Annenberg Institute
BROWN UNIVERSITY

EdWorkingPaper No. 25-1177

Understanding and Meeting the Needs of Part-time Community College Students: A Mixed Methods Analysis of Community College Administrator Perspectives and State-Wide Administrative Data

Trey Miller
University of Texas at Dallas

Holly Kosiewicz
University of Texas at Dallas

Melissa Martinez
Texas State University

Kelley Glover
University of Texas at Dallas

Genna Campain
Stanford University

Rodney Andrews
University of Texas at Dallas

While most community college students enroll part-time, there is little evidence on how to effectively improve college attainment of part-time students. This mixed methods study, situated in Texas, addresses this research gap by developing a more complete understanding of the part-time student population, their challenges and needs, as well as the types of interventions and programs that might support their persistence and completion. The qualitative component collected and analyzed data from interviews with administrators at a representative sample of Texas community colleges to unearth their beliefs and perceptions about why students enroll part time, the barriers that prevent them from enrolling full-time, and the supports they offer to support part-time student success. The quantitative component leveraged student-level administrative data on the universe of newly enrolled students at Texas community colleges in Fall 2017 to characterize the part-time student population and descriptively examine: (a) the extent that a student's prior academic background, demographic characteristics, and credit loads related to academic momentum and completion; (b) transitions between full-time, part-time, and stop out status, and (c) which institutional efforts were predictive of academic momentum and timely college completion. Findings from both components suggest that external factors (e.g. the need to work and / or care for dependents) are the primary reason why students enroll part-time and succeed at lower rates relative to full-time students. Consequently, administrators reported investing heavily in programs that connect students with programs and supports such as basic needs supports, emergency aid, and childcare support to help them navigate external challenges. Quality of instruction, academic momentum, and structural factors (e.g. course access) were featured less in these explanations, despite evidence suggesting that they contribute to part-time student success. Colleges could take further steps to identify strategies that mitigate barriers preventing part-time students from staying engaged and continuously enrolled.

VERSION: April 2025

Suggested citation: Miller, Trey, Holly Kosiewicz, Melissa Martinez, Kelley Glover, Genna Campain, and Rodney Andrews. (2025). Understanding and Meeting the Needs of Part-time Community College Students: A Mixed Methods Analysis of Community College Administrator Perspectives and State-Wide Administrative Data. (EdWorkingPaper: 25 -1177). Retrieved from Annenberg Institute at Brown University: https://doi.org/10.26300/6w7m-2x78

Understanding and Meeting the Needs of Part-time Community College Students: A Mixed Methods Analysis of Community College Administrator Perspectives and State-Wide Administrative Data[1]

Trey Miller (University of Texas at Dallas)*, Holly Kosiewicz (University of Texas at Dallas), Melissa Martinez (Texas State University), Kelley Glover (University of Texas at Austin), Genna Campain (Stanford University), Rodney Andrews (University of Texas at Dallas)

Abstract: While most community college students enroll part-time, there is a relative dearth of evidence on how to effectively improve college attainment specifically for part-time students. This mixed methods study, situated in Texas, addresses this research gap by developing a more complete understanding of the part-time student population, their challenges and needs, as well as the types of interventions and programs that might support their persistence and completion. The qualitative component collected and analyzed data from interviews with administrators at a representative sample of Texas community colleges to unearth their beliefs and perceptions about why students enroll part time, the barriers that prevent them from enrolling full-time, and the supports they offer to support part-time student success. The quantitative component leveraged student-level administrative data on the universe of newly enrolled students at Texas community colleges in Fall 2017 to characterize the part-time student population and descriptively examine: (a) the extent that a student's prior academic background, demographic characteristics, and credit loads relate to academic momentum and completion; (b) transitions between full-time, part-time, and stop out status, and (c) which institutional efforts were predictive of academic momentum and timely college completion. Findings from both components suggest that external factors (e.g. the need to work and / or care for dependents) are the primary reason why students enroll part-time and succeed at lower rates relative to full-time students. Consequently, administrators reported investing heavily in programs that connect students with programs and supports such as basic needs supports, emergency aid, and childcare support to help them navigate external challenges. Quality of instruction, academic momentum, and structural factors (e.g. course access) were featured less in these explanations, despite evidence suggesting that they contribute to part-time student success. Colleges could take further steps to identify strategies that mitigate barriers preventing part-time students from staying engaged and continuously enrolled.

[1] Correspondence should be sent to tmiller@utdallas.edu. The conclusions of this research do not necessarily reflect the opinion or official position of the Texas Higher Education Coordinating Board, Texas Workforce Commission, or state of Texas. We would like to thank Dr. Kristina Flores, former Director of Research at the Texas Association of Community Colleges, and Dr. Kathy Hughes, former Principal Researcher at the American Institutes for Research, and participants at Texas Success Center's Pathways Institute conference in April, 2025 for their invaluable feedback. We also thank Ahana Samat for excellent research assistance. We gratefully acknowledge the generous financial support from the Greater Texas Foundation for this research.

Part-time students constitute most students attending community college in the United States (Green, 2021; National Center for Education Statistics, 2024). However, research shows that they are significantly less likely to complete a college credential than full-time students (Bombardieri et al., 2017). Data from the National Student Clearinghouse (NSC) demonstrate that 20 percent of students who started college in 2017 and enrolled exclusively part-time completed a college credential within six years (NSC, 2023). By comparison, four times as many full-time students achieved the same outcome within the same time frame (80%) (NSC, 2023). This disparity has not narrowed over time (NSC, 2023).

The prevailing strategy to reverse these trends has been to encourage part-time students to enroll full-time or at a minimum increase their credit loads. Support for this strategy is based on work showing that students enrolled in more credit hours build the academic momentum required to complete college (Attewell, Heil, & Reisel, 2012). Wang (2017) conceptualizes academic momentum as two distinct parts: mass - the "quantity" of a student's academic effort, and velocity - the "quality" of a student's progress towards reaching their educational goals (Wang, 2017). We argue that efforts to increase credit load build "mass", however they do very little, if anything, to alter structures, policies, and practices that ensure velocity.

The narrowness of the current strategy has prompted calls for more creative approaches to better support the academic momentum and overall success of part-time students. In a 2022 report, Complete College America argued that "colleges are not currently designed to effectively serve part-time students", and improving the outcomes of part-time students should be a "full-time priority." Others have reached similar conclusions. In 2018, EAB [Education Advisory Board] issued a white paper calling on officials to shift more of their attention to part-time students since their success has a significant impact on achieving equity in completion (EAB, 2018). Finally, Dr. Karen Stout, President and Chief Executive Officer of Achieving the Dream, remarked in a 2017 Civitas report that "colleges must be prepared to have more expansive and nuanced conversations about completion… [and] we cannot and must not take our attention away from [part-time] students" (Civitas Learning, 2017, p. 2).

But exactly how should community colleges be designed to better serve part-time students pursuing a college credential? To break from business as usual practices, it is important to understand how community college administrators interpret the problem of low college completion of part-time students, and engage in action to assist these students as they pursue a college credential. The objective of this paper is to help community colleges identify potential blind spots limiting how they support and educate part-timers, and uncover opportunities to transform the ways they think about bolstering part-time student success. To achieve this goal, we analyzed interview data from administrators at 10 diverse Texas community colleges to explore how they: (a) explain the reasons that students enroll part-time, (b) frame the issue of low completion rates among part-time students, and (c) engage in efforts to improve the success of part-time students. We examined the extent to which these interpretations and prescriptions

were premised on existing empirical evidence, using Wang (2017)'s Holistic Model for Community College Momentum, and our analysis of merged student-level administrative records from the Texas Education Agency (TEA), the Texas Higher Education Coordinating Board (THECB), and the Texas Workforce Commission (TWC).

Overview of Relevant Literature

Who are part-time students? A description of their enrollment patterns, and demographic and academic characteristics

Four out of five community college students enroll part-time at least once during college (EAB, 2018). Their presence is increasingly common, despite recent declines in the overall U.S. community college population (EAB, 2018). While overall enrollment at two-year colleges in the United States declined sharply from 7.5 million in 2009 to 4.7 million in 2021, the decline was less pronounced among part-time students. Their share of total enrollment at two-year colleges increased from 57% to 64% during this period (Digest of Education Statistics, 2022). In Texas, where overall community college enrollment declined by 3.2 percent (from 718,547 in 2015 to 695,702 in 2023), the proportion of part-time students increased from 75.4% to 77.2% during the same period (THECB, 2024). Part-time students have traditionally been overrepresented in two-year colleges; however, their increasing numbers highlight their significance as a student group.

Part-time enrollment is often treated as a fixed characteristic (Attewell et al., 2012), but evidence shows that it is dynamic in nature. Using student-level enrollment data from five community colleges from one state, Crosta (2013) identified over 4,000 unique enrollment patterns across an 18-semester period, revealing that students alternated between full-time, part-time, and non-enrollment. On a broader scale, an analysis of the Beginning Postsecondary Student Longitudinal Survey, which tracks a nationally representative sample of postsecondary students, found that approximately 30 percent of students who started college in 2012 transitioned between full-time and part-time enrollment before their sophomore year (NCES Data Lab, n.d.).

Part-time community college students exhibit demographic and academic characteristics that are distinct compared to full-time students. Part-time students, relative to full-time counterparts, are more likely to be students of color, economically disadvantaged students, and older students (Bombardieri, 2017).[2] Evidence shows that these students are more vulnerable to hardships and stress, factors that hinder their ability to increase enrollment intensity and complete college on time (CCCSE, 2017; Goldrick-Rab, 2010; Halberg et al., 2023; Fong et al., 2017; Green, 2021; Page & Clayton, 2016; Steinhauer & Lovell, 2021).[3]

---

[2] More generally, when compared to full-time students, part-time students are 73% more likely to be financially independent (71% vs. 41%), more than twice as likely to work forty or more hours per week (42% vs. 19%), and 65% more likely to have dependents (38% vs. 23%) (Bombardieri, 2017).

