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A Review of Reduced and Free Transit Fare Programs at Public Colleges and Universities in California

THESIS

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in Transportation Science

by

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I would like to thank my advisor, Professor Jean-Daniel Saphores, for generously inviting me to work on this project and for his guidance throughout my graduate studies. As someone who has personally benefitted from the types of programs discussed in this thesis, I am grateful for the opportunity to work on something that has great importance to me. I would also like to thank Professor R. Jayakrishnan, whose courses were so informative, and whose enthusiasm made learning so much more enjoyable. Finally, I would like to thank Professor Michael Hyland, whose course opened my eyes to what the future of transportation holds and whose passion was inspiring to me.

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ABSTRACT OF THE THESIS

A Review of Reduced and Free Transit Fare Programs at Public Colleges and Universities in California

By

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Master of Science in Transportation Science

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Professor Jean-Daniel Saphores, Chair

This thesis presents an overview of free and reduced fare transit programs offered by public colleges and universities in the state of California. It also provides a review of selected papers from both the U.S. and around the world regarding these programs for students. Finally, it analyzes responses to a survey of public California colleges and universities about their free and reduced fare transit programs during fiscal year 2018-19. To conduct the study, all campuses in the University of California, California State University, and California Community College systems were sent a link to a survey which asked respondents to provide details about any transit programs they offer. Fifty-eight campuses, from all parts of the state, responded to the survey and reported a total of 62 programs. Overall, these programs achieved an average usage rate of 23% among all users, which included students, staff, and faculty. Considering students alone, their usage rate is almost 32%. Of particular interest were six schools that reported offering programs based on the insurance-style in which all students pay a flat rate regardless of usage. The average usage rate of these programs was about 48%, much higher than for other programs. Many schools do not appear to have adequate tracking mechanisms to determine the usage of

their programs, especially the number of rides taken among users. Funding sources frequently included student fees (for over a third of the programs) and among UCs and CSUs, parking citation revenue. Community colleges more frequently relied on grants from transit agencies and state government, along with student fees, for their programs. Generally, these programs not only provide students and even campus faculty and staff with an affordable and convenient alternative to driving, they also benefit schools by reducing demand for limited parking space and can be a selling point for prospective students. Transit agencies can also benefit from the increased ridership from program participants.

I. INTRODUCTION

To reduce greenhouse gas (GHG) emissions, California has passed numerous measures including AB 32, SB 32, and SB 375. AB 32, adopted in 2006, required GHG emissions in the state to be reduced to 1990 levels by 2020 [1]. SB 32, which was passed a decade later in 2016, expanded upon the mandates of AB 32 by requiring that California's GHG emissions levels be reduced to 40% below their 1990 levels by the year 2030 [2]. In between these two bills (in 2008), SB 375 sought to provide tools to enable the California Air Resources Board, in coordination with regional Metropolitan Planning Organizations, to achieve the goals set in AB 32. SB 375 also prioritized reducing vehicle miles traveled (VMT) [3], which is a key component of California's efforts to meet its emissions goals because the transportation sector is responsible for 40% of all of the state's greenhouse gas emissions [4]. California's efforts have come under fire with the federal government, however, as the Trump administration has sought to limit the states' ability to adopt stricter emissions standards. In response, California and 22 other states sued the Environmental Protection Agency in November 2019 over its attempts to invalidate California's regulations for limiting emissions and increasing zero-emissions vehicles [5].

One way to reduce VMT is to encourage Californians to switch from their personal vehicles to transit for at least some of their trips. In this context, this thesis investigates the programs that public colleges in California offer for enticing students, faculty, and staff to take transit by reducing or even eliminating transit fares. I focused on three large higher education systems. The first one is the California Community Colleges, which has a total enrollment of over 2.1 million students who attend 115 campuses [6]. The second system is the California State University (CSU) campuses, which had 26 campuses and a fall 2019 enrollment just shy of

482,000 students [7]. The third one is the University of California (UC) system, with 10 campuses and over 285,000 students in the fall 2019 [8]. To collect data about reduced and free fare transit programs at these public institutions, I conducted an online survey of their transportation departments between November 2019 and June 2020. The survey asked colleges if they offered any such programs and if so, to provide information about them, including usage statistics, impact on ridership, and funding sources. I then analyzed this information to understand the performance of these programs and their effectiveness at attracting students, as well as faculty and staff, to ride transit.

In Section 2, I review selected papers and reports on free and reduced fare transit programs to understand program features such as eligibility, discount amount, and outcome. A table summarizing these findings can also be found at the end of this section.

Section 3 provides an overview of the methods used to collect and analyze the data for this study. A description of the survey conducted is discussed as well as the characteristics of the respondents. Appendix 1 contains the list of the colleges that were targeted in the survey and indicates which of those participated. The survey itself can be found in Appendix 2.

In Section 4, I discuss survey results and present some salient facets of the programs offered by the colleges and universities who participated in the survey, with a particular interest for the impacts of these programs on ridership.

Finally, Section 5 offers concluding remarks and recommendations based on the results of the survey conducted for this thesis and the literature review.

II. LITERATURE REVIEW

Papers reviewed for this study cover reduced fare or free transit programs by public college and universities, with a focus on studies published after 2010, although I also considered a few studies from the 1990s and early 2000s that provided particularly useful insight. Papers were reviewed to identify several characteristics, including: the type of program implemented, the time frame of the study, the type of analysis conducted, study results and how the success of the program(s) considered was measured.

Free or discounted transit fare programs can be organized into three categories: discounted passes for students, for seniors, or for all passengers. Here, I review studies dealing with students and with all passengers since they include students. Most prior research regarding the effects of such discounts has been case studies of specific programs. While the exact effect of each program varies, transit ridership increased in nearly all cases. A companion study to this thesis reviewed programs for all types of passengers and analyzed programs offered by transit agencies in California [9].

Discounted transit fare passes for students and school faculty

Students have often been the beneficiaries of free or reduced transit programs, commonly offered by colleges and universities, often to relieve congestion or parking limitations on campus. These programs, otherwise known as Universal Access (UA) programs, have been well studied [10] – [14], [17], [20] – [21]. They offer beneficiaries the ability to ride local transit for free, or in some cases for a flat fee.

In an early study, Williams et al. [10] evaluated the success of a UA program called U-PASS at the University of Washington, where this program was introduced in 1991. They found that transit ridership among students, faculty, and staff at the university increased by 35% after the first year. Additionally, the number of students utilizing single occupancy vehicles (SOVs) to reach campus decreased from 33% to 23% following the first year of the program [10].

Brown et al. [11] studied 35 universities that offered UA to their students. Each program considered showed significant ridership increases during the first year, from 71% at California State University, Sacramento to 200% at the University of Colorado, Boulder. A follow-up study of the UA program at the University of California, Los Angeles, reported first year transit ridership growth of 56% and a SOV usage decline of 20%, which reduced congestion in parking lots for students who continued to drive [12].

Students have also been found to be willing to pay annual or per semester fees in exchange for unlimited free transit rides. In one case, Western Washington University students approved a quarterly fee of $32 for a UA program proposed to them in a survey. Such a program would have, in fact, only cost the university $20 per student per quarter [13]. A similar study by Dorsey [14] found that Weber State University students supported a UA program allowing free transit rides for a $15 annual fee. The authors also noted that in the ten years following the University of Utah's establishment of a new UA program at their campus, 15 to 20% of students consistently rode transit [14].

More recently, American University, a private university in Washington D.C., instituted a UA program of its own in 2016. That program was the result of a partnership with the Washington Metropolitan Area Transit Authority (WMATA), which provided a deeply discounted pass rate to American University, which in turn charged each student $130 per semester in exchange for free, unlimited transit rides. The program was a clear success, with 90% of American University students using the free passes. WMATA also benefited by receiving $2.7 million and a boost in ridership [15].

Despite the many successful examples of UA programs, not all have fared so well [16]. The University of Connecticut and the city of Mansfield, Connecticut partnered in 1994 to create a UA program that allowed both students and residents to ride one local bus route free of charge. Within 10 years, the program was dismantled due to the cost sharing between the University and the City not being equitable. Zolnik [16] found that Mansfield was paying considerably more per passenger ($0.95) than the University ($0.72) despite the fact that student users outnumbered Mansfield resident users by a 7.6:1 ratio. No meetings were held between the two entities to discuss this issue, leading to its demise [16].

Initial success is also not a guarantee of lasting success. In 2008, the University of California, Los Angeles offered eligible employees a 12-week transit pass, followed by a discounted transit pass. The program initially saw a substantial increase in transit ridership, but the effects were not long-lasting. Although at the start of the program, the number of full-time transit-riding employees increased by 71%, by the end of the free trial, 30% of participants had dropped out, and an additional 23% dropped out of the program after another year. The authors

noted that those who remained in the program generally had more flexible schedules than those who dropped out. Moreover, programs such as this in general attract riders for whom transit provides a comparable commute time to driving. Sensitivity to gas prices and having children also played a role in how long a participant stayed in the program [17].

The literature also has papers that analyzed reduced transit fare programs created for children or grade school students. Such a program was put in place in San Francisco for middle and high school students from low income families in an effort to promote attendance to after-school activities [18]. The program was successful in achieving this goal. Some proposals for free transit pass programs for students also received some attention. For example, Gase et al. [19] studied the potential impacts of offering free transit passes for all students in Los Angeles County. The authors found that while revenue for the Los Angeles Metropolitan Transportation Authority (LACMTA), the transit agency operating buses in Los Angeles County, could decrease by up to 20%, long term ridership could increase 26%. Moreover, school attendance was likely to increase [19]. Though such a program has not yet been implemented, LACMTA is considering eliminating fares for all riders, which will be discussed later in this chapter.

