Evaluating the Effectiveness of Academic Coaching for College Students

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Abstract

The effectiveness of academic coaching at a mid-sized public university was evaluated for the spring 2020 semester by examining the change in academic performance and retention to the fall 2020 semester. Coaching effectiveness was evaluated across three different groups of undergraduate students. Two of the groups were academic recovery programs and one was comprised of students in good standing. Student data from the Office of Institutional Research (OIR) was analyzed for coached students and non-coached students using an ex-post-facto, quasi-experimental design. Results indicated that coached students in good academic standing had a significant increase in cumulative GPA of 0.12 from pre to post semester. For academically at-risk students in the two academic recovery programs, Freshman Grade Point Recovery and Summit, the results showed a significant increase of 0.55 and 0.54 in

cumulative GPA respectively, and a significant increase of 0.42 and 0.89 in term GPA compared to matched non-coached groups respectively. Retention rates to the fall 2020 semester were higher for all coached students compared to matched non-coached groups.

Keywords: Academic coaching, program evaluation, learning assistance, academic performance, student retention

Evaluating the Effectiveness of Academic Coaching for College Students

College student retention, persistence, and completion have long been the dominant lenses through which student success has been analyzed and evaluated (Mayhew et al., 2016; Tandberg & Hillman, 2014; Tinto, 2006; Veenstra, 2009). Persistence rate is defined as the percentage of first-year students who return to college in their second year to continue their education at *any* institution, whereas retention rate is the percentage of first-year students who return specifically to the same institution (National Student Clearinghouse Research Center [NSCRC], 2021). According to NSCRC (2021), the overall persistence rate across all institutions in the United States dropped by two percentage points, from 75.9% in the fall 2018 cohort to 73.9% in the fall 2019 cohort, while the retention rate dropped by 0.8%, from 67.0% to 66.2% in the same time frame.

Retention and persistence rates had been stable for four years prior, so this trend is disconcerting, given that the baseline numbers were already unsatisfactory. From National Center for Education Statistics (NCES; 2021) data, the average percentage of first-year four-year degree students from 2014 to 2019 cohorts that do not return to their institution is about 19%. For part-time students, this percentage for the same set of cohorts drops further to 55.5% (NCES, 2021).

The data referenced above indicate that retention and persistence are major challenges for institutions in the nation and emphasize the need for heightened focus on interventions grounded in student retention and persistence. Academic coaching emerged as an intervention in 2000 for improving student retention and success (Bettinger & Baker, 2014). In the last decade, several institutions have started academic coaching programs using different approaches to implementation (Robinson, 2015). Based on their review of academic coaching programs across 101 institutions in the nation, Robinson (2015) proposed a definition of academic coaching, which involves an interpersonal relationship between the student and coach where the coach helps the student to become aware of their values, interests, purpose, and passion, and then helps develop those qualities in the student. For the purpose of this research and as academic coaching is viewed by the current institution, academic coaching is defined as an interpersonal relationship between a

coach and a student which helps the student to: (a) improve their awareness of purpose, strengths, values, and interests, (b) enhance self-regulation skills, (c) build learning strategies for college-level academics, and (d) engage in the university community.

Despite the proliferation of academic coaching programs, there is a dearth of empirical studies evaluating the effectiveness of these programs. This article reviews the literature on academic coaching as an intervention as compared to other interventions used by institutions, and the literature on the limited set of empirical studies available on this topic. The academic coaching program at Middletown State University (MSU), a mid-sized, suburban, northeastern, public university, is also described. The academic coaching program at MSU is assessed based on student learning outcomes and student retention, and the specific program evaluation questions are presented. The results of the program evaluation are documented with the discussion and conclusion subsequently. Since this was a single-semester evaluation that spanned the start of the COVID-19 pandemic, the effects of the pandemic are also discussed.

