

Board 176: Work in Progress: Case Study of Factors Affecting Reverse-Transfer Students' Degree Completion

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Doris Espiritu is the Dean of the Center of Excellence for Engineering and Computer Science and Professor of Chemistry at City Colleges of Chicago-Wilbur Wright College. She also serves as the Senior Advisor to the Provost of the City Colleges of Chicago. Doris Espiritu is one of the first National Science Foundation's research awardees under the Hispanic-Serving Institutions (HSI) Program. She pioneered Engineering at Wright and had grown the Engineering program enrollment by 2500% within five years. Doris founded seven student chapters of national organizations including the Society of Women Engineers (SWE), the Society of Hispanic Professional Engineers (SHPE), the Society of Asian Scientists and Engineers (SASE), the National Society of Black Engineers (NSBE) and ten times Outstanding Chapter Awardee, the American Chemical Society-Wright College Chapter. Doris promotes collaboration between K-12 schools, other community colleges, 4-year institutions, non-profit organizations, and industries. Doris' current research is to design and implement practices that develop Community of Practice (CoP), Professional Identity, and Self-Efficacy to increase diversity in Engineering and Computer Science and to streamline transfer from community colleges to 4-year institutions.

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I. INTRODUCTION

Reverse Transfer students are students that initially attend a four-year institution, and without the attainment of a degree, transfer to a community college. Approximately 20% of students that start at four-year institutions reverse transfer within the first six years [1,2,3]. Despite their growing numbers, this population has often been neglected in prior educational research. The continuous population growth in reverse transfer students has influenced many states to pass legislative laws to ease transitions and encourage students to complete their degrees. Seven states, including Texas, Colorado, Florida, Oregon, Maryland, Michigan, and Missouri have implemented legislation creating reverse transfer programs and pathways to aid in successful post-secondary degree completion [3]. Many factors influence students to reverse transfer, including the cost of college. Recent studies report a staggering 76% increase in student loan debt since the class of 2000, surpassing the inflation rate by 41% [4]. The decision to reverse transfer is also influenced by the challenges of social integration; a concept illuminated by Schlossberg's Transition Theory. The theory identifies six facets of transition: independence, challenges, awareness, relationships, support, and belonging [5]. The transition from high school to a four-year institution in many cases causes culture shock; as students grapple with disparities in social environments and academics [6,7]. Large class sizes and insufficient support from professors, or guidance counselors often result in many students struggling [8]. The lack of a unified campus community discourages students from actively participating in extracurricular activities [8]. When students fail to establish meaningful connections, it impacts their academic performance and diminishes the overall quality of their educational experience.

The sense of belonging and community established at the community college differs significantly from the experience at a four-year institution. In contrast to a larger class size at four-year institutions, community colleges offer smaller class settings that foster intimate and engaging learning atmospheres. Reduced student-teacher ratios enable personalized approaches, tailoring lessons to individual needs, enhancing instructional quality, and facilitating interactive learning experiences [9]. Smaller class sizes contribute to a sense of community among students, fostering a welcoming and comfortable atmosphere that encourages active participation in discussions [10]. This positive and collaborative learning environment promotes both academic achievement and personal growth. Although this reasoning suggests reverse transfer will aid students in returning to 4-year institution and completing a bachelor's degree, transferring to community college does the opposite. Reverse transfer students are less likely to attain a bachelor's degree becoming a concerning problem [11,12,13]. Our research aims to identify factors that hinder bachelor's degree completion among reverse transfer students and provide valuable insights to improve retention and degree completion rates by investigating the initial motivations behind students' decision to attend a four-year institution and subsequently, what

prompts them to reverse transfer. We will also investigate the impact of transferring to community college on reverse transfer students' educational trajectory.