[3] A national survey conducted by Goldrick-Rab (2022) found that part-time students were significantly more likely than full-time students to report that an unexpected $500 expense would make it difficult for them to stay enrolled in college.

In terms of their academic backgrounds and goals, evidence indicates that part-time community college students are disproportionately placed in developmental education (Bohlig et al., 2018; Kisker et al., 2023; Stewart, Lim, & Kim, 2015). Further, several studies show that many part-time students pursue short-term, career-focused certificate programs to acquire skills needed for employment (Donaldson & Townsend, 2007; Goncalves & Trunk). In summary, the literature reveals that most community college students enroll in fewer than 12 credit hours at least once in college, and that they are more diverse than full-time students, but nevertheless their identities often intersect with those of populations linked to lower rates of success in college.

Academic momentum perceived as primary determinant of lower rates of success among part-time students

Since the 2000s, the relevance of academic momentum as a key determinant of the success gap between part-time and full-time students has grown, shifting the focus away from student background characteristics, academic and social engagement, and institutional policies as potential explanations (Attewell & Monaghan, 2016; Calcagno, Crosta, Bailey, & Jenkins, 2007). This growth can be attributed to an increase in scholarship showing that enrolling part-time is negatively correlated with steady progression in college, particularly with achieving intermediate success outcomes like reaching specific credit milestones (e.g., earning 15 or 30 credits), completing a certain percentage of a degree program, or passing gateway courses in writing and mathematics (Attewell & Monaghan, 2016; Attewell et al., 2012; Calcagno, Crosta, Bailey, & Jenkins, 2007). Studies show that reaching these milestones, particularly on time, can translate into higher rates of year-to-year persistence, upward transfer, and college completion (Attewell & Monaghan, 2016; Doyle, 2009; Calcagno, Crosta, Bailey, & Jenkins, 2007; Roska & Calcagno, 2010).

However, earlier research also investigated the relationship between academic and social engagement and success among part-timers. Informed by Tinto's theory of student retention (Tinto, 2000), this work found that in general part-time students are less engaged in college compared to their full-time counterparts (Jacoby, 2005; O'Brien, 2001). More specifically, being enrolled part-time has been associated with lower rates of collaborating with peers, interacting with instructors, and seeking advice from instructors about assignments, course grades, or career plans (CCSSEE, 2005). Participating in these activities in college promotes student learning, retention, gains in academic performance, institutional commitment and completion (Hu & Kuh, 2003; Kember, Lee, & Li, 2001; Tinto, 2005).

A separate yet small number of studies has examined how structural factors shape the success of part-time students. Most of these studies center on policies governing the distribution and the allocation of student financial aid. Researchers find that part-time students are significantly less likely to be eligible for college aid, and receive smaller amounts of aid relative to full-time students (Lapovsky, 2008; Murdock, 1990). Compounding this problem is that the amount of aid that part-time students receive is often not enough to offset direct and indirect costs of pursuing a postsecondary education (Protopsaltis and Parrott, 2017; Murdock, 1990; Palacios, Goldvale, & Tatum, 2020). Past research indicates that students who cannot afford the

cost of college are less likely to persist and graduate (Dynarski, 2003; Long & Riley, 2007). An even smaller research base has investigated how the architecture of community college influences the experiences of part-time students. This scholarship reveals that part-time students sometimes face challenges in accessing required courses and support services at convenient times (McDonnell, Soricone, & Sheen, 2014). Taking advantage of critical student supports, such as advising, child care support, and financial aid, positively relates with short- and long-term educational outcomes in college (Denning, Marx, & Turner, 2019; Kappner, 2002; Tinto, 2004). Further, because these supports may not be integrated into the structures of degree programs, part-time students, who spend less time on campus, may be less aware of these resources or may be left out of specific student programming, like orientation (Rustchow & Schneider, 2011; Weiss et al., 2019).

Research on efforts to improve the success of part-time students

Few studies have examined the effectiveness of strategies to improve the education outcomes of part-time students. The primary exception is research investigating the academic impacts of programs designed to increase a student's enrollment intensity (Attewell et al., 2012; Attewell & Monaghan, 2016; CCCSE, 2017; McKinney et al., 2019). Descriptive research finds that students who participate in programs to increase enrollment intensity, such as the "15 to Finish" campaign, persist at higher rates and perform better academically (CCA, 2024).[4] Other efforts aiming to increase a student's credit load have made benefits contingent on enrolling full-time. These efforts include financial aid programs like the TEXAS Grant program; California's Student Success Completion Grant; Indiana's Next Generation Hoosier's Educator Scholarship; as well as the Accelerated Study in Associate Program (ASAP), which offers community college students a unique set of financial, academic and personal support.

In contrast to this limited evidence base, a more substantial body of research has examined general student success strategies within the community college context (Bailey et al., 2015; Goldrick-Rab, 2010; Jenkins et al., 2021; Weiss et al., 2019). This research reveals that successful strategies address a broad array of student academic and nonacademic challenges through a network of support that continue through a student's academic career (Bailey et al., 2016; Cotner et al., 2021; Karp et al., 2021; Wang, 2017; Weiss et al. 2019).

In summary, existing research shows that part-time students represent a significant and growing portion of community college populations. While these students have diverse needs and goals, they also face various constraints. However, the strategies promoted to support their success have largely focused on increasing their credit loads. This study explored how community college administrators interpret the issue of low completion rates among part-time students and assessed how these perspectives shape the ways their institutions educate, support, and engage these students. We contrasted these perspectives against current evidence to

[4] The "15 to Finish" initiative, originally launched at the University of Hawaii, became a national campaign through the nonprofit organization Complete College America, with hundreds of institutions joining the effort.

determine where community college administrators could accommodate new evidence to better support this student population.

Theoretical Framework

We apply Wang's (2017) framework, which synthesizes research on factors that support engagement and progress among community college students, to assess the credibility of administrator perspectives of part-time students.

Three domains define the core of Wang's (2017) framework. Each one is characterized as a major design element that is conducive to keep students on a steady pathway towards completion. The *curricular domain* relates to the structural coherence of program course sequences, as well as enrollment intensity and continuity. The *teaching and learning domain* of academic momentum concerns instructional strategies and student learning, and is divided into two components: cognitive momentum and metacognitive momentum. Cognitive momentum is defined as a student's cumulative progress toward learning and mastering specific subject matter, and metacognitive momentum as a student's ability to assess, monitor, and regulate their own learning. Finally, *the motivational domain* of momentum addresses the psychological dimensions of college-going, and has four major components: aspirational momentum, growth mindset, perseverance, and agentic momentum. Aspirational momentum refers to the student's commitment and dedication in the pursuit of reaching their educational goals. Growth mindset relates to a student's belief that academic performance is conditional on effort and learning. Perseverance is defined as a student's ability to push themselves to overcome obstacles that derail success. Finally, agentic momentum relates to a student's resourcefulness in successfully navigating the college environment to reach their educational goals. Research studies collectively show that community colleges successful at driving improvements in college completion are those that design highly structured, predictable and comprehensible course sequences (Belfield et al., 2016); employ student-centered pedagogical approaches that intentionally attend to the student's competencies, situate learning in realistic contexts, and foster active learning (Karp et al., 2015); and support students psychosocial characteristics (e.g., self-regulated learning, motivation) (Fong, et. al, 2017).

Central to Wang's (2017) theoretical framework is the conception that individual and environmental forces can mediate the strength and the direction of momentum in each of these three domains. Student-based assets, like pre-college academic preparedness and positive psycho-social characteristics (e.g., grit, perseverance), are described as examples of *carry-over momentum,* which can propel students forward in their college trajectory, and help them overcome challenges presented by their college environments (EAB Global, 2018; Greene et al., 2008; Halberg, et al., 2023). Structural barriers, like inadequate advising or difficulty accessing student financial aid, are characterized as examples of *counter momentum friction* that can set students back from accomplishing their stated goals (Belfield, 2016; CCCSE, 2018; Ma & Baum,

2016). Finally, *unplanned personal challenges* like job-loss or the unexpected need to care for an ailing family member are factors external to the community college that can also significantly weaken the momentum needed to drive success for community college students (Fong et al., 2016; Goldrick-Rob et al., 2021; Goncalves & Trunk, 2014). In sum, Wang's (2017) framework offers administrators a clear orientation around the consequential factors, structures, and conditions that may influence a student's academic momentum in community college.

Methodology

To achieve the study's aims, we used a mixed methods approach. We conducted a qualitative study to gather interview data on how community college administrators frame the reasons why students enroll part-time and complete college at lower rates than full-time students, and identify how the administrators attempt to remedy this disparity. We also conducted a descriptive quantitative study, leveraging student-level administrative records, to predict the relative influence of student-level factors (e.g., demographics, previous academic background) and institution efforts (e.g., developmental education, eight-week courses) on the academic momentum of part-time students.

Texas Community College System

The setting of this study is Texas, a state with one of the largest community college systems in the U.S. This system operates within a highly decentralized governance structure and consists of over 50 two-year community college districts located across various regions of the state. These districts differ in the levels of federal, state, and local funding they receive and offer a wide range of programs that prepare students for both immediate employment and transfer to four-year institutions. This system serves a wide array of students who differ by race, ethnicity, sex, and income but also by academic and work experiences, life circumstances, and college goals. According to Texas Higher Education Coordinating Board data, roughly 77 percent of students who attended a community college in the 2023 fiscal year were part-time (Texas Higher Education Accountability System, n.d.). These characteristics make Texas public community colleges an information-rich case for exploring how administrators frame the college completion problem for part-time students, how they approach fixing it, and whether these perspectives are grounded in evidence.

Qualitative Study

Qualitative Data

We purposefully sampled 10 Texas community colleges reflecting diverse institutional characteristics present in the state. Using 2022 data from the Integrated Postsecondary Education Data System, we selected an initial set of 29 community colleges whose student populations varied in the proportion of students who were part-time, identified of color, and who received a

Pell grant. From those, we chose community colleges that differed by the size of their student population, their level of urbanicity (i.e., urban, suburban, town, and rural), and their location in the state. Table 1 shows the summary characteristics of selected community colleges participating in the study. Across these colleges, we interviewed 39 administrators involved in designing or implementing strategies used to support student success. The administrators who participated in the study included Deans, Directors, Vice Presidents, and Coordinators of Academic Programs and Student Support Services at both the campus and district levels. We conducted 11 interviews, each lasting approximately 60 minutes. These focus group interviews, which included two to six administrators per group, were held virtually and audio recorded for transcription between October 2021 and March 2022.

(Insert Table 1 here)

Qualitative Analysis

To examine interview transcript data, we used a hybrid analytic approach, drawing on inductive and deductive methods (Saldaña, 2013). Using *Taguette*, an open-source qualitative research analysis tool (Rampin et al., 2021), three of the four authors analyzed administrator transcripts by first developing descriptive, in vivo and process codes, without referencing existing literature. As a group, we then collectively reviewed these codes to reach consensus on their meaning. Through this process, we developed a codebook, which we then used to re-examine the data to develop insights to meet our research aims. These codes helped us to identify the common and distinct viewpoints shaping how community college administrators understood why students chose to enroll part-time and why they succeeded at lower rates relative to their full-time counterparts. We also connected codes to identify the main and unique ways in which sampled community colleges endeavored to support the success of part-time students.

We then used Wang's framework to analyze how community college administrators' perspectives and strategies align with current evidence on the challenges faced by part-time students and the supports that are necessary for their success. More specifically, we examined the emphasis administrators placed on the factors identified by researchers as influencing part-time student enrollment and success, and whether student success initiatives addressed the curricular, teaching and learning, and motivational dimensions of academic momentum (Wang, 2017).

Quantitative Study

Quantitative Data

We utilized individual-level data on the universe of 205,644 newly enrolled students (N = 205644) in Texas community colleges in Fall 2017. This sample includes students with no prior enrollment in college (FTIC students), and students who were not enrolled in college during the 2016-17 academic year (non-FTIC students). We included these non-FTIC students because many students who enroll part-time have had some college experience and may be returning to

complete a credential while working or parenting. These data, which come from administrative records collected by the Texas Education Agency, the Texas Higher Education Coordinating Board, and Texas Workforce Commission, include student demographic information, K-12 standardized and college readiness exam scores, postsecondary matriculation and transcript records. These data allowed us to create a profile for part-time students, and track their trajectories and performance in college, considering the characteristics of their instructors, their participation in various educational interventions, their prior academic background, and their involvement in the labor market.

Definitions

Part-time status. We broadly classify part-time students as students enrolled in fewer than 12 hours in the fall or spring semester or fewer than 6 hours in the summer semester. Within that classification, we grouped part-time students into two categories. Students in the *low-enrollment intensity* category were part-time students enrolled in fewer than 6 hours of coursework; and students in the *high-enrollment intensity* category were part-time students enrolled in between 6 and 12 hours of coursework.

Initial enrollment intensity. We defined initial enrollment intensity as the number of credit hours the semester after they matriculated in their first semester of college.

Academic momentum. We classified students who enrolled in the same number of credit hours in their second semester or increased their credit load in their second semester as having momentum. Conversely, students who decreased their number of enrolled credit hours in the second semester did not have momentum.

Quantitative Analysis

Our quantitative analysis was descriptive and constituted four main components. The first component developed an academic, enrollment, and demographic profile of full-time relative to part-time students in our sample. The second component investigated the relative influence of a student's demographic and academic characteristics on the likelihood that a student fell into one of two part-time enrollment categories (i.e., low-enrollment intensity vs. high-enrollment intensity), and on whether students in either group were able to achieve academic momentum. We compared results from both analyses against the frames used by community college administrators to characterize part-time students and explain their completion rates compared to full-time students. The third component examined the relative influence of various factors under the control of the community college in speeding up or slowing down the academic momentum of community college students. These factors included educational interventions (e.g., developmental education, dual credit education, 8-week courses), mode of delivery (e.g., face-to-face, online, hybrid), and assignment to same-race instructor.

Results

Reasons Explaining Why Students Enroll Part-time in Community College

The dominant frame that administrators constructed to explain why community college students enrolled part-time overwhelmingly attributed enrollment decisions to forces outside of their control. The choice to go part-time was driven by factors such as employment, care-giving, lack of financial resources, unanticipated hardships, and "life circumstances". It was rare that administrators cited their own policies or services as reasons why students did not matriculate in larger course loads, but a few were mentioned. One administrator from Community College 4 stated that the limited availability of course offerings and sections matching students' delivery preferences (e.g., hybrid, online) played a role in reducing course loads for students with an interest in full-time status. Another administrator from Community College 5 stated that some certificate programs were intentionally structured to be part-time to accommodate student work schedules. In these programs, students had no choice but to enroll part-time.

> They have so much going on. Students now, I think their lives are so much more complex than they were when I was a student, and often they're parents...full time employees, or sometimes they have multiple jobs. They're taking care of their own parents perhaps. There's so many things that they have going on in their life that they just don't have time to be a full time student on top of everything else. (College 2 administrator)

Within this understanding was the larger idea that public officials failed to develop policies that effectively offset the opportunity costs of attending college full time.[5] Administrators from more than half of sampled colleges expressed the viewpoint that access to federal and state student financial aid did not cover the direct and indirect costs of attending college (e.g., tuition and fees, lost wages, child care expenses) for students juggling multiple responsibilities.[6] "They're not eligible for all the scholarships, if they're not full time." One administrator from Community College 1 elaborated:

> They've got family, they've got ongoing jobs. Even with financial aid it's not enough to fully support our students now, and part of that is the conundrum that we're a low tuition college, and so students actually don't get as much financial aid as if we were a high tuition college, although this has been going on for many years.

---

[5] A very small number of administrators also amplified other structural barriers, but their resonance varied by the location of the campus. For instance, while some administrators working in remote community colleges elevated poor rural transportation and technological infrastructure as significant impediments, administrators working in urban community colleges mentioned rising costs of living and unaffordable child care as factors interfering with student enrollment decisions.

[6] We note that one administrator from College 4 asserted that financial resources did not contribute to decisions to enroll part-time because "96 percent of our student population is eligible for financial aid." However, they were an outlier in our study.

Enrolling part-time was also associated with testing the viability of college. As one administrator from College 1 put it, "They're not quite sure they fit. They're not quite sure they can do it." An administrator from College 9 echoed this interpretation, saying that some students preferred to "eas[e] their way back into higher [education]. 'So let me try one class. Let me try a few classes and see where I end up'." In these instances, the decision to enroll part-time was cast as a personal choice motivated more by fear, intimidation, or a lack of confidence and less by economic or social constraints. Nevertheless, these interpretations again treated student enrollment decisions as situations in which community colleges had little if no sway.

Connecting a student's decision to enroll part-time with their other defining characteristics was common among most administrators. Administrators frequently made observations that part-time students were also first-generation students, low-income students, or "non-traditional" students. These connections relayed the perception that part-time students were a disadvantaged group akin to students who had been traditionally underserved by government institutions and policies.

The factors administrators interpreted to be meaningful for part-time enrollment were consistent with our descriptive quantitative analysis. Table 2 shows the percent of students who enrolled full-time, part-time at a higher level of credit intensity (enrolled in 8-11 credit hours) or part-time at a lower level of credit intensity (less than 8 credit hours) in fall of 2017. These data were disaggregated by various student demographic and academic characteristics (e.g., race, academically disadvantaged). These data show that 62 percent of the 2017 cohort enrolled part time; of these students almost two thirds enrolled in fewer than eight hours. This suggests that most students who enrolled part-time in Texas are more than one course away from achieving full-time status.

Of these three focal groups, full-time students were the most likely to be FTIC, White, male, and seeking a degree or upward transfer. In contrast, part-time high credit students were more likely to be Hispanic and recognized by the THECB as economically and academically disadvantaged. Part-time-low credit students were the most likely to be non-FTIC, Black, and female relative to part-time high and full time students. We observed no distinct differences across other characteristics between these three groups. Taken together, these results conform with past findings documenting high rates of part-time enrollment at community colleges, and that part-time students are significantly more likely than full-time students to come from traditionally disadvantaged backgrounds.

(Insert Table 2 here)

Reasons Explaining the Completion Gap Between Part-time and Full-time Students

Administrators from all sampled colleges also understood disparities in collegiate success between full-time and part-time students to stem primarily from "the same reasons [that they attend part-time]." External factors were believed to hinder forward progress in several ways. One way was by constraining the mental bandwidth part-time students needed to invest in academic success. Several administrators noted that some part-time students could not " concentrate one hundred percent on their coursework", "don't select the right courses," or more broadly "haven't figured out how to juggle those priorities or time necessarily in order to be successful at all of the things that are a priority in their life". Another way was directly influencing a student's decision to stop or drop out entirely from college. When work hours changed and conflicted with class schedules, one administrator noted that part-time students would often stop attending college. "You know they are working or have kids, and something happens. And you know, if their work schedule changes and it interferes with their job, then they have to stop." Additionally, an administrator from College 10, located in a rural area of the state, noted that limited access to technology and transportation impeded part-time students' ability to stay enrolled in college.

Unclear college goals, the length of time required to complete a credential, a sense of not belonging, and placement into developmental education appeared to magnify the costs of a college credential, particularly for those who viewed postsecondary education as optional. One administrator from Community College 5 put it this way:

> A lot of times we'll hear them say that this is an option for them. Work is not an option, taking care of their families, not an option, but school was an option for them. So that's one of the first things that tends to go, because that's where their extra money goes. Their extra time goes, and when something's got to give it is education.

In light of the administrators' emphasis on external factors as disruptors of academic momentum, we investigated the relationship between academic momentum and student success in our quantitative sample. Table 3 shows the probability of student success–that a student completes a credential or upward transfer within three years–based on whether they exhibited momentum in the second semester, their initial enrollment intensity, and FTIC status .[7] The "Initial" column contains the initial probability of completion within three years for students enrolled at each intensity. The "All" row and column have the probability for all students without disaggregation by initial enrollment intensity or FTIC status.