It is also valuable to consider the experience of other countries with UA programs that can be found almost worldwide. The city of Brussels, Belgium, offered in the early 2000s free transit rides for students from Flemish-speaking universities. The results were quite positive – 89% of enrolled students rode transit on a regular basis and 55% reported using transit more than in the year prior to the program's start [20]. Van Goeverden et al. [21] analyzed four fare-free programs, two of which were for students, including the program in Brussels. The other program

was in the Netherlands and also resulted in increased transit ridership. Before the Netherlands program began, public transit mode share among students was 11%; It increased to 21% following the implementation of the program [21].

Discounted transit fare passes for all passengers

Although this thesis focuses on programs for students (but also faculty and staff of schools, colleges and universities), I also reviewed studies that analyzed programs for all riders because students can take advantage of these as well. Free and discounted fare programs are frequently used by transit agencies to increase ridership with the hope of shifting travel away from automobiles and decreasing air pollution and congestion in urban areas.

For example, the New York City Metropolitan Transit Authority introduced several incentive programs to encourage travel on its systems. These included reduced fares for certain services, free intermodal transfers, and discounts on bulk MetroCard purchases. Over a few years, ridership increased by as much as 24% overall, and bus ridership increased 40% [22]. Perone et al. [23] note that fare-free transit can often attract undesirable riders – delinquents or other riders who cause disruptions or commit crimes, which, in addition to potentially driving away passengers, can also increase costs for a transit agency. They reported that fare-free transit works better on smaller systems in large part due to the cost of eliminating fares [23].

Recently, fare-free transit for all riders has gained some traction in the United States. In 2019, the cities of Olympia, Washington and Kansas City, Missouri both declared that their transit systems would become fare-free in 2020 [24]. Olympia replaced the city of Corvallis'

transit system as the largest agency in the Pacific Northwest to transition to a fareless system, with Corvallis making this change in 2011 [25]. According to the Corvallis Transit System, it was a notable success – one year after the program was implemented, ridership had increased almost 38% [26]. Additionally, the COVID-19 pandemic prompted many transit agencies to go fare-free, which is discussed later in this review.

In a 2004 paper, Nuworsoo analyzed deep discount transit programs and discovered that those modeled after insurance programs, in which all members pay into a system regardless of whether they use it or not, are the most beneficial in terms of increasing ridership on transit while also not hurting the revenues of transit agencies. He noted that colleges are particularly suitable locations to implement these programs, as student ridership can fill surplus space on transit vehicles, especially in off-peak hours when ridership decreases [27]. Brown et al. expands upon this, explaining that such insurance-style programs not only benefit transit agencies, but also colleges as they can purchase bulk passes at a lower rate, rather than paying a higher rate for individual passes [11].

The literature also includes a number of case studies from foreign countries. In Milton, Canada, transit was made free during the off-peak hours of 9am – 3pm. The city saw a 66% increase in its average monthly ridership year-over-year as a result of this program [28]. The transit authority in Haifa, Israel simplified and reduced its fares in the late 2000s. This led to an increase in ridership of 7.7% [29]. Gaoping, China saw a 320% boost in transit ridership when it eliminated fares in the mid-2010s. Most new riders again shifted to transit from walking or biking, with much fewer coming from cars [30]. Templin, Germany experimented with a free

transit program for all riders around 2002. The result was a 750% increase in ridership in the first year alone, with ridership continuing to grow in following years. However, just 10 to 20% of these passengers had shifted modes from automobiles to transit, while up to 50% had shifted from walking [31]. Two studies were conducted to analyze the effects of a free fare program in Tallinn, Estonia, which began in 2013. In the first several months of free fares, ridership increased 3%, although the authors found that 1.8% was due to increased supply of transit. However, year after the start of the program, ridership was up 14%. There was a significant 40% modal shift from walking to public transit, while the shift from cars to transit was just 5% [32], [33].

It is clear that while making transit free or offering discounts is a good way to increase ridership, it is not very good at reducing automobile traffic. A study of the free bus program in Bergen, Norway found that the number of buses traveling through the city center equaled the number of automobiles being replaced following the start of the program [34]. Additionally, Zhang et al. [35] argued that the initial positive effect on ridership following the introduction of free or reduced fares diminishes over time. Another lesson from the literature is that fare reductions are likely ineffective if they are temporary. For example, Thogersen and Moller [36] studied a program in Copenhagen which gave 1000 people free month-long travel passes. Although the participants showed a much higher usage of transit during the trial month compared to a control group, there was little difference in the transit usage between the two groups after the free month had ended [36].

Developments during the COVID-19 Pandemic

The onset of the COVID-19 pandemic, not surprisingly, had a drastic impact on public transportation worldwide as people were advised to stay at home. According to a report prepared for the American Public Transit Association (APTA), transit ridership in the United States in April 2020 was down almost 75% compared to the previous year [37]. At the same time, many transit agencies began implementing rear-door boarding policies to eliminate interaction between their employees and passengers. For systems where fare payment occurs at the front of the vehicle, this forced a de facto fare-free policy [38]. Though at the time of this writing it is still early to have a range of scientific studies of the impacts of these new fare policies on ridership, this section will review some of the available reports of agencies that implemented free or reduced fares to their systems.

One notable example of free fares implemented outside the United States is Transport for London's (TfL) bus network, which eliminated fares on April 20, 2020 as many of their drivers fell ill [39]. The fare suspension was short-lived, however, as TfL quickly activated contactless card readers at the middle doors of their buses to resume fare collection starting just a month later in May 23, 2020 [40]. Based on data provided by TfL, the cessation of fares did not appear to have a drastic effect on ridership. Between April 1 and April 27 (which includes one week of fare-free service), 30.2 million trips were counted on buses. For the next data period from April 28 through May 25, the number of trips increased slightly to 32.5 million. However, for the period between May 26 and June 22, trip counts grew to 47 million, despite fare collection resuming [41]. It should also be noted that as a condition of receiving government aid, Transport

for London was required to end its free fare programs for children 11 to 18 and for seniors (during peak hours), at least temporarily [42].

Elsewhere around the world, other fare-free transit programs have been put in place during the course of the pandemic. The city of Paris (France) recently announced that in September 2020, it was making transit free for residents under the age of 18 through a reimbursement program. This adds to the existing free transit programs for seniors and children younger than 11 in the city [42]. The London Transit Commission in Ontario, Canada suspended fares for all passengers on its buses between late March and September 2020 [43]. According to a ridership report from the Commission, ridership decreased in the first full month of fare-free service, but in the following months ridership gradually increased. The Commission attributes this increase to the loosening of COVID-19 related restrictions that led more people to leave their homes [44].

The United States also saw many transit agencies move to waive fares during COVID-19. One of the largest transit agencies in the U.S., the New York MTA, made its local buses free to ride for just over five months between the end of March and the end of August 2020. This was done to a large extent to keep bus operators distanced from passengers, as fare collection occurs at the front of the bus [45]. A review of ridership data provided by the MTA showed that the elimination of fares had a negligible effect on ridership when it was first put into effect [46]. Although ridership numbers gradually increased, there is no evidence that this was due to the free fares rather than other outside factors. In fact, in the days after fares were re-implemented, ridership continued to increase on most days [46].

Other large agencies also went fare-free during this period. The Regional Transit District (RTD) in Denver, Colorado suspended fares for all riders in early April 2020. The RTD fare suspension was short-lived compared to many other agencies, however, and passengers were once again required to pay fares starting on July 1, 2020 [47]. King County Metro, the transit agency for the metropolitan Seattle area, instituted a considerably longer fare suspension, which lasted between late-March 2020 and October 1, 2020 [48]. All of the agencies in the U.S. mentioned here ended their free fare periods after enhancing the safety of their drivers, typically by installing plexiglass barriers between the drivers and the passengers to stop the spread of COVID-19 [45], [47], [48].

One of the largest transit agencies in California, the Los Angeles Metropolitan Transit Authority (LA Metro), is seriously considering the possibility of making its bus and rail transit free as soon as 2021 as a result of COVID-19 and the economic hardships it has caused particularly among LA Metro's riders [49]. The agency formed an internal task force in September 2020 to study such a proposal about this topic which the agency's CEO expects by the end of the year [50]. LA Metro was already in the process of studying mechanisms such as congestion pricing to fund a free transit system and a separate study is underway to determine ways to allow students to ride the system fare-free [49].