Literature Review

Bettinger and Baker (2014) identify three major barriers to college student success and retention: lack of access to appropriate information (Bettinger et al., 2012; Deil-Amen & Rosenbaum, 2003; Goldrick-Rab, 2010), students' academic preparation and

performance (Adelman, 2006; Bettinger & Long, 2009; Calcagno & Long, 2008), and lack of integration into the university community (Bloom & Sommo, 2005; Tinto, 2006). Interventions, such as learning communities, student success courses, academic advising, and summer bridge programs, seek to increase retention and persistence (Bettinger & Baker, 2014). Academic coaching, as a postsecondary student support initiative, dates back twenty years, to the advent of InsideTrack, a third-party provider that partners with college and universities to provide coaching to incoming students (Bettinger & Baker, 2014). InsideTrack was rolled out in the 2000-2001 school year and has coached more than 2.6 million students nationally (InsideTrack, 2021). Once a student is matched with an InsideTrack coach, the coach provides support for prioritization, goal setting, planning, and organization, for academic and non-academic activities (Bettinger & Baker, 2014).

At first glance, the academic coaching model seems closely aligned with the broader concept of college mentorship, with a mentor being defined as someone who helps students to address the aforementioned barriers by suggesting learning strategies, building relevant non-academic skills, like time management and goal setting, and referring them to additional college resources (Bettinger & Baker, 2014). However, mentoring, whether faculty or peer mentoring, is considered more informal and broader compared to the formal processes and specific areas covered by academic

coaching (Robinson, 2015). Mentors rely on their personal experience and may use less in-depth knowledge of topics to guide students, whereas coaches are trained to respond to specific student challenges and provide in-depth strategies to guide them (Robinson, 2015). Another support mechanism provided in higher education is academic advising. Academic advisors typically guide students with overall degree planning, major selection, course selection and registration by semester, adherence to institutional policies/procedures, and referrals to other resources (McClellan & Moser, 2011; Robinson 2015). They generally have high student caseloads and meet with students once or twice in a semester unless there are special circumstances. Academic advisors do not spend as much one-on-one time with students as coaches, so they lack the depth of relationship, and they are not trained to help students with self-regulation and study skills for better learning outcomes (Robinson, 2015). In some institutions, these functions may overlap or be part of the same department.

Other support mechanisms in higher education that may be confused with academic coaching are counseling and tutoring. Counselors at colleges are licensed professionals who help students with their mental health, wellbeing, education, and career goals (Kaplan et al., 2014; Robinson, 2015). Academic coaching "does not hold the stigma of therapy, yet it provides comprehensive assessment of the whole student experience which includes

environmental, psychological, and skills-based concerns" (Robinson, 2015, p. 116). This indicates some overlap in services, but coaching provides referrals to counseling when it is clear that the problems a student is facing are based on mental health challenges. Tutoring, as an academic support, is purely based on subject knowledge and specific content-oriented study skills (Robinson, 2015). Tutors help students with challenges in specific courses and serve as role models because they are generally senior students who have already taken those courses (Robinson, 2015). Unlike tutoring, academic coaching provides foundational skills that span all coursework and is not content-specific.

The effectiveness of academic coaching programs has been evaluated in a handful of empirical studies (Alzen et al., 2021; Bettinger & Baker, 2014; Capstick et al., 2019; Lehan et al., 2018; Robinson & Gahagan, 2010; Sepulveda et al., 2019), which are examined next. The largest study (N=13,555) was done using InsideTrack data across 2- and 4-year programs, public and private not-for-profit, and proprietary colleges (Bettinger & Baker, 2014). In this study, students were randomly assigned to a coaching group (n=8,049) or a control group (n=5,506). The researchers found that the coached students had 5% and 12% better retention than students who had not received coaching, after six months and one year of the coaching semester, respectively. One limitation of this study was that the students were older, nontraditional students, with an

average age of 31. Also, InsideTrack employs full-time professional coaches while most institutions use internal staff for academic coaching. For example, some institutions may use part-time undergraduate or graduate students, while others may hire full-time staff members.

Lehan et al. (2018) explored the effects of academic coaching on student retention for graduate students in an online degree program. They selected 160 students who had received coaching at least once in a 3-month period and built a matched sample for comparison from students who had not received coaching after controlling for demographic and academic variables. Their results showed that coached students were 2.66 times more likely to stay in college than students who did not attend coaching. Surprisingly, in a later study, Lehan et al. (2020) found that this retention advantage did not translate to degree completion unless the students continued to have coaching contact throughout their program. Since this study was conducted on graduate students in online degree programs, its findings cannot be generalized to undergraduate, face-to-face degree programs.

