

## **Board 409: Toward Understanding Engineering Transfer Students' Transitions from Community Colleges to 4-year Institutions**

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## **Toward understanding engineering transfer students' transitions from community colleges to 4-year institutions**

### **Abstract**

Community college students who transfer to 4-year institutions for engineering degrees are known to face significant adversity. Some common challenges they face include having minimal financial resources, a lack of engineering-oriented mentorship, and prolonged time to degree. Engineering transfer students are naturally diverse, ranging in age, experience, and motivation. Some have carved paths that include, for example, military service, starting a family of their own, or switching their career aims. The nuanced nature of the transfer student experience challenges higher education professionals to identify innovative ways for transfer students to meet their individualized goals.

The engineering transfer students aim to transition from a previous institution to a 4-year baccalaureate institution, obtain an engineering undergraduate or graduate degree, and, finally, transition into an engineering-oriented career. These are major transitions. Schlossberg has identified factors that influence an individual's ability to cope with their experienced transitions, namely, situation, self, support, and strategies. Through this lens, the transfer experiences and transfer shocks undergone by these ambitious students may be better understood and improved.

A partnership between a 4-year institution, the University of California San Diego (UCSD), and two community colleges, Imperial Valley College (IVC) and Southwestern College (SWC), has been formed to better understand and support transfer engineering students as they make major transitions in, through, and out of their respective institutions. Through this partnership, a supportive program called EMPOWER has been devised to assemble cohorts of Pell-grant-eligible engineering transfer students so that their diverse and timely needs can be addressed. Scholarships and high-impact practices have been offered to these students. Program activities include cross-campus visits, faculty, and alumni mentorship, financially supported research opportunities, and cohort-supporting social opportunities. Through focus groups and survey questionnaires, the transition experience for these students is further investigated. In this paper, an outline is provided detailing the common challenges faced by engineering transfer students as they transition toward their careers, along with high-impact practices to support them.

## Introduction

Transitions “in, through, and out” of the university system are challenging for students [1]. Students may face challenges that include, for example, passing a class, keeping up with family or social commitments, or holding a concurrent part-time job. These challenges can negatively affect student attrition [2]. Even with so many barriers, there is an increasing number of students who have been able to persevere and obtain a meaningful career [3,4]. However, there are disadvantaged communities of students who are especially challenged to overcome the expected and necessary student transitions.

Schlossberg in “A model for analyzing human adaptation to transition” has detailed that transitions are affected by the individual’s situation, self, support, and strategies [5]. The situation entails the story behind a change, such as the timing or trigger, and the role change. Self refers to personal, demographic, and psychological characteristics and resources. The support is externally provided by previous or newly formed relationships and communities. Strategies include the individual’s coping and stress management skills. Schlossberg also investigated perceptions from adult students in college [6]. In this study, Schlossberg asked important questions related to their sense of belonging including “Do I feel I matter to the institution?” and “Do I feel noticed, appreciated, welcomed?” giving credit to Rosenberg and McCullough [7].

Transitions for transfer students in, through, and out of community college and in, through, and out of the university system are more rapid than their 4-year university peers [1]. Transfer students are often the first generation in their families to attend college and can come from low-income backgrounds [8, 9, 10]. Many transfer students have faced adversity that their 4-year peers have not experienced. Transfer students also have a shortened time to reposition themselves, identify resources, and build confidence to continue their studies [11].

Transfer students pursuing engineering careers, more specifically, are presented with additional challenges [12, 13]. Ogilvie [13] reviews the literature detailing many transfer engineering challenges and pathways. They point to work by Blash et al. [14] who share that time-to-degree is another major challenge facing these students. Xu et al [15] examined whether or not being a transfer student was a “good bet” due to a delayed time of entry to the workforce explaining that financial outcomes are important to these students. Much of the literature also points to “transfer shock”, as originally coined by Hills et al. in 1965 [16]. This “shock” certainly relates to Schlossberg's theory introduced over a decade later.

It is important to support transfer engineering students in effective ways due to limited institutional resources. Financial assistance and high-impact practices are known to meet an important need for transfer engineering students [17, 18]. It is reported that well-directed efforts lead to improved retention rates, shorter time-to-degree, and increased prospects after graduation

[17]. Organizing these efforts through the lens of Schlossberg’s framework can increase the effectiveness of support during the transfer engineering students’ transitions.

## The EMPOWER Program

Schlossberg’s transition theory applied to the transfer engineering student experience is illustrated in Figure 1. Figure 1, highlights the major transitions, the support provided by the 4-year institution to the community college, and a series of enrichment activities that may be used to support the transfer engineering students.

