget and Policy Priorities (2017), federally funded housing programs fall short in California. Thus, referring students to such programs ineffective in the short period of time students attend CET. However, another approach may be beneficial. Demonstration projects conducted in Chicago, Illinois and King County, Washington show there is a measure of success when the silos of housing and workforce development activities are aligned to common purposes (Office of Policy, 2018 ). Uniquely positioned with locations geographically dispersed across California, CET could seek to create partnerships with programs offering housing assistance, breaking through these silos by working

with low-income residents needing job training. Being able to develop formal linkages will require a commitment of research, planning, and advocacy resources. Partnerships like those in other areas may not have an immediate impact on withdrawal rates, but over a longer period of time this type of partnership meets the shared goals of moving people out of poverty through stable housing and improved workforce participation.

CET faces universally challenging issues in reducing the withdrawal rate by directly assisting its most at risk students. Clearly recognizing students' needs, CET is not alone in needing to support students to the point of graduation, develop the funding resources and partnerships to maintain and expand services contributing to success. A final perspective to offer in developing sources to support emergency services, CET could strategically engage in organizational and locally based fundraising to ensure that funding is available. Taken a step further, activities can include leadership and volunteer opportunities for students and graduates. Efforts will help CET maintain its services while providing the opportunity to demonstrate and advocate for the success of CET's programs to its various stakeholders.

In conclusion, Table 12 lays out a potential path for CET's Management Team to follow in the form of a list of milestones and potential outcomes that can be used to begin implementing and monitoring recommended actions to reduce withdrawal rates.

Table 12

Proposed Milestone	Potential Outcome
Examine all student characteristic variables in a comprehensive analysis	Better understanding of student population with all factors considered
Study of student cancellation characteristics	Determine if there are indicating characteristics for cancellations
Research withdrawal rates of comparative institutions' longitudinal data	Confirm CET's withdrawal rate is substantially lower than counterparts
Offer more programs targeting women	Improve enrollment rates while not increasing withdrawal rates
Expand basic literacy services through a 10 day integrated bridge program	Identification of students needing basic skills support testing above 8 <sup>th</sup> grade levels
Assign a dedicated individual for related legislative advocacy	Inclusion of private non-profit institutions with low income students receiving additional supportive services
Partner with local food security resources such as food banks	Improve student food security and allow for limited income to be spent elsewhere
Assign dedicated individual(s) to create strategic partnerships with transportation and housing agencies	Increased funding for emergency services and/or strategic partnerships to reduce barriers
Implement organizational and local fundraising campaigns for supportive services	Improved financial resources to support student success

## REFERENCES

- Bailey, T. R., & Alfonso, M. (2005). *Paths to persistence: An analysis of research on program effectiveness at community colleges*. (Series No. 1). Lumina Foundation for Education. Retrieved from <https://folio.iupui.edu/handle/10244/268>.
- Bailey, T., Alfonso, M., Scott, M., & Leinbach, T. (2004). *Educational outcomes of occupational postsecondary students*. Washington, DC: National Assessment of Vocational Education, US Department of Education. Retrieved from <https://www2.ed.gov/rschstat/eval/sectech/nave//ed-outcomes.pdf>.
- Bremer, C. D., Opsal, C., Hirschy, A., Castellano, M., Center, B., Geise, A., & Medhanie, A. (2011, July). *Relative impact of interventions to improve achievement and retention in postsecondary occupational programs*. Louisville, KY: National Research Center for Career and Technical Education. Retrieved from <https://files.eric.ed.gov/fulltext/ED574509.pdf>.
- Calcagno, J. C., Bailey, T., Jenkins, D., Kienzl, G., & Leinbach, T. (2005). Community college student success: What institutional characteristics make a difference? *Economics of Education Review*, 27(6), 632-645. Retrieved from <https://files.eric.ed.gov/fulltext/ED489096.pdf>.
- Caliendo, M., & Schmidl, R. (2016). Youth unemployment and active labor market policies in europe. *IZA Journal of Labor Policy*, 5(1), 1. Retrieved from <https://izajolp.springeropen.com/track/pdf/10.1186/s40173-016-0057-x>.