In a pilot study, Sepulveda et al. (2019) investigated the effects of academic coaching on retention and cumulative GPA at the end of the first year at a mid-sized, western, public university. Their findings showed no differences between 46 participants who experienced brief academic coaching and 45 participants who did

not undergo coaching on measures of retention and GPA. Although the results were not statistically significant, potentially due to inadequate sample size, the mean cumulative GPAs were higher for the experimental group compared to the control group. From another academic coaching program for the academic year of 2007-2008 at the University of South Carolina, Robinson and Gahagan (2010) report that 92% of the coached students (N=182) improved their GPA. The details on this study were limited, so no comparisons can be made.

In recent years, there have been two studies that are like the work highlighted in the present study (Alzen et al., 2021; Capstick et al., 2019). The academic coaching programs at both institutions invite students who are academically at risk, with cumulative GPAs below 2.0, to participate in coaching. Both of these studies compared the academic performance and retention of coached students to a group of students who had not attended coaching. Capstick et al. (2019) reported an average of 0.5 increase in semester GPA for fulltime coached students compared to the non-coached students in the intervention semester and an increase in retention to the following semester by 18.1%. Alzen et al. (2021) reported an average increase of 0.3 in semester GPA for coaching participants (i.e., at least one session attended) and an average increase of 0.5 in coaching completers (i.e., at least three coaching sessions attended) over coaching non-participants. Retention to the following semester

was higher for coaching participants by 10%, and for coaching completers by 15%, over coaching non-participants. All of the above results for these two studies were statistically significant. Capstick et al. (2019) used a non-equivalent groups design while Alzen et al. (2021) used a quasi-experimental design. The current research is like the Alzen et al. study in that it uses a quasi-experimental design and builds matched comparison sets from the non-coached student population based on certain criteria. In addition to the students who have cumulative GPAs of less than 2.0, it also includes data for students with higher GPAs who attended coaching and compares them to non-coached students.

Academic Coaching at Middletown State University

Middletown State University (MSU) is a mid-sized, suburban, northeastern, public university. In the 2019-2020 academic year, there were 10,881 total students, with 61% female, 75% full-time, 25% students of color, and 87% undergraduate students.

Program Description

The Academic Achievement Center (AAC) at MSU, whose mission is to empower students to access, discover, and achieve, houses four departments: Academic Advising, for first-semester freshmen and special populations, Learning Assistance, Student Accessibility Services, and Testing Services. Learning Assistance includes both tutoring and academic coaching. While tutoring focuses on what to learn, academic coaching focuses on how to

learn. Academic coaches work with students to develop themselves as learners so that they can be successful in any course, any program, any semester, focusing particularly on the following skills: goal-setting and motivation, time and task management, learning strategies, organization and prioritization, professional academic communication, research and library resource support, stress management, test preparation, and test anxiety management, and self-advocacy in the utilization of other university services. In response to the shift to online education, necessitated by the COVID-19 pandemic, academic coaches now also discuss how to be successful online learners. Academic coaching is a free service, accessible to any MSU undergraduate or graduate student. The academic coaching staff is comprised of one coordinator and eight graduate assistants who are enrolled in a graduate program at MSU, typically in a human services department. They spend an average of two academic years in their role. At the start of their tenure, they undergo extensive training in both the procedures and policies of the AAC at large, as well as those of their specific area within the AAC. Their initial training also includes introductions to pivotal campus partners, such as the Counseling Center, Registrar's Office, and Career Services, to ensure a firm understanding of the campus partnerships they might find most beneficial for referrals to students.

Students schedule academic coaching appointments online, through Accudemia (2020). They have the option of scheduling either a 30- or 60-minute appointment with a coach. Prior to the first appointment, they complete an intake form to indicate their reasons for seeking coaching and how they heard about the service. The information gathered through the intake form serves as the foundation of the first meeting, to identify and discuss the student's unique needs. Also, in the first meeting, academic coaches will review a set of academic coaching expectations, work with the student to identify their academic goals, establish goals for the coaching relationship, and schedule a follow-up meeting. A successful academic coaching partnership requires the cultivation of a relationship where the student can develop trust and confidence in their coach, and ultimately themselves as college-level learners. This partnership aims to develop a student as a self-advocate who is accountable to themselves and their learning journey. To maximize this development, weekly or biweekly meetings are recommended, though no formal schedule is mandated.