The findings underscore the notion that ensuring that external factors, whether anticipated or unforeseen, do not disrupt enrollment is crucial for successfully completing college. Consistent

[7] The "initial" column contains the initial probability of completion within three years for students enrolled at each intensity. The "all" row and column have the probability for all students without disaggregation by initial enrollment intensity or FTIC status.

with past research, we found that initial enrollment intensity and momentum were strongly related to student success outcomes for all students. Students enrolled at a higher intensity in the first semester were more likely to complete and transfer upward than those enrolled in fewer credit hours (40% probability for full time enrollment, 28% for part time high enrollment and 19% for part time low enrollment). However, among students enrolled at any intensity, those who demonstrated momentum were significantly more likely to complete and transfer upward within three academic years. For example, among Non-FTIC, Part Time High students, 56% of those who had momentum completed a credential or transferred upward within three years; whereas only 16% of those who did not have momentum did so.

(Insert Table 3 here)

While administrators from all colleges identified external issues as the primary factor preventing part-time students from completing college, administrators from less than half of sampled colleges pointed out institutional factors as barriers. Administrators from College 3 and 4 mentioned the limited availability of courses or sections that fit students' non-school schedules was one factor. They noted that some required courses were offered exclusively in the fall, while others only in the spring. Additionally, certain courses were not offered in the evenings, which made it challenging for part-time students to attend class after work. College 3 administrator briefly highlighted the accessibility of student support, pointing out that "services might not be open" so part-time students "don't get the advantage of interacting with advisors as much as they need to perhaps."

On top of issues with course and support service accessibility, administrators from two colleges pointed to larger structural problems impacting part-time students, but also their full-time counterparts. These included confusing degree pathways and "cafeteria-style" programs that gave students significant freedom in choosing their courses. College 1 administrators cited an Associate's Degree in General Studies as a credential without "a clear, coherent pathway of study in a particular field," which made it difficult for students to maintain interest and make progress toward their degree: "It's harder to be compelled to keep moving forward if you haven't found something that keeps you, that captures your interest." These administrators reported that they were actively working to reassign these students to other programs with defined course sequences and clearer connections with their academic and career goals.

Unexpectedly, the quality of instruction and student support did not feature in administrators' frameworks for understanding why part-time students underperformed relative to full-time students.

How Community Colleges Support Part-Time Student Success

Student Success Initiatives Do Not Focus on Part-Time Students

Administrators reported that most student success initiatives did not consider the credit status of the student. Two main reasons explained this generalized student success approach. First, administrators from half of sampled colleges indicated that most of their students were part-time, and for that reason, were not an explicit focus. A College 5 administrator said: "No, we haven't done that since so many of our students are part time, you're basically talking about our overall approach, anyway." Second, administrators from all colleges relayed that all students, regardless of their credit status, should have equal access to opportunities that could improve their success. For instance, a College 9 administrator stated "we don't differentiate the students between full-time and part-time, we treat everybody the same." Similarly, a College 4 administrator shared "we don't have anything that is specifically targeted for part-time. But …we consider the needs of all of our students." "All of the resources that we provide, anything that we provide for a full-time student, we provide for a part-time student" said a College 6 administrator. This lack of focus had downstream effects on the strategies colleges implemented to support part-time students but also the data they collected on this population. In fact, no college explicitly mentioned disaggregating data to better understand the characteristics and outcomes of part-time students. Consequently, administrators did not know the extent that their student success initiative improved part-time student success, either in the short-time or long-term.

Efforts to Support Curricular Momentum

Administrators outlined several strategies to increase the curricular momentum of their students. These strategies included improving advising practices, removing institutional barriers, increasing course loads, and expanding course offerings.

Holistic Advising. Administrators from four colleges mentioned holistic advising efforts to keep students enrolled, engaged, and on track to completion. These efforts shifted the way in which community colleges approached advising, from one that is transactional and ad-hoc to one that is structured, routine, engaged, and connects students with a wide range of academic and non-academic services. For example, at College 2, administrators referenced "building relationships with students," assigning students a primary advisor at enrollment, and expanding the options for how and when students could meet with support staff. At College 8, advisors intentionally connected students with community partners to address needs that fell outside the services that the college could provide. Finally, at College 1, holistic advising included compensating adjunct faculty to serve as academic advisors as part of their responsibilities.

Administrators from all but three colleges emphasized the importance of early alert systems in strengthening and enhancing the connections between faculty and students. Early alert systems, online communication tools, are a common component of holistic advising reform, and are used to make colleges more responsive to student needs.

> We recognize the faculty are our number one connection with students. And so we do that through our retention, alert system. And so the faculty provide information back to the institution about what's going on with the student. (Administrator, College 2)

Early alert systems relayed real-time information about student engagement and performance, which helped colleges address problems before they became more severe. “If [students are] not attending, if they have missing assignments," or “ did not perform well on the first exam”, faculty could send an alert to an advisor through the system to help the college identify and address the issues the student was facing.

Removing institutional barriers. Some colleges reported engaging in efforts to dismantle barriers that often derail students from completing their education. These efforts included developing clear structured degree programs, offering predictable course schedules through block scheduling, and replacing developmental education with the co-requisite education model.[8] Administrators from three colleges highlighted the use of “program mapping” and “visual representations” of degree pathways to guide students in selecting the courses required to complete their program requirements. Additionally, one college specifically mentioned their ongoing participation in the Texas Pathways initiative to improve student progress.

> I think we've come a long way from when we started to where we are now, we have reduced the number of credit hours that a student needs to graduate with their associate degree. So, we are still working diligently with the guided pathways [initiative] to ensure that we have clear pathways for our students.

College 8 administrators emphasized block scheduling to minimize uncertainty about when courses required for programs would be offered. In reference to their automotive technology certificate program, an administrator said, “You have a fall block, and you have a spring block. Once you complete both blocks, you’re done with that certificate.” Another college reported implementing the co-requisite education model to accelerate the speed at which students could access gateway courses.

Increasing credit loads. Although administrators at most colleges stated that there was no college-wide policy encouraging students to increase their course loads, some voiced strong opposition to the idea. Administrators generally felt that such a policy was flawed because it failed to “recognize the individual lives of the students” and could jeopardize crucial relationships that support student success. A College 10 administrator said, “How are they going to trust us and want to connect with us if we're telling them you have to be full time?”

Nevertheless, administrators from Colleges 7 and 10 acknowledged the importance of enrollment intensity in “helping students to… graduate faster and potentially save some money.”

---

[8] All community colleges participating in our study were involved in the Texas Pathways Initiative, a Texas-based effort to define clear academic pathways for students enrolled in public two-year institutions.

Each college had implemented initiatives designed to encourage full-time course loads. College 7 launched the "15 to Finish" campaign, which allowed students to attend summer school for free if they enrolled full-time during the fall and spring semesters. College 10 launched a similar program, offering free tuition and fees to students who enrolled in 15 credit hours, as long as they applied for scholarships, received financial aid, and planned to graduate from the college.

Expanding course delivery options. Administrators from all colleges discussed offering varied course options to encourage continuous enrollment and engagement. This effort included shortening traditional 16-week courses, offering courses in various delivery modes (e.g., in-person, hybrid, online), and at different times of day and on weekends, and offering opportunities to attend in-person courses virtually if they are unable to be there physically.

College 2 highlighted their plans to turn an entire campus to exclusively offering 8-week courses in an effort to retain students and accelerate their progress. By taking "either an extra class or become full time, right? Because they could take 2 classes in the first 8, 2 in the second 8, and lo and behold, they've taken 12 hours.…they can focus more, not navigating three or four courses." According to the administrator, successfully completing an eight week course would signal to the student that " I can do college. I succeeded. I got a passing grade. I can keep going." Across these colleges, administrators shared an overall understanding that offering courses in a variety of formats and modalities could change the calculus for students deciding whether to continue and persist in college.

Efforts to Support Teaching and Learning Momentum

While administrators mentioned a kaleidoscope of efforts to enhance the curricular momentum of students, they offered fewer mentions of how they supported the cognitive and metacognitive development of part-time students. In fact, only a few colleges explicitly referenced efforts to improve the quality of in-person teaching.

Offering supplemental instructional support. The primary strategy mentioned by community colleges for helping students master course material and regulate their learning was by offering opportunities for tutoring, supplemental instruction, and other forms of instructional support outside the classroom. Administrators from all colleges reported expanding the hours and days tutoring was available and introducing online tutoring opportunities particularly in response to the pandemic. Some colleges continued to offer expanded instructional services, intentionally "thinking of our students who are parents, who are working." For example, College 10 specifically made the online tutoring program Tutor Me "available in every Blackboard course and every course is required to have a Blackboard presence, whether they're face to face, hybrid or fully online." At College 5, administrators emphasized the use of both in-person and online supplemental instructors, particularly in introductory and gateway courses, to support

student learning and retention. Finally, at College 4, administrators mentioned offering multiple workshops to help students improve their time management and test-taking skills. These efforts, which were wide in scale, did not seek to alter traditional teacher-centered pedagogy.

Improving teaching quality. Efforts to systematically reform traditional teaching practices in the classroom to make them more student-centered were rarely mentioned by participating colleges. However, College 4 and 7 administrators discussed the recent establishment of centers on their campuses that have the explicit goal of enhancing teaching and learning across all classes. Descriptions of both centers emphasized designing courses to create inclusive classroom environments, scaling evidence-based instructional practices, and providing opportunities for faculty collaboration to support student learning. Through the center at College 7, "a faculty member in biology can get to go with a faculty member in psychology and bridge that gap for our students in terms of their learning.. College 4 reported offering workshops to train faculty on "how to engage the students more," and on "universal design…being able to develop or design our courses…so that they are accessible for all students you know. Why should we wait for students to say or to get a letter from, you know, um student services saying a student needs special accommodations. So we want to be able to create courses or build our courses that are all inclusive."