Table II.1: Summary of Literature Reviewed

Authors (year)	Area (Data year)	Method	Main Findings
Discounts for Students and School Faculty			
Brown et al. (2001) [11]	Various Universities	Surveys	35 university Unlimited Access systems for students were analyzed. First year ridership increases ranges from 71% to 200%. Operating costs and subsidies per passenger decreased following the implementation of such programs.
Brown et al. (2003) [12]	Los Angeles/UCLA (2001-2002)	General Data Analysis	With a free PT system at UCLA, PT use increased 56% during the first year and solo driving decreased 20%
De Witte et al. (2005) [20]	Brussels (2003-2004) Sample Size: 3162	Surveys	Students from Flemish-speaking universities in Brussels were allowed to ride public transit for free. 89% of students who enrolled used transit frequently. 55% reported using transit more than the previous year.
Dorsey (2005) [14]	Utah (2002-2003) Sample Size: 305 (2000) 120 (2002) 783 (2003)	Surveys	Students at Weber State University are studied for their willingness to pay for a $15 annual fee for a free transit pass. Over 50% of students said they would support this. University of Utah offers such a program and sees 15-20% of its students riding transit. The University pays the transit agency nearly $1 million/year for this service.
Gase et al. (2014) [19]	Los Angeles, California (2013)	Cost Estimations	If LA County were to provide all students with a free transit pass, fare revenues would decrease up to $71 million, a 20% decrease. Long term ridership could increase as much as 26%. School attendance could increase leading to increased school funding.
McDonald et al. (2004) [18]	San Francisco, California (2001-2003) Sample Size: 1073 (2002) 1234 (2003)	Ridership data analysis, surveys	Distributing free transit passes to low-income middle- and high school students led to an increase in attendance to after-school activities, although it did not significantly increase school attendance.
Myers et al. (2006) [13]	Bellingham, WA (2005) Sample Size: 2095	Logistic Regression	A willingness-to-pay survey was conducted at Western Washington University to determine what price students would find acceptable to pay for a yearly free transit pass. Results showed that students would be willing to pay over $32/quarter for a service

			that would cost $20/student/quarter to operate.
van Goeverden et al. (2006) [21]	Various European Locations: Leiden-The Hague Hasselt Netherlands Brussels	Synthesized results from previous studies	An analysis of four fare-free systems found that ridership increased in all cases. In two cases, mode shift from car was over 40%. Two cases allowed only students to ride for free. Both saw ridership increases and in the Netherlands, PT mode share among students increased from 11% to 21%.
Williams et al. (1993) [10]	Seattle, Washington (1991-1992)	Ridership Data and Surveys	The University of Washington introduced a U-PASS in 1991 which allowed faculty and staff to ride transit for free, among other benefits. About one year into the program, monthly transit ridership increased 35%. The percentage of students who drive to campus alone fell from 33% to 23%.
Zhou et al. (2011) [17]	Los Angeles, California (2008) Sample Size: 720 (Survey 1) 274 (Survey 2)	Surveys	12-week free transit passes were given to eligible UCLA employees, followed by discounted transit passes. 33% more riders used the system and 5% of all employees switched to transit completely.
Zolnik (2007) [16]	Connecticut (1993-2002)	Case Study	A universal access program supported by UConn and the city of Mansfield allowing students and residents to ride one bus route was established to increase transit ridership. The program was terminated within 10 years due to inequities between the funding partners. The city was paying considerably more per passenger than UConn, despite more students using the service than residents.
		Discounts for all riders	
Cats et al. (2014) [32]	Tallinn, Estonia (2013)	Multiple linear regression	Following the introduction of free public transit, demand increased 3%, however it was determined that the lack of fare accounted for a 1.2% increase, the rest due to increase in transit supply
Cats et al. (2017) [33]	Tallinn, Estonia (2013-2014) Survey Size: 1500	General Data Analysis	A year after fares were removed, PT usage increased 14%. It was accompanied by a major (40%) modal shift from walking to PT. Car share decreased 5%, however VMT increased 31%, leading to more traffic. Market share of PT increased 20% among low income groups

D'Alessandro (2008) [28]	Milton, Canada (2007-2008)	Ridership Data	Free fares were offered during off-peak hours from 9am – 3pm. Average monthly ridership increased 66% compared to the same time period in the previous year.
Fearnley (2013) [34]	Various locations in Europe	Citing data from various sources	Free fares can significantly increase ridership, but are not a good way to shift travel from cars to PT. Most new riders shift from walking/biking. Free fare schemes should be accompanied by policies to reduce car usage directly, if that is the goal
Hirsch et al. (2000) [22]	New York City (1996-1999)	MetroCard ridership data	Following a series of fare incentives introduced on NYC transit in the mid-late 1990s, system ridership increased as much as 24%. Bus ridership increased over 40%.
Nuworsoo (2004) [27]	Denver, CO (1991 – 2002) Berkeley, CA (1996 – 2000)	Statistical analyses	Discount programs modeled after insurance programs in which all participants pay into the program can help increase ridership while also increasing revenues for transit agencies
Perone et al. (2003) [23]	Various Locations	Case Studies	While fare-free PT increases ridership, it often attracts "undesirable riders." Overall, fare-free PT works better on smaller systems mainly due to cost considerations
Sharaby & Shiftan (2012) [29]	Haifa, Isreal (2008)	Farebox data, Survey, MNL model	Fare simplification/reduction led to a 7.7% increase in ridership
Shen et al. (2015) [30]	Gaoping, China (2013-2015) Sample Size: 900 - 1000	General Data Analysis, Survey	320% increase in ridership after fares eliminated. Most new customers shifted from walking/biking; not much shift from cars
Storchmann (2003) [31]	Templin, Germany (1997-2000)	Surveys, analysis of ridership data	In the first year of free transit in Templin, ridership rose 750%. Two years later, ridership was 13 times greater. Up to 50% of passengers had shifted from walking. Only 10-20% shifted from cars.
Thogersen & Moller (2004) [36]	Copenhagen (2002-2003) Sample Size: About 1000	Survey, multiple regression model	1000 people were given free month passes to use the transit system. During the free month, the participants showed much higher usage of PT than the control group. However, after the free month, there was little difference between the PT usage of the two groups.

Zhang et al. (2018) [35]	Beijing (2007-2012)	Multiple linear regression model	Fare reduction has a positive effect on ridership in the short-term, diminishing over time

III. METHODS AND DATA

1. OVERVIEW

Data for this study were collected using a survey programmed in Survey Monkey that was sent via email to 147 public colleges and universities in the State of California. Specifically, the target population includes the following:

- University of California: 10 campuses
- California State University: 23 campuses
- Community Colleges: 114 campuses

At the time of this study, Calbright College and Madera College were not yet part of the California Community College system and so they were not included in the survey. Colleges were surveyed between November 2019 and June 2020 because it took a long time for some institutions to respond, which required multiple email reminders. This section describes the survey instrument and provides an overview of the responses received. The full survey is available in Appendix 2.

2. SURVEY

The survey for this thesis was structured similarly to a survey that was conducted in 2019 by Saphores et al. for a study examining free and reduced fare programs that transit agencies offer to riders. After conducting a small pilot study, survey requests were sent via email to members of the transportation departments of each campus, if contacts were listed on the corresponding institution's website. For campuses without a dedicated transportation department, the survey was sent to the department which had authority over such programs, often student services.

The survey was organized into three sections. In the first section, respondents were asked to identify themselves with their name, job title, and the number of years they have spent in their current role. In section two, participants were asked if their school offered any free or reduced fare transit programs at their college during fiscal year 2018-19. If they did, this part went on to ask who was eligible for the program, how many of those eligible used the program, and how many rides were generated during the year. This section also asked schools to identify the funding sources used for their programs. Lastly, a follow-up question asked if schools had discontinued any programs that had previously been offered. The final section asked participants for any additional comments.

To encourage participation, the survey was designed to be completed in approximately 10 to 15 minutes. Participants were free to refuse to answer any particular question for any reason. Once the survey was started, participants could return to it for up to 7 days to add more information. For schools that were non-responsive, at least three follow up participation requests were sent. Different points of contact were chosen for some schools that did not respond to survey requests, or when another look at the school directory showed that the original contact no longer worked there.

3. RESPONSES AND ANALYSIS

A total of 56 responses were received, which accounted for 58 of the campuses surveyed (one survey answered for a community college district which included three campuses). This corresponds to a response rate of 39.5% (58 respondents out of 147 schools targeted). There is a notable lack of comprehensive surveys of colleges regarding their transit programs in the

academic literature, which makes it difficult to compare this response rate to other studies. It is important to note that I received responses from campuses throughout the state, which provided widespread coverage. Figure III.1 shows a map of the locations of the schools which responded to the survey. The breakdown by institutional type is given in Table III.1.