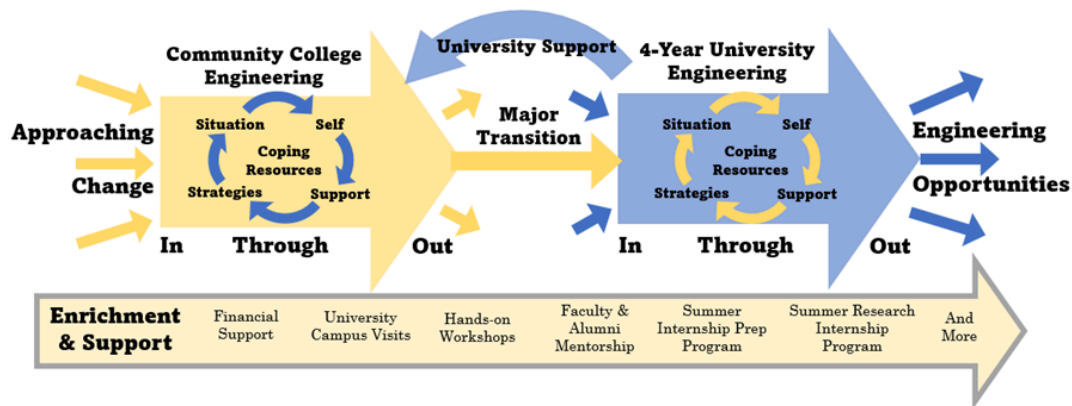


Figure 1: Adapted from [19] to illustrate the transition process for transfer engineering students from community colleges to 4-year universities

Transitions are affected by:

- Situation** - An engineering transfer student may be moving from one institution to another, one location to another, one culture to another, one group of peers to another, and one financial position to another.
- Self** - An engineering transfer student’s view of themselves can relate to a sense of belonging. Characteristics affecting this can include culture, socioeconomics, gender identity, and age, for example. Resilience, positive outlook, and a sense of commitment are three qualities important to have for students during these transitions.
- Support** - An engineering transfer student can have difficulties finding new friends, new mentorship, or new financial support. Support might be unavailable or unidentifiable due to institutional barriers.
- Strategies** - An engineering transfer student may need to find new coping strategies when in a new situation or under different stressors.

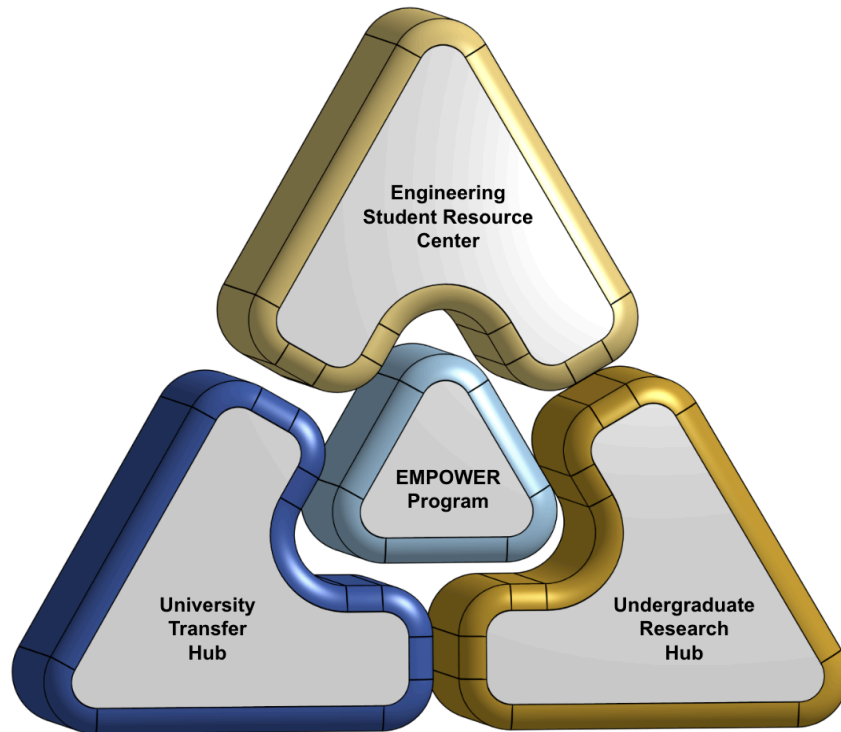


Figure 2: The EMPOWER program's positioning among existing university resources

The EMPOWER program was recently launched at University of California San Diego (UCSD), Imperial Valley College (IVC), and Southwestern College (SWC). The multi-institutional effort requires university-specific resource alignment as well as cross-campus collaboration. Figure 2 illustrates how the EMPOWER program at the 4-year university is positioned to leverage existing resources, including the existing 1) transfer student support hub, 2) an undergraduate research engagement hub, as well as 3) an engineering student resource center.

The EMPOWER program is designed to directly support Pell-grant-eligible students. An additional support arm of the program has been to coordinate with the financial aid office to ensure targeted scholarships, up to \$10,000 were provided to each EMPOWER scholar. Financial aid influences multiple factors from Schlossberg's including situation, self, and support.

Financial assistance is certainly an enabler for students to adjust their attention away from the many financial pressures a student may have.

