

College Re-Imagined

Can a New Model Help Close Higher Education's Equity Gap?

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- Foster a national community of reform-minded scientific researchers; and
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The Rappaport Institute for Greater Boston at Harvard's Kennedy School of Government strives to improve the region's governance by attracting young people to serve the region, working with scholars to produce new ideas about important issues, and stimulating informed discussions that bring together scholars, policymakers, and civic leaders. The Rappaport Institute was founded and funded by the Phyllis and Jerome Lyle Rappaport Foundation, which promotes emerging leaders in Greater Boston.

Table of Contents

I. Summary	1
II. Introduction	1
III. Background	1
IV: Duet Program Description	4
V: Data Analysis.....	5
VI: Discussion	8
VII: Conclusion.....	12
Endnotes.....	13

Figures

Figure 1: Age of Duet Students (2015 - 2019)	6
Figure 2: Percent of AA Students Graduating Within 3 Years	7
Figure 3: Duet AA Graduates' Paths to Degree	8
Figure 4: Percent of Duet Students Completing AA by Months to Graduation and Cohort.....	9
Figure 5: Average Number of Months to AA Completion for Duet Students by Race/Ethnicity.....	9

Tables

Table 1: Demographic Characteristics of Duet Students (2015 - 2019).....	5
Table 2: Percent of AA Graduates by Race/Ethnicity.....	6

I: Summary

In 2014, Southern New Hampshire University and Boston-based Duet Education partnered to re-imagine the traditional college experience by combining flexible, competency-based online courses with wraparound, in-person support and coaching. Using data on the first 554 students to enroll in the program, we show that this “hybrid college” model has achieved graduation rates more than twice the Massachusetts state average, cut the cost of college in half, and eliminated race-based college completion disparities. While further research is needed, early evidence suggests that this new approach could have significant implications for closing equity gaps in higher education, reducing college debt, and increasing economic mobility.

II: Introduction

Despite the well-documented economic and social benefits of postsecondary education, systemic barriers have prevented disproportionate numbers of Black, Hispanic, Indigenous, first-generation and low-income students from completing college. In Boston, white adults are two times more likely to hold bachelor’s degrees than Black or Hispanic adults. Low-income and first-generation students also have disproportionately low college completion rates. Many of these students enroll in college but are unable to complete due to financial constraints or conflicts with work and family responsibilities.

Few postsecondary degree programs offer the flexibility, affordability, and support services needed to help students overcome these barriers. Online degree programs provide increased affordability and ease of access but often offer limited social interaction or support for students to navigate college. As a result, traditionally underrepresented students are disproportionately likely to drop out of online programs. In addition, course-taking progress in traditional online programs remains determined by the credit-per-term structure, which limits the pace at which students make progress and increases costs for students who need to repeat courses.

Recently, two innovative strategies have emerged that aim to improve on existing online college models. Competency-based education allows students to advance through coursework at their own pace based on mastery of defined skills and competencies. Hybrid colleges pair online degree programs with personalized coaching and wrap-around in-person support services.

In this brief, we describe a partnership between Duet, a non-profit that supports college students in the Greater Boston area, and a competency-based postsecondary degree program at Southern New Hampshire University (SNHU). Duet’s hybrid model uses in-person coaching and support to help students overcome key challenges to completing online postsecondary degree programs. As such, this partnership between Duet and SNHU is well positioned to increase economic opportunity and close the college completion gap for students of color, first-generation college students, and low-income students by meeting the needs of working adults and students who have previously dropped out of college.

Using data from 2015-2019, we examine the demographic characteristics, prior education experiences, and degree completion rates of students enrolled at SNHU and supported by Duet and compare these data with information on student outcomes from traditional two-year institutions in Massachusetts. We show that Duet serves a population that is traditionally underrepresented in higher education, outperforms comparable postsecondary institutions on similar degree attainment measures, and provides unique flexibility and support.

III. Background

In the 21st century, a college education has become the main path to America’s middle class. As manufacturing and other blue-collar jobs have eroded, the college wage premium has more than doubled over the last forty years,¹ and since 2010, more than 9 in 10 new jobs created went to candidates with college degrees.² Beyond improved wage and employment outcomes, research has shown that college graduates experience stronger civic engagement,³ better health outcomes,⁴ and higher self-reported wellbeing.⁵

In Boston’s knowledge-based economy, a college degree is particularly critical to unlocking economic opportunity. While in 1979, the median wage for college graduates in Massachusetts was 50% higher than the median wage for non-college

graduates, today Massachusetts college graduates earn nearly twice as much as workers without a BA.⁶

For generations, however, the U.S. higher education system has systematically excluded many Black, Hispanic, Indigenous, and low-income students from access to educational opportunities. In Greater Boston, just 28% of Black adults and 24% of Hispanic adults hold bachelor's degrees, compared to 53% of white adults.⁷ Low-income and first-generation students also suffer from low graduation rates. From the Massachusetts high school class of 2011, fewer than 20% of low-income students earned a bachelor's degree within seven years.⁸