MSU academic coaching also offers coaching for two special populations of students – students in the Freshman Grade Point Recovery (FGPR) and Summit programs. A student in the FGPR program is a first-year student (0-23 earned credits) who is on academic probation, which is defined as having a cumulative GPA below 2.00. A student in the Summit program is a readmitted

student or a student with a GPA below 2.0 saved by the Academic Standards Committee appeal process. The goal of these mandatory academic recovery programs is to provide an academic support system for these students to enable them to achieve good academic standing, defined as a cumulative GPA of 2.00 or higher, and re-enter the university with the support that reintroduces them to academic standing and policies. FGPR and Summit support include orientation sessions, group advising sessions, and individual appointments with both an assigned academic advisor and academic coach over the course of the semester. This is in an effort to provide students an opportunity to re-evaluate the circumstances by which they arrived at their current academic standing, determine how they might make different decisions should they be faced with similar obstacles again, set goals for future success, and develop a personalized set of strategies to help them achieve those goals.

In addition to providing one-to-one coaching support in this near-peer model, academic coaches deliver classroom presentations by faculty invitation and group presentations to student organizations, as requested. The presentations introduce academic coaching as a service and address topics, such as stress management, motivation and goal setting, active learning strategies, and time and task management. Academic coaching is also often included as a component of cross-departmental and cross-divisional programming, providing support to initiatives like first-year

Athletics and Recreation programming and Summer Bears bridge programming out of the division of Student Success and Diversity.

Program Evaluation

For this study, cumulative GPA and term GPA were used as measures of academic performance. Student retention was measured from the spring 2020 semester to the fall 2020 semester as continued enrollment or graduation. To state the program evaluation questions succinctly, some shorthand notations are used. The prefix "AC" is used to indicate usage of academic coaching and "non-AC" is used for non-usage of academic coaching during the spring 2020 semester. The following program evaluation questions were designed to evaluate academic coaching for the groups of FGPR, Summit, and General Population students separately: a) what is the pre-/post-semester change in cumulative GPA for AC students, b) how does the term GPA of AC students compare to a matched group of non-AC students and c) how does the retention of AC students to the following semester (i.e., fall 2020) compare to a matched group of non-AC students?

Method

The impact of academic coaching on cumulative GPA, term GPA, and retention to the following semester for Summit, FGPR, and General Population students was examined using an ex-post-facto, quasi-experimental design. This research design was chosen because effectiveness was evaluated after implementation of the AC

program using historical administrative data for analysis and because students could not be randomly assigned into AC or non-AC groups due to the voluntary nature of AC for General Population and Summit participants and mandatory AC sessions for FGPR students. Participation in the Summit and FGPR programs are for specific populations of academically at-risk students. The AC service for General Population students is advertised through new student orientation, admitted student days, faculty emails, class presentations, community and student email announcements, social media platforms, the university mobile app, and referrals from student accessibility services, the academic advising department, and other university services. Though participation in AC for FGPR, Summit, and General Population students could not be randomly assigned, comparison groups were developed by the Office of Institutional Research for each of these three populations using inverse propensity weights. The matched comparison groups of non-AC students enrolled in the spring 2020 semester were developed based on student class year (to help control for experience in college and credits earned), full-time/part-time status (to help control for credit load during the spring 2020 term), and pre-semester cumulative GPA (to help control for academic achievement prior to the spring 2020 term). Students with missing pre-term cumulative GPA and non-degree students were excluded from the analysis. In addition, all undergraduate and graduate

students are eligible to avail of the free academic coaching, however, graduate students do not utilize this service as heavily as the undergraduate students and therefore were excluded from the analysis.

Participants

Participants included FGPR, Summit, and General Population students. FGPR students are required to use academic coaching at least once so the registration hold for the next semester can be lifted. Summit students are strongly encouraged to use academic coaching but not required. All other students utilize academic coaching voluntarily. For the spring 2020 semester, there were 203 undergraduate degree-seeking students who utilized academic coaching across the FGPR, Summit, and General Population groups and who also had a pre-term cumulative GPA. The distribution of AC students across these three groups for the spring 2020 semester was: General Population (79, 38.9%), FGPR (107, 52.7%), and Summit (17, 8.4%). As is evident from these numbers, most of the AC students in the spring 2020 semester were in the combined FGPR and Summit groups and hence were considered academically at-risk (124, 61%). Undergraduate student class-year for all AC students was distributed as follows: Freshman (131, 64.5%), Sophomore (21, 10.3%), Junior (22, 10.8%), and Senior (29, 14.3%). AC students were comprised of 110 (54.2%) female and 93 (45.8%) male students. The racial and ethnic breakdown of AC participants

was: White (122, 60.1%), Black or African American (40, 19.7%), Hispanic (24, 11.8%), Two or more races (7, 3.4%), Cape Verdean (2, 2.0%), Asian (3, 1.5%), and Unknown (3, 1.5%). The average number of visits for each group were: FGPR (*M*=1.73), Summit (*M*=1.94), and General Population (*M*=3.46).