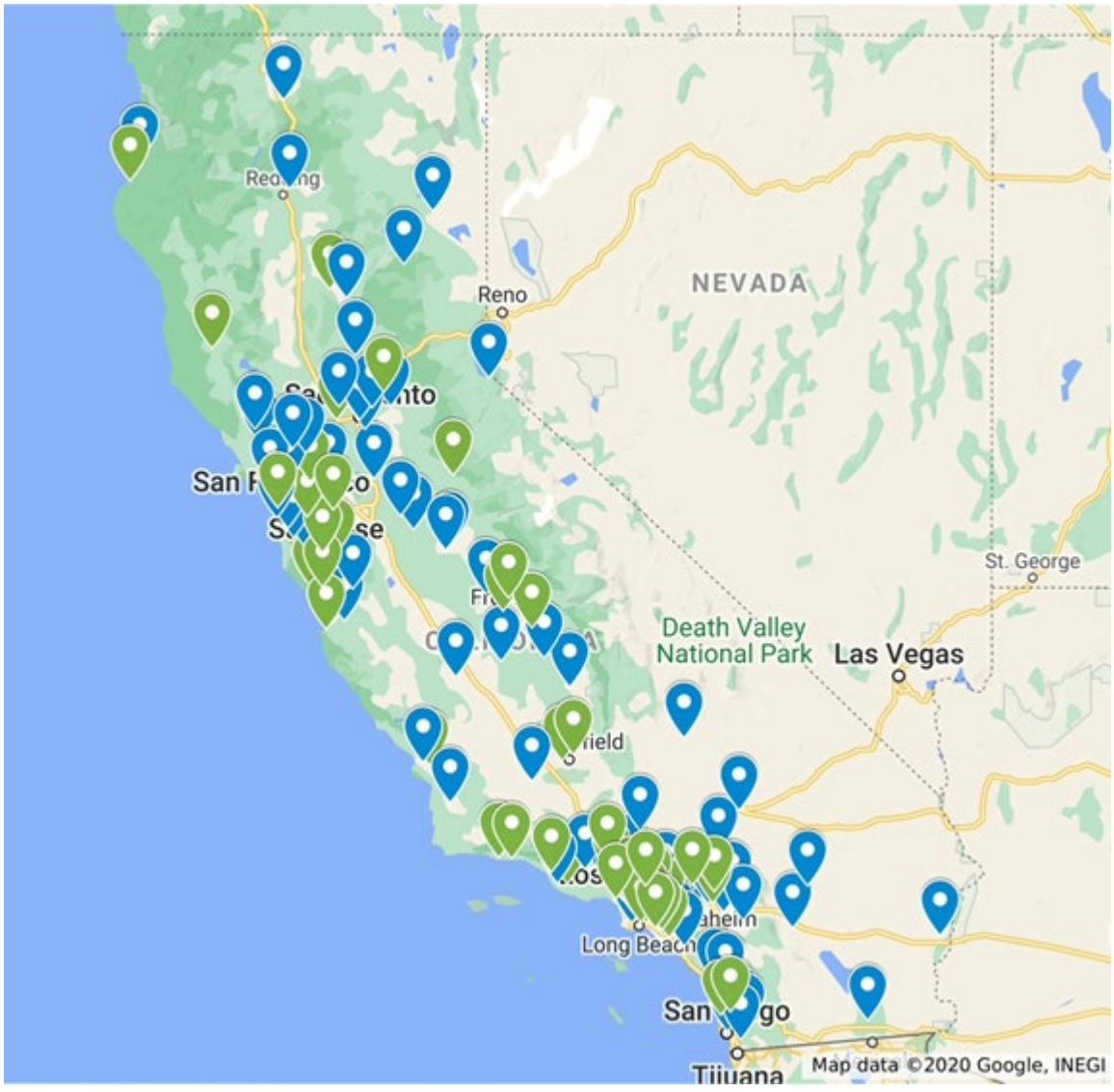

Figure III.1: Map of Schools Surveyed and Targeted
Note: a green marker indicates respondent; blue marker indicates non-respondent

Table III.1: School Response Summary

	University of California	California State University	California Community Colleges	Total
Total Number of Schools Surveyed	10	23	114	147
Total Number of Responses	9	15	34	58
Percentage of Schools Responding	90%	65.2%	29.8%	39.5%

Once all survey responses were received, a data cleaning process was initiated to remove any duplicate or otherwise erroneous entries. Not all respondents fully answered all questions. While some campuses were able to provide responses for most, if not all, questions in the survey, many did not have enough information to accurately respond to some questions. This was especially prevalent for questions on the number of users of free or reduced fare transit programs. Community college campuses in particular do not appear to have the tracking mechanisms in place to report this type of information. Responses were then organized in a spreadsheet both by institutional type and comprehensively analyzed.

As mentioned above, the survey asked participants to enter their job title and the number of years they have been in that position to get a measure of their experience. As Figure III.2 shows, the majority of respondents have been in their position for 5 years or less. On average, respondents have been in their current roles for over 7 years, with a median value of 3 years. The job titles of respondents ranged from Transportation Department managers, analysts, and coordinators, to Dean of Student Services and similar titles.

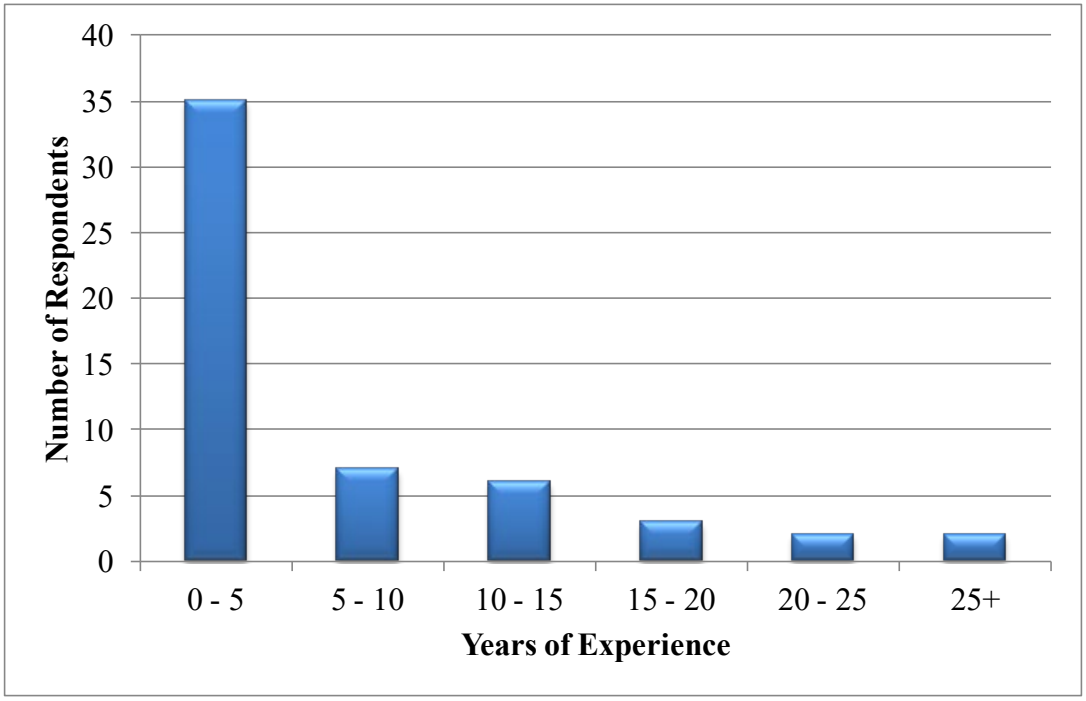

Figure III.2: Experience of Survey Respondents

IV. RESULTS

Results from the survey were analyzed in Excel with a variety of different metrics. This chapter is broken down into sections that analyze the data collected for University of California campuses, California State University campuses, and community college campuses for each question in the survey. In the first section, I discuss the number of programs reported by each institution type and what modes are included in these programs from schools that reported such data. Next, I look at the usage statistics of the reported programs from each system. Many of the schools were able to provide more in depth information about their programs and their usage. Using those data, I can determine the average usage rate, which is defined as the ratio of the number of individuals who used the program to the total number of eligible participants. Because many of the programs were open to faculty and staff in addition to students, the usage rate for students only is also given. Schools were also asked to provide the number of trips taken through a particular program during fiscal year 2018 – 2019. However, most respondents could not answer that question because the data were unavailable (especially in the case of community colleges) or the data were incomplete. Finally, the last two sections examine the funding sources for these programs and additional comments provided by respondents.

1. PROGRAMS REPORTED

UC Campuses

Eight UC campuses reported offering at least one free or reduced fare transit program, which is almost 90% of the responding schools, for a total of 16 programs reported. Among the programs for which mode data were provided, bus systems were included in half of the UC programs. Vanpool systems were included in four of the programs, followed by rail systems which were

part of three programs at UC Irvine, UCLA, and UC San Diego. Two of the programs, one at UC Irvine and another at UC Santa Barbara, indicated that other types of modes were involved (see Figure IV.1).

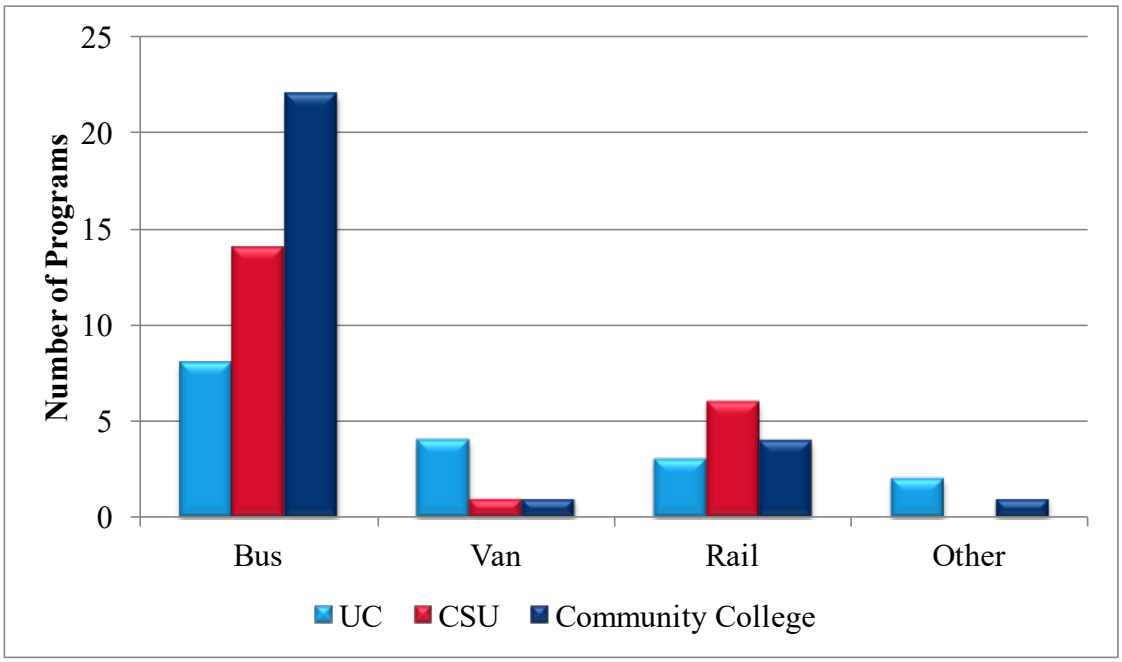

Figure IV.1: Distribution of Mode Type among Reported Programs

CSU Campuses

As with the UC campuses, the CSU system showed a high rate of their campuses offering free or reduced fare transit pass programs. Thirteen of the fifteen responding schools (~87%) indicated that they offered at least one reduced transit fare program, for a total of 19 reported programs offered between all campuses. The most popular mode in CSU transit programs was bus, which was included in the majority of programs, 14 in total. Rail was included in just six of the reported programs; five of which were at campuses in Southern California, while the sixth was at San Jose State. Just one program included a van system at CSU Fullerton. The distribution of mode types is seen in Figure IV.1.