Well-directed high-impact practices should be enacted in addition to the financial assistance to truly support students during their transitions. The high-impact practices designed for EMPOWER to influence each of Schlossberg's transition factors include:

- A month-long **summer preparatory program** to prepare students in both technical and professional skills for internship applications. EMPOWER Scholars at the two community college partners are encouraged to enroll. The summer program implemented was highlighted by Truong et al. in [20].
- A multi-year **research and mentoring program** that introduces students to research experience with faculty in Engineering departments at UCSD. The students are encouraged to explore graduate studies in the BS/MS, MS, or PhD program. EMPOWER Scholars at UCSD are encouraged to participate.
- A year-long **multi-dimensional mentoring program with faculty and alumni**, helping students with professional development, career choices, and internship opportunities. EMPOWER Scholars at IVC, SWC, and UCSD are encouraged to participate.
- A year-long **enrichment visit and workshop program** consisting of visits to UCSD and workshops to help students with the transferring process and preparation and to ease transfer shock. EMPOWER Scholars at the two community college partners are encouraged to participate.

## Methods of Investigation

In working toward a better understanding of transfer engineering students, their transitions, and how the program has been supportive of them so far, a series of questions are raised to the students after transferring to the 4-year university through online surveys and focus groups.

### A. Transition to a 4-year University

- 1) Please share about your college transition to the university. What has it been like thus far?
- 2) What, if at all, has been the support you have had in your transition thus far? Can you share an example as to why or how they have been supportive in your transition?
- 3) What are one or two ways your background, upbringing, or identity have contributed to (or hindered) your transition? Please share why or how.
- 4) Why did you decide to go the community college route? What goals do you have for transfer (If any)?
- 5) What strategies have you developed thus far to reach your mentioned goals? Any resources used, etc.?

### B. Participating in the EMPOWER Program

- 1) What are some of the ways you have participated in the EMPOWER program thus far?

- 2) How, if at all, have the EMPOWER program components you engaged with contributed to your transition? Please provide an example.
- 3) How, if at all, have they contributed to any feelings of being welcomed by your college? Please provide an example.
- 4) What did you gain from your EMPOWER program experience?

#### C. Future Participation in the EMPOWER Program

- 1) What are some of the ways you hope to participate in the EMPOWER program? What parts of the program most excite you?
- 2) Reflecting on your answer about the parts of the EMPOWER program you want to participate in, how do you hope this engagement will support you in your transition into your next year? Please provide an example.
- 3) How, if at all, do you think your participation in the EMPOWER program will connect you to campus? Please provide an example.
- 4) What would have made your EMPOWER program experience better?

#### D. Sense of Belonging

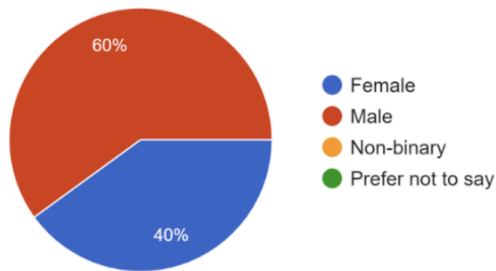
- 1) In what ways, if at all, do you feel like you feel valued at your college?
- 2) How do you think your experiences as an EMPOWER Scholar will play a role in feeling like you belong to the university?
- 3) In what ways, if at all, do you find the university a comfortable, supportive place for you and for other students?

### **First Cohort Experience & Reflection**

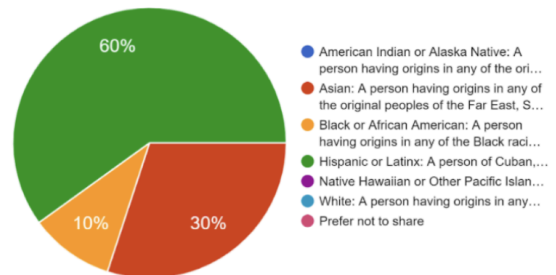
The results in this section are drawn from ten UCSD EMPOWER scholar responses to the survey questionnaire. Summarized responses are categorized into the corresponding survey sections “Transition to a 4-year University”, “Participating in the Program”, “Future Participation in the Program”, and “Sense of Belonging”. The full, deidentified responses are found in Appendix A.

Survey respondents' demographic information:

a) Identified Gender



b) Identified Race or Ethnicity



c) Highest Educational Degree Completed by Parent(s)/Guardian(s)

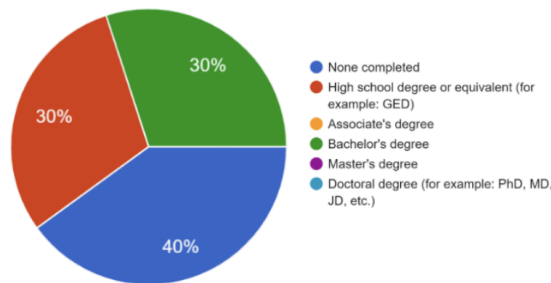


Figure 3: a) Identified Gender, b) Identified Race or Ethnicity, and c) Highest Educational Degree Completed by Parent(s)/Guardian(s) for survey respondents

### A. Transition to a 4-year University

The first five questions asked to students are intended to gauge their experience transitioning into a 4-year university. In general, the diverse transfer engineering students have shared, expectedly, diverse experiences. They all knew they wanted to earn a degree but decided to attend community college for different reasons. Financial reasons were commonly shared, but in addition, some felt the need to support their families, needed more time or resources to transition toward a 4-year institution, or were uncertain about which career path they wanted to pursue.