II.METHODS

A. DESIGNING THE INTERVIEW QUESTIONS

Currently, case study interviews serve as the primary method for extracting comprehensive information. We adopted the Appreciative Inquiry Method (AI) for case study interviews [14]. Rooted in a positive framework, the AI method shifts the traditional problem-solving narrative by directing attention toward an organization's existing assets, successes, and positive elements. Encouraging participants to share stories of their positive experiences, AI generates insights that illuminate patterns and themes contributing to an individual's success. Researchers employ AI to foster engagement, collaboration, and positive change, creating a more inclusive and participatory research environment. This method empowers individuals to contribute to a shared vision for the future, promoting a strengths-based perspective. For instance, instead of employing questions that may evoke negative sentiments, such as "What did you not like about your former institution?", our inquiries were phrased in a way that invited positive contributions, such as "What is something you would recommend to the institution you formerly attended to improve on?". By adopting the Appreciative Inquiry Method, we aimed to create an environment conducive to open and affirmative dialogue. This methodology guided the interviews' tone and encouraged participants to reflect on their experiences through a constructive lens.

B. PARTICIPANTS and INTERVIEWS

To ensure methodological rigor and maintain consistency across interviews, we employed a standardized set of questions for all participants. This strategy was intentional to prevent and minimize potential interviewer bias. The uniformity in questioning facilitated a comparative analysis of the gathered data, contributing to the reliability of our findings. Reverse transfer students were chosen from Wright College Engineering Program. The Wright College Engineering Program implements evidence-based practices intentionally to develop belonging through the Holistic and Programmatic Approach [15]. We recruited students from this program due to familiarity and availability. We are expanding our interview participants to reverse transfer students who believe they are only taking general education course and enrolling in community college to "repair their GPA". Comparing the two interview populations and performing longitudinal analysis to identify factors that impact completion.

III.PRELIMINARY RESULTS

The results presented here are preliminary. Six (6) case studies participants of underrepresented communities and are currently enrolled in The Center of Excellence for Engineering and Computer science at Wilbur Wright College. The Engineering Program at Wright does not only provide holistic and programmatic support for students but also a guaranteed transfer to 4-year institutions. The reverse transfer students currently interviewed have attended Wright for less than a year. We understand that our current sample is not an accurate representation but the next sample population to be interviewed will be reverse transfer students with no intentional pathways.

Case study results:

Participant A:

Participant A is a low-income, and first-generation college student. They attended a university renowned for its highly ranked engineering programs. Receiving full funding for their college education noting that “money was the biggest thing” when selecting universities to attend. The student stayed at a four-year institution for two years and shared that during their time there, they “felt miserable.” Coming from a high school with limited financial resources, inconsistent teachers, and a lack of STEM (Science, Technology, Engineering, and Mathematics) programs, they experienced culture shock. The lack of preparation for comprehensive coursework and classroom experience hindered Participant A from succeeding at the four-year institution. Further lack of academic support and community prompted this student to reverse transfer. Transferring to a program that holistically supports Participant A made them feel more socially comfortable and academically supported. “I felt like I was welcomed to the college and to the program” Participant A shares that they would “start at the community college” if they could start over. Participant A is now on track to obtain their associates and transfer back to a four-year institution through guaranteed admission.

Participant B:

Participant B initially attended a four-year university majoring in business for two years before reverse transferring. This student attended a 4-year institution with scholarship, so money as a financial barrier was not a factor for reverse transferring. The original decision to enroll and attend a four-year university stemmed from wanting to explore new environments and create distance from their family. Realizing that their institution was lacking in diversity and felt disconnected: “I really liked the school, but I really feel being the minority there.” In addition, Participant B wanted to switch majors, and their 4-year institution did not have the major. Participant B reversed transfer due to the major offered at Wright College with guaranteed transfer. With the same amount of money, they are paying at their 4-year institution in the wrong major he will be one step towards his goal. Participant B later realizes the community found at Wright College that inspired them more, “I like how we are all trying to be successful, and that really bonds us. Participant B feels a greater sense of belonging and connection amongst peers at community college than at the institution they transferred from. When asked if they could start the initial college process over again. Participant B said, “I would do engineering right here. The Program will here be is the best choice.”

Participant C:

Participant C is a first-generation college student. They attended a prestigious four-year university and received full funding for their college tuition; money is not a factor “Thought it would’ve been a great investment but my experience at the four-year institution felt really cold” Participant C said.: Participant Struggled with academic performance and felt the institution “didn’t support the students that were struggling.” Their reason for transferring to a community College was also major. Participant C first majored in nursing at a four-year institution and later pursued engineering. When asked about the differences of belonging, they stated that they felt like they belonged to both institutions, the four-year institution, and at Wright. Participant C said, “I feel like I belong in both places for different reasons.” Participant C felt a stronger cultural bond with the initial four-year institution primarily due to its shared ethnic representation population. However, at Wright, they experienced greater social acceptance stating, “I also socially belong here. Participant C found academic motivations and common interests amongst their peers. Participant C says they are doing well at community college with a

tough major because of a shared common interest with peers, “wanting to transfer to a four-year institution”. Participant C is on track to obtaining an associate degree and will be transferring to 4-year engineering school. When asked if given the decision to start over, where would they be, Participant C stated, “I would come here and enroll in this program first.”

Participant D:

Participant D is a low-income, first-generation college student who initially attended a prestigious four-year institution. During Participant D’s time at the four-year institution Participant D’s classes were asynchronous. Contrary to the first three interviewees, Participant D felt that the financial cost of tuition was the main factor in reverse transferring but added that their institution lacked student support and did not ensure a strong learning environment. Said “I did not learn anything at my four-year institution and teachers didn't care about me as a student.” Participant D felt unsupported in addition to the high cost of tuition. Participant D reverse transferred to Wright College Engineering Program and now feels supported academically, integrated socially, and is on track to transfer to the four-year institution to obtain their bachelor's degree. Participant D states, “I belonged here because it was in person and I got to know people, teachers, the program, smaller community...Nice to have a smaller group of people and understand the process to get my degree” When asked if they could start over Participant D states “I would start here (i.e. Wright College)”.

Participant E:

Participant E is a low-income, first-generation college student who attended a prestigious four-year university for two semesters. Participant E lived on campus during their time at the 4-year institution that was not fully covered by financial aid but attended classes asynchronously. Regardless of living in campus, they experienced isolation “I didn't really get to see many people outside of my roommates and whoever was on my floor” noting that they “found it difficult to organically meet people.” Participant E’s leading factor in reverse transferring was “the cost of college and fear of “debt piling up.” Upon reverse transferring Participant E felt a shift in environment expressing how community college feels “more welcoming” and fosters a “sense of community”. This student is on track to complete their associate degree and transferring back to a four-year institution to complete their bachelors. When asked if they would start the college decision over again Participant E says, “I would have been at Wright College. I know the career I was going for would've been enough to cover any debts I incur at the transfer university.”

Participant F:

Participant F is a low-income, first-generation college student who initially attended a prestigious four-year institution. The selection of this student’s 4-year institution was because of the “prestige the school” and in part “its engineering program, and how good its academic programs were”. Participant F attended the four-year institution for 2 semesters. When asked if Participant F felt socially included on the four-year institution's campus. Participant F stated, “I did not really interact with a lot of people, but I would say I felt like I belonged there”. Participant F, however, shared how lack of academic support and knowledge of proper resources negatively impacted their ability to feel welcomed at their initial four-year institution. Participant F states, "I feel like I have more access to the professor and more resources for tutoring and I am learning the material more as compared to the four-year institution.” Participant F’s costs outside the price of tuition also adversely affected this student’s ability to afford the cost of living at the 4-year institution Participant F states, “staying in the dormitory is main contributor to my

financial hardships and the lack of social inclusion and affordability at the four-year institution prompted my decision to reverse transfer". When asked if they could start the college decision process over again, they stated, "I would have done the two-year institution first and then transfer to the four-year institution."

In the decision to reverse transfer, four central themes were identified: (a) a sense of self-belonging, (b) decision rationale, (c) organizational involvement, and (d) student support. All six case study participants are currently enrolled at the Engineering Program at Wright. All interviews point to confidence, community connection, and academic support that makes all participants change their perception about college and where they should have started.

IV. DISCUSSION

The significance of cultural representation and community inclusion are crucial factors in fostering a sense of community and belonging, particularly for those of underrepresented backgrounds. Social integration and cultural alignment pose barriers to students' academic success. The concept of "belonging uncertainty", a feeling of not fitting in a social group, and "imposter syndrome", a feeling of anxiousness as a result from doubting one skill, [16,17] underscore the importance of creating a supportive environment. Our preliminary results highlight the correlation between the positive outcomes of an inclusive campus culture and their academic, performance, persistence, and mental health. Despite facing challenges recovering from academic damage already done at the 4-year institutions, participants expressed satisfaction with the benefits offered by a programmatic approach they currently experienced. All participants also benefit from lower cost of education, smaller and more supportive communities, and specific transfer pathways. Academic pathways provided by curricular maps affect students' likelihood of persisting in their studies. [18]. The new experiences have been significant in providing a clear sense of direction and an increase in self-efficacy [19].

V. FUTURE WORK

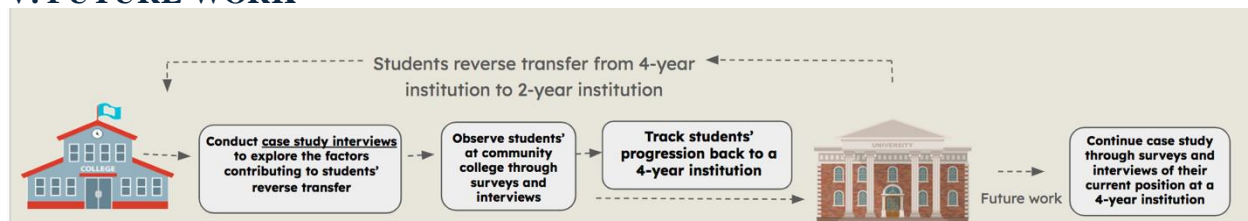


Figure 1: The complete process of our research including future work.

All the interviewed participants are enrolled in an engineering program at Wright College. Picking reverse transfer students that are not in any pathway, and non-engineering students will give us two reverse transfer populations to compare. The next group of interviews will be randomly chosen from reverse transfer students who are not involved in a program but are only taking courses to be able to transfer back to 4-year institutions and complete a degree. The same case study question will be used for consistency. It will be interesting to see if reverse transfer students enrolled in the same college but not involved in a programmatic approach would feel the same way. These two populations should have the same demographics to eliminate the differences in demographics.

To further our research, we will also conduct a comprehensive survey among reverse transfer students in the college to understand their experiences, challenges, and aspirations. The aim is to further explore the identified themes across a larger demographic by advancing towards a larger quantitative investigation [18]. Our plan involves conducting consequential interviews with our participants. We intend to schedule interviews at significant milestones, including upon graduating from community college, their transition to a four-year institution, and upon attaining their bachelor's degree. The longitudinal study will delve deeper into our findings, enabling us to track the educational trajectory of our participants over time. Through longitudinal approach, we seek to uncover patterns, trends, and insights that may not be immediately apparent from a singular interview, by closely following the educational journeys of our participants, we aim to shed light on the complexities and nuances of the reverse transfer process. Contributing to a deeper understanding of this process and informing strategies for improving educational outcomes for all students.

ACKNOWLEDGEMENTS

This work has been supported by Grant No. DUE-1832553 from the National Science Foundation. Any opinions, findings, conclusions, or views expressed in this material are those of the authors and do not necessarily reflect the views of the National Science Foundation. A special acknowledgement to everyone else that assisted in this research including Nick O'Reilly, Kalan Ellis, Cody Castle, and Grant Mason.

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