While these centers aimed to drive systemic change in teaching and learning across their campuses, other colleges reported implementing individual initiatives that targeted specific aspects of teaching. For example, College 1 administrators mentioned taking part in an initiative aimed at raising awareness of how race and ethnicity shape student outcomes. Through this initiative, faculty of courses with high withdrawal rates used institutional data to start conversations

> …around understanding what it means to establish a welcoming classroom environment, what it means to have a syllabus that is welcoming rather than off putting, really looking at language, and how you behave in the first week of the semester.

College 3, which serves a large immigrant student population, invested in implementing a program designed to promote culturally relevant teaching practices. While College 1 and College 3 focused on improving teaching quality by making instruction more responsive to students's demographic backgrounds, administrators from College 5 noted how they used instructional designers to "help design courses [in] online, face to face, and hybrid formats." This effort emphasized optimizing instruction for different modes of delivery rather than modifying it to meet the needs of a specific student demographic.

Efforts to Support Motivational Momentum

To motivate students to remain engaged and persevere in college, administrators emphasized their efforts to foster an environment where students felt recognized as valued

members of the campus community. Across all colleges, administrators mentioned terms such as "inclusivity", "sense of belonging", and "culture of care" to communicate the important role connectedness and support play in student persistence and retention. An administrator from College 5 relayed how their campus approaches building inclusivity on their campus.

Administrators relayed several strategies to satisfy students' fundamental need for connection and belonging. One strategy included dedicating campus offices or areas where students could learn more about the campus and gather and build relationships with their peers. College 3 recently invested in constructing new buildings on its campuses to house critical student support services. Administrators reported that "the new buildings have what they call sticky spaces, which are spaces designed for students to stick around…Some of them have technology in them as well, charging stations. Just a place where they want, they can stick around and they can interact with each other." With a similar goal, College 7 created a Welcome Center designed to help all incoming students familiarize themselves with their new college environment. Designed as a "cafe-style" space, it featured "multiple places to plug in your devices," "comfortable seating," and "tons of tables." As the first point of entry for new students, the Welcome Center fostered an environment where social connections could form and students' need for support could be met.

Another strategy involved creating campus programs that encouraged students to explore their interests, familiarize themselves with campus resources, and engage in various campus events. College 3, in particular, introduced the "Passport" program, an innovative initiative designed to encourage student participation in campus events and activities. Through the program, students "get points for going to [eligible] college events… and they get a medal for commencement" if they acquired a certain number of points. College 3 administrators reported disseminating a list of programs and events qualifying for points as a means to increase awareness of opportunities and resources available on campus.

Finally, administrators discussed using technology, specifically call and text messaging campaigns, and social media, to strengthen connections between faculty, staff, and part-time students, and impart important information to students. These technologies have opened new avenues for reaching non-traditional students, such as part-time students, who may not attend classes on campus or have responsibilities outside school.

> We do have all different ways that we try to reach out to all of our different student types, and I will say that you know, for those who are more part time, or who are working, we do seem to get a good response (College 5 administrator).

Tools such as hashtags, in particular, were mentioned as helping colleges to build campus community and following, and make resources and supports more visible to students. For example, an administrator from College 10 noted staff using Instagram hashtags to link students with campus content, and more specifically to help students register for classes. Moreover, the ubiquitous use of Instagram, X, among others has made these social media platforms important

spaces for “engaging and interacting with students” and treating these spaces as “a big place to capture students.” Foregrounding social media messages in a “culture of caring” such that every message “articulate[s] that we care for them,” was particularly consequential for administrators from College 10.

Efforts to directly address counter momentum friction

All colleges reported investing heavily in efforts to directly address the basic needs of their students. These efforts were a response to an awareness that students did not have “everything that [they] need to live a reasonable, straightforward life.” These efforts explicitly addressed external challenges students faced, including unreliable transportation, housing instability, food and financial insecurity, as well as poor mental and physical health. Several administrators also referenced connecting students with external supports (e.g., community health clinic), and providing students vouchers to offset the costs of vaccinations, childcare, and transportation.

> We have a number of initiatives that are meant to address basic or essential needs. Because again our students, you know, don't have a place to live, don't have food, transportation, medical care, mental health, wellness….My area is involved in helping students with transportation, with child care, paying for additional costs of textbooks, access to food, access to housing. (College 1).

The efforts were often discussed within the larger goal of creating more inclusive campus environments. For example, administrators at College 3 noted that efforts were underway to establish a student-parent resource center that would offer student parents access to free childcare, academic support, and time to attend classes. College 7 administrators noted that inclusivity was “something that [their] institution drives home very clearly”, and hosted a series of family a related events “where the spouses, the daughters, the uncles, whoever were invited to the college to get to experience”. Administrators from Colleges 3 and 9 shared that making their campuses more inclusive increased both inter-generational awareness of college and interest in attending.

> You know a two-generation approach so that's something on the horizon…But we’re always thinking. You know, student parents are part-time. Student parents need that support. Their children will be at a college campus, so we'll be inspirational, you know. It'll be inspirational for them. But with a place to bring everything together, we're hoping that we are going to connect the dots for them and be more supportive.

Quantitative evidence supporting the role for policies and practices to support curricular momentum and mitigate counter momentum friction

Tables 4 and 5 show the probability of a student achieving one of two outcomes (momentum in Table 4 and attainment of a credential or upward transfer in Table 5) based on their initial enrollment intensity and other malleable factors (e.g., 8 week courses). For each row, the table reports the share of students who achieved the corresponding outcome or not by whether they were identified as having the associated malleable factor or not (Yes column vs. the No column), by initial enrollment intensity. For example, in Table 4, 48% of full-time students who enrolled in an eight week course in their first term had momentum, compared to 62% of full-time students who did not enroll in an eight week course. Given the large sample size, nearly every difference in mean outcomes reported in Table 3 was statistically significant at conventional levels. Nevertheless, we report the standard error for the mean difference in parenthesis below each pair.

Several factors exhibited a consistent relationship with momentum and student success for both part- and full-time students. Having enrolled in a dual credit course while in high school was positively related to both momentum and student success for all students. Similarly, receiving institutional aid, and having an instructor of the same race/ethnicity, both of which could help address counter-momentum friction, were positively related to momentum and student success regardless of initial enrollment intensity. Conversely, being employed during or immediately prior to beginning college, which could be seen as a source of counter-momentum friction, was negatively associated with momentum and student success for all students.

Other factors showed positive associations with momentum for part-time students, but not for full-time students. For example, enrollment in developmental education courses, eight-week courses, and student success courses was positively linked to momentum for part-time students, but negatively associated with momentum for full-time students. These course modalities may help foster engagement among part-time students, who could benefit from strategies taught in student success courses or find it easier to incorporate online or condensed courses into their busy schedules.

(Insert Table 4 here)

(Insert Table 5 here)

Finally, given that administrators believed the primary factor driving low success rates among part-time students was the external pressures they face, which make it difficult for them to engage consistently with their coursework, we aimed to examine whether students who reduce their course load from one semester to the next but remain enrolled are more likely to succeed than those who completely stop out. If staying enrolled at a lower intensity helps students facing unforeseen challenges continue to make academic progress while addressing those challenges, colleges might consider developing advising strategies that guide students in choosing a

manageable course load. This would allow them to make steady academic progress while also reserving enough time and energy to cope with external pressures.

Table 6 presents regression results for three-year credential completion/upward transfer on the students who either 1) had momentum (enrolled in same or higher credit load), 2) stayed enrolled decreased credit load, or 3) stopped out (zero hours). Coefficients measure the change in the probability of completion/upward transfer if a student had momentum or decreased their hours instead of stopping out. Coefficients indicate that a student is more likely to achieve completion/upward transfer within three years if they have momentum or decrease their hours but stay enrolled in at least one course.Furthermore, compared to stopouts, students with momentum were associated with a 45 percentage point increase in three-year credential completion or upward transfer, while decreasing enrolled hours but continuing to stay enrolled was linked to a 23 percentage point increase in achieving the same outcome. These results suggest that momentum is positively related to success, but also that enrolling at any intensity in a semester is preferable to stopping out.

(Insert Table 6 here)

Discussion

This mixed-methods study explored how administrators from a diverse set of 10 Texas community colleges: (a) explained the reasons that students enroll part-time, (b) framed the issue of low completion rates among part-time students, and (c) engaged in efforts to improve the success of part-time students. We compared their perspectives and strategies with Wang's (2017) framework for understanding community college student success, alongside evidence from quantitative analyses of student-level administrative records, to identify potential areas for reform. Below are our key findings for colleges to consider when developing initiatives to support part-time students.

Part-time Students are Invisible

Our results suggest that administrators lacked empirical knowledge of the unique characteristics and needs of part-time students and were unable to identify which programs contributed to their success. Several factors contribute to this conclusion. First, sampled community colleges did not collect specific data on part-time students, nor did they disaggregate data in an effort to support their success. Administrators and faculty alike did not have information readily available to identify students by their credit status. As such, they could not identify the unique problems part-time students were facing, nor could they adjust their practices to better address their problems. Second, with part-time students making up most of the student body, some administrators believed that they understood and were addressing their needs by default. Finally, the reluctance to differentiate support services based on credit status, with the

belief that all students should have equal access to supports and initiatives, led colleges to implement a generalized student success approach. From our perspective, this unintentional focus on part-time students renders them invisible, and limits community colleges from developing empirically based policies, practices, and strategies that can inform how to best support their success in college.

Low Success Rates of Part-time Students are Believed to be Driven by External Factors

Administrators primarily attributed lower success rates among part-time students to external factors, such as work, familial, or personal responsibilities. These factors hinder part-time students from staying engaged, making optimal decisions, and on track towards timely completion. This way of understanding comports with research from the field of public health, which finds that poverty significantly impairs an individual's executive functioning and higher-order processing (Doxie, 2014; Mani, Mullainthan, Shafir, & Zhao, 2013). Relatedly, some administrators specifically noted that external pressures contributed to what behavioral scientists refer to as "present-biased mindsets"—the tendency to prioritize immediate needs over long-term benefits (Appelhans, 2022). At the same time, administrators showed little introspection regarding how their own actions may have contributed to the disparities between full-time and part-time students. The quality of teaching, the meaningfulness of curricula, or the impact of policies and practices were rarely referenced or discussed as potential root causes of these disparities, or areas that community colleges could improve.

Improving Teaching and Learning is not a Focus to Drive Higher Success

Community college administrators rarely discussed comprehensive or targeted efforts to improve the quality of curricula and instruction in the classroom as a strategy for enhancing success among part-time students. Instead, administrators reported that their community colleges leaned heavily into providing instructional support outside the classroom as a means to bolster their students' academic success. While supplemental instruction and tutoring services should be available to students who need them, they do not fundamentally address ineffective instructional practices or make curricula more relevant to students' daily lives and goals. Instead, they merely reinforce existing practices, requiring students to invest more in their postsecondary education since these services are provided outside of class time. In her framework, Wang (2017) argues that the main venue for keeping students engaged and on track is inside the classroom. This suggests that community colleges should carefully assess whether coursework, programs, and degrees align with the needs and interests of students whose constraints threaten their attachment to college. To what extent are faculty attending to student competencies, situating learning in realistic contexts, fostering active learning, and supporting student psycho-social needs? Answering these questions is crucial to ensure that faculty engage in practices and methods that encourage, rather than discourage, students from seeing the value of college. Additionally,

providing faculty with information on the credit status of their students could help them become more attuned to, and better equipped to support part-time students.

Colleges Lack Consensus on Whether and How to Determine Student's Optimal Credit Load

While administrators acknowledged that credit load was a consequential determinant of timely college completion, there was little consensus over how to determine a student's optimal credit load. No college reported implementing a policy that encourages students to enroll in higher credit loads, however some administrators noted that advisors often relayed the benefits of enrolling full-time with the hope that students would take more classes. However, most administrators agreed that advocating for higher credit loads may reduce the probability of completion, particularly for students juggling multiple responsibilities. Other colleges were reluctant to provide specific guidance about credit load, leaving such decisions up to students.

However, administrators recognized that retaining students, regardless of their credit load, was crucial for ensuring their successful completion of college. This recognition is supported by descriptive evidence from the quantitative analysis demonstrating that students who reduced their course load but remained enrolled were more likely to complete college than those who stopped out. Colleges reported implementing a variety of interventions to retain students, including providing basic needs services, offering supplemental instruction, and introducing student programs aimed at fostering a sense of belonging and inclusivity.

Concluding Reflections

Taken together, the evidence points to the potential promise of strategies that build upon current efforts to proactively connect students with a range of supports that can help them navigate external challenges and choose an appropriate credit load that balances the goals of maintaining momentum while also countering momentum friction. At times, students may need to reduce their credit load to zero to focus on addressing external challenges. Colleges can be a part of this decision, keep track of the motivating circumstances, provide support, and work with students to develop a plan to re-engage in coursework. Such efforts could complement and enhance the efficacy of common re-enrollment campaigns that seek to re-engage students who left college with some credit but no credential by providing advisors with important context about the reasons for stopping out and plans for re-engagement. Finally, colleges can work to tailor support specifically for part-time students and strengthen curricular and instructional factors that impact college completion for this often overlooked population.

References

Adelman, C. (1999). *Answers in the tool box: Academic intensity, attendance patterns, and bachelor's degree attainment*. US Department of Education, Office of Educational Research and Improvement.

Adelman, C. (2006). *The toolbox revisited: Paths to degree completion from high school through college*. US Department of Education.

Attewell, P., Heil, S., & Reisel, L. (2012). What is academic momentum? And does it matter? *Educational Evaluation and Policy Analysis*, *34*(1), 27-44.

Attewell, P., & Monaghan, D. (2016). How many credits should an undergraduate take? *Research in Higher Education*, *57*(6), 682-713.

Bailey, T., Bashford, J., Boatman, A., Squires, J., Weiss, M., Doyle, W., Valentine,J. C., LaSota, R., Polanin, J. R., Spinney, E., Wilson, W., Yeide, M., & Young, S. H. (2016). *Strategies for postsecondary students in developmental education – A practice guide for college and university administrators, advisors, and faculty.* Washington, DC: Institute of Education Sciences, What Works Clearinghouse.

Bailey, T. R., Jaggars, S. S., & Jenkins, D. (2015). *Redesigning America's Community Colleges: A clearer path to Student Success / Thomas R. Bailey, Shanna Smith Jaggars, Davis Jenkins.* (Pilot project. eBook available to selected US libraries only). Harvard University Press. https://doi.org/10.4159/9780674425934

Barnard, A., Pittz, T., & Vanevenhoven, J. (2019). Entrepreneurship education in US community colleges: A review and analysis. *Journal of Small Business and Enterprise Development*, *26*(2), 190-208

Beer, C., & Lawson, C. (2018). Framing attrition in higher education: a complex problem. *Journal of Further and Higher Education, 42*(4), 497-508.

Belfield, C., Jenkins, P. D., & Fink, J. (2019). *Early momentum metrics: Leading indicators for community college improvement*. Community College Resource Center. https://ccrc.tc.columbia.edu/publications/early-momentum-metrics-leading-indicators.html

Belfield, C., Jenkins, P. D., & Lahr, H. E. (2016). Momentum: The academic and economic value of a 15-credit first-semester course load for college students in Tennessee.

Bivens and Wood (2016). Voice of the national researcher. African American student populations. In A. Long (Ed.), *Overcoming educational racism in the community college: Creating pathways to success for minority and impoverished student populations* (pp. 11-27). Taylor and Francis.

Bohlig, E. M., Bullock, C. M., Garza, M., Hartman, C., Lovseth, K., & Yu, H. (2018). Developmental education and community college student success: Are the odds ever in their favor? *Texas Education Review, 6*(1), 53-74. doi:10.15781/T2C24R520

Bombardieri, M., Hatton, M., & Slatter, A. (2017, September 6). *The part-time student challenge*. Center for American Progress. https://www.americanprogress.org/issues/education-postsecondary/news/2017/09/06/438483/part-time-student-challenge/

Calcagno, J. C., Bailey, T., Jenkins, D., Kienzl, G., & Leinbach, T. (2008). Community college student success: What institutional characteristics make a difference? *Economics of Education review*, *27*(6), 632-645.

Carey, K. (2009, June 10). *On accountability – Achieving President Obama's college completion goal.* Diverse: Issues In Higher Education. https://www.diverseeducation.com/home/article/15088597/on-accountability-achieving-president-obamas-college-completion-goal

Center for Community College Student Engagement. (2017). *Even one semester: Full-time enrollment and student success.* https://repositories.lib.utexas.edu/server/api/core/bitstreams/a4f4cddd-87f4-48a8-a04d-65cdc0d0dfa6/content

Center for Community College Student Engagement (2018). *Show me the way: The power of advising in community colleges*. https://cccse.org/sites/default/files/Show_Me_The_Way.pdf

Center for Community College Student Engagement (2019). *The intersection of work and learning: Findings from entering students in community colleges.* https://cccse.org/sites/default/files/WorkingLearner.pdf

Civitas Learning. (2017). *Community insights. Emerging benchmarks & student success trends from across the Civitas,* 1(3). https://media.civitaslearning.com/wp-content/uploads/sites/3/2020/02/Civitas_Learning_Community_Insights_Issue_3-1.pdf

Clovis, A.M., & Chang, M. (2021). Effects of academic momentum on degree attainment for students beginning college at 2-year institutions. *Journal of College Student Retention: Research, Theory & Practice*, *23*(2), 322-336.

Cobb, R. W. & Ross, M. H. (1997). *Cultural studies of agenda denial: Avoidance, attack and redefinition.* University Press of Kansas.

Community College Research Center (2023). *Pell grants and community college students.*

https://ccrc.tc.columbia.edu/media/k2/attachments/pell-grants-community-college-students.pdf

Complete College America [CCA]. (2024). *Complete college, America: Harnessing the power of higher education to renew American democracy.* https://CompleteCollege.org/CompleteCollegeAmerica-RenewDemocracy

Completing college: A national view of student completion rates – Fall 2011 cohort (Signature Report No. 14). National Student Clearinghouse Research Center.

Cotner, H., Bragg, D., Cheng, I., Costelloe, S., Freeman, B., Goold, G., Heiser, E., Lemire, S., Miller, D.G., Porowski, A., Van Noy, M., & Yadav, E. (2021). *Designing and delivering career pathways at community colleges: A practice guide for educators* (WWC 2021007). Washington, DC: National Center for Education Evaluation and Regional Assistance (NCEE), Institute of Education Sciences, U.S. Department of Education. https://whatworks.ed.gov.

Cruse, L. R., Holtzman, T., Gault, B., Croom, D., & Polk, P. (2019). *Parents in college- By the numbers.* Institute for Women's Policy Research.

Denning, J., Marx, B., & Turner, L. (2019). Propelled: The effects of grants on graduation, earnings, and welfare. *American Economic Journal: Applied Economics.* 11(3): 193-224.

Donaldson, J. F., & Townsend, B. K. (2007). Higher education journals' discourse about

adult undergraduate students. *The Journal of Higher Education (Columbus)*, *78*(1), 27–50. https://doi.org/10.1353/jhe.2007.0001

Dynarski, S. (2003). Does aid matter? Measuring the effect of student aid on college attendance

and completion. T*he American Economic Review*, 93(1), 279–288

EAB Global (2018). *Reframing the Understanding the Growing Importance of Success for Community Colleges' Part-Time Students Question of Equity: Understanding the Growing Importance of Success for Community Colleges' Part-Time Students*

Fike, D. S., & Fike, R. (2008). Predictors of first-year student retention in the community college. *Community college review*, *36*(2), 68-88.

Fong, C. J., Davis, C. W., Kim, Y., Kim, Y. W., Marriott, L., & Kim, S. (2017). Psychosocial factors and community college student success: A meta-analytic investigation. *Review of Educational Research*, *87*(2), 388-424.