Center on Budget and Policy Priorities. (2017, March 30). *California fact sheet federal rental assistance*. [PDF file]. Retrieved from

<https://www.cbpp.org/sites/default/files/atoms/files/4-13-11hous-CA.pdf>.

Cal Jobs. (n.d.). *ETPL programs*. [Provider list]. Retrieved from

<https://www.caljobs.ca.gov/vosnet/drills/program/ApprovedPrograms.aspx>.

Cave, G., & Doolittle, F. (1991). *Assessing JOBSTART: Interim impacts of a program for school dropouts*. New York, NY: Manpower Demonstration Research Corporation.

Retrieved from <https://files.eric.ed.gov/fulltext/ED338923.pdf>.

Center for Employment Training. (2017). *2017-2018 California Student Catalog*. Retrieved

from <https://cetweb.edu/wp-content/uploads/2018/06/CA-Student-Catalog-2017-18.pdf>.

Center for Employment Training. (n.d.). *50<sup>th</sup> anniversary. The birth of a great program – from “sal si puedes” to coast to coast – 1697 -2017*. Retrieved from

<https://cetweb.edu/about/50th-anniversary/>.

Center for Employment Training. (n.d.). *Frequently Asked Questions*. Retrieved from

<https://cetweb.edu/>.

Cho, Y., Kalomba, D., Mobarak, A., Orozco, V., & Wolfson, D. (2015). Differences in the effects of vocational training on men and women: Constraints on women and drop-out behaviour. *International Labour Organization*. Retrieved from

[http://www.ilo.org/public/libdoc/ilo/2015/115B09\\_28\\_engl.pdf](http://www.ilo.org/public/libdoc/ilo/2015/115B09_28_engl.pdf).

Community College Extended Opportunity Programs and Services, Cal Education Code §69640-69656 (1976). Retrieved from

[https://leginfo.legislature.ca.gov/faces/codes\\_displayText.xhtml?lawCode=EDC&division=5.&title=3.&part=42.&chapter=2.&article=8](https://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=EDC&division=5.&title=3.&part=42.&chapter=2.&article=8).

“Compulsory education laws: Background”. (n.d.) In *Findlaw*. Retrieved from

<http://education.findlaw.com/education-options/compulsory-education-laws-background.html>

Cooper, P. (2017). *College completion rates are still disappointing*. Forbes. Retrieved from

<https://www.forbes.com/sites/prestoncooper2/2017/12/19/college-completion-rates-are-still-disappointing/#560d3984263a>.

Cornwall, A. (2016). Women's empowerment: What works? *Journal of International Development*, 28(3), 342-359. Retrieved from

<https://onlinelibrary.wiley.com/doi/pdf/10.1002/jid.3210>.

Demetriou, C., & Schmitz-Sciborski, A. (2011). Integration, motivation, strengths and optimism: Retention theories past, present and future. Paper presented at the *Proceedings of the 7th*

*National Symposium on Student Retention*, 300-312. Retrieved from

<https://pdfs.semanticscholar.org/909d/94498abfe9d8606994c319509f43ac6b06fa.pdf>.

Department of Housing and Community Development. (2018, April 26). *State Income Limits for 2018*. Retrieved from [http://www.hcd.ca.gov/grants-funding/income-limits/state-and-](http://www.hcd.ca.gov/grants-funding/income-limits/state-and-federal-income-limits/docs/inc2k18.pdf)

[federal-income-limits/docs/inc2k18.pdf](http://www.hcd.ca.gov/grants-funding/income-limits/state-and-federal-income-limits/docs/inc2k18.pdf).