Procedure

Students met one or more times with academic coaches in 30- or 60-minute appointments. Generally, a student met with the same coach throughout a semester, but there were rare cases when a student met with multiple coaches. All appointments were made using the Accudemia system. Academic coaches had available times logged into Accudemia, so a student picked a coach based on their availability and scheduled one or more appointments. Accudemia allows for the scheduling of recurring appointments. The scheduling of an appointment sent an email to the student and the academic coach with the date and time of the appointment.

Prior to the COVID-19 pandemic, coaching appointments were held in person, in a designated academic coaching space within the Academic Achievement Center. After the start of the pandemic, the appointments were held over Zoom, utilizing Accudemia's integration with Zoom. Accudemia kept track of missed, canceled, and rescheduled appointments, and the duration of the appointments. It also stored other profile information for the

student, such as major, cumulative GPA, race/ethnicity, gender college, year, and academic standing.

Measures

The effectiveness of the AC program was analyzed separately for the FGPR, Summit, and General Population groups. First, the effectiveness of academic coaching was evaluated using a paired samples t-test to examine change in cumulative GPA pre-and post-term for AC students in the Summit, FGPR, and General Population groups. In addition, one-way ANOVAs to compare spring 2020 term GPA for AC students and matched comparison groups were conducted for the Summit, FGPR, and General Population groups. The effectiveness of the AC program was also measured by comparing student retention or graduation by the fall 2020 semester for each of the three AC groups and their comparison groups.

Results

The results of cumulative GPA, term GPA, and retention analyses are presented separately for FGPR, Summit, and General Population students.

FGPR Group

The FGPR group was comprised of 107 students, 106 of which were at freshman class status in spring 2020. FGPR students are required to use academic coaching at least once so the registration hold for the next semester can be lifted. A paired-samples t-test was conducted to determine differences in pre-term (M=1.42, SD=.47)

and post-term (*M*=1.97; *SD*=.66) cumulative GPA. Results of the test determined that post-term cumulative GPA was significantly higher than pre-term cumulative GPA (*t* (106)=-12.67, p<.001).

A one-way ANOVA was conducted to compare the effect of AC on term GPA for FGPR students and their matched comparison group. The comparison group was comprised of students who were not in the FGPR program and who did not attend an AC session. The comparison group was matched to the FGPR group using inverse propensity weighting on the following variables: student class year, full-time/part-time status, and pre-semester cumulative GPA. The one-way ANOVA revealed that there was a statistically significant difference in term GPA for the FGPR and matched comparison group (F (1,8023)=[10.83], p=.001). Students in the FGPR group earned significantly higher term GPA (*M*=2.33) in spring 2020 compared to the matched group (*M*=1.91).

Table 1

One-Way Analysis of Variance of Term GPA for AC Status (FGPR and Comparison Group)

Source	*df*	*SS*	*MS*	*F*	*p*
Between Groups	1	18.91	18.91	10.83	.001
Within groups	8,023	14,007.42	1.75		
Total	8,024	14,026.32			

In addition, retention rates (percentage of students still enrolled or graduated by the following semester) were calculated for the FGPR and matched groups. Overall, 74% of FGPR students retained or graduated in to fall of 2020 compared to 70% of the non-AC

comparison group despite starting the semester with a similar mean cumulative GPA.

Table 2

Retention for FGPR & Comparison Group students by class year spring 2020 to fall 2020

Class Year spring 2020	Total N		Mean GPA Start of spring 2020		Graduated by fall 2020		Still Enrolled in fall 2020		% Retained or graduated	
	AC	Non-AC	AC	Non-AC	AC	Non-AC	AC	Non-AC	AC	Non-AC
Freshman	106	7892	1.42	1.30	0	0	78	5513	74%	70%
Sophomore	1	74	1.84	1.69	0	0	1	52	100%	70%
Total	**107**	**7966**	**1.43**	**1.30**	**0**	**0**	**79**	**5565**	**74%**	**70%**

Note. FGPR is for freshman students who are not in good standing. These students may have progressed by a semester to be Sophomores, hence the empty Junior and Senior rows.

Summit Group

The Summit group was comprised of 17 students distributed across all class levels. Summit students are encouraged to use academic coaching, but it is not required. A paired-samples t-test was conducted to determine differences in pre-term (M=1.33, SD=.48) and post-term (M=1.87, SD=.43) cumulative GPA. Results of the test determined that post-term cumulative GPA was significantly higher than pre-term cumulative GPA (t (16)=-6.10, p<.001).

A one-way ANOVA was conducted to compare the effect of AC on term GPA for Summit students and their matched comparison group. The comparison group was comprised of students who were not in the Summit program and who did not attend an AC session. The comparison group was matched to the Summit group using

inverse propensity weighting on the following variables: student class year, full-time/part-time status, and pre-semester cumulative GPA. The one-way ANOVA revealed that there was a statistically significant difference in term GPA for the Summit and matched comparison group (F (1, 8028)=[7.22], p=.007). Students in the Summit group earned significantly higher term GPA (*M*=2.89) in spring 2020 compared to the matched group (*M*=2.00).

Table 3

One-Way Analysis of Variance of Term GPA for AC Status (Summit and Comparison Group)

Source	*df*	*SS*	*MS*	*F*	*p*
Between Groups	1	13.44	13.44	10.83	.007
Within groups	8,028	14,941.24	1.86		
Total	8,029	14,954.68			

In addition, retention rates (percentage of students still enrolled or graduated by the following semester) were calculated for the Summit and matched groups. Overall, 82% of Summit students retained or graduated by the fall 2020 compared to 68% of the non-AC comparison group despite starting the semester with similar mean cumulative GPA.

Table 4

Retention for Summit & Comparison Group students by class year spring 2020 to fall 2020

Class Year spring 2020	**Total N**		**Mean GPA Start of spring 2020**		**Graduated by fall 2020**		**Still Enrolled in fall 2020**		**% Retained or graduated**	
	AC	**Non-AC**	**AC**	**Non-AC**	**AC**	**Non-AC**	**AC**	**Non-AC**	**AC**	**Non-AC**
Freshman	4	1896	.68	1.35	0	0	4	1279	100%	67%
Sophomore	2	948	1.26	1.71	0	0	2	658	100%	69%
Junior	6	2844	1.37	1.65	0	0	4	1954	67%	69%
Senior	5	2370	1.80	1.83	0	261	4	1303	80%	66%
Total	**17**	**8058**	**1.32**	**1.64**	**0**	**261**	**14**	**5194**	**82%**	**68%**

General Population

The General Population AC group was comprised of 79 students distributed across all class levels. A paired-samples t-test was conducted to determine differences in pre-term (*M*=3.00, *SD*=.62) and post-term (*M*=3.12, *SD*=.52) cumulative GPA. Results of the test determined that post-term cumulative GPA was significantly higher than pre-term cumulative GPA (*t* (78)=-4.10, p<.001).

A one-way ANOVA was conducted to compare the effect of AC on term GPA for General Population students and their matched comparison group. The comparison group was comprised of students who did not attend an AC session in spring 2020. The comparison group was matched to the General Population AC group using inverse propensity weighting on the following variables: student class year, full-time/part-time status, and pre-semester cumulative GPA. The one-way ANOVA revealed that there was no statistically significant difference in term GPA for the General Population and matched comparison group (F (1,8294)=[.180], p=.671). Students in the General Population group earned similar term GPA (*M*=3.15) in spring 2020 compared to the matched group (*M*=3.10).

Table 5

One-Way Analysis of Variance of Term GPA for AC Status (General Population and Comparison Group)

Source	*df*	*SS*	*MS*	*F*	*p*
Between Groups	1	.18	.18	.18	.671
Within groups	8,294	8,043.50	.97		
Total	8,295	8,043.67			

In addition, retention rates (percentage of students still enrolled or graduated by the following semester) were calculated for the General Population and matched groups. Overall, 95% