Transfer has become increasingly complex as higher education and student demographics change. Shifts in the racial and ethnic composition of the transfer student population are important to understand but challenging to measure because race and ethnicity variables are sometimes missing from national datasets. Research that does not allow for the disaggregation of transfer patterns by race/ethnicity, coupled with a dominant view of transfer as being a vertical pattern from a two-year to a four-year institution only, fails to provide a complete picture of transfer pathways that include alternative patterns. Also, because this research on transfer is so focused on vertical transfer, which we refer to as one-to-one transfer, we have a limited understanding of how students who pursue alternative transfer patterns differ from the traditional vertical transfer students.

In this Data Note, we report on research associated with our High-Performing Transfer Partnerships study that emerged from our research on the Credit When It’s Due (CWID) initiative. Using an equity lens to study transfer in today’s changing demographic landscape, we focus on a sample of transfer students from one state who engage in multi-institutional attendance patterns (MIAP) to understand their representation and student characteristics. We begin by presenting definitions from the transfer literature that pertain to MIAP, then we present results from an initial descriptive analysis of students who are represented in MIAP versus students who engage in the more traditional transfer pathway from a community college to a university.

**MULTI-INSTITUTIONAL ATTENDANCE PATTERNS**

As student populations have changed over the past several decades, transfer patterns have also changed, going beyond the vertical and linear-matriculation attendance that was envisioned for students who started at a community college and matriculated to a university.

In fact, non-traditional transfer pathways have been identified for some time despite limited research on how and why students participate, how they may be similar or different, and how they might benefit. For example, nearly three decades ago transfer researchers Townsend and Dever (1999) defined “reverse transfer” to identify students who begin at universities and then transfer to community colleges, and de los Santos and Wright (1990) defined swirlers as students who move back and forth between multiple higher education institutions. Recently, Taylor and Jain (2017) offered additional definitions of transfer to include reverse credit transfer, concurrent enrollment, and dual credit, with each of these patterns depicting emerging forms of transfer.

In this Data Note, we use MIAP as a unifying descriptor to capture transfer patterns other than the traditional vertical transfer from community college to university (Taylor & Jain, 2017). We note that the MIAP group includes a sizeable number

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1 Credit When It’s Due (CWID) is a 16-state network that focuses on reverse credit transfer policy and practice implementation. For more information, see: [http://www.uw.edu/ccri/research/transfer/](http://www.uw.edu/ccri/research/transfer/)
of students who appear to be concurrently enrolled or who are swirling.²

Scholars have identified a high percentage of MIAP students. An important study documenting the evolution of college attendance patterns nationwide was conducted by Adelman (2006) using data from the National Education Longitudinal Study (NELS) NELS:1988/2000. Establishing the presence of MIAPs more than a decade ago, Adelman found 60% of undergraduates attended more than one institution, noting that 12% of students at four-year institutions took classes at a community college and 8% of students swirled back and forth between two- and four-year institutions. Similarly, McCormick’s (2003) analysis of the Baccalaureate & Beyond:92-93 data indicated that over half of students attended more than one institution and 20% attended at least three institutions. The same author also analyzed Beginning Postsecondary Students (BPS) BPS:89/90 data and found nearly half of students who started at a four-year institution attended two or more institutions within five years. Among students who started at a two-year institution, that percentage was 63%. Recent research done by Shapiro, Dundar, Wakhungu, Yuan, and Harrell (2015) indicated that, among students who started at 2- and 7-year institutions in 2008, 45% of students who transferred changed their institution more than once.

Whereas these results document the prevalence of MIAP, scholars have not examined how MIAP students might differ on a number of important characteristics from non-MIAP students. The lack of demographic variables to measure race and ethnicity is one reason for this omission (Meza, Bragg, & Blume, 2018). Even in exemplary studies that include race and ethnicity variables (i.e., Crisp and Nuñez, 2014), the population examined is one-to-one transfer students, leaving researchers and policymakers in the dark about how MIAP students differ. Since many studies of transfer simply do not include race variables or exclude from the data large percentages of MIAP students (i.e., Wyner, Deane, Jenkins, & Fink, 2016), they may be omitting a population of students that is significantly different from the students included in their own analytical samples.

PRELIMINARY STUDY AND RESULTS

In this initial analysis, we analyzed the data by race as well as other demographics to understand if the students who follow MIAP are significantly different from students who follow the one-to-one vertical transfer pattern. We used the CWID dataset and examined data on age, gender, race, Pell grant eligibility, grade point average (GPA), and various enrollment variables.³ We combined all MIAP patterns into one group that includes students who earn credits at two or more sending institutions (community colleges) before transferring to a receiving baccalaureate institution. Then, we used various z-tests to test the null hypothesis of no differences in proportions of students who follow MIAP and students in the one-to-one transfer pathway.

Our final sample included 20,680 students, among whom 47% attended one institution before transferring and who were therefore counted as one-to-one vertical transfer students, and 53% who earned credits at three or more institutions, representing MIAP. Among that group, 33% attended two institutions, 14% attended three, and the remaining 7% attended four or more institutions before transferring the final time to a four-year university. While this sample only includes students who are represented in CWID data and not representative of all transfer students in the state, we were nevertheless interested in the high percentage of MIAP students as well as the large numbers of institutions they attended.

RESULTS

Findings from the z-tests for the sample studied reveal significant differences between the MIAP and one-to-one vertical transfer groups on race, Pell grant eligibility status, and remedial course enrollment. We found African American students to be significantly more likely to fall into the MIAP category (p<.01). Results also indicate that students who receive Pell grants and students who have enrolled in remedial coursework are less likely to follow MIAP (p<.01).

These findings lead us to conclude that more research should be done on the differences between these two groups of students.

² Concurrent enrollment indicates that students enroll and take coursework at a community college and a university simultaneously (McCor- mick, 2003), and swirling describes student movement back and forth between more than two higher education institutions (de los Santos & Sutton, 2012)

³ The state selected in the CWID dataset includes students who were enrolled in one of seven public 4-year institutions and had transferred from one of the 30 public 2-year institutions between Spring 2013 and September 2014, and transferred to any public baccalaureate degree-granting institution in the state’s public college system. Students included in the sample transferred from three types of sending institutions: a.) a public associate degree-granting institution within the state; b.) An in-state independent (private) institution; and c.) an out-of-state institution. Variables included in the analysis are: age, gender, race, Pell grant eligible, degrees earned, GPA, college credits earned in high school, whether the study took remedial courses prior to transfer, whether the student enrolled in remedial courses, and credits earned prior to transfer.
If, as we find in this state, there are significant differences between MIAP and non-MIAP students, the results of large-scale analyses that exclude MIAP students are put into question and warrant further investigation.

**CONCLUSION**

The goal of this preliminary research is to describe MIAPs that are overlooked in the literature and understand how demographics, especially race, relate to MIAP status. By making race visible in our analysis, we seek to contribute to the literature on transfer pathways and racial equity, and break from race-neutral explanations of transfer attendance patterns (Bensimon, 2017). With this goal in mind, our next studies will examine the impact of MIAP on college outcomes for transfer students of color relative to other transfer student groups.

**REFERENCES**


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