Students shared a variety of challenges they faced while in transition. Some related to transitioning to a new system, with a faster pace and more competitive nature. Although families can provide encouragement, motivation, and overall support, some students shared that their family's lack of experience with the higher education system left them at a disadvantage when trying to advance. Cultural expectations or language barriers also posed challenges.



Support was found often through institutional resources, in and out of the EMPOWER program. For example, resources described in Figure 2 were commonly helpful, and additional ones were also shared including counseling and psychological services or the office for students with disability. Scholarships were commonly brought up as necessary support. Two students also shared that friends played a significant role in their transition experience. The students strategized in different ways to overcome the challenges but many alluded to the act of seeking out help being a useful method. This included applying for scholarships or internships, finding mentors, and using existing institutional resources. Tables 1-5 provide more detailed themes to the specific responses. Some additional quotes are provided.

1) Please share about your college transition to the university. What has it been like thus far?

Table 1: Positive and negative themes for student’s college transition

Positive Themes	Negative themes
<p><b>Resources have made a difference in feeling supported (mental health, EMPOWER, orientations)</b>            Feelings of independence            Taking time for reflection assisted</p>	<p><b>Quarter system challenges/Rigor</b>  <b>Mental health concerns</b>            Difficult transition</p>

“I am struggling every day, and it seems that I am just focused on making it to the next day. The pace has been so fast and my antidepressants are not working so well with my schedule. I am now using CAPS resources but reaching out to professors is something I'm afraid to do. I feel very little in comparison to my classmates, who seem to grasp everything quickly. It feels as if I am not fit for this major.”

“The first year was really rough for me due to mental health reasons. I'm grateful that EMPOWER offers many resources that led me to the professional help I needed.”

2) What, if at all, has been the support you have had in your transition thus far? Can you share an example as to why or how they have been supportive in your transition?

Table 2: Internal, external, and other support for student's college transition (items in bold were shared by multiple students)

<b>Internal supports</b>	<b>External supports</b>	<b>Other</b>
<b>EMPOWER</b> Mentorship Access to internships Mental health services Disability services Bridge programs Professors and counselors	<b>Community and friends</b> Friends	<b>Scholarships</b>

- 3) What are one or two ways your background, upbringing, or identity have contributed to (or hindered) your transition? Please share why or how.

Table 3: Positive and negative themes for student's college transition as they relate to background, upbringing, or identity (items in bold were shared by multiple students)

<b>Positive Themes</b>	<b>Negative themes</b>
<b>Family encouragement</b> Feelings of independence Taking time for reflection assisted	<b>Lack of parental knowledge of college experiences</b> Disability Cultural expectations for gender roles Language barriers

POSITIVE QUOTE: My family expects a lot from me and I don't want to disappoint them. I usually think of them whenever I don't want to do something. :)

- 4) Why did you decide to go the community college route? What goals do you have for transfer (If any)?

Table 4: External and internal factors for student's reasoning to attend community college (items in bold were shared by multiple students)

<b>External factors</b>	<b>Internal factors</b>
<b>Financial reasons</b> Familial commitments Not accepted into preferred college	<b>Transitional support needed into college</b> Career/academic pathway indecision

5) What strategies have you developed thus far to reach your mentioned goals? Any resources used, etc.?

Table 5: Academic, professional, and personal strategies developed to reach goals (items in bold were shared by multiple students)

Academic	Professional	Personal
Meeting with academic advisors Focusing on classes <u>Forming study groups</u>	<u>Applying to internships</u> Seeking a career coach	<b>Participating in campus activities &amp; resources</b> <u>Focusing on personal projects</u> Applying for financial support

“The EMPOWER scholarship has been a big support in my transition as there is no worry of finances to distract me from my studies—one thing is that I did not know how expensive campus dining was. Community, friends, and social connections have been very supportive in my transition because school would be much more stressful without them.”

B. Participating in the Program

Students who are part of the EMPOWER program are provided with a scholarship. Students shared that scholarship support is a useful part of the program. According to the responses, there was a mixed rate of event participation for the optional hosted events. One student shared that they have not attended any EMPOWER events whereas some shared that they have attended most of the events. They shared the value of connecting with faculty and one another. At each event, students felt especially welcomed with time granted for more personal connections that may have not been provided in their normal course-related work. Through these connections, they have gained valuable personal and professional advice.

C. Future Participation in the Program

As many are still finding ways to navigate the resources available through the program, students showed a sense of eagerness and a strong desire to participate in more programming. Many shared their desire for increased research and mentorship opportunities. One student shared that they especially enjoyed the cross-campus visits from current community college students. By continuing to be supported by the program, they expect to make better graduate school and career decisions. One student also shared that they hope to support the program by mentoring incoming students themselves. Many students shared different ways the program could improve, for example through increased programming, different mentorship styles, and more resource sharing.

## D. Sense of Belonging

While the majority of students shared that they felt valued and connected to the university, one student shared that they do not think they are a good fit and that they are falling short of expectations. Having the relatively small EMPOWER community, students feel more represented and more connected. Comfort has come from many of the resources offered either directly through the program or indirectly, by the program connecting the additional already available resources to the specific students in need.

## Summary and Future Work

Major transitions and their impacts on transfer engineering students are important to understand and influence with institutional support. Financial assistance and a multitude of high-impact practices have been aligned through the EMPOWER program to meet the transfer engineering students' needs as they transition "in, through, and out" of their respective institutions and into meaningful careers. This effort is ongoing and aims to produce data that can help the educational community better understand these transitions, especially as they pertain to Pell-grant-eligible, transfer engineering students.

## Acknowledgements

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## APPENDIX A - Deidentified Questionnaire Responses

### A. Transition to a 4-year University

- 1) Please share about your college transition to the university. What has it been like thus far?

It is nice to be more independent, but adapting to the quarter system has been difficult.

I think the college transition was great. Attending various preparation events and attending a

previous \_\_\_\_\_ tour before enrolling full-time at \_\_\_\_\_ allowed me to adapt to this new environment. Having the \_\_\_\_\_ community has also helped out in mitigating any negative feelings about feeling isolated as a transfer student.

The first year was really rough for me due to mental health reasons. I'm grateful that \_\_\_\_\_ offers many resources that led me to the professional help I needed.

Currently for my second year, I'm working to get back on track with my education plan, utilizing academic accommodations from the OSD.

It was tough at first. Everything went a lot faster than usual. The affects of my bad habits became more apparent (procrastination). I feel like I've adapted much better now. I took some time after each quarter to reflect on my mistakes and learned what I had to do to get an A. I currently feel a lot more comfortable at \_\_\_\_\_. :)

It's been okay. It has ups and downs. While getting into my dream university is exciting, getting familiar with the new system was a little challenging

Not good to be honest. I am struggling every day, and it seems that I am just focused on making it to the next day. The pace has been so fast and my antidepressants are not working so well with my schedule. I am now using CAPS resources but reaching out to professors is something I'm afraid to do. I feel very little in comparison to my classmates, who seem to grasp everything quickly. It feels as if I am not fit for this major.

The difference between community college experience and university experience is that I have more chance of getting to know new people, coursework is much harder and more intense. Also the academic environment is more competitive

Though it has been challenging to acclimate to the quarter system, the transition overall has been excellent. I was well prepared, and the supports in place here have made the transition much easier.

It's been a little tough. At first I really tried and did really good work. But now I feel burnt out. I want to do good research, but I definitely needed a break from breaking my back in community.

My transition to university was pretty smooth. Adjusting to the quarter system was challenging but it never represented a real problem.

- 2) What, if at all, has been the support you have had in your transition thus far? Can you share an example as to why or how they have been supportive in your transition?

The \_\_\_\_\_ scholarship has been a big support in my transition as there is no worry of finances to distract me from my studies—one thing is that I did not know how expensive campus dining was. Community, friends, and social connections have been very supportive in my transition because school would be much more stressful without them.

Receiving support in terms of internships has been the greatest so far. I was questioned by my mentor on what summer internships I was looking into and by declaring my goals and demonstrating my passion, my mentor was able to connect me with people in industry and find additional resources that would allow me to network with more people from that company. This mentor provided guidance on how to network, how to follow-up, and how to apply for internships.

I've received support from the \_\_\_\_\_ CAPS, the OSD and of course the \_\_\_\_\_ Scholars program. The scholarship made it possible for me to focus on school while learning to take care of my health better.

My younger sister transferred with me. We always tried to help each other. She is a lot more aware than I am and has helped me traverse the more bureaucratic side of things. We also motivate each other and talk about our experiences at \_\_\_\_\_ which I think helps.

There's one program at the start of the fall quarter when I was just transferring to \_\_\_\_\_ that arranged a transfer prep program (Transfer prep, by idea center and Jacob's school of engineering ). This program lasted for four days and it helped me to make connections with other students in Engineering, faculties, and navigate through the resources the campus has.

CAPS has helped look for psychiatrists and psychologists in La Jolla since I can no longer afford my treatment back home in Mexico. I have lost some classes due to going to appointments over there. But the material is too hard to handle, and I can no longer go back.

I would say friends and family, as well as I got lots of support from my previous community college, which I'm really appreciated.

Financial support (through \_\_\_\_\_, \_\_\_\_\_s, CASP), mental health (CAPS), transfer student resources through the Transfer Hub, opportunities advertised by the IDEA center, etc. These support services have helped ease the financial burden of attending a UC and helped support my wellness, academic and beyond.

The support for transitioning pretty much came mostly from \_\_\_\_\_. I seek out groups to help me with my goals, and no necessarily groups that focus on a transfers, so I had missed out on a lot.

I have met with academic counselors and professors who provided valuable advice on school and professional development. Moreover, my friends represent a huge part in my educational career and personal development.



- 3) What are one or two ways your background, upbringing, or identity have contributed to (or hindered) your transition? Please share why or how.

My background and upbringing is one of the main reasons I'm here at \_\_\_\_\_. My parents grew up in poverty and didn't have the opportunity for college education, so they raised me with an emphasis on the value of education and provided the means for me to seek higher education. One thing that has hindered my transition is a disability I have that can be challenging for me to manage with the quarter system.