Community Colleges

Fewer of the participating community colleges reported offering transit programs at their campuses compared to the UC and CSU systems, however, the vast majority (27 out of 34 respondents) did report offering at least one program. There were 27 reported programs among the community colleges, however not all schools indicated the exact number of programs that they offer. In terms of mode distribution, community colleges showed the least diversity. Bus systems were included in 22 out of 27 programs, while the next most popular mode was rail, which was included in just four programs, two in Southern California, and two in the San Francisco Bay Area. Van and other systems were part of 1 program each (see Figure IV.1).

2. PROGRAM USAGE STATISTICS

For schools that provided statistics about program eligibility and usage, I calculated the usage rate for all eligible participants and among students only. This was due to usage of transit programs by school staff and faculty often being quite low and thus giving a biased sense of the success of the programs. As students are typically the primary target group for such programs, their usage of these programs is an important metric.

Only six schools clearly indicated in the survey that their programs use the "insurance" model promoted by Nuworsoo in 2004, in which all students pay a fee which allows them unlimited free transit rides, regardless if they take advantage of the program or not [27]. The schools include UC Berkeley, UC Santa Barbara, UC Santa Cruz, Chaffey College, De Anza College, and Santa Monica College. The average usage rate for these programs is quite impressive – almost 48% of those eligible used the programs. All of these programs, with the

exception of the one offered by UC Santa Barbara, saw usage rates at 40% or above, which is a strong indication of the potential for success of this model.

UC Campuses

Among the UC programs, faculty and staff were reported to be eligible for 11 of the programs, while students were eligible for just nine (see Figure IV.2). Among the programs for which usage statistics were provided, the usage rate when including all eligible groups is just over 27%. However, when considering just the student population, the usage rate increases to almost 49%. There was a large range of usage rates among all the programs, from <1% for two of UC Irvine's programs up to 83% at UC Santa Cruz, shown visually in Figure IV.3. These data are summarized in Table IV.1. As mentioned previously, Santa Cruz uses the "insurance" model for its program, where students pay a mandatory quarterly fee, which allows them to ride local and campus-operated transit for free. This is similar to American University's results after introducing its own program based on the insurance model, in which 90% of students used the program, as well as Brussels' UA program for universities, which also saw almost 90% of students regularly riding transit [15], [20].

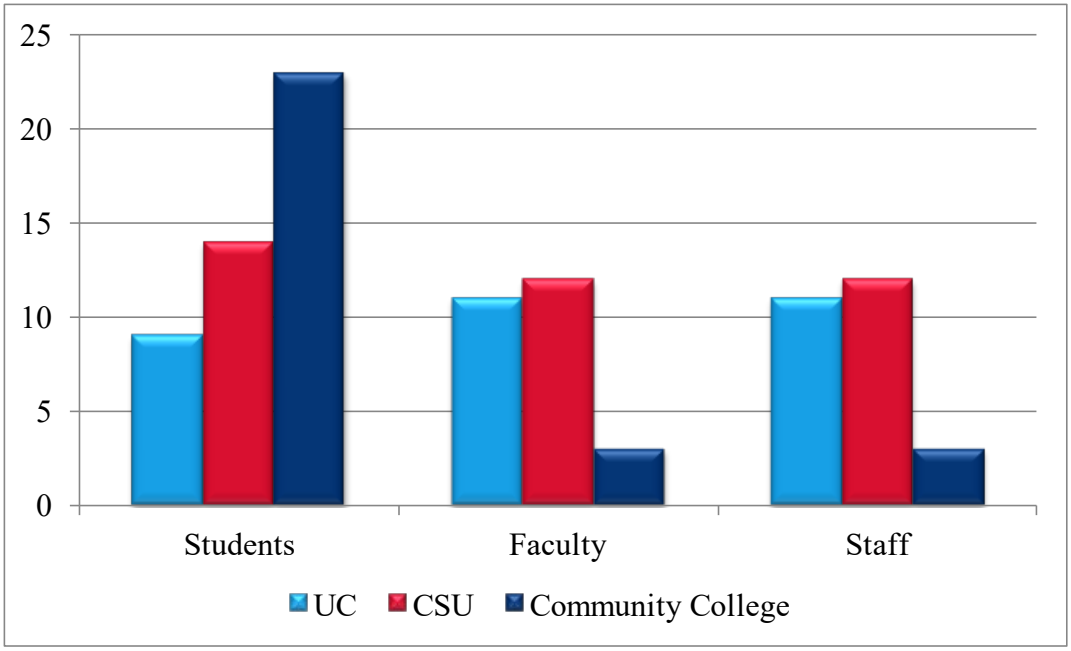

Figure IV.2: Program Eligibility by Group

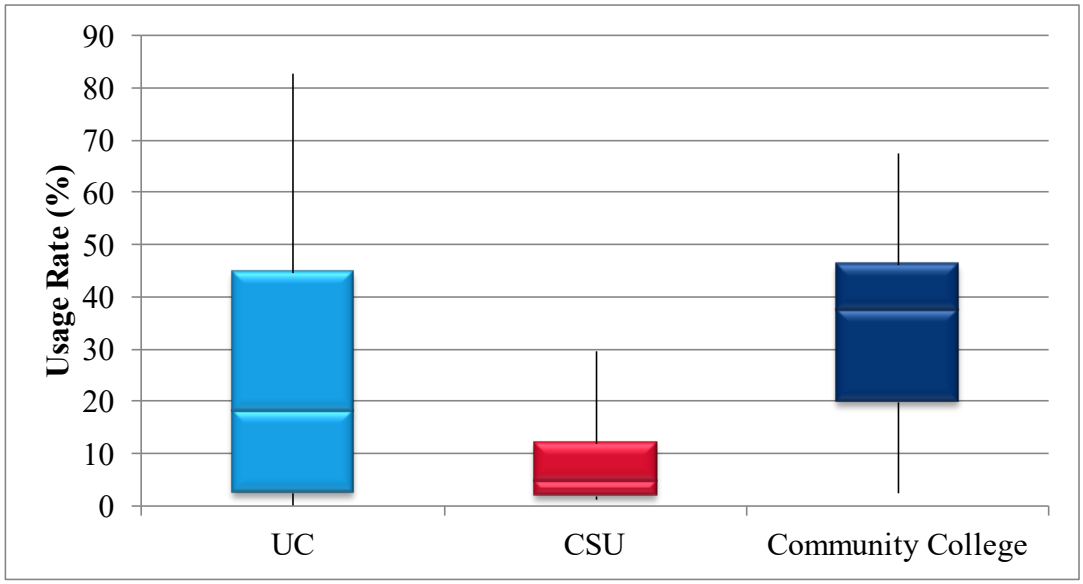

Figure IV.3: Usage Rate Spread by College System

CSU Campuses

At CSU campuses, students were eligible to participate in 14 of the 19 reported programs, while faculty and staff were eligible for 12 (see Figure IV.2). The majority of the programs (11) were

open to all groups. In total, these programs had an average usage rate among all eligible students, faculty, and staff of 8.6%. Among students only, the average usage rate was 12.4%. Although these rates are not as high as those seen at UCs, they are similar to that seen at the University of Utah, which reported 15 to 20% of students riding transit in a study following the introduction of a U-PASS program there. The usage rates of these programs ranged from 1.1% at CSU Northridge to 29.5% at CSU Chico (see Figure IV.3). These results are summarized in Table IV.1. While this range is quite large, one can see from the average that the CSU program having a 29.5% usage rate is significantly higher than the majority of the programs.

Community Colleges

Programs offered by community colleges were almost unanimously offered solely to students and not faculty and staff. Of the reported programs at these campuses, faculty and staff were eligible for just 3 (see Figure IV.2). Because of this, there is a just minor difference between the usage rate for all participants and that of students alone. Though many of the community colleges were unable to provide usage data for their programs, the average program usage rate among those for which data are recorded was just over 34%.

Figure IV.4 shows the comparison of average usage rates for both all eligible users and students only. We can see that generally, students use these programs at a higher rate than staff or faculty, as might be expected, though the usage among these groups clearly varies depending on the institution.