Glaser, B., & Strauss, A. (1967). *The discovery of grounded theory: Strategies for qualitative research.* Mill Valley, CA: Sociology Press.

Goldrick-Rab, S. (2010). Challenges and opportunities for improving community college student success. *Review of Educational Research*, *80*(3), 437-469.

Goldrick-Rab, S., Clark, K., Baker-Smith, C., & Witherspoon, C. (2021). *Supporting the whole community college student: The Impact of Nudging for Basic Needs Security*. Hope Center for College, Community, and Justice.

Goncalves, S. A., & Trunk, D. (2014). Obstacles to success for the nontraditional student in higher education. *Psi Chi Journal of Psychological Research*, *19*(4).

Green, J. M. (2021). Part-Time enrolled community college students: A case study examining the experiences of the invisible majority. Digital Commons @ ACU, *Electronic Theses and Dissertations.* Paper 425. https://digitalcommons.acu.edu/etd/425

Greene, T. G., Marti, C., & McClenney, K. (2008). The effort--outcome gap: Differences for African American and Hispanic community college students in student engagement and academic achievement. *Journal of Higher Education, 79*(5), 513-539.

Hallberg, K., Hofmeister, K., Bertrand, M., & Morgan, B. (2023). Supporting community college student success-Evidence from a randomized controlled trial. *Journal of Research on Educational Effectiveness, 16*(1), 63-81.

Hatch, J. A. (2002). *Doing qualitative research in education settings*. State University of New York Press.

Hu, S., & Kuh, G. (2003). Maximizing what students get out of college: Testing a learning productivity model. *Journal of College Student Development*, 44, 185-203.

Huerta, A. H., Rios-Aguilar, C., & Ramirez, D. (2022). "I had to figure it out": A case study of how community college student parents of color navigate college and careers. *Community College Review*, *50*(2), 193-218.

Jacobs, J., & Worth, J. (2019). The evolving mission of workforce development in the community college. *TU O'Banion (Ed.)*, *13*, 167-190.

Jenkins, D. & Bailey, T. (2017). *Early momentum metrics: Why they matter for college improvement.* Community College Research Center, Teachers College, Columbia Unviersity. https://ccrc.tc.columbia.edu/publications/early-momentum-metrics-college-improvement.html

Jenkins, D., Lahr, H., & Mazzariello, A. (2021). *How to achieve more equitable community college student outcomes: Lessons from six years of CCRC research on Guided Pathways. Report.* Community College Research Center, Teachers College, Columbia University.

Kappner, A.S. (2002). Across the Education Continuum: Child Care on the College Campus. Cedar Fall, IA: National Coalition for Campus Children's Centers.

Karp, M. M., Raufman, J., Efthimiou, C., & Ritze, N. (2015) *Redesigning a Student Success Course for Sustained Impact: Early Outcomes Findings.* Community College Research Center, Teachers College, Columbia University Series CCRC Working Papers, 81. Retrieved from https://doi.org/10.7916/D83N22ZN

Karp, M., Ackerson, S., Cheng, I., Cocatre-Zilgien, E., Costelloe, S., Freeman, B., Lemire, S., Linderman, D., McFarlane, B., Moulton, S., O'Shea, J., Porowski, A., & Richburg-Hayes, L. (2021). *Effective advising for postsecondary students: A practice guide for educators* (WWC 2022003). Washington, DC: National Center for Education Evaluation and Regional Assistance (NCEE), Institute of Education Sciences, U.S. Department of Education. https://whatworks.ed.gov.

Kisker, C. B., Cohen, A. M., & Brawer, F. B. (2023). *The American community college / Carrie B. Kisker, Arthur M. Cohen, Florence B. Brawer.* (Seventh edition.). Jossey-Bass.

Kahu, E. R. (2013). Framing student engagement in higher education. *Studies in Higher Education, 38*(5), 758-773.

Kember , D , Lee , N and Li , N . (2001). Cultivating a sense of belonging in part‐time students. *International Journal of Lifelong Education*, 20 : 326 – 341.

Lapovsky, L. (2008). Rethinking student aid: Nontraditional students. In (Baum, S., McPherson, M., & Steele, P. eds) *The Effectiveness of Student Aid Policies: What the Research Tells Us.* College Board.

Le, C., Pisacreta, E. D., Ward, J. D., Margolis, J., & Booth, H. (2020). *Policies to Ensure Equitable Access to Well-Resourced Colleges and Universities*. ITHAKA S+R. http://www.jstor.org/stable/resrep49504

Lee, N. (2018). The part-time student experience: It's influence on student engagement, perceptions and retention. *The Canadian Journal for the Study of Adult Education*, 2018, 1-18.

Long, A. (Ed.). (2023). *Overcoming educational racism in the community college: Creating pathways to success for minority and impoverished student populations*. Taylor & Francis.

Long, B. T., & Riley, E. (2007). Financial aid: A broken bridge to college access? *Harvard Educational Review*, 77(1), 39-63.

Ma, J., & Baum, S. (2016). Trends in community colleges: Enrollment, prices, student debt, and completion. *College board research brief*, *4*, 1-23.

McKinney, L., Novak, H., Hagedorn, L. S., & Luna-Torres, M. (2019). Giving up on a course: An analysis of course dropping behaviors among community college students. *Research in Higher Education*, *60*, 184-202.

Miller, Cynthia; Headlam, Camielle; Manno, Michelle; Cullinan, Dan. (2020). Increasing Community College Graduation Rates with a Proven Model: Three-Year Results from the Accelerated Study in Associate Programs (ASAP) Ohio Demonstration. MDRC. Retrieved from https://www.mdrc.org/sites/default/files/ASAP_OH_3yr_Impact_Report_1.pdf

Murdock, T. A. (1990). Financial aid and persistence: An integrative review of the literature. *NASPSA Journal*, 27(3), 213-221.

National Center for Education Statistics (2018). *Working Before, During, and After Beginning at a Public 2-Year Institution: Labor Market Experiences of Community College Students.* https://nces.ed.gov/pubs2018/2018428.pdf

National Center for Education Statistics (2019). *Profile of Undergraduate Students: Attendance, Distance and Remedial Education, Degree Program and Field of Study, Demographics, Financial Aid, Financial Literacy, Employment, and Military Status: 2015–16.* https://nces.ed.gov/pubs2019/2019467.pdf

National Center for Education Statistics (2021). *National Postsecondary Student Aid Study. First Look at the Impact of the Coronavirus (COVID-19) Pandemic on Undergraduate Student Enrollment, Housing, and Finances.* https://nces.ed.gov/pubs2021/2021456.pdf

National Center for Education Statistics (2023) *Undergraduate enrollment.* https://nces.ed.gov/programs/coe/indicator/cha/undergrad-enrollment

National Center for Education Statistics (2023). *Projection of education statistics to 2030.* https://nces.ed.gov/pubs2024/2024034.pdf

National Center for Education Statistics (2024). *Postsecondary outcomes for nontraditional and traditional undergraduate students.* https://nces.ed.gov/programs/coe/pdf/2024/CTU_508c.pdf.

Page, L. C., & Scott-Clayton, J. (2016). Improving college access in the United States: Barriers and policy responses. *Economics of Education Review*, *51*, 4-22.

Palacios, V., Goldvale, C., & Tatum, L. (2020). *Driving Home Costs Beyond Tuition: A New Look at Older Students' Challenges Affording Housing.* Georgetown Center on Poverty and Inequality.

Pascarella, E. T., & Chapman, D. W. (1983). A multiinstitutional, path analytic validation of Tinto's model of college withdrawal. *American Educational Research Journal, 20*(1), 87-102.

Protopsaltis, S., & Parrott, S. (2017). *Pell grants: a key tool for expanding college access and economic opportunity - need strengthening, not cuts.* Center on Budget and Policy Priorities.

Rampin et al., (2021). Taguette: Open-source qualitative data analysis. *Journal of Open Source Software, 6*(68), 3522, https://doi.org/10.21105/joss.03522

Rein M., & Schön D. A. (1977). Problem setting in policy research. In Weiss C. H. (Ed.), *Using social research in public policy making* (pp. 235-251). Lexington, MA: Lexington Books.

Rein M., & Schön D. A. (1996). Frame-critical policy analysis and frame-reflective policy practice. *Knowledge and Policy*, 9, 85-104

E.Z. Rutschow & E. Schneider. 2011. *Unlocking the Gate: What We Know About*

Improving Developmental Education. New York, NY: MDRC.

Saldaña, J. (2013). *The coding manual for qualitative researchers* (2nd ed.). SAGE.

Sandoval-Lucero, E., Maes, J., & Klingsmith, L. (2014). African American and Latina (o) community college students' social capital and student success. *College Student Journal*, *48*(3), 522-533.

Santiago, D. (2016). Voice of the national researcher. Community college data trends for Latino student populations in Long (Ed.) *Overcoming educational racism in the community college: Creating pathways to success for minority and impoverished student populations* (pp. 11-27). Taylor and Francis.

Schon, D.A. & M. Rein (1994). *Frame reflection: Toward the resolution of intractable policy*

controversies. New York: Basic Books.

Scrivener, S., Weiss, M. J., Ratledge, A., Rudd, T., Sommo, C., & Fresques, H. (2015). Doubling graduation rates: Three-year effects of CUNY's Accelerated Study in Associate Programs (ASAP) for developmental education students. New York: MDRC. Retrieved from https://eric.ed.gov/?id=ED558511

Scrivener, S., & Weiss, M. J. (2022). Findings and Lessons from a Synthesis of MDRC's Postsecondary Education Research. *MDRC*.

Shapiro, D., Dundar, A., Huie, F., Wakhungu, P. K., Yuan, X., Nathan, A., & Bhimdiwala, A. (2017). *Completing College: A National View of Student Attainment Rates by Race and Ethnicity – Fall 2010 Cohort* (Signature Report No. 12b). Herndon, VA: National Student Clearinghouse Research Center.

Snow, D. A., Rochford, E. B., Worden, S. K., & Benford, R. D. (1986). Frame alignment processes, micromobilization, and movement participation. *American Sociological Review, 51*(4), 464–481. https://doi.org/10.2307/2095581

Sommo, C., Cullinan, D., & Manno, M. (2018). Doubling graduation rates in a new state: Two-year findings from the ASAP Ohio demonstration. MDRC Policy Brief, December. Retrieved from https://eric.ed.gov/?id=ED592008

Stage, F. K. (1989). Motivation, academic and social integration, and the early dropout. *American Educational Research Journal, 2*6(3), 385-402.

Stewart, S., Lim, D. H., & Kim, J. (2015). Factors influencing college persistence for first-time students. *Journal of Developmental Education, 38*(3): 12-16.

Texas Higher Education Coordinating Board. (N.D.) Enrollment forecast 2021-2035. Texas reskilling and upskilling through education (TRUE). Grant program 2020-2025. https://www.highered.texas.gov/institutional-grant-opportunities/texas-reskilling-and-upskilling-through-education-true-grant-program-2024-25/

Texas Higher Education Coordinating Board (2021) Enrollment forecast 2021-2035. https://reportcenter.highered.texas.gov/reports/data/enrollment-forecast-2021-2035-january-2021/

Texas Higher Education Coordinating Board. (2024). *Expanding enrollments across communities and institutions*. https://databridge.highered.texas.gov/expanding-enrollment-across-communities-and-institutions/#Higher-education-must-meet-the-needs-of-a-changing-population

The White House (2013). The Obama administration launches scorecard.

Theobald, R. J., Goldhaber, D. D., Gratz, T. M., & Holden, K. L. (2019). Career and technical education, inclusion, and postsecondary outcomes for students with learning disabilities. *Journal of Learning Disabilities*, *52*(2), 109-119.

Tinto, V. (2000). Taking retention seriously: Rethinking the rst year of college. *NACADA Journal*, 19(2), 5–10.

Tinto, V. (2004). *Student Retention and Graduation: Facing the Truth, Living With the Consequences.* (Occasional Paper 1). Washington, DC: The Pell Institution for the Study of Opportunity in Higher Education.

Tinto, V. (2005). Moving from theory to action. In A. Seidman (Ed.), *College student retention: Formula for student success* (pp. 371–333). Washington, DC: American Council on Education and Praeger.

Velez, W. (1985). Finishing college: The effects of college type. *Sociology of Education,* 191-200.

Walton, G. M., & Brady, S. T. (2017). The many questions of belonging. *Handbook of competence and motivation: Theory and application*, *2*, 272-293.

Wang, X. (2017). Toward a holistic theoretical model of momentum for community college

student success. In Paulson, M. (Ed). *Higher education: Handbook of theory and research* (Vol. 32, pp. 259–308). Springer International Publishing AG. https://doi.org/10.1007/978-3-319-48983-4_6

Weiss, M. J., Ratledge, A., Sommo, C., & Gupta, H. (2019). Supporting community college students from start to degree completion: Long-term evidence from a randomized trial of CUNY's ASAP. *American Economic Journal: Applied Economics*, *11*(3), 253-297.

Woulfin S. L. (2015). Catalysts of change: An examination of coaches' leadership practices in framing a reading reform. *Journal of School Leadership*, 25(3), 526–557.

Zhang, Y. L. (2022). Early academic momentum: Factors contributing to community college transfer students' STEM degree attainment. *Journal of College Student Retention: Research, Theory & Practice*, *23*(4), 873-902

Tables

Table 1

Institutional Characteristics of Participant Sample

Institution	Region	Urbanicity	Size	Percent Part-Time Students of Color	Percent Students of Color	Percent Students Awarded Pell
1	Central	City: Large	>20,000	72%	53%	22%
2	Central	Sub-urban	10,000-19,999	69%	58%	27%
3	West	City: Large	>20,000	69%	86%	39%
4	South	City: Large	10,000-19,999	68%	97%	38%
5	Central	City: Midsize	5,000-9,999	58%	48%	39%
6	East	Town: Distant	1,000-4,999	42%	37%	27%
7	South	City: Large	10,000-19,999	74%	74%	32%
8	North	Rural: Fringe	1,000-4,999	69%	34%	39%
9	West	Town: Distant	1,000-4,999	23%	47%	22%
10	East	Town: Remote	1,000-4,999	59%	47%	37%

Table 2

Student characteristics by enrollment intensity

Variable	Full Time	Part Time High	Part Time Low
Enrollment			
Percent of Cohort	38%	23%	29%
Designated First-Time-In-College (FTIC)			
FTIC	65%	53%	33%
Non FTIC	35%	47%	67%
Race/Ethnicity			
White	36%	29%	21%
African American	12%	14%	17%
Hispanic	42%	47%	42%
Asian	4%	4%	4%
Other	6%	6%	6%
Sex			
Female	51%	56%	59%
Disadvantage			
Economic	48%	49%	38%
Academic	36%	38%	34%
Limited English Proficiency	3%	3%	3%
Intent			
Seeking Degree or Credit Transfer	82%	79%	74%
Age			
Age 24 or Younger	83%	71%	51%
Modality			
Face	85%	78%	68%
Internet	13%	18%	28%
Hybrid	3%	3%	3%

Table 3

Student success by initial enrollment intensity, FTIC status, and momentum in second semester

Variable	All		FTIC		Non-FTIC		
Momentum Status	Yes	No	Yes	No	Yes	No	Initial
Initial Enrollment Intensity							
All	40%	12%	35%	10%	45%	13%	
Full Time	55%	18%	50%	15%	65%	23%	40%
Part Time High	41%	11%	30%	5%	56%	16%	28%
Part Time Low	26%	5%	15%	3%	33%	6%	19%

Table 4

Relationship between momentum and malleable factors, by initial enrollment intensity

Malleable Factor	Full Time		Part Time High		Part Time Low	
Had Momentum	Yes	No	Yes	No	Yes	*No*
	(s.e.)**		(s.e.)		(s.e.)	
Enrolled in developmental education course	53%	64%	58%	59%	77%	66%
	(0.004)		(0.005)		(0.004)	
Enrolled in eight-week course	48%	62%	64%	58%	79%	68%
	(0.006)		(0.007)		(0.005)	
Enrolled in student success course	58%	62%	62%	57%	83%	66%
	(0.004)		(0.005)		(0.004)	
Employed during the first semester	57%	66%	56%	64%	68%	70%
	(0.004)		(0.005)		(0.004)	
Received institutional aid	72%	57%	72%	58%	86%	75%
	(0.004)		(0.006)		(0.006)	
Had a professor of the same race/ethnicity	61%	58%	60%	57%	72%	65%
	(0.004)		(0.005)		(0.003)	
Employed immediately prior to the first semester	58%	64%	56%	63%	68%	70%
	(0.004)		(0.005)		(0.004)	
Had previous dual credit enrollment	67%	60%	63%	59%	69%	70%
	(0.005)		(0.008)		(0.006)	
Had 1-29 hours previous college credit (non-FTIC)*	62%	54%	55%	52%	63%	63%
	(0.010)		(0.012)		(0.007)	
Had loans from previous college enrollment (non-FTIC)	51%	58%	50%	54%	63%	64%
	(0.008)		(0.009)		(0.005)	
Took at least one internet course	54%	63%	55%	60%	69%	68%
	(0.004)		(0.005)		(0.003)	
Took at least one hybrid course	58%	60%	57%	59%	66%	69%
	(0.006)		(0.008)		(0.006)	

* *"No" column is having 30 or more hours of previous college credit*

** *Standard error of t-test under H0: difference = 0.*

Table 5

Relationship between student success and malleable factors, by initial enrollment intensity

Malleable Factor	Full Time		Part Time High		Part Time Low	
Completed a Credential or Transferred Upwards	Yes	No	Yes	No	Yes	*No*
	(s.e.)**		(s.e.)		(s.e.)	
Enrolled in developmental education course	24%	48%	14%	37%	8%	24%
	(0.004)		(0.004)		(0.003)	
Enrolled in eight-week course	36%	41%	31%	28%	25%	19%
	(0.006)		(0.006)		(0.004)	
Enrolled in student success course	34%	44%	31%	28%	25%	19%
	(0.004)		(0.004)		(0.004)	
Employed during the first semester	38%	44%	27%	31%	19%	20%
	(0.004)		(0.005)		(0.003)	
Received institutional aid	51%	37%	38%	26%	30%	18%
	(0.004)		(0.005)		(0.005)	
Had a professor of the same race/ethnicity	41%	39%	29%	27%	21%	18%
	(0.004)		(0.004)		(0.003)	
Employed immediately prior to the first semester	39%	43%	28%	29%	19%	20%
	(0.004)		(0.004)		(0.003)	
Had previous dual credit enrollment	56%	36%	43%	25%	30%	18%
	(0.005)		(0.007)		(0.005)	
Had 1-29 hours previous college credit (non-FTIC)*	50%	50%	34%	42%	17%	27%
	(0.010)		(0.012)		(0.007)	
Had loans from previous college enrollment (non-FTIC)	43%	47%	39%	37%	27%	22%
	(0.008)		(0.008)		(0.005)	
Took at least one internet course	40%	40%	32%	27%	23%	17%
	(0.004)		(0.005)		(0.003)	
Took at least one hybrid course	37%	41%	26%	29%	18%	20%
	(0.004)		(0.005)		(0.003)	

** "No" column is having 30 or more hours of previous college credit*

*** Standard error of t-test under H0: difference = 0.*

Table 6

Estimated relationship between momentum and student success

Probability of Earning a Credential or Transferring Upward Within Three Years	Baseline Probability (Stopped Out)	Coefficient	
		Had momentum (s.e)	Decreased hours but did not stop out (s.e.)
Combined* (n= 124,729)	0.04 (0.003)	0.45 (0.003)	0.23 (0.004)
Full time only (n=78,272)	0.04 (0.004)	0.50 (0.005)	0.27 (0.005)
Part time high only (n= 46,457)	0.04 (0.005)	0.36 (0.005)	0.15 (0.006)