Edes, A. (Producer). (2018, April 3). *All Things Considered* [Radio broadcast]. Washington, D.C.: National Public Radio. Retrieved from

<https://www.npr.org/sections/thesalt/2018/04/03/599198739/food-housing-insecurity-may-be-keeping-college-students-from-graduating>.

Educational Opportunity Program. (n.d.). History of the educational opportunity program. *Cal State LA*. Retrieved from <http://www.calstatela.edu/eop/history-educational-opportunity-program>.

Eicher, V., Staerklé, C., & Clémence, A. (2014). I want to quit education: A longitudinal study of stress and optimism as predictors of school dropout intention. *Journal of Adolescence*, 37(7), 1021-1030. Retrieved from

<https://pdfs.semanticscholar.org/909d/94498abfe9d8606994c319509f43ac6b06fa.pdf>.

Eichhorst, W., Rodríguez-Planas, N., Schmidl, R., & Zimmermann, K. (2015). A road map to vocational education and training in industrialized countries. *ILR Review*, 68(2), 314-337.

Retrieved from <https://web-b-ebshost-com.libaccess.sjlibrary.org/ehost/pdfviewer/pdfviewer?vid=1&sid=b54f0002-4e0a-45e3-89d5-c07b714ab474%40sessionmgr101>.

Eichhorst, W. (2015). Does vocational training help young people find a (good) job? *IZA World of Labor*, doi: 10.15185/izawol.112. Retrieved from <https://wol.iza.org/articles/does-vocational-training-help-young-people-find-good-job/long>.

Elffers, L., Oort, F. J., & Karsten, S. (2012). Making the connection: The role of social and academic school experiences in students' emotional engagement with school in post-

secondary vocational education. *Learning and Individual Differences*, 22(2), 242-250.

Retrieved from <https://www-sciencedirect-com.libaccess.sjlibrary.org/science/article/pii/S1041608011001750>.

Elliott, J., & Lopez del Puerto, C. (2015). Development of an attitudes and intentions scale for construction skills training programs. *Journal of Employment Counseling*, 52(3), 131-144.

Retrieved from

[https://www.researchgate.net/profile/Carla\\_Puerto/publication/281608586\\_Development\\_of\\_an\\_Attitudes\\_and\\_Intentions\\_Scale\\_for\\_Construction\\_Skills\\_Training\\_Programs/links/572e6a2608ae7441518f42fc/Development-of-an-Attitudes-and-Intentions-Scale-for-Construction-Skills-Training-Programs.pdf](https://www.researchgate.net/profile/Carla_Puerto/publication/281608586_Development_of_an_Attitudes_and_Intentions_Scale_for_Construction_Skills_Training_Programs/links/572e6a2608ae7441518f42fc/Development-of-an-Attitudes-and-Intentions-Scale-for-Construction-Skills-Training-Programs.pdf).

Fernandes-Alcantara, A. (2015). *Vulnerable youth: employment and job training programs*.

Washington, DC: Congressional Research Service. Retrieved from

[https://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?referer=https://scholar.google.com/&httpsredir=1&article=2456&context=key\\_workplace](https://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?referer=https://scholar.google.com/&httpsredir=1&article=2456&context=key_workplace).

Foundation for California Community Colleges. (n.d.). *Fresh Success*. Retrieved from

<https://foundationccc.org/What-We-Do/Student-Services/FreshSuccess>.

Gase, L. N., Kuo, T., Teutsch, S., & Fielding, J. E. (2014). Estimating the costs and benefits of providing free public transit passes to students in Los Angeles County: lessons learned in applying a health lens to decision-making. *International journal of environmental research and public health*, 11(11), 11384–11397. Retrieved from

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4245618/>.

Gavilan College. (n.d.). *Fresh Success*. Retrieved from

<http://www.gavilan.edu/student/eops/calworks/freshsuccess.php>.

Gerdes, H., & Mallinckrodt, B. (1994). Emotional, social, and academic adjustment of college students: A longitudinal study of retention. *Journal of Counseling & Development*, 72(3), 281-288. Retrieved from <https://web-a-ebSCOhost-com.libaccess.sjlibrary.org/ehost/detail/detail?vid=0&sid=bc03b887-4b64-440d-8b9d-9c6fdc83eea3%40sdc-v-sessmgr03&bdata=JnNpdGU9ZWwhvc3QtbGl2ZSZzY29wZT1zaXRl#AN=108034545&db=ccm>.

<https://web-a-ebSCOhost-com.libaccess.sjlibrary.org/ehost/detail/detail?vid=0&sid=bc03b887-4b64-440d-8b9d-9c6fdc83eea3%40sdc-v-sessmgr03&bdata=JnNpdGU9ZWwhvc3QtbGl2ZSZzY29wZT1zaXRl#AN=108034545&db=ccm>.

<https://web-a-ebSCOhost-com.libaccess.sjlibrary.org/ehost/detail/detail?vid=0&sid=bc03b887-4b64-440d-8b9d-9c6fdc83eea3%40sdc-v-sessmgr03&bdata=JnNpdGU9ZWwhvc3QtbGl2ZSZzY29wZT1zaXRl#AN=108034545&db=ccm>.

*Green jobs innovation fund grant comprehensive report on the evaluation of findings*. (2014). (Phase III Report). San Francisco: Harder + Company.

Hansen, L. (2018, September 6). San Jose tops list for least affordable housing in U.S. *The Mercury News*. Retrieved from <https://www.mercurynews.com/2018/09/06/san-jose-tops-list-for-least-affordable-housing-in-u-s/>.

Hanushek, E. A., Schwerdt, G., Woessmann, L., & Zhang, L. (2017). General education, vocational education, and labor-market outcomes over the lifecycle. *Journal of Human Resources*, 52(1), 48-87. Retrieved from <https://www.econstor.eu/bitstream/10419/58710/1/689824106.pdf>.

Hirschy, A. S., Bremer, C. D., & Castellano, M. (2011). Career and technical education (CTE) student success in community colleges: A conceptual model. *Community College Review*,

39(3), 296-318. doi:10.1177/0091552111416349. Retrieved from <https://journals-sagepub-com.libaccess.sjlibrary.org/doi/abs/10.1177/0091552111416349>.

Hirshleifer, S., McKenzie, D., Almeida, R., & Ridao-Cano, C. (2016). The impact of vocational training for the unemployed: Experimental evidence from turkey. *The Economic Journal*, 126(597), 2115-2146. Retrieved from <https://www.econstor.eu/bitstream/10419/96735/1/dp8059.pdf>.

Holzer, H. J. (2012). *Going, Going...Gone? the evolution of workforce development programs for the poor since the war on poverty*. Washington, DC: Georgetown University and American Institutes for Research. Retrieved from <http://npc.umich.edu/news/events/war-on-poverty-june-conference/holzer.pdf>.

Job Corps. (2018). Outcome Measurement System Center Report Card (OMS-10). Retrieved from [https://www.jobcorps.gov/flysystem/s3?file=2018-07/JobCorps\\_oms10\\_ytd\\_2018-05\\_0.pdf](https://www.jobcorps.gov/flysystem/s3?file=2018-07/JobCorps_oms10_ytd_2018-05_0.pdf).

Job Training Partnership Act of 1982, 29 U.S.C. § 1501 (*et. seq.*). Retrieved from <https://www.congress.gov/bill/97th-congress/senate-bill/2036>.

Kirsch, I. , Jungeblut, A., Jenkins, I., & Kolstad, A. (2002). *Adult literacy in america*. Washington, D.C., National Center for Educational Statistics. Retrieved from <https://nces.ed.gov/pubs93/93275.pdf>.

Krafft, C. (2017). Is school the best route to skills? returns to vocational school and vocational skills in Egypt. *The Journal of Development Studies*, , 1-21. Retrieved from

<https://www.pop.umn.edu/sites/pop.umn.edu/files/wp-2013-9.pdf>.

Los Angeles County Department of Public Health. The Potential Costs and Benefits of Providing Free Public Transportation Passes to Students in Los Angeles County. Issue Brief. October

2013. Retrieved from <https://www.pewtrusts.org/->

[/media/assets/2013/10/hiaissuebrief\\_studenttransitpassprogram\\_october20131-\(1\).pdf](https://www.pewtrusts.org/-/media/assets/2013/10/hiaissuebrief_studenttransitpassprogram_october20131-(1).pdf).

Louie, D. (2018, March 16). Low wage jobs come to possible tipping point in San Jose.

Retrieved from <https://abc7news.com/business/low-wage-jobs-come-to-possible-tipping-point-in-san-jose/3225326/>.

Ma, J., Pender, M., & Welch, M. (2016). Education pays 2016: The benefits of higher education for individuals and society. Trends in higher education series. Retrieved from

<https://trends.collegeboard.org/sites/default/files/education-pays-2016-full-report.pdf>.

Meherns, D. (2017, June 13). *Changing the tech economy from the bottom up* [Video file].

Retrieved from <https://www.youtube.com/watch?v=1JXnMTr7rDo>.

Miller, C., Bos, J. M., Porter, K. E., Tseng, F. M., & Abe, Y. (2005). The challenge of repeating success in a changing world: Final report on the center for employment training replication

sites. New York, NY: MDRC. Retrieved from

<https://www.mdrc.org/sites/default/files/the%20challenge%20of%20repeating%20success%20ES.pdf>.

Murphy, K. (2018, May1). As bay area rents soar, many can't keep up. *The Mercury News*.

Retrieved from <https://www.mercurynews.com/2018/05/01/as-bay-area-rents-soar-many-cant-keep-up/>.

National Center for Educational Statistics. (n.d.). Vocational education in the united states: The early 1990s. Retrieved from <https://nces.ed.gov/pubs/web/95024-2.asp>

National Center for Education Statistics. (n.d.). Table B01: Percentage of 1995-96 and 2003-04 beginning postsecondary students who persisted or attained a credential after 6 years, by initial degree or certificate program and field of study: 2001 and 2009. In Career/technical education (CTE) Statistics. Retrieved from <https://nces.ed.gov/surveys/ctes/tables/B01.asp>.

Olson, K. (1973). The G. I. Bill and Higher Education: Success and Surprise. *American Quarterly*, 25(5), 596-610. doi:10.2307/2711698. Retrieved from [https://www-jstor-org.libaccess.sjlibrary.org/stable/2711698?origin=crossref&seq=1#metadata\\_info\\_tab\\_contents](https://www-jstor-org.libaccess.sjlibrary.org/stable/2711698?origin=crossref&seq=1#metadata_info_tab_contents).

Office of Job Corps. (2016). Policy and Requirements Handbook. *U.S. Department of Labor*.

Retrieved from [https://s3-us-west-2.amazonaws.com/jobcorps.gov/2017-04/Job\\_Corps-prh.pdf](https://s3-us-west-2.amazonaws.com/jobcorps.gov/2017-04/Job_Corps-prh.pdf).

Office of Policy Development and Research. (2018, Summer/Fall). Programs integrate workforce and housing services. *Evidence Matters*. Retrieved from

<https://www.huduser.gov/portal/evidence.html>.

- Pittman, R. B. (1991). Social factors, enrollment in vocational/technical courses, and high school dropout rates. *The Journal of Educational Research*, 84(5), 288-295. Retrieved from <https://web-b-ebshost-com.libaccess.sjlibrary.org/ehost/detail/detail?vid=0&sid=a123624b-feb3-4b8d-adbf-f5b0ee1e909e%40sessionmgr102&bdata=JnNpdGU9ZW9vc3QtbGl2ZSZzY29wZT1zaXRl#AN=5819428&db=ehh>.
- Plank, S. B., DeLuca, S., & Estacion, A. (2008). High school dropout and the role of career and technical education: A survival analysis of surviving high school. *Sociology of Education*, 81(4), 345-370. Retrieved from <https://files.eric.ed.gov/fulltext/ED497348.pdf>.
- Protopslatis, S. & Parrott, S. (2017). Pell grants – a key tool for expanding college access and economic opportunity – need strengthening, not cuts. *Center on Budget and Policy Priorities*. Retrieved from <https://www.cbpp.org/sites/default/files/atoms/files/7-27-17bud.pdf>.
- Reason, R. D. (2009). An examination of persistence research through the lens of a comprehensive conceptual framework. *Journal of College Student Development*, 50(6), 659-682. Retrieved from <http://www.sjsu.edu/studentaffairs/docs/Student%20Persistence.Reason%20journal%20article.pdf>.
- Rose, A. (2018, August 17). California's college promise moving beyond the call for free college for all [Blog post]. Retrieved from <https://calbudgetcenter.org/blog/californias-college-promise-moving-beyond-the-call-for-free-college-for-all/>.

- Rosenbloom, D. H., Kravchuk, R. S. & Goldman, D. D. (2009). *Public administration: Understanding management, politics, and law in the public sector*. New York, NY: McGraw-Hill.
- Shriver, J. (2017). *Leisure and hospitality led year-over job scene*. San Jose: Employment Development Department, Labor Market Information Division. Retrieved from [http://www.labormarketinfo.edd.ca.gov/file/1fmonth/sjos\\$pds.pdf](http://www.labormarketinfo.edd.ca.gov/file/1fmonth/sjos$pds.pdf).
- Smith, A. (2016, September 15). Finding a ride. *Inside Higher Ed*. Retrieved from <https://www.insidehighered.com/news/2016/09/15/community-colleges-negotiate-transportation-options-get-students-class>.
- Spaulding, S., Lerman, R. I., Holzer, H. J., & Eyster, L. (2015). *Expanding economic opportunity for young men and boys of color through employment and training* Urban Institute. Retrieved from <https://www.urban.org/sites/default/files/alfresco/publication-pdfs/2000097-Expanding-Economic-Opportunity-for-Boys-and-Young-Men-of-Color-through-Employment-and-Training-1.pdf>.
- Speulda, L.A. & Lewis, R. O. (2003). History of the CCC and WPA and other depression-era programs in region 6 of the USFWS. *U.S. Fish & Wildlife Service*. Retrieved from <https://www.fws.gov/uploadedFiles/Depression%20Era%20Programs%20-%20Region%206.pdf>.
- State of California Employment Development Department. (n.d.). *Fact Sheet Workforce Innovation and Opportunity Act*. [PDF File]. Retrieved from [https://www.edd.ca.gov/pdf\\_pub\\_ctr/de8714g.pdf](https://www.edd.ca.gov/pdf_pub_ctr/de8714g.pdf).

- Swail, W. S. (2004, June). The art of student retention: A handbook for practitioners and administrators. In *Educational Policy Institute. Texas Higher Education Coordinating Board 20th Annual Recruitment and Retention Conference Austin, TX June* (Vol. 21, No. 877, pp. 1-39).
- Swail, W. S. (2006). Seven guiding questions for student retention. *Student Success, 1*(1), 10. Retrieved from [http://www.educationalpolicy.org/pdf/StudentSuccess\\_0601.pdf](http://www.educationalpolicy.org/pdf/StudentSuccess_0601.pdf).
- Sylvia, R., & Sylvia, K. (2012). *Program planning and evaluation for the public manager* (4th ed.). Long Grove, Illinois: Waveland Press.
- UC Santa Barbara. (n.d). Remarks on signing the economic opportunity act. *The American Presidency Project*. Retrieved from <https://www.presidency.ucsb.edu/documents/remarks-upon-signing-the-economic-opportunity-act>.
- United States Department of Labor. (n.d.). *O\*Net OnLine*. Retrieved from <https://www.onetonline.org/>.
- U.S. Bureau of Labor Statistics. (n.d.). *Standard Occupational Classification*. Retrieved from <https://www.bls.gov/soc/home.htm>.
- U.S. Department of Labor Office of Job Corps. *Policy and Requirements Handbook*. Retrieved from [https://www.jobcorps.gov/flysystem/s3?file=2017-04/Job\\_Corps-prh.pdf](https://www.jobcorps.gov/flysystem/s3?file=2017-04/Job_Corps-prh.pdf).
- Van der Steeg, M., van Elk, R., & Webbink, D. (2015). Does intensive coaching reduce school dropout? *Economics of Education Review, 48*, 184-197. Retrieved from <https://www->

[sciencedirect-](#)

[com.libaccess.sjlibrary.org/search/advanced?docId=10.1016/j.econedurev.2015.07.006](http://com.libaccess.sjlibrary.org/search/advanced?docId=10.1016/j.econedurev.2015.07.006).

Volodina, A., Nagy, G., & Köller, O. (2015). Success in the first phase of the vocational career:

The role of cognitive and scholastic abilities, personality factors, and vocational interests.

*Journal of Vocational Behavior*, 91, 11-22. doi:10.1016/j.jvb.2015.08.009. Retrieved from

<https://www-sciencedirect->

[com.libaccess.sjlibrary.org/science/article/pii/S0001879115000913](http://com.libaccess.sjlibrary.org/science/article/pii/S0001879115000913).

*Workforce education financial aid and student access and retention*. (2006). Olympia, WA:

Workforce Training and Education Coordinating Board. Retrieved from

[http://wtb.wa.gov/Documents/WorkforceEdFinAid\\_AccessFinalReport.pdf](http://wtb.wa.gov/Documents/WorkforceEdFinAid_AccessFinalReport.pdf).

Yi, H., Zhang, L., Yao, Y., Wang, A., Ma, Y., Shi, Y., . . . Rozelle, S. (2015). Exploring the

dropout rates and causes of dropout in upper-secondary technical and vocational education

and training (TVET) schools in china. *International Journal of Educational Development*,

42, 115-123. Retrieved from <https://www-sciencedirect->

[com.libaccess.sjlibrary.org/science/article/pii/S0738059315000504](http://com.libaccess.sjlibrary.org/science/article/pii/S0738059315000504).

Zambroski, A. & Gordon, A. (1993). *Evaluation of the minority female single parent*

*demonstration: 5<sup>th</sup> year impacts at CET*. Princeton, N.J.: Mathematica Policy Research, Inc.

Retrieved from <https://www.mathematica-mpr.com/our-publications-and->

[findings/publications/evaluation-of-the-minority-female-single-parent-demonstration-](#)

[fifthyear-impacts-at-cet](#).

## APPENDIX A

### Status Codes and Definitions

Center for Employment Training (CET) uses levels of categories to track student progress. For this research project, status categories provided by CET were grouped into “Withdrawn, Currently Enrolled, and Graduated.” Included are two additional categories not defined by CET but identified in this project.

<b>CET Categories</b>	<b>Definition</b>	<b>Research Category</b>
I	Incomplete - Withdrawal after 10 days	Withdrawn
ENR	Enrolled	Currently Enrolled
C	Compliant Status	
P	Probationary Status - Attendance, Competencies or Both	
W	Warning Status - Attendance, Competencies or Both	
L	Enrolled on an approved Leave of Absence	
G	Graduated and Placed	Graduated
LT	Graduated past 150% of Actual Hours	
J	Graduated in active Job Search	
<b>Undefined</b>		Removed from records
CN	Cancellation – Withdrawal within 10 days	
CL	Cancellation – Withdrawal with no exit date and 0% of competencies completed	