Return on Investment Analysis for the MentorPRO Peer Mentoring Platform

Abstract

This study examines the return on investment (ROI) of MentorPRO, a peer mentoring platform aimed at improving first-year college student retention. We model a cohort of 1,500 first-year students (approximately the size of a UMass Boston freshman class) with an annual program cost of $36 per student. Using in-state and out-of-state tuition levels of roughly $15,000 and $36,000 respectively (with an 80% in-state, 20% out-of-state distribution), we calculate the additional tuition revenue generated under first-to-second year retention rate improvements of 2.5, 5, and 10 percentage points. Our analysis yields ROI estimates indicating that MentorPRO's benefits outweigh its costs in purely financial terms. We integrate recent empirical findings on MentorPRO's impact – notably, gains in student GPA, sense of belonging, and persistence (Hersh et al., 2025; Werntz et al. (2023, 2025to contextualize these. The results suggest that investing in a peer mentoring platform can be an economically efficient strategy for universities to bolster student success and institutional revenue, aligning educational and financial objectives.

Introduction

College student retention has long been recognized as both a critical student success outcome and a key driver of institutional finances. When students drop out, they forego the personal and professional benefits of a college degree, and universities lose tuition revenue that is costly to replace. Recent national analyses estimate that U.S. colleges collectively lose on the order of $16 billion in tuition revenue each year due to student attrition (REF). In an analysis of 1,669 colleges and universities, the Educational Policy Institute's found that, collectively, the lost revenue due to attrition in an amount close to $16.5 billion in a single academic year, with four-year public colleges and universities averaging $13 million from loss from attrition. Beyond these direct losses, institutions incur substantial expenses in recruiting and admitting new students to fill the seats left empty by dropouts. In the private sector, it is well established that retaining an existing customer is far more cost-effective than acquiring a new one; analogously, retaining an enrolled student yields a far greater return on each dollar spent than does continually backfilling attrition with new enrollees (REF). Recognizing this economic logic, colleges are increasingly investing in programs that support student persistence, especially during the vulnerable first year of college when dropout rates are highest (Tinto, 2012).

Among such interventions, peer mentoring has emerged as a promising high-impact practice to boost first-year student retention. MentorPRO is a technology-enabled peer mentoring platform that connects incoming freshmen with trained upper-class mentors through a mobile app, facilitating frequent communication, guidance, and accountability. By improving students' sense of belonging, self-efficacy, and academic engagement, the program addresses key predictors of retention (Wilson & Gore, 2013; Collier, 2017). Peer mentoring may be especially effective for at-risk student populations that traditional support services have struggled to reach. First-generation and underrepresented students, for example, are often less likely to seek help from faculty or advisors due to unfamiliarity or apprehension (Alexitch, 2002; Schwartz et al., 2022). These students, however, tend to respond well to near-peer support that is seen as more approachable and relatable (Colvin & Ashman, 2010). By leveraging trained peers and an

accessible communication platform, MentorPRO can engage students who might fall through the cracks of conventional support systems. Several studies have explored MentorPRO in the context of college mentoring program that match incoming first-year students to trained, supervised, and paid peer mentors with an average ratio of one peer mentor to 25 first-year students. First-year students receive personalized messages and nudges from their peer mentors who are trained to provide support and answer questions about campus life, student loans, course selections, and more. Students are also encouraged to meet with their peer mentors in person once they are on campus. Students are prompted to complete an interactive goal-setting feature and each week, students are prompted to use MentorPRO's Check-In, a brief, idiographic measurement approach through which they use a slider to indicate the presence and severity of weekly challenges: academic habits, academic planning, connections, finances, physical health, wellbeing, and career. Students are prompted through the application to complete Check-Ins once a week. The Check-In assessment was inspired by Weisz and colleagues' (2011) Top Problems Assessment to monitor students challenges and enable proactive support.

This paper presents anl ROI analysis of the MentorPRO peer mentoring platform that integrates evidence from recent peer-reviewed and in preparation studies on MentorPRO's efficacy to inform the assumptions of our economic model. Werntz et al. (2023) reported that, in a large pilot implementation of a MentorPRO-like platform, nearly half of first-year students engaged with the app at least once, and those who completed frequent self-check-ins showed a modest but significant improvement in university-reported end-of-year GPA. Building on these findings, Werntz et al. (2024) employed a rigorous propensity score matching design and found that greater engagement with MentorPRO (measured by mentor/mentee message exchanges and use of self-assessment tools) was associated a lower probability of objective indicators of poor academic performance and a higher likelihood of strong psychosocial outcomes like sense of belonging and academic self-efficacy. These psychosocial gains are noteworthy, as a robust sense of belonging has been linked to higher persistence in college (Gopalan & Brady, 2020). In parallel, an internal analysis at UMass Boston's College of Liberal Arts and College of Management (2024) found that *each additional message* a first-year student sent to their MentorPRO peer mentor corresponded to approximately 3% increase in that student's odds of being retained into the next year (as reported by university data), even after controlling for a wide range of student risk factors including high school GPA, generational status, race/ethnicity, and income. Such findings suggest that, by fostering engagement and early intervention through the near-peer relationship, the program measurably increases the likelihood that students stay enrolled.

To conduct the ROI, we first outline the ROI calculation framework, detailing how retained students translate into tuition revenue gains for the university. We then present a scenario analysis using UMass Boston as a case example, with realistic cohort size, tuition rates, and program cost parameters. Our scenarios consider modest retention rate improvements of 2.5 percentage points (on par with the effects observed for students with minimal mentor engagement) up to 10 percentage points (reflecting a scenario of high program efficacy as suggested by strong engagement in the platform). For each scenario, we compute the additional tuition revenue generated, net revenue after accounting for program costs, and the ROI as a benefit-cost ratio. Finally, we discuss these results in the context of the broader literature on the economics of student retention and the value of peer mentoring programs.

Literature Review

Investments in student success programs can yield substantial dividends for institutions, as evidenced by prior economic analyses of retention interventions. A seminal study by Bettinger and Baker (2014) examined a randomized coaching intervention for college students and found significant increases in persistence: students assigned to a coach were more likely to still be enrolled one year later, with the effect persisting even after the coaching ended. The authors concluded that "*coaching was a more cost-effective means of improving retention and completion than many traditional interventions such as additional financial aid" (Bettinger & Baker, 2014).* This finding is indicative of the high ROI potential for relatively low-cost support programs. Similarly, Oreopoulos and Petronijevic (2019) demonstrated through experimental evaluations that proactive, personalized support can markedly improve student outcomes. Although their work is perhaps best known for highlighting the challenges ("nudging" alone often had limited impact), one component of their analysis showed that more intensive coaching led to meaningful gains in academic performance and persistence for at-risk students, particularly when contrasted with purely informational interventions. These studies reinforce a key principle: **targeted support that addresses non-academic barriers and fosters continuous engagement can substantially enhance student retention**, often at a marginal cost that is trivial compared to the tuition revenue at stake.

Peer mentoring occupies a distinct but related niche among support interventions. It harnesses the influence of near-peers – students who have recently navigated the same transition – to provide guidance and motivation in ways that professional staff may not easily replicate. The approach is grounded in decades of research on social integration and mentoring in higher education. Astin's (1993) theory of involvement and Tinto's (1993) model of student departure both suggest that students who form supportive peer connections and become integrated into the campus community are more likely to persist. Empirical research has borne this out: for example, a meta-analysis by Gershenfeld (2014) found that formal peer mentoring programs consistently have positive effects on college GPA and retention, especially for first-year and minority students. Colvin and Ashman (2010) qualitatively documented how peer mentors serve as "connectors" linking new students to campus resources and as relatable role models, thereby demystifying help-seeking and promoting a sense of belonging among mentees. Such psychosocial support translates into measurable academic benefits. Indeed, the recent analyses of MentorPRO's impact align with this narrative. Werntz et al. (2023) observed that students who actively used MentorPRO's self-assessment "check-in" feature had slightly higher GPAs, indicating that the platform engages students in behaviors conducive to academic success. Werntz et al. (2024) found that **students with high MentorPRO engagement were significantly more likely to feel "part of the university community," with higher perceived academic self-efficacy and life satisfaction** relative to less-engaged peers. These outcomes – belongingness, confidence, well-being – are precisely the factors that mediate long-term persistence in college (Hausmann et al., 2007; Schreiner et al., 2012).

Likewise, in a recent study (Hersch et al., 2025) explored retention outcomes for the pilot Fall 2023 freshman cohort of University of Massachusetts, Boston students. This small study leveraged regression models with a rich set of covariates (including high school background, financial aid status, etc.) to isolate the impact of MentorPRO engagement on the likelihood of

first year retention. The frequency of mentor–mentee communication via MentorPRO emerged as a significant predictor of retention. For each additional message that a first-year student sent to their peer mentor through the app, the odds of that student being retained into the next year increased by approximately 3% . This effect was evident even after controlling for pre-college characteristics, and it held in both unadjusted and adjusted models. In practical terms, a student who exchanged five messages with their mentor would be roughly 13–14% more likely to persist than an otherwise similar student who did not exchange messages – a substantial difference, considering that baseline first-year retention rates at public universities like UMass Boston typically hover around 70–75% (NCES, 2022).

It is noteworthy that students with lower GPA's were more likely to use the Check-in feature, which was designed to provide students with an easily accessible tool for indicating their weekly challenges. This, combined with the messaging data suggests that establishing a responsive personal connection with a peer mentor – even through brief text-based interactions – can enable proactive support and make a meaningful difference in whether a student decides to continue into their second year. Not all first-year students will actively message their mentors, of course, but those who do appear to gain a real retention advantage. And because MentorPRO operates on an *opt-in* and on-demand model, it may provide a safety net: those encountering challenges or uncertainty have an accessible access to an approachable, credible form of support, which can prevent small issues from escalating into reasons for withdrawal.

Taken together, these studies suggest that MentorPRO is a theoretically-informed, practically-applicable approach to improving the determinants of student persistence. In this study, we explore the potential financial returns that MentorPRO generates for colleges and universities (see Appendix A for ROI Calculation Framework).

ROI Scenario Analysis

Table 1 presents the outcomes of the ROI analysis under three retention improvement scenarios: a 2.5 percentage-point increase in first-year retention (a conservative scenario), a 5.0 percentage-point increase (moderate scenario), and a 10.0 percentage-point increase (high-impact scenario). These increments are consistent with the range of effects observed in empirical studies; for instance, a 5 percentage-point boost corresponds roughly to the increase one might expect if students average a handful of meaningful interactions with their mentors (recalling that ~5 mentor messages was associated with a 13–14% relative increase in retention likelihood in the UMass Boston data). A 10-point increase, while ambitious, is not unheard of for intensive mentoring/coaching programs (Bettinger & Baker, 2014), and serves as an upper bound for our analysis. The middle scenario of 5 points could be considered a realistic target beyond the pilot year, as MentorPRO has become increasingly well-implemented and engagement is actively promoted. We assume an initial cohort of 1,500 first-year students with 80% in-state and 20% out-of-state, as described above. Additional students retained are rounded to the nearest whole student for presentation purposes. All monetary values are in U.S. dollars and pertain to a single academic year.

Although the ROI calculations presented here do not explicitly account for the costs associated with hiring peer mentors, this approach aligns with the financial structure of many institutions,

including UMass Boston, which typically already allocate funds to employ peer mentors irrespective of MentorPRO implementation. MentorPRO thus primarily enhances the effectiveness, scale, and impact of an existing investment by providing structured, scalable support and communication channels, rather than introducing entirely new staffing costs. MentorPRO's features, including its engagement tools, dashboards and data processing, have enabled programs increase the ratio of mentees to mentors, providing additional cost savings. Consequently, the substantial positive ROI demonstrated in this analysis represents incremental value—capturing additional tuition revenue at minimal extra investment beyond the modest annual platform and implementation fee.

Table 1. *Projected Annual Financial Impact of MentorPRO under Varying First-Year Retention Rate Improvements (Cohort = 1,500 students; in-state tuition = $15,000; out-of-state tuition = $36,000; program cost = $54,000/year).*

Retention Rate Increase	Additional Students Retained	Additional Tuition Revenue	Net Revenue (after $54k cost)	ROI (Net as % of Cost)
+2.5 percentage points	~38 students	$720,000	$666,000	1233%
+5.0 percentage points	75 students	$1,440,000	$1,386,000	2567%
+10.0 percentage points	150 students	$2,880,000	$2,826,000	5233%

As shown in Table 1, even a very modest improvement in retention yields a striking financial return. A 2.5-point increase (for example, raising first-year retention from 72% to 74.5%) means retaining roughly 38 additional students out of the 1,500-student cohort. These students contribute an estimated $720,000 in tuition revenue in the next year. After subtracting the $54,000 cost of MentorPRO, the net revenue gain to the university is about $666,000. In ROI terms, this net gain is **1,233% of the cost** – in other words, over **12 times** the investment. Put differently, every $1 spent on MentorPRO in this scenario yields about $13.33 in returned net tuition revenue.

In the moderate scenario of a 5 percentage-point retention increase, the benefits scale roughly linearly. Retaining an extra 75 students generates an additional $1.44 million in tuition, for a net gain of $1.386 million after costs. This equates to an ROI of approximately **2,567%**, or about 26.5 times the cost. Finally, the high-impact scenario of a 10-point retention boost (say, from 72% to 82% first-year retention) produces truly exceptional returns: on the order of $2.88 million in added tuition from 150 saved students, netting $2.826 million after cost. The ROI in this case

is **5,233%** – meaning the program returns over 50 times its cost in net revenue. Few investments, either in education or elsewhere, can boast this magnitude of return.

It is important to note that these calculations **only** account for the immediate next-year tuition revenue from retained students. We have deliberately not extended the horizon to include revenue from years beyond the sophomore year, in order to present a conservative, first-order estimate. In reality, of course, retaining a student into the second year greatly increases the likelihood that the student will continue to subsequent years. The **lifetime value** of a retained student (through graduation) can thus be a multiple of the one-year value used here. For example, if even a fraction of those 38 additionally retained students in the conservative scenario persist through their senior year, the university would collect perhaps 3–4 years of tuition from them rather than just one. The net present value of such long-term retention gains would amplify the ROI further. Our one-year analysis can be thought of as capturing the *minimum* financial upside of MentorPRO – the floor, not the ceiling. We revisit the multi-year implications in the Discussion.

Another aspect to clarify is that the above revenue figures are based on **gross tuition**. UMass Boston, like many public universities, provides financial aid and tuition discounts, so the *net* tuition revenue per student is somewhat lower than the sticker values ($15k in-state, $36k out-of-state) used in Table 1. If we were to use the average net tuition (approximately $17k per student at UMass Boston (ROIFINAL.NRM1.docx)), the absolute revenue gains would be somewhat lower; however, the ROI percentages would remain extremely high because both the benefit and cost would scale down proportionally. Even under very conservative financial assumptions (e.g., using net tuition and including additional modest costs), the ROI stays well above 1,000% in all scenarios, reaffirming the fundamental conclusion that MentorPRO pays for itself many times over in retained tuition.

Discussion

The results of our ROI analysis make a compelling economic case for investing in the MentorPRO peer mentoring platform. In pure financial terms, MentorPRO can be viewed as a **high-yield investment** for the university. An outlay of $54,000 per year yields net returns ranging from about $666,000 to $2.8 million in our scenarios – a striking reward for a relatively small expenditure. To put the conservative scenario in perspective, the $666k net gain from a 2.5-point retention increase is equivalent to the tuition of 44 in-state students or 18 out-of-state students. This far exceeds the cost of the program, effectively allowing the university to **recapture revenue** that would have been lost to attrition. Notably, these figures mirror real-world data: our model's ~5 point improvement scenario (100 extra students retained) and $1.4M revenue gain aligns with observed patterns in which a few percentage points of retention translate to millions in revenue. Indeed, using institutional data, we estimated ROI figures on the order of 3000–5000%, consistent with Table 1, which indicates that MentorPRO returns **$30–$50 for every $1 invested**. Such ratios are exceedingly rare for educational programs. The underlying reason is that the cost of intervention is low relative to the tuition at risk. The economic value of preventing a single dropout (tens of thousands of dollars in tuition) is so large that even an intervention with modest efficacy can generate an impressive ROI.

From a budgetary standpoint, the cost of MentorPRO is relatively small in the context of university expenditures. $54,000 constitutes a tiny fraction of what a university like UMass Boston spends annually on recruitment, student services, or instruction. For example, losing just 50 students to attrition (as in our smallest scenario) would forfeit roughly $850,000 in gross tuition – an amount that could fund dozens of peer mentors or multiple student support initiatives./ In contrast, MentorPRO requires only a small fraction of that amount to potentially **save** those 50 students. In essence, the program is **self-financing**: the additional tuition it brings in can cover its cost many times over. This creates a virtuous cycle wherein improving student outcomes (higher retention) directly feeds back into increased revenue that can be reinvested in student success. For public universities operating under tight fiscal constraints and often subject to performance-based funding formulas (which reward higher retention and graduation rates), this alignment of financial and educational incentives is particularly attractive.

It is also instructive to consider the broader economic and societal implications of improved retention. On an individual level, each student retained is a life potentially transformed – a step closer to earning a degree that dramatically increases their lifetime earnings and opportunities. On an institutional level, higher retention enhances reputation and rankings (as retention and graduation rates are key performance indicators), which can further improve enrollment and funding prospects. And on a public level, more college graduates mean a more educated workforce and greater economic contributions. Schneider (2010) observed that when more students graduate, they not only earn more but also **pay more taxes and repay loans**, thereby strengthening the public tax. A report by the Educational Policy Institute noted that the lost revenue to colleges from dropouts is mirrored by "untold billions" in lost productivity and social costs borne by communities and taxpayers. In light of these facts, the ROI of MentorPRO can be thought of not just in institutional dollars, but in social returns. Each percentage point increase in retention is a win-win: the student benefits, the institution benefits, and society benefits from a better-educated populace.

Our analysis has sevearl limitations and considerations. First, we assumed that retention improvements observed in correlational studies (e.g., higher messaging leading to higher retention) can be translated into causal effects attributable to MentorPRO. In practice, realizing a 5 or 10 percentage-point jump in retention may require concerted efforts to ensure high engagement on the platform (e.g., effective mentor training, integration with other support services, and perhaps nudges to students to use the app). If engagement is low, the retention gains (and hence ROI) might be closer to the lower end of our scenarios (~2.5 points or even less). That said, even a 1% improvement would still cover the program cost with ease. Second, we did not factor in potential *additional costs* such as scaling up mentor compensation if the program expands. In many cases, however, peer mentors are already in place (as resident assistants, orientation leaders, etc.), and MentorPRO primarily enhances their reach and efficiency Moreover, any marginal increase in mentor staffing would be a minor expense compared to the revenue gains. Third, we focused on tuition revenue and did not explicitly include state subsidy or funding implications. For public institutions, retaining students can also mean securing state appropriation dollars tied to enrollment or performance metrics. Including those could further boost the calculated ROI, but data on such subsidies vary by state and were beyond our scope. By using tuition alone, we keep the analysis generalizable and conservative.

It is worth highlighting that MentorPRO's impact extends beyond financial metrics. The platform's documented effects on GPA, sense of belonging, and student well-being are also valuable outcomes in their own right, even if they did not translate into immediate revenue.

This ROI calculus strengthens the case for scaling up peer mentoring as a core component of first-year experience programs. From a strategic standpoint, university leaders seeking cost-effective ways to boost retention should view MentorPRO as not just a student support tool, but as a revenue-preserving (indeed, revenue-enhancing) asset. Our findings align with a growing body of literature in the economics of education that emphasizes *student success initiatives as sound financial strategy* (Schreiner et al., 2012; Kalsbeek, 2013). Too often, expenditures on "student services" are seen purely as costs; ROI analyses like ours reframe them as investments with quantifiable payoffs.

Future research could extend this work by tracking actual cohorts over multiple years to capture the full lifetime value of retention through graduation, and by examining the ROI of MentorPRO in different institutional contexts (e.g., community colleges, private colleges) where tuition structures and baseline retention rates differ. Additionally, as MentorPRO and similar platforms accumulate more usage data, it may be possible to refine our understanding of which components drive the most retention benefit (e.g., frequency of mentor contact vs. quality of interaction) and thus optimize the allocation of resources within the program for even greater efficacy.

Ultimately, the decision to adopt an intervention often hinges on both evidence of effectiveness and considerations of cost. MentorPRO now has demonstrated evidence of effectiveness from multiple studies (Hersh, 2025; Werntz et al., 2023, 2025) showing positive impacts on student outcomes and retention.

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Appendix

ROI Calculation Framework

We define the program's return on investment in terms of **tuition revenue retained** as a direct result of improved first-year student retention, relative to the cost of implementing MentorPRO. The ROI analysis is structured around a one-year time horizon for benefits: specifically, we calculate the additional tuition collected in the sophomore year from students who, absent MentorPRO, would have dropped out after the freshman year but who are retained due to the program. This one-year benefit is a conservative proxy for the program's impact; in reality, retaining a student for the second year often means they continue to enroll in subsequent years, potentially yielding multiple years of tuition revenue. By focusing on the immediate next-year tuition gain, we ensure our ROI estimates are grounded in near-term, realized returns directly attributable to first-year mentoring.

For an entering cohort of size **N** (the number of first-year students), let **Δp** represent the improvement in the first-year retention rate (i.e., the percentage-point increase in the proportion of students who continue from freshman to sophomore year as a result of MentorPRO). For example, if the baseline retention rate is 75%, then an increase of $\Delta p = 0.05$ (equivalent to 5 percentage points) would raise the retention rate to 80%.

The number of **additional students retained**, due to MentorPRO's implementation, is calculated as: **Additional Students Retained = N × Δp**

To estimate the **additional tuition revenue**, we account for the mix of in-state and out-of-state students. Let **α** represent the proportion of in-state students (and 1 − α the proportion of out-of-state students). Let **Tin** and **Tout** represent the annual tuition for in-state and out-of-state students, respectively. The average tuition per student can be computed as:

Average Tuition = (α × Tin) + ((1 − α) × Tout)

Thus, the total additional tuition revenue generated from the improved retention rate is:

Additional Tuition Revenue = Additional Students Retained × Average Tuition

In this analysis, we use the following values:

- N = 1,500 students
- α = 0.80 (80% in-state, 20% out-of-state)
- Tin = $15,000
- Tout = $36,000

This gives an average tuition of:

Average Tuition = (0.80 × 15,000) + (0.20 × 36,000) = 12,000 + 7,200 = $19,200

With these inputs, we estimate the financial impact of varying levels of retention improvement and compare that to the annual program cost.

Let **C** be the total annual program cost (in this case, $36 per student × 1,500 students = $54,000). Then: **Net Revenue = Additional Tuition Revenue – C** and **Return on Investment (ROI) = (Net Revenue ÷ C) × 100%**

An ROI of 100% would indicate that the net gain equals the cost (i.e., benefits are double the cost), while an ROI of 2000% would indicate that net benefits are 20 times the cost. In the context of higher education interventions, an ROI in the thousands of percent is extraordinarily high, but as we will see, MentorPRO can achieve this due to the high value of retained tuition relative to the program's modest cost.

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