In the wake of Covid-19, Massachusetts fall 2020 enrollment data showed the largest single-year decrease in public higher education undergraduate enrollment on record.⁹ Across the country, early analyses suggest that students of color and low-income students are both failing to enroll and dropping out at higher rates than their white peers, and experts fear that we may face a "lost generation" of Black, Hispanic, and low-income students who drop out of school during the pandemic and never return.¹⁰

Students leave college for many reasons, but economic pressures are a critical barrier for many. An in-depth survey conducted by Public Agenda showed that almost three quarters (71%) of students who left higher education before graduating cited the "need to work and make money" as a reason they left, while 52% pointed to the high cost of tuition. 41% also cited challenges balancing family commitments.¹¹

These concerns around balancing school with work and family commitments reflect the changing nature of college enrollments in the U.S., where "non-traditional" students have become the new norm. Despite the popular conception of a college student as a 20-year-old, residential, full-time student, today over 70% of students are classified as non-traditional in that they meet at least one of the following criteria:

- They are older than 25
- They are a parent
- They are working one or more full-time jobs
- They are the first in their family to attend college

Boston's higher education system has failed to provide sufficiently affordable and flexible college pathways that meet the needs of this new generation of non-traditional students. In FY 2014, the median unmet financial need for full-time students in Massachusetts was \$11,163 per year.¹² Students end up borrowing heavily to pay for college – today, the average student loan balance in Massachusetts is more than \$38,000 – and as a result often struggle to cover their own costs of living.¹³ At Boston's largest community college, 60% of students report that they can't afford to eat balanced meals.¹⁴

As a result, many students ultimately make the decision to drop out of school and work full time. And while two-thirds of students who have dropped out of college report giving "a lot of thought" to going back,¹⁵ the data suggest that only 13% ever will.¹⁶

In all, more than 1.5 million adults in the Boston metro area lack any type of postsecondary credential, including nearly 500,000 students with some college but no degree.¹⁷ These adults—including many students of color, first-generation students, and low-income students—face limited economic opportunity, increased financial stress, and even shorter life expectancies. In order to close the college completion gap, Boston will need more affordable, highly supported pathways for non-traditional students, and in particular working adults.

The Role of Online Learning in Expanding Access

Over the last two decades, the growth of online learning has expanded access to higher education for millions of people. As of 2018, a total of 3.3 million students in the U.S.—nearly 1 in 5 of all American postsecondary students—were enrolled in distance-only education programs.¹⁸ Over the last fifteen years, online enrollments have quadrupled.¹⁹

For many historically underrepresented students, the flexibility and affordability of online learning has put a college degree within reach for the first time. Indeed, students of color, first-generation students, low-income students, rural students, students with disabilities, parents, and working adults are all disproportionately represented in online education

programs.²⁰ As a result, observers have identified online learning as a potentially “revolutionary” solution to longstanding problems of educational inequity.²¹

However, online learning also faces critical challenges. Research on the efficacy of online learning has been mixed: while some researchers have found that online learning has the potential to improve learning outcomes while reducing cost,^{22,23} in practice there is evidence to suggest that students enrolled in online-only courses receive lower grades and are more likely to drop out of school than their peers enrolled in face-to-face courses.^{24,25}

Troublingly, research also indicates that historically underrepresented students and students without strong academic preparation are most likely to struggle in an online-only environment.^{26,27} Online learners face a variety of unique challenges, from time-management issues²⁸ to a lack of clear structure²⁹ to lower engagement levels.³⁰ First and foremost, however, online-only students often struggle with feelings of isolation and disconnection.³¹ As Baum & McPherson (2019) summarize, “The central problem appears to be the lack of adequate personal interaction between students and instructors, as well as among students.”³²

“The Human Factor”: Combining Online Learning with In-Person Supports

A growing body of evidence demonstrates “how central the social, emotional, and interactional dimensions of learning are.”³³ Indeed, of the many interventions that have been attempted to improve college success, providing students with personalized 1:1 advising and comprehensive wraparound support services is one of the few approaches that has been shown in multiple randomized control trials (RCT) to improve college graduation rates. For example, the Accelerated Study in Associates Program (ASAP) at the City University of New York, which combines comprehensive advising services, enhanced career training, streamlined course schedules, tuition waivers, and other wraparound support services successfully doubled graduation rates for participating students.³⁴ These results were replicated when a second RCT showed that the ASAP program improved graduation rates from 19% to 35% across 3 community colleges in Ohio.³⁵ Similarly, a 2017 study by Evans and colleagues found that a comprehensive case management intervention providing community college students in Fort Worth, TX with intensive coaching, mentoring, and referral services tripled graduation rates from 16% for the control group to 48% for the treatment group.³⁶

How can this “human touch” be replicated for online learners? In the postsecondary space, one emerging model is “hybrid college,” which combines online courses with wraparound in-person supports. The hybrid college model includes two core components. First, the hybrid college model uses online learning to reduce costs and increase flexibility for non-traditional learners. Second, the hybrid college model also incorporates a range of wraparound in-person supports including 1:1 academic coaching, career counseling, transportation and childcare subsidies, and a physical study space to ensure that students receive the academic, personal, and financial support they need to complete their degrees.

A New Model for College: Competency-Based Education

Built to serve the needs of non-traditional students, including parents and working adults, most hybrid colleges also take advantage of another recent innovation in higher education: competency-based education. Under the traditional course-based higher education structure, time is constant and learning is variable: courses run for a predetermined amount of time, and at the end of each course, students receive a grade that reflects their performance. Under the competency-based approach, time is variable and learning is constant: students pursue their own learning paths and advance in their studies whenever they have mastered clearly defined competencies.

Since learning is measured through demonstrated mastery rather than seat time, students who have already mastered certain competencies can simply complete the relevant assessment and move on without having to waste their time or money on courses they don’t need; at the same time, when students struggle with a certain concept or skill, they can take the time they need to achieve mastery. In addition to increasing flexibility, this approach also increases academic rigor by setting a predetermined standard for mastery that all students are required to meet. In the words of former U.S. education secretary Arne Duncan, “the century-old practice of awarding degrees based solely on seat time in a classroom, and not on demonstrated competence in a subject, is at odds with a world in which the Internet offers perpetual opportunities for learning and mastering skills.”³⁷

By combining flexible online competency-based education programs with wraparound in-person supports, a small but growing group of hybrid college sites aim to achieve “dramatically improved learning, graduation, and career outcomes” for non-traditional students.³⁸ To date, however, no analyses have been published on outcomes for students enrolled in hybrid colleges.

IV. Duet Program Description

Founded in 2014, Duet, Inc. is a non-profit organization formed “to increase the number of students with college degrees earning a living wage in Greater Boston by creating a financially viable path to college completion and a good job.” The Duet model combines two key components in order to increase college success: (I) access to flexible and affordable online degree programs and (II) wraparound in-person supports.

Part I: Flexible and Affordable Online Degree Programs

Through a partnership with Southern New Hampshire University (SNHU), Duet students are granted access to SNHU’s fully accredited, competency-based associate and bachelor’s degree programs. Officially launched in 2013, SNHU’s competency-based program was the first in the nation to be approved by the U.S. Department of Education to receive federal financial aid under the department’s direct assessment provisions, independent of the traditional credit hour structures. This online degree path allows students to earn the same degree they would receive as an in-person student on SNHU’s campus in Manchester, but instead of earning credits by sitting in class for a certain number of hours and passing a test at the end, students in SNHU’s competency-based program earn them by completing real-world projects that demonstrate their mastery of the relevant content. SNHU uses a subscription-based pricing model under which full time students pay a flat fee (\$2,333 per term) for as many credits as they want to complete, with no additional charges or fees.

On a day-to-day basis, students in SNHU’s competency-based program complete workplace-based projects and submit them to SNHU faculty for review. For example, in an accounting course, instead of taking a multiple-choice test at the end of the unit, students would complete a project where they prepare financial statements for an example business and draft an email to their boss with recommendations. If a student’s submission demonstrates mastery of the required skills, they can move on to the next project; if not, they can go back, review the material, and resubmit their project as many times as they need to achieve mastery. Students who score “not yet” on an assessment receive detailed feedback to help them revise and improve their submission. The average student submits each project multiple times before reaching mastery, revising their submission based on reviewer feedback in between each submission. Compared to traditional degree programs, the competency-based approach aims to offer a more intentional and work-relevant curriculum, a higher level of individualized feedback, and a bar set at mastery as opposed to merely passing.

Part II: Wraparound, In-Person Supports

Duet pairs SNHU’s competency-based curriculum with intensive, personalized coaching and wraparound support services customized to meet each students’ individual needs and life circumstances. The core of the Duet model is intensive, one-on-one coaching. Duet hires and trains a diverse set of coaches who partner with each student to overcome barriers to success, progress, and completion. Coaches meet regularly with students both in person and remotely and monitor their progress on a daily basis to ensure that students are staying on track and provide additional support when they need it. Duet’s coaching is custom-built to support students in progressing through SNHU’s project-based, on-demand curriculum in order to earn their degrees as quickly, efficiently, and affordably as possible.

Duet also works with students from enrollment to and through graduation to help them identify upwardly mobile career paths and leverage their degrees effectively in the job market. Finally, Duet provides students with a range of day-to-day support services including free computer access and meals at a downtown Boston student center, transportation subsidies, access to a quiet study space, and childcare at select times to help them overcome routine but critical barriers to degree completion.

Potential Benefits of the Duet Model

For students not well-served by existing college options, the Duet model offers several critical advantages:

- **Acceleration:** Students control how quickly they earn their SNHU degree with Duet. The more work they get done, the sooner they graduate, fast-tracking their path to a better job or a higher-level degree.
- **Flexibility:** While many adult learners struggle to balance work and family responsibilities with rigid academic schedules and due dates, SNHU’s competency-based curriculum is completely asynchronous, allowing students to fit their studies around the other demands in their lives.
- **Affordability:** For students eligible for federal Pell grants, SNHU’s annual tuition of \$7,000 (3 terms x \$2,333 per term) is just \$504 above the amount of a full Pell grant. As a result, while the average national debt burden for students graduating in the class of 2018 was more than \$29,000, low-income students are able to graduate from Duet without incurring large amounts of debt.³⁹
- **Work-relevance:** In SNHU’s competency-based program, students get the opportunity to apply liberal arts skills in real-world contexts. Since projects were designed in partnership with employers and with the needs of working adults in mind, the content is highly work-relevant.

V. Data analysis

In order to better understand the characteristics and program outcomes of Duet students, we analyzed program data on all students who enrolled in the Duet-SNHU partnership between the program’s launch in 2015 and 2019 (N=554). We compared graduation rates, time-to-degree completion and costs for students enrolled at SNHU and supported by Duet to similar data from traditional two-year institutions in Massachusetts and across the U.S. While these analyses do not speak to the Duet-SNHU partnership’s causal impacts, they do highlight significant positive trends among participating students. We show that students enrolled at SNHU with support from Duet had significantly higher graduation rates overall as well as across racial subgroups, faster time-to-degree outcomes, and lower costs than comparable institutions, positioning hybrid college models like the Duet SNHU partnership as a potential solution to overcoming systemic barriers to postsecondary education.

Demographics and prior postsecondary experience

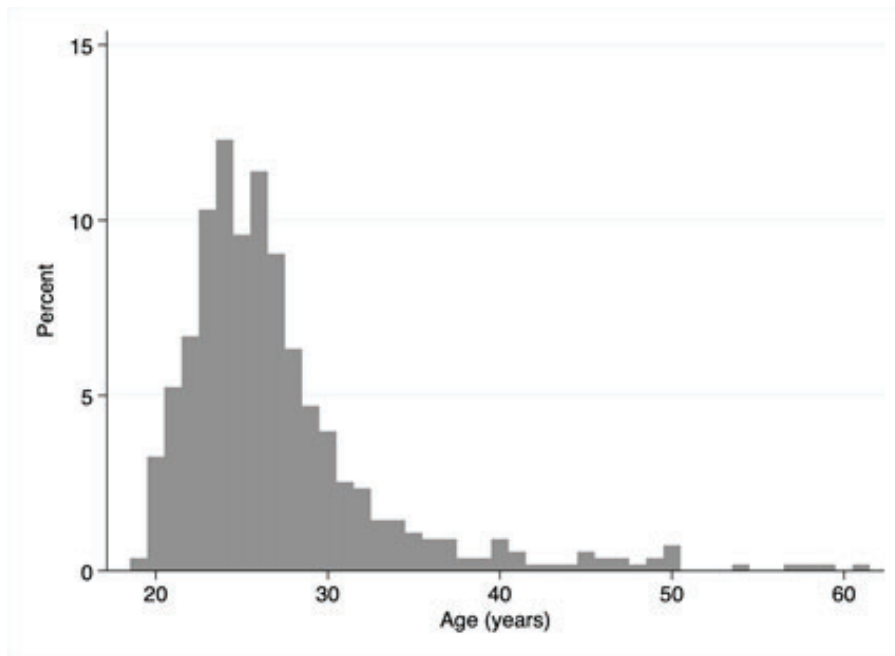
Duet serves a population of students that is underrepresented in postsecondary education, including students who identify as Black or Hispanic, who are over 25, or who are parents. Table 1 and Figure 1 describe the characteristics of Duet enrollees from 2015-2019. Among the subsample of students (N=530) who reported their race and/or ethnicity, 40% identified as Black, 41% as Hispanic, 7% as white, 4% as Asian, and 5% as Other. On average, students were 27 years old, with age at enrollment ranging from 19 to 61 years. More than a quarter of students (28%) had at least one dependent and 59% were female.

Table 1: Demographic Characteristics of Duet Students (2015 - 2019)

	Percent Enrollees	N
Female	59	554
Asian	3.6	530
Black/African American	39.6	530
White	6.5	530
Other	5	530
Hispanic	40.7	547
Have at least 1 dependent	28	548
MA resident	92	549
Previously attended college	67	551

Note: N column reflects total number of Duet students with non-missing values for each characteristic.

Figure 1: Age of Duet Students (2015 - 2019)



The majority of students were Massachusetts residents (92%) and attended high school in either Boston Public Schools (32%) or at some other Massachusetts high school (28%). About two thirds of Duet students had previous postsecondary experience at either a two-year or four-year institution. Among the 367 students with previous postsecondary experience, 51% attended public two-year institutions, 1.6% attended private two-year institutions, 11.2% attended public four-year institutions and 25.8% attended private four-year institutions.

Students of color make up a greater proportion of the student body and a greater proportion of Associate in Arts (AA) graduates at the Duet-SNHU partnership than at traditional two-year colleges. Table 2 compares the share of enrollees and the share of AA graduates by race and ethnicity supported by Duet to Massachusetts traditional two-year colleges. At Duet, Black and Hispanic students comprised 80.3% of enrolled students and 78.4% of AA graduates from 2015-2019. In contrast, at traditional two-year colleges, Black and Hispanic students made up 33.3% of the student body and only 22.6% of AA graduates in 2019.

Table 2: Percent of AA Graduates by Race/Ethnicity

	Duet (2015 - 2019)		MA two-year (2019)	
	Percent Enrollees	Percent AA Graduates	Percent Enrollees	Percent Graduates
Hispanic	40.7	33.7	20.9	15.1
Black	39.6	44.7	12.4	7.5
White	6.5	6.3	52.1	62.1
Other	5	5.9	3.7	2.9
Asian	3.6	4.3	4.7	5.6
N	554	255	10,493	2,138

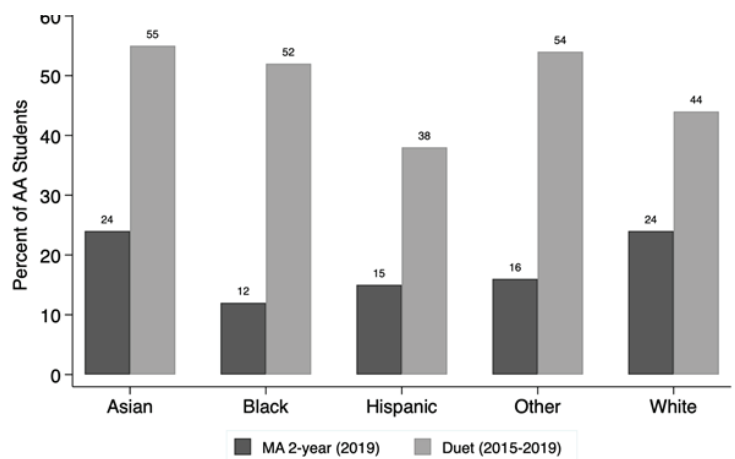
Note: Race is missing for 5% of DUET students and 7% of MA public two-year cohort

Graduation rates

While the majority of Duet students are pursuing bachelor's degrees, few of the students enrolled between 2015-2019 have been enrolled long enough to complete a four-year degree. As a result, we focus this analysis on AA graduation rates. As a benchmark, we compare the graduation rates of students supported by Duet to the graduation rates of traditional two-year colleges in Massachusetts. While this is not a perfect comparison group—students supported by Duet differ from students at traditional institutions in measured and unmeasured ways—traditional two-year colleges are the primary alternative for students seeking AA degrees. In 2019, the three-year graduation rate for first-time full-time associate degree seeking students at traditional two-year degree granting institutions in Massachusetts was 20%. By comparison, graduation rates for students supported by Duet were more than twice as high as the statewide average: 46% of all students who enrolled in SNHU with Duet support between 2015-2019 completed an AA degree within three years, with graduation rates for the most recent cohorts rising above 50%.

Duet graduation rates are also higher than traditional two-year colleges across all racial subgroups. Figure 2 displays AA graduation rates broken out by race and ethnicity. The graduation rates of students supported by Duet are more than two times higher than those of traditional two-year colleges across all race and ethnicity subgroups except for white students.

Figure 2: Percent of AA Students Graduating Within 3 Years

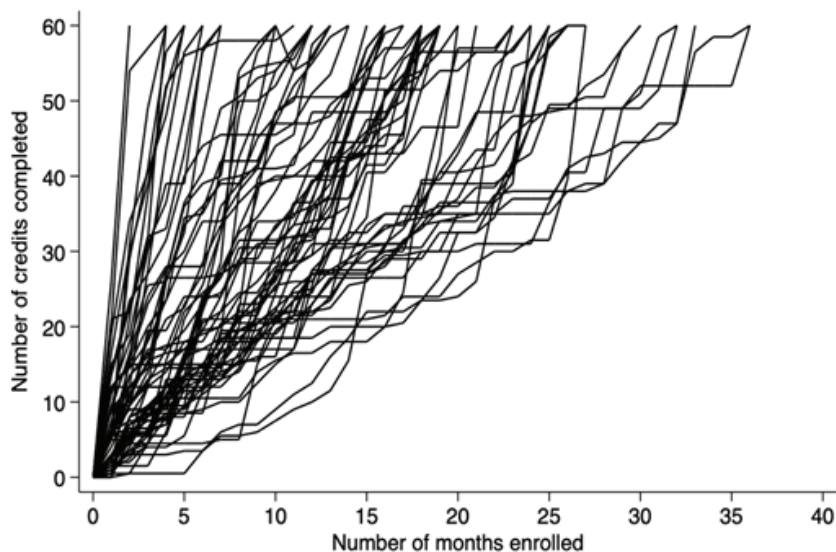


Note: MA 2-year 2019 graduation rates include total number of AA degree completers divided by total cohort from 20 public and private two-year colleges in Massachusetts with data available at <https://nces.ed.gov/ipeds/datacenter/InstitutionByName.aspx?goToReportid=1>

Time to degree completion

SNHU's flexible, competency-based model allows students to complete their degree at their own pace. From 2015-2019 AA graduates took between 1 and 55 months to complete their degree. Figure 3 displays a selection of possible paths to AA degree completion by plotting the number of credits completed against the numbers of months it took to complete 60 credits among the first 100 Duet students to attain AA degrees. As the figure shows, some students accrue credits quite rapidly while others take more time to complete their degree. It is also important to note that the SNHU-Duet partnership model allows students to easily take a break from their studies and then re-enroll at a future time when necessary. Indeed, twenty percent of AA graduates withdrew from the program and then re-enrolled at some point before completing an AA degree.

While there is variation, students supported by Duet tend to complete their degrees significantly faster than students enrolled in traditional two-year degree programs. On average, across cohorts, Duet students who complete an AA degree spend 18 months (1.5 years) enrolled at SNHU. In contrast, data from the National Student Clearinghouse (NSC) shows that the average elapsed time to AA completion at NSC-participating public institutions in the U.S. is 67 months (5.6 years). For students over 20—who make up the vast majority of students at Duet—this average increases to 83 months (6.9 years).

Figure 3: Duet AA Graduates' Paths to Degree

Note: Each line represents one of Duet's first 100 Associate graduate's paths to degree completion (60 credits mastered). Adapted from Duet.

Across cohorts, Duet students follow a similar trajectory to degree completion. Figure 4 displays the percent of students completing an AA degree by the number of months it took for each entry year cohort. In the 2015, 2017 and 2018 cohorts about 40% of students completed an AA degree within 24 months or less. The 2019 cohort appears to be outpacing earlier cohorts with 40% of students completing their degree in under 20 months, while the 2016 cohort had fewer students (30%) completing a degree in under two years.

Cost of attendance

SNHU's subscription-based tuition structure, under which full time students pay a flat fee (\$2,333 per term) for as many credits as they want to complete with no additional charges or fees, provides an opportunity for savings in comparison to the per-credit cost of two-year colleges or four-year colleges. An average Duet student completing their AA degree in 20 months will spend a total of \$11,665 ($\$2,333 \times 5$ four-month terms), almost half the average cost of tuition and fees (\$21,300) to complete an AA at a traditional two-year college in Massachusetts ($\$5,325 \times 4$ semesters). While the data are limited, among the 26 BA completers in our data, the average time to degree was 18 months, allowing Duet BA graduates to earn a bachelor's degree for about a quarter of the cost of four years at a traditional in-state four-year college.

VI. Discussion

The preceding analyses highlight the ways in which the Duet-SNHU partnership is increasing college degree attainment and reducing barriers to postsecondary education for a traditionally underserved population. Due to the lack of a valid comparison group and differences between the populations of students who attend SNHU with Duet support and those who attend traditional two-year colleges, these results cannot support strong claims about the causal impact of attending SNHU with Duet support versus attending a traditional institution. However, they do suggest that the hybrid college model is a promising approach for addressing three important challenges facing Massachusetts and the nation: racial inequality, social mobility, and economic growth.

Racial inequality

For decades, systemic barriers have prevented students of color from graduating college at the same rates as white students. Nationally, research indicates that even for students enrolled at the same institution, graduation rates may be as much as 35 percentage points lower for students of color compared to white students.⁴¹ In Massachusetts, white students

Figure 4: Percent of Duet Students Completing AA by Months to Graduation and Cohort

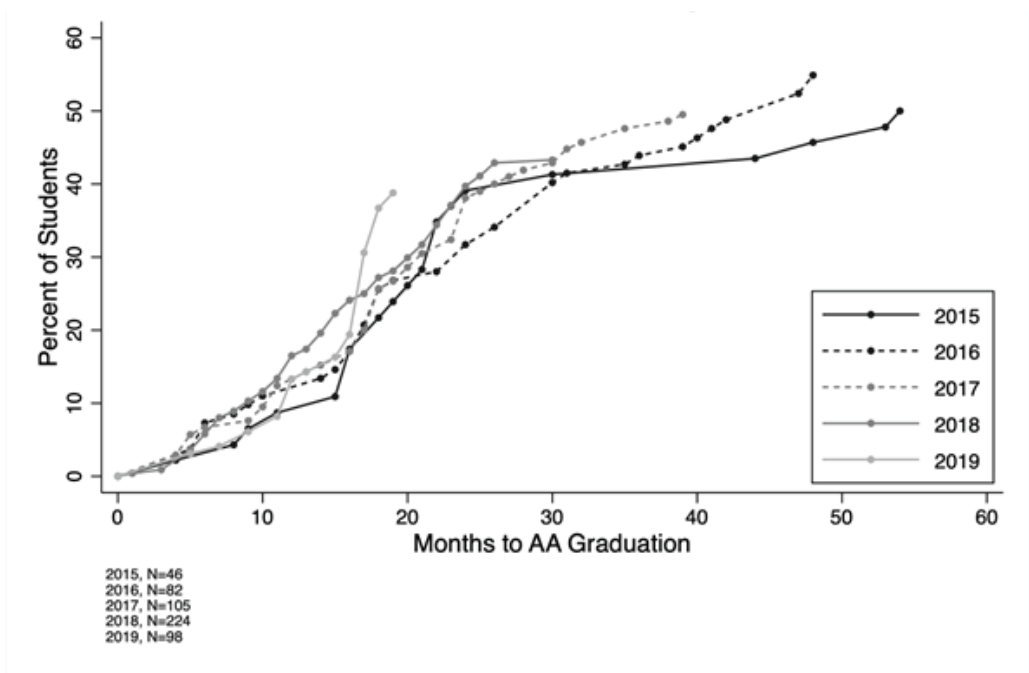
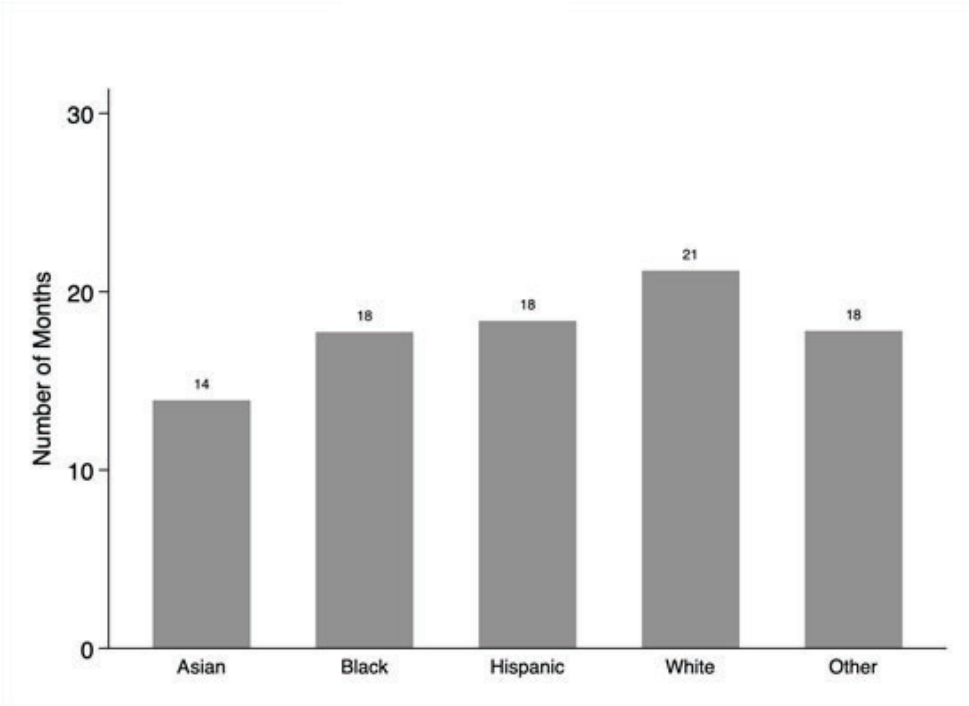


Figure 5: Average Number of Months to AA Completion for Duet Students by Race/Ethnicity



enrolled in AA programs are twice as likely to graduate on-time as Black students. At Duet, that disparity has been eliminated: in fact, Black students are actually almost 10 percentage points *more* likely to graduate on time than white students (although white students at Duet are still almost twice as likely to graduate on time as white students at traditional institutions). And while nationally, Black students take on average a full year longer than white students to graduate college,⁴² at Duet, Black students have actually graduated 3 months faster on average as shown in Figure 5. These results represent a major breakthrough: The Duet-SNHU partnership has eliminated the opportunity gap between students of color and white students enrolled in their program. Nationally, if Black & Hispanic students graduated at the same rate as their white peers, there would be 1 million more college graduates within just three years.⁴³

Expanding access to college for historically underserved students has significant implications for closing the racial wealth

gap and expanding economic opportunity more broadly. According to a 2015 analysis conducted by the Boston Federal Reserve, white households in Boston have median wealth of \$247,500, compared to just \$8 for Black households.⁴⁴ A follow-up working group convened by the Boston Fed in response to these findings concluded that inequities in Massachusetts' current higher education systems "widen the gap between rich and poor and between whites and people of color...contributing to intergenerational cycles of poverty and lack of opportunity to build wealth."

The model represented by Duet's partnership with SNHU has the potential to change that in at least two ways. First, by reducing the cost of higher education, Duet can help its students mitigate the burden of college debt, which disproportionately impacts communities of color and reinforces the racial wealth gap. Today, Black adults are more than twice as likely as white adults to hold college debt,⁴⁵ and an analysis conducted by the Brookings institution found that Black BA graduates are five times as likely to default on student loans as white BA graduates.⁴⁶ Second, by increasing college graduation rates, the Duet model can improve earning potential for graduates and reduce racial income disparities. Black college graduates could not only see an immediate income boost, but also an improved earnings trajectory over time. Specifically, Black adults between 25-34 earn \$18,000 more per year than their counterparts with only a high school degree, but that wage premium almost doubles to \$33,000 for those 35-44.⁴⁷

Economic opportunity & social mobility

While many view the United States as a land of opportunity, America has fallen to 16th in the world in intergenerational mobility, substantially behind other high-income countries like Canada, Norway, and Denmark.⁴⁸ According to research from the Equality of Opportunity Project, absolute economic mobility, as measured by the percentage of children who earn more than their parents, has dropped from 90% for children born in 1940 to just 50% for children born in 1980.⁴⁹ While Massachusetts has fared better than many other states, absolute mobility has still fallen more than 35 percentage points in Massachusetts over the last 40 years.⁵⁰

Higher education can dramatically improve social mobility. An analysis conducted by the Equality of Opportunity Project has shown that while in general, students from the highest-income families end up 30 percentile points higher in the national income distribution than students from low-income families, for students from different income backgrounds who attend the same college, that earnings gap is reduced by 76%.⁵¹ The authors conclude that "The small gap in earnings outcomes between students from high- vs. low-income families within each college shows that most colleges successfully 'level the playing field' across students with different socioeconomic backgrounds."⁵²

The problem, however, is that students from high-income backgrounds remain significantly more likely to attend and graduate from college than students from low-income backgrounds. Even in Massachusetts—long known as a national leader in higher education—this is a significant problem. Across the state, while 52% of high-income students graduate college, just 18% of low-income students complete their degree.⁵³

At Duet, 65% of students are low-income. For these students in particular, college can increase economic mobility and provide a critical path to the middle class. Specifically, children born into the lowest income quintile who earn a four-year degree are almost five times less likely to remain in the lowest income quintile as adults (10% vs. 47%).⁵⁴

Strengthening Massachusetts' economy

According to the Georgetown University Center on Education and the Workforce, Massachusetts has the highest proportion (63%) of job postings requiring a four-year degree or higher of any state in the country.⁵⁵ In recent years, however, our higher education system has struggled to keep pace with workforce demand—by 2025, the number of new job openings for college graduates is projected to exceed the number of new college graduates by a minimum of 55,000 to 65,000.⁵⁶ According to Massachusetts' 2017-2020 Workforce Innovation and Opportunity Act (WIOA) state plan, "Massachusetts' population projections and educational attainment rates portend critical shortfalls in the supply of labor needed to sustain the state's leading industries."⁵⁷

In order to improve educational attainment and ensure a skilled and productive workforce, Massachusetts will need to invest not only in solutions to improve the K12-to-college pipeline, such as improved college counseling and dual enrollment programs, but also to build on-ramps for working adults, parents, and other non-traditional students to return to

college and complete their degrees.

In 2019, 68,233 students graduated from Massachusetts' public high schools, and 49,233 (72%) enrolled at an institution of higher education.⁵⁸ While increasing college matriculation rates for Massachusetts' high school graduates is a key priority, the number of potential degree completers age 25+ is a far bigger pool than the number of students graduating high school each year. Specifically, more than 744,000 Massachusetts residents over the age of 25 have some college credit but no degree, and another 1.2 million have no credential beyond a high school diploma.⁵⁹ If Massachusetts hopes to increase its college graduation rate, more attention must be paid to this critical and underserved demographic. According to our findings, 67% of students at Duet have attended at least one prior institution of higher education. Programs like Duet, therefore, can provide an important pathway for the hundreds of thousands of Massachusetts residents across the state with some college to be able to return to school and graduate.

While we do not have sufficient data on the employment outcomes of students who have graduated from SNHU with Duet support to estimate the economic return of the program, past research suggests that the returns on a college degree are generally large. According to Hershbein and Kearney, the median bachelor's degree holder earns \$1.19 million in lifetime income, more than twice the typical high school graduate.⁶⁰ The benefits of increased college graduation rates are also not limited just to individual graduates: at the city level, there is a strong correlation in Massachusetts between higher rates of educational attainment and lower rates of unemployment.⁶¹ Statewide, according to a 2021 analysis conducted by Ithaka S + R, associate degree holders in Massachusetts contribute more than \$1,000 in annual benefits and bachelor's degree holders contribute more than \$2,500 in annual benefits due to increased tax revenue and reduced public expenditures.⁶² In total, the report estimated that a 5% increase in educational attainment in Massachusetts would produce between \$200 million (if new degrees are all associates) to \$500 million (if new degrees are all bachelor's) in annual value.

VI. Conclusion

Through a combination of innovative strategies, including competency-based education and hybrid learning, Duet's partnership with SNHU serves an underrepresented population in higher education and outperforms comparable postsecondary institutions on similar degree attainment measures. While this evidence is not causal, it does suggest programs like Duet may play an important role in reducing racial inequality and increasing social mobility and economic growth. Further research is needed to establish causal effects of Duet and other hybrid programs on college degree attainment and longer-term labor market outcomes. Nonetheless, the initial evidence suggests these programs have the potential to be transformative in higher education.

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