Table IV.1: Reported Program Statistics

	Total Number of Programs	Average Usage Rate	Average Student Usage Rate	Usage Rate Range
University of California	16	27.1%	48.8%	<1% - 82.9%
California State University	19	8.6%	12.4%	1.1% - 29.5%
Community College	27	34.2%	34.4%	2.5% - 67.6%

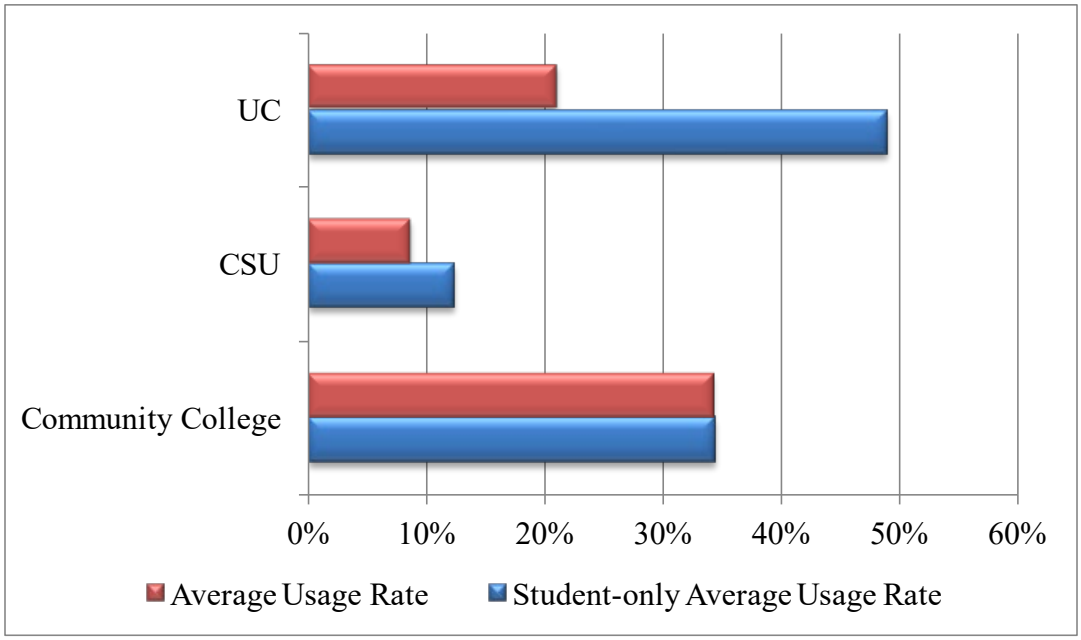

Figure IV.4: Average Usage Rate by College System

3. FUNDING SOURCES

A variety of funding sources were reported from the participating schools, although a majority reported funding sources not from subsidies from cities, counties, or school districts.

UC Campuses

Among the UC participants, only four of the 16 programs received funding from student fees. Rather, just over half reported that they funded their programs at least in part with monies not from students or cities/counties (see Figure IV.5). Six of the nine programs that reported utilizing other funding sources used parking citation revenues. In their 2001 paper, Brown et al. discussed similar findings of parking revenues being used to fund transit programs at universities that do not primarily use student fees for that purpose [11]. The authors speculated that many universities may choose not to directly pay for a Universal Access program because this conflicts with their own service for which they can charge students, namely a parking pass and associated fees.

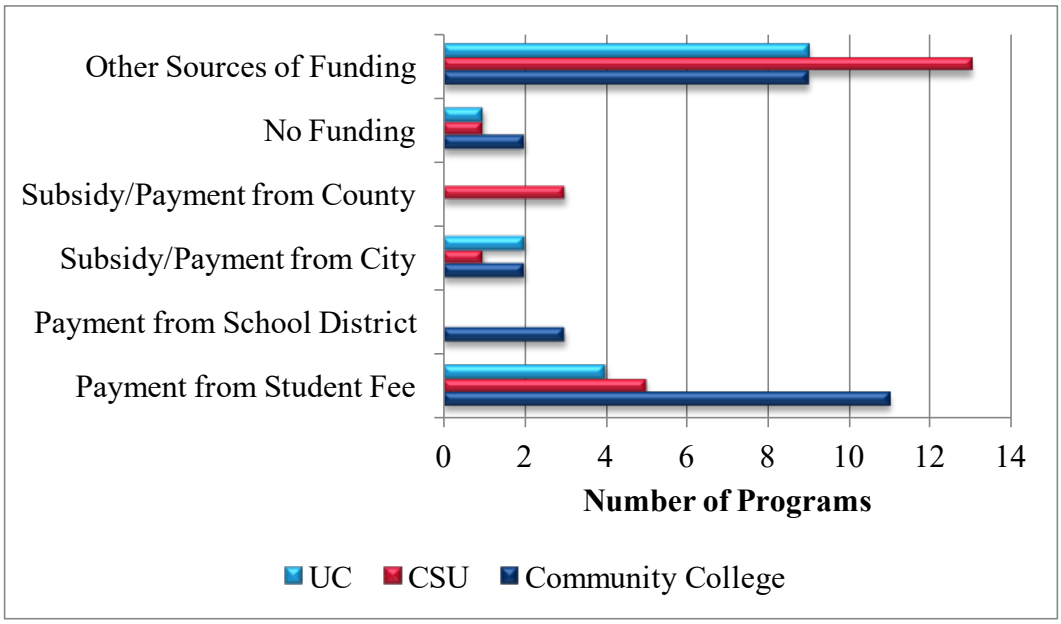

Figure IV.5: Distribution of Funding Sources for Each System

CSU Campuses

CSU respondents reported funding sources similar to those of the UC programs. Among the CSU programs, student fees helped to fund just over 25% of programs (five out of 19), while a majority (13 out of 19, or 68%) had other sources of funding. Several campuses indicated that these other sources included using parking and citation revenue to fund their programs. Figure IV.5 shows the breakdown of funding sources among the CSU programs.

Community Colleges

Unlike both CSUs and UCs, community colleges had a large portion of their programs being paid for at least in part by student fees, with 11 out of the 27 reported programs using this as a funding source. Three colleges indicated that they received grants or subsidies from local transit agencies for their programs and another three used categorical funds from both college and state sources. Just two programs, both at Pasadena City College, were reported to be paid for by parking revenue, in contrast again with CSUs and UCs which frequently used this revenue source to fund their programs (see Figure IV.5).

Of all the respondents, just three schools indicated that they had discontinued a reduced transit fare program within the last five years: CSU Long Beach, CSU Fullerton, and the City College of San Francisco. Insufficient funding was the reason for discontinuation for all these programs, with CSU Fullerton indicating that fraudulent use became an issue.

4. ADDITIONAL SURVEY RESPONSES

Participants were asked to give the age of their programs as a way to gauge their longevity and success. Schools were able to provide this information for 39 of the reported programs. The programs had a large age range, from two 1-year-old programs to one that has been in place for approximately 49 years at UC Santa Cruz. Almost half of these programs, 19 in total, have been offered for 10 years or more. The average age of the programs was just over 11 years. Among the six schools that offered insurance-style programs, the average program age was over 20.5 years, another testament to their success.

After completing the survey, respondents were given the opportunity to provide any additional comments. Several participants noted that they are planning to begin new transit programs at their schools in the near future. These include Cypress College, Coastline College, Golden West College, and Monterey Peninsula College. With the exception of Golden West College (which already offers a transit program for disadvantaged students), none of these campuses currently offered any additional programs at the time of this study. College of the Canyons explained that the program they offer, in which students pay $20 for six months of free transit and the school pays per ride, is becoming too expensive to be sustainable. The school is planning to change the program so that it will purchase passes for interested students, allowing them unlimited transit rides for a flat fee.

V. CONCLUSIONS

Overall, the free or reduced fare transit programs offered by public colleges and universities in California during fiscal year 2018-19 showed promise in terms of attracting riders to transit, particularly among students. The 58 schools that took part in the survey reported that 62 different free or reduce transit pass programs were offered on their campuses. Of the participating schools, over 80% (48 out of 58 schools) offered at least one such program. The average usage rate for all reported programs was approximately 23% when including students, staff, and faculty. However, among students only, the usage rate was almost 30%. Broken down by institutional type, the University of California campuses reported the highest student usage rate, with 49%, followed by Community Colleges with an average of 34%. Meanwhile, California State Universities had the lowest average usage rate among students at just over 12%. One possible explanation is that of all the programs reported by CSUs, just one, at the Monterey Bay campus, explicitly indicated that all students are enrolled automatically for unlimited free rides. All others either required students to opt-in to the program and/or gave a discount towards a transit pass, rather than free rides, both of which are barriers that are not seen in an automatic free ride program. Overall, these numbers suggest that there is an opportunity for improvement in these programs to attract more students, staff, and faculty to ride.

The data collected show that programs based on the insurance model (where all students pay a flat fee per time period, which gives them unlimited free transit rides during that time), were successful at the six campuses that implemented them. All but one of these six schools saw usage rates among all eligible users above 40%, which is higher than the average for all schools. The highest usage rate among these schools was at UC Santa Cruz, with over 82%. The average

age of these programs was 20.5 years, almost double the average age of all programs of 11 years. In addition to stimulating transit usage among the campus population, these insurance-style programs can also reduce costs for colleges by decreasing the need to build additional parking infrastructure for commuting students. Decreasing road congestion on campus is also likely to increase the quality of life for students, staff, and faculty. It is important to note, however, that transit programs of any form have a good chance of success; of the 58 schools that responded to the survey, only three of them indicated that they discontinued a transit program within the past five years, all due to insufficient funding. All three of those campuses now currently offer different transit programs.

During the analysis of the data collected in this study, it became clear that many schools, community colleges in particular, do not have tracking mechanisms in place to count the number of trips being taken with these programs. Knowing not only how many of those eligible use the program (the usage rate), but also how often the service provided by the program is used can be an important factor in deciding to expand or in seeking additional funding. There is likely a sizable unmet potential for transit programs at community colleges in particular, as just a handful of these campuses offer student housing, meaning that community college students are overwhelmingly commuting students. As of 2019, only 11 community colleges in California had on-campus housing [51]. For these reasons, it would be beneficial for schools to establish a way to track how many trips are taken by program participants. This again may require coordination with transit agencies.

One way that participating schools in this study tracked usage was through student ID card or transit pass swipes on transit vehicles. Using student ID cards for example, transit agencies can program their fare collection machines to accept the IDs as fare, and report the total number of trips taken for students at a particular school. This can also be adapted for schools that give transit passes to their students. Transit agencies can track the passes that are given to schools and provide the school with their usage data.