Due to my parents not receiving education beyond middle school, it took a lot of work for me to know how to look for resources that would benefit my educational career. While many students had parents they could easily rely on for educational or career advice, that wasn't something I could do, so I had to put additional effort into finding mentors willing to provide any guidance. Additionally, it was difficult to receive support for receiving a higher education as a Hispanic woman. In my culture, women aiming for a career isn't necessarily desired or highly recognized so it was difficult having to constantly fight against cultural setbacks.

Coming from an immigrant family and also being a first-gen college student, I basically had to navigate the college life all by myself. I first realized how different my experience was when my roommates said they had their parents fill out FAFSA for them, that they didn't have to work because they had financial support from their family, or how they could just ask to intern at their parents' companies.

I've never experienced those privileges. I've been financially independent for years before transferring to \_\_\_\_\_. Thanks to the \_\_\_\_\_ scholarship, it was the first time I didn't have to work while still in school.

I don't really like talking about it because I feel like it doesn't/shouldn't matter but I've had a couple moments where I've felt like an alien at \_\_\_\_\_. Like it's probably my mind playing tricks on me but a lot of times, when I interact with people, I can't help but feel that I'm out of place. People have so far always been nice and easy to talk to so these thoughts don't usually stay for long but they still reappear and sometimes scare me from participating in office hours or club events.

I think having understood how unusual my upbringing was (relative to most people I've talked to) has helped me persevere through these thoughts. My family expects a lot from me and I don't want to disappoint them. I usually think of them whenever I don't want to do something. :)

I am Hispanic as I was born and raised in Mexico but only came to the US to pursue college as the space industry is very developed here. Being raised in Mexico made me perseverant and a hard worker. However, being the eldest in my household led me to handle too many responsibilities which made me put myself last. My parents do not speak English, so I do all

the paperwork for them. I helped my brother get into college in the USA but it was after I spent a whole gap year understanding the US system. Being a woman in a Mexican household often means looking out for your loved ones but nobody looks after you. Many of my mental health disorders were dismissed, since my parents did not believe in mental health issues and would just say I needed to work harder. It was until last quarter that I had personal struggles in regard to not seeing life enjoyable anymore, but more of a "I just need to get through the day" thing. I had an incident where my parents finally took my mental health seriously and I was allowed to see a psychiatrist. I do not have thoughts of that such anymore but still struggle mental health wise. This has impacted my academics, as I have not been doing well academically. I am very ashamed of myself because I was once a high achieving student and I can no longer live up to what others expect of me.

I grew up in an immigrant family, and moved to the U.S in 2018. I'm the only child in the family getting chance to attend college. I would say the language barrier would be the obstacle in my transition.

Not comfortable doing so.

I don't know

- 4) Why did you decide to go the community college route? What goals do you have for transfer (If any)?

I went to the community college route because I was not accepted into any of the schools I applied to, and I knew that the best route to get into a UC after high school is through community college. My goal was to transfer to \_\_\_\_\_ in Computer Science, so my educational plan was based on that.

I decided to go the community college route due to financial reasons. At the time of deciding whether to attend a 4 year university or community college, the pandemic had just started and my father suffered three heart attacks. Since he was the main financial provider for my family, I was debating whether or not to stay in school or to help my family financially while he was in the hospital. If I attended community college, it seemed a bit easier to manage a part-time job or switch to a full-time job if necessary.

I attended and finished high school outside of the U.S. The grading system in my country is very different from that of the U.S, so the community college route was the realistic way for me to transfer to a university.

As I got my high school from foreign country, community college was my only choice to pursue my bachelor degree.

I had no money to pay for my undergrad education in the US. I decided to do community

college in hopes of getting a full ride to university, which I was able to do thanks to being awarded the Jack Kent Cooke Undergraduate Transfer Scholarship.

I really don't want to miss the educational opportunity in the U.S to pursue my dream. I have been long wanting to build things like softwares, devices or machines that could enhance people' life.

I decided to start as a community college as it was a much more financially feasible option. I have already successfully transferred.

COVID seemed to even out the education regardless of where you were going to school. I had to keep my finances in check.

At the time, I wasn't sure of what I wanted to do. So, I enrolled in community college to keep on with my education, while I figured out what I wanted to do.

- 5) What strategies have you developed thus far to reach your mentioned goals? Any resources used, etc.?

I spoke to different counselors throughout my time in community college for support which included academic planning. I enrolled in some programs that offered student support and resources.

I've been applying to internships for the company I would like to work for, I've been focusing on personal projects that relate to the type of career I want, and I've been aiming to excel in the classes that are relevant to the internships I'm considering.

I have recently started working with a Career Coach from the \_\_\_\_\_ Career Center to build my resume and seek internships for this summer. I also plan to attend \_\_\_\_\_ Scholar's events more consistently to network and find out more about research opportunities/

Reaching out for help, using all the college resources; specially , going to counseling office as early as possible and working closely with the transfer center at my college are some of the some of the strategies that helped me the most.

My goals are to do a PhD in Electrical Engineering or in an area that helps me be a successful engineer for instrumentation used in space missions. I also wish to work for the space industry as an electrical engineer. For the PhD, I have not been using resources, unfortunately, even though I should. For working in the space industry, I got selected for the Brooke Owens Fellowship Program and will intern at Blue Origin. I feel very worried because I was selected based on my past accomplishments where I was doing okay. But now I am struggling a lot with depression and anxiety, and I am afraid to not perform well. I also wished to TA for a class but that won't be possible due to my underperformance.

I would say trying to become more disciplined, and never give up when facing challenges as

you would grow if you could somehow overcome those. You can take a rest any time you need to but just never stop

Take advantage of student resources available, study groups, apply to research and internship opportunities, seek help when needed, etc.

No.

I learned that applying to scholarships is crucial due to my financial situation. Also, when it comes to school, I just try my best and that has always worked for me.

## B. Participating in the Program

1) What are some of the ways you have participated in the \_\_\_\_\_ program thus far?

I haven't been to any hosted events because of scheduling conflicts.

I've attended most of the \_\_\_\_\_ events and I've attended both events where the cohorts from community colleges attended \_\_\_\_\_ tours. Through these events, I was able to advise current community college students on my transfer experience and what they can expect once they transfer as well.

I've attended events hosted by the program.

Mixer program with senior members, faculty meeting and brunch, pre midterm and final exam check ins.

Last quarter I attended two sessions I believe where I talked to Professor \_\_\_\_\_ and Professor \_\_\_\_\_. \_\_\_\_\_'s words gave me motivation and \_\_\_\_\_'s lively personality gave me the push I needed for the day. I also was present when \_\_\_\_\_ students came to visit. It was nice meeting students with similar backgrounds as mine.

I didn't get much time attending some of the social meeting in the past, but I will try manange my time attending more to get connected with other faculty and students.

I have attended many of the \_\_\_\_\_s events, both on campus and cross campus events. I also hope to participate in research through \_\_\_\_\_.

Going to the meetings and helping out where I can. I did not do the summer prep programs but have done mostly everything else.

I attend most of their events.

2) How, if at all, have the \_\_\_\_\_ program components you engaged with contributed to your transition? Please provide an example.

I think the \_\_\_\_\_ program events have helped me become a bit more confident, especially when speaking to new people. While I was at community college, I was really shy but at the cross-over events with community college students, I felt comfortable sharing my experience because I knew that it would help them gain a better understanding of the transfer process.

They've helped me by making me connected to other students in my major who are my seniors, exposed me to the campus resources, and the events and mixers made me feel included.

The first meeting was very inspiring. I should attend more social gatherings to get out of my shell.

The program supported me financially and now I am seeking for faculty mentorship and resources helping me with the future academic purposes.

It has helped me feel a sense of belonging and support that has helped me ease into the transition between community college and a UC.

The financial support provided by \_\_\_\_\_ is unparalleled, but their social events are great for meeting people and feeling like you belong.

- 3) How, if at all, have they contributed to any feelings of being welcomed by your college?  
Please provide an example.

At any \_\_\_\_\_ event that I've attended, I've always received warm welcomes and I've been asked about how I am personally doing, how my classes are going, and if I need help in any way. By doing so, I feel like I belong in this program and that I am valued as a student.

I definitely feel very welcome and assured that I have a solid support system for my time at \_\_\_\_\_.

The refreshers are nice. Talking to other \_\_\_\_\_ members (new and old) was a neat thing to do during orientation.

I am not sure I can answer this as I have not been very present in the meetings. I could do better in that aspect.

The Professor - \_\_\_\_\_ is super friendly and passionate about connecting with students, which made me feel welcomed.

The \_\_\_\_\_ events have all made me feel welcome. \_\_\_\_\_, partnering professors, and other students have been excellent in making me feel a part of this community.

I think I have spoken with professors I did not get the chance to from my school work, but I had wanted to meet them.

Every time I go to an \_\_\_\_\_ event, I feel welcome and comfortable. I think the program coordinator does a great job at including everyone.

4) What did you gain from your \_\_\_\_\_ program experience?

From the \_\_\_\_\_ program experience, I continue to gain a stronger community and I am able to improve myself personally and professionally.

I gained valuable advice from students and professors.

Try to explore available resources at my university

Ease of financial burden, a support service, and a sense of belonging at \_\_\_\_\_.

A whole different perspective of education. Talking to my peers and professor has been incredibly insightful.

### C. Future Participation in the Program

1) What are some of the ways you hope to participate in the \_\_\_\_\_ program? What parts of the program most excite you?

I hope to get connected more with the program, such as by attending events. I remember reading about mentorship in the program, but I'm not sure how that works.

I continue to look forward to the events when community college students visit \_\_\_\_\_ because it's always nice to hear from them and how they've been doing. Additionally, any social events are always exciting because I get to interact with various \_\_\_\_\_ members and learn about what they have personally been up to.

Research and internship opportunities

I hope to participate in the research program. That and the quarterly events excite me the most. Free food is great.

Resource sharing, research and internship opportunities

I wish I could get 1-1 mentoring.

Social event and faculty mentorship

I am hoping to keep attending \_\_\_\_\_ events as my schedule allows. I am most excited for and hoping to participate in summer research, also if my schedule allows.

I would like to mentor incoming students.

2) Reflecting on your answer about the parts of the \_\_\_\_\_ program you want to participate in, how do you hope this engagement will support you in your transition into your next year? Please provide an example.

I think engaging in these events will continue to help me feel like I truly belong as a \_\_\_\_\_ student. If I decide to join additional student organizations, I won't feel any sense of isolation but rather recognize that I belong in these organizations and that I am capable of making valuable contributions.

I hope that the research and internship opportunities will help me build a strong resume, a clear career path upon graduation.

I'm hoping to get connected to some researches happening in my department.

This would allow me to be held accountable by someone in achieving my goals. Although it is my responsibility to do so as I am an adult.

I'm applying to BS/MS in this Spring quarter, as well as I'm planning to apply some other MS when graduating so I hope I could get some advice and support from faculty.

I hope my participation will keep fostering that sense of belonging and support that I know will help me in coming quarters.

I don't know.

I would love to participate in the research and internship opportunities in the hope to grow and be ready for industry after I graduate.

3) How, if at all, do you think your participation in the \_\_\_\_\_ program will connect you to campus? Please provide an example.

By engaging in these events, I think I'll feel even more comfortable navigating around campus and I'll gain a greater sense of confidence when reaching out to professors. For example, if I happen to have an interest in conducting research with a faculty member who attends the \_\_\_\_\_ events, I won't be as nervous because I was able to connect with them beforehand.

It helps in getting to know more students in similar backgrounds as mine.

The \_\_\_\_\_ Scholars provide many academic related opportunities such as research opportunities, summer internship program, and other available resources at campus

I think it will connect me to other students and faculty, which it already has a bit, and that will help me connect to campus/

Speaking with other students gives a good perspective on what are the lives of others. You get clues and life advice you wouldn't expect.

By attending to their socials, I become closer and closer to the engineering community at \_\_\_\_\_.

4) What would have made your \_\_\_\_\_ program experience better?

Perhaps more email communication

Possibly adding professional workshops such as how to apply to research opportunities, effective ways of connecting with research advisors, or anything related to internships.

Regular mental health check-ins and reminders about campus resources for students' physical and mental well-being.

I was part of the \_\_\_\_\_ program during my time in \_\_\_\_\_ City College. It was led by a man named \_\_\_\_\_ and he managed to have a lot of events (resume workshops, company panels, company visits, college visits with the help of transfer students, etc) during the semester.

I think you should contact him and ask him about what sort of things he did to make the program pretty big.

\_\_\_\_\_

What they're doing is nice, but I also think it would be more important if they can arrange some company tour or visits from related companies to come and give us some insight about how to prepare for industries after graduation, building connections for internship opportunities, resume reviews or other

I believe I cannot say much as it would have helped if I attended to more social events. I do not know why I am sometimes scared of them.

Social events

I believe being paired with a specific mentor would have made it a bit better.

A little more people at some of our talks.

More academic and professional development resources. Like emails with links to these resources.

D. Sense of Belonging



1) In what ways, if at all, do you feel like you feel valued at your college?

Yes, I do feel valued at \_\_\_\_\_, especially because when I am asked questions or when I have something to share, I receive the appropriate attention and it seems like my statements are valued.

Just having connection and someone who closely knows and follow how we're doing makes me feel that I'm not alone.

I sincerely do not think I am a good fit. Many people here are very talented and smart. I am falling short on what it is expected from \_\_\_\_\_'s students.

I have been learning a lot since I attended college, and I also get supported by many students and staff

I would say I feel valued, especially by the scholarship programs I'm in. The support they offer, both financial and academic, help me feel like what I am working for is worthwhile and I am supported in my goals.

In many.

I feel like being a member of the structural engineering community makes me feel valued. Our community is competitive, but very supportive at the same time.

2) How do you think your experiences as an \_\_\_\_\_ Scholar will play a role in feeling like you belong to the university?

I think my experiences as an \_\_\_\_\_ scholar will play a significant role in a sense of belonging because I will be exposed to opportunities that not many other students may receive and that will help me become more familiar with campus and the resources it provides.

I really appreciate the quarterly meetups and events that helps me make friends with students from similar backgrounds. Knowing that there are students like me who are succeeding at college gives me a sense of belonging.

Once I find my community there, I will have a better sense of belonging.

I get mental health and academic support

It will and has played a role through their various events, fantastic faculty, and support offered.

Honestly I feel more represented as a transfer and Latino than before. I hadn't seen so many until \_\_\_\_\_.

As I mentioned before, just having a scholar's community within \_\_\_\_\_ is very unique and

a great way to feel connected to the school.

3) In what ways, if at all, do you find the university a comfortable, supportive place for you and for other students?

I find the university to be a comfortable and supportive place by having so many resources that promote academic and professional success. There are many opportunities that are unique to \_\_\_\_\_ and I greatly appreciate that the university is invested in students' growth.

It is my personal experience, but I do not feel comfortable. It is hard to fit in.

There are many supporting services on the campus trying to help students mentally and physically

The university feels like a small, but tight knit city and close community. Through student support services, like \_\_\_\_\_, I feel comfortable and supported here.

I like knowing that even without the hardcore computer topics there are still students with similar experiences in this school.

Going to places like the library and attending on campus events makes the \_\_\_\_\_ experience worth it.