An alternative to using student ID cards as transit fare is providing students with a smart card that can be used on compatible transit systems, such as the TAP smart card which is accepted by many Los Angeles-area transit agencies. Four of the CSU campuses which participated in this study noted that smart cards were provided to students for their transit programs, however, all of these schools required students to either purchase or apply for the cards, rather than distributing them to all students automatically. Programs may see higher usage rates if schools provide all students with a smart card without requiring each individual to opt-in to the program, thus removing barriers to accessing transit. This method would likely work well with insurance-model programs, as all students would receive a physical smart card in return for paying their transportation fee, which could serve to solidify an otherwise abstract notion of paying for a service. Additionally, the IDs of these cards could be tracked by schools to determine the number of trips taken by users of the program.

Smartphone apps are another way to facilitate the counting of rides taken by users of transit programs, although none of the schools in this study specifically indicated that they were using this technology. Many transit agencies around the world utilize apps to provide real-time

arrival data and, increasingly, the ability to purchase fares. Some transit agencies in California are already using the Transit App for both these purposes, including Santa Monica Big Blue Bus and Omnitrans in San Bernardino. Transit agencies in over 10 regions within California, including the major regions of Los Angeles, San Francisco, and Sacramento, provide real-time tracking data to the Transit App, and fare integration with the app could potentially be added [52] [53] [54]. Schools could consider partnering with transit agencies which use these apps and create accounts for their students. Students could then use the app to purchase discounted or free fares which would allow them to show validation upon boarding and have their rides easily logged. These data could then be shared with schools to gauge program performance. Employing apps for use in transit programs is especially relevant now due to the ongoing pandemic, as the need for any form of contact throughout a transit trip is eliminated with this method.

Automatic passenger counters (APCs) can also be used to track ridership. These are sensors typically located above doorways on transit vehicles that sense when passengers enter a vehicle as a way to track ridership. They can also be connected to a GPS system which ties passenger boarding and alighting to specific stops along a route [55]. Although this method of tracking ridership may not be as useful for schools which partner with local transit agencies for their programs (as it would be difficult for the APC to differentiate between a student and a regular passenger), schools that offer their own transit services could benefit from this technology.

Schools participating in this study reported a variety of funding sources. A popular funding source for transit programs among the UC and CSU systems was parking citation fees. This source was only reported to be used by one of the responding Community Colleges, Pasadena City College. Nearly a third of the reported programs among all types of institutions used student fees as a funding source. Far less prevalent was funding from counties, cities, or school districts, each of which was used for fewer than 10% of all programs (out of 62 programs, three each used funding from schools districts and counties, and five received funding from cities). Overall, funding was not found to be a significant concern among the responding schools in this study. Only three schools had discontinued a transit program within the past five years due to insufficient funds, however all of those schools currently offer programs at their campuses.

Future studies, either at a broad level or at individual schools, could look further into the reasons why some of those who are eligible for these programs do not currently utilize them. Designing programs around the needs of the participants will drive ridership, and would likely require coordination between both schools and transit agencies. Given the success of the six transit programs in this study which used the insurance model, it may be useful to conduct an in-depth study of a larger sample of these programs to assess their outcomes at a broader scale. For if indeed there is more evidence in support of these types of programs, colleges which either do not offer any programs or that are finding existing programs to be unsustainable may be more confident in offering insurance-style programs on their campuses.

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APPENDIX 1: LIST OF SCHOOLS TARGETED AND RESPONDENTS

College/University Name	Participated in Survey?
University of California	
University of California, Berkeley	Yes
University of California, Davis	Yes
University of California, Irvine	Yes
University of California, Los Angeles	Yes
University of California, Merced	No
University of California, Riverside	Yes
University of California, San Diego	Yes
University of California, San Francisco	Yes
University of California, Santa Barbara	Yes
University of California, Santa Cruz	Yes

College/University Name	Participated in Survey?
California State University	
California Polytechnic State University, Pomona	No
California Polytechnic State University, San Luis Obispo	Yes
California State University, Bakersfield	Yes
California State University, Channel Islands	Yes
California State University, Chico	Yes
California State University, Dominquez Hills	Yes
California State University, East Bay	Yes
California State University, Fresno	No
California State University, Fullerton	Yes
California State University, Long Beach	Yes
California State University, Los Angeles	Yes
California State University, Maritime	No
California State University, Monterey Bay	Yes
California State University, Northridge	Yes
California State University, Sacramento	No
California State University, San Bernardino	No
California State University, San Marcos	Yes
California State University, Stanislaus	No
Humboldt State University	No
San Diego State University	Yes
San Francisco State University	Yes
San Jose State University	Yes
Sonoma State University	No

College/University Name	Participated in Survey?
California Community Colleges	
Allan Hancock College	No
American River College	No
Antelope Valley College	No
Bakersfield College	Yes
Barstow Community College	No
Berkeley City College	Yes
Butte College	No
Cabrillo College	Yes
Canada College	No
Cerritos College	Yes
Cerro Coso Community College	No
Chabot College	Yes
Chaffey College	Yes
Citrus College	No
City College of San Francisco	Yes
Clovis Community College	Yes
Coastline College	Yes
College of Alameda	No
College of Marin	No
College of San Mateo	No
College of the Canyons	Yes
College of the Desert	No
College of the Redwoods	Yes
College of the Sequoias	No
College of the Siskiyous	No
Columbia College	Yes
Compton College	No
Contra Costa College	No
Copper Mountain College	No
Cosumnes River College	No
Crafton Hills College	No
Cuesta College	No
Cuyamaca College	No
Cypress College	Yes
DeAnza College	Yes
Diablo Valley College	Yes
East Los Angeles College	No
El Camino College	No

College/University Name	Participated in Survey?
Evergreen Valley College	Yes
Feather River College	No
Folsom Lake College	No
Foothill College	No
Fresno City College	Yes
Fullerton College	No
Galivan College	No
Glendale Community College	No
Golden West College	Yes
Grossmont College	No
Hartnell College	No
Imperial Valley College	No
Irvine Valley College	No
Lake Tahoe Community College	No
Laney College	No
Las Positas College	Yes
Lassen College	No
Long Beach City College	Yes
Los Angeles City College	Yes
Los Angeles Harbor College	No
Los Angeles Mission College	No
Los Angeles Pierce College	No
Los Angeles Southwest College	No
Los Angeles Trade-Tech College	Yes
Los Angeles Valley College	No
Los Medanos College	No
Mendocino College	Yes
Merced College	No
Merritt College	No
MiraCosta College	No
Mission College	No
Modesto Junior College	No
Monterey Peninsula College	Yes
Moorpark College	No
Moreno Valley College	No
Mt. San Antonio College	No
Mt. San Jacinto College	No
Napa Valley College	No

College/University Name	Participated in Survey?
Norco College	No
Ohlone College	No
Orange Coast College	No
Oxnard College	No
Palo Verde College	No
Palomar College	No
Pasadena City College	Yes
Porterville College	No
Reedly College	Yes
Rio Hondo College	Yes
Riverside City College	No
Sacramento City College	No
Saddleback College	No
San Bernardino Valley College	Yes
San Diego City College	No
San Diego Mesa College	No
San Diego Miramar College	Yes
San Joaquin Delta College	No
San Jose City College	Yes
Santa Ana College	No
Santa Barbara City College	Yes
Santa Monica College	Yes
Santa Rosa Junior College	No
Santiago Canyon College	No
Shasta College	No
Sierra College	Yes
Skyline College	No
Solano Community College	No
Southwestern College	No
Taft College	No
Ventura College	Yes
Victor Valley College	No
West Hills College Coalinga	No
West Hills College Lemoore	No
West Los Angeles College	No
West Valley College	No
Woodland Community College	No
Yuba College	No

APPENDIX 2. SURVEY OF FREE OR REDUCED FARE TRANSIT PROGRAMS AT COLLEGES AND UNIVERSITIES

Introduction

Thank you for participating in this study.

On the behalf of the California Legislature, the Institute of Transportation Studies at the University of California Irvine (UCI) is investigating free or reduced transit fare programs offered by colleges and universities in California.

Use of survey data and privacy

Ø None of your answers will be presented in any way that identifies you or your agency without your explicit written authorization.

Ø Aggregate survey responses may be reported in publications or presentations in aggregate form.

Ø Your contact information will not be shared with anyone outside of the research team.

Ø Your responses will be stored only on a secure computer at the Institute of Transportation Studies at UCI.

Ø All survey data will be erased three years after the completion of this study.

What to expect

Ø This survey has 2 parts. Part I asks a few questions about you, the survey respondent and your school. Part II inquires about any free or reduced transit pass programs offered by your school.

Ø Completing this survey may take between 5 and 15 minutes depending on the number of free or reduced transit pass programs offered by your school/university.

Ø Questions are single-choice, multiple-choice, and open-ended.

Ø You do not need to finish this survey in one sitting; you can return to the surve*y* from the same device anytime over the next 7 days.

Ø A pdf document with all the survey questions is available here.

Ø Feel free to skip any question that you do not want to answer, but please answer questions as best you can.

Participation, withdrawal, and questions about this survey

Ø Your participation in this survey is entirely voluntary, but we greatly value your professional opinion and appreciate your contributions to this research.

Ø You may withdraw your participation at any time.

Ø You are not waiving any legal rights because of your participation in this study.

Ø If you have any questions or concerns about this research, please contact

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* 1. Do you agree to participate in this study?

- ◯ I agree to participate in this study
- ◯ I decline to participate in this study

PART I: ABOUT YOU

* 1. What is your name?

First:

Last:

* 2. What is your email address?

* 3. What is the name of the college/university you are working for?

4. What is your current job title?

5. How many years have been working in your current role?

PART II. FREE OR REDUCED TRANSIT FARE PROGRAMS

We would now like to collect information about the free or reduced transit fare programs offered by your college/university during fiscal year 2018-19.

* 1. Did your college/university offer *any free or reduced transit fare program(s)* during fiscal year 2018-19?

- ◯ Yes
- ◯ No

Free or Reduced Transit Fare Program Details: **Program 1**

Please provide details about the first free or reduced transit fare program offered by your college/university.

1. What is the name of this free or reduced transit fare program offered by your college/university?

2. During fiscal year 2018-19, what modes were part of this program?
Select all that apply, and *mention the name of the transit agency* that operates that mode in the box below.

- ☐ Bus
- ☐ Vans
- ☐ Rail
- ☐ Other mode (name mode below)

Name of the transit agency:

3. During fiscal year 2018-19, who was eligible for this program? Kindly mention the **conditions of eligibility (if any)** for each group in the box below?
(Please also indicate if all students in a specific year or in a specific school are automatically enrolled or not)

- ☐ Students
- ☐ Faculty
- ☐ Staff
- ☐ Others (please specify below)

Conditions:

4. Briefly explain what discount this program offers to each of the eligible groups:
(Please make sure to mention any time, route, or mode restrictions)

Students	
Faculty	
Staff	
Other	

5. During fiscal year 2018-19, how many people from each applicable group(s) were **eligible** for this program?
(Feel free to state 'Not known')

Students	
Faculty	
Staff	
Other	
Comments (optional)	

6. During fiscal year 2018-19, approximately how many people from each eligible group(s) **used** this program?
(Feel free to state 'Not known')

Students	
Faculty	
Staff	
Other	
Comments (optional)	

7. During fiscal year 2018-19, approximately how many boardings did this program have?
(Feel free to say 'Not known' or add comments)

8. What were the sources of funding for this program during fiscal year 2018-19? Please check all that apply.

- [ ] Payment from student fee
- [ ] Payment from school district
- [ ] Subsidy/payment from city
- [ ] Subsidy/payment from county
- [ ] No funding
- [ ] Other source of funds (please specify)

9. For how many years has your college/university been offering this program?
(feel free to add comments, or state 'Not known' if the answer is unknown)

* 10. Did your college/university offer *another* Free or Reduced Fare Transit program during the fiscal year 2018-19?

- ◯ Yes
- ◯ No

Free or Reduced Transit Fare Program Details: **Program 2**

Please provide details about the second free or reduced transit fare program offered by your college/university.

1. What is the name of this free or reduced transit fare program offered by your college/university?

2. During fiscal year 2018-19, what modes were part of this program?
Select all that apply, and *mention the name of the transit agency* that operates that mode in the box below.

- [ ] Bus
- [ ] Vans
- [ ] Rail
- [ ] Other mode (name mode below)

Name of the transit agency:

3. During fiscal year 2018-19, who was eligible for this program? Kindly mention the **conditions of eligibility (if any)** for each group in the box below?
(Please also indicate if all students in a specific year or in a specific school are automatically enrolled or not)

- [ ] Students
- [ ] Faculty
- [ ] Staff
- [ ] Others (please specify below)

Conditions:

4. Briefly explain what discount this program offers to each of the eligible groups:
(Please make sure to mention any time, route, or mode restrictions)

Students	
Faculty	
Staff	
Other	

5. During fiscal year 2018-19, how many people from each applicable group(s) were **eligible** for this program?
(Feel free to state 'Not known')

Students	
Faculty	
Staff	
Other	
Comments (optional)	

6. During fiscal year 2018-19, approximately how many people from each eligible group(s) **used** this program?
(Feel free to state 'Not known')

Students	
Faculty	
Staff	
Other	
Comments (optional)	

7. During fiscal year 2018-19, approximately how many boardings did this program have?
(Feel free to say 'Not known' or add comments)

8. What were the sources of funding for this program during fiscal year 2018-19? Please check all that apply.

- [ ] Payment from student fee
- [ ] Payment from school district
- [ ] Subsidy/payment from city
- [ ] Subsidy/payment from county
- [ ] No funding
- [ ] Other source of funds (please specify)

9. For how many years has your college/university been offering this program?
(feel free to add comments, or state 'Not known' if the answer is unknown)

* 10. Did your college/university offer *another* Free or Reduced Fare Transit program during the fiscal year 2018-19?

- Yes
- No

Free or Reduced Transit Fare Program Details: **Program 3**

Please provide details about the third free or reduced transit fare program offered by your college/university.

1. What is the name of this free or reduced transit fare program offered by your college/university?

2. During fiscal year 2018-19, what modes were part of this program?
Select all that apply, and *mention the name of the transit agency* that operates that mode in the box below.

- [ ] Bus
- [ ] Vans
- [ ] Rail
- [ ] Other mode (name mode below)

Name of the transit agency:

3. During fiscal year 2018-19, who was eligible for this program? Kindly mention the **conditions of eligibility (if any)** for each group in the box below?
(Please also indicate if all students in a specific year or in a specific school are automatically enrolled or not)

- [ ] Students
- [ ] Faculty
- [ ] Staff
- [ ] Others (please specify below)

Conditions:

4. Briefly explain what discount this program offers to each of the eligible groups:
(Please make sure to mention any time, route, or mode restrictions)

Students	
Faculty	
Staff	
Other	

5. During fiscal year 2018-19, how many people from each applicable group(s) were **eligible** for this program?
(Feel free to state 'Not known')

Students	
Faculty	
Staff	
Other	
Comments (optional)	

6. During fiscal year 2018-19, approximately how many people from each eligible group(s) **used** this program?
(Feel free to state 'Not known')

Students	
Faculty	
Staff	
Other	
Comments (optional)	

7. During fiscal year 2018-19, approximately how many boardings did this program have?
(Feel free to say 'Not known' or add comments)

8. What were the sources of funding for this program during fiscal year 2018-19? Please check all that apply.

- [ ] Payment from student fee
- [ ] Payment from school district
- [ ] Subsidy/payment from city
- [ ] Subsidy/payment from county
- [ ] No funding
- [ ] Other source of funds (please specify)

9. For how many years has your college/university been offering this program?
(feel free to add comments, or state 'Not known' if the answer is unknown)

* 10. Did your college/university offer *another* Free or Reduced Fare Transit program during the fiscal year 2018-19?

- Yes
- No

Free or Reduced Transit Fare Program Details: **Program 4**

Please provide details about the fourth free or reduced transit fare program offered by your college/university.

1. What is the name of this free or reduced transit fare program offered by your college/university?

2. During fiscal year 2018-19, what modes were part of this program?
Select all that apply, and *mention the name of the transit agency* that operates that mode in the box below.

- [ ] Bus
- [ ] Vans
- [ ] Rail
- [ ] Other mode (name mode below)

Name of the transit agency:

3. During fiscal year 2018-19, who was eligible for this program? Kindly mention the **conditions of eligibility (if any)** for each group in the box below?
(Please also indicate if all students in a specific year or in a specific school are automatically enrolled or not)

- [ ] Students
- [ ] Faculty
- [ ] Staff
- [ ] Others (please specify below)

Conditions:

4. Briefly explain what discount this program offers to each of the eligible groups:
(Please make sure to mention any time, route, or mode restrictions)

Students	
Faculty	
Staff	
Other	

5. During fiscal year 2018-19, how many people from each applicable group(s) were **eligible** for this program?
(Feel free to state 'Not known')

Students	
Faculty	
Staff	
Other	
Comments (optional)	

6. During fiscal year 2018-19, approximately how many people from each eligible group(s) **used** this program?
(Feel free to state 'Not known')

Students	
Faculty	
Staff	
Other	
Comments (optional)	

7. During fiscal year 2018-19, approximately how many boardings did this program have?
(Feel free to say 'Not known' or add comments)

8. What were the sources of funding for this program during fiscal year 2018-19? Please check all that apply.

- [ ] Payment from student fee
- [ ] Payment from school district
- [ ] Subsidy/payment from city
- [ ] Subsidy/payment from county
- [ ] No funding
- [ ] Other source of funds (please specify)

9. For how many years has your college/university been offering this program?
(feel free to add comments, or state 'Not known' if the answer is unknown)

* 10. Did your college/university offer *another* Free or Reduced Fare Transit program during the fiscal year 2018-19?

- ○ No
- ○ Yes (please specify how many more programs)

History of free or reduced transit fare programs

* 1. In the **past five fiscal years**, did your college/university offer any free or reduced transit fare program(s) that have now been discontinued?

- ◯ Yes
- ◯ No

History of free or reduced transit fare programs

1. The closed free or reduced transit fare program were applicable to which all groups? Check all that apply.

	Reduced transit fare program	Free transit fare program
Students	☐	☐
Faculty	☐	☐
Staff	☐	☐
None	☐	☐

Other (please specify)

2. What are the reasons why your college/university's now discontinued free or reduced transit fare program(s) was(were) terminated? Check all that apply.

- ☐ Insufficient funding
- ☐ Insufficient demand
- ☐ I don't know
- ☐ Other (please specify)

CLOSING QUESTIONS

1. If you have any comments about this survey (and in particular about free or reduced transit fare programs), please enter them in the box below:

2. May we follow up with you on your responses?

- ◯ No
- ◯ Yes, please contact me at the email address I entered in Part I of this survey
- ◯ Yes, please contact me at a different email address or by phone (please include area code):

3. Would you like to receive an electronic copy of our findings?

- ◯ No
- ◯ Yes, please send it to the email address I entered in Part I of this survey
- ◯ Yes, please send it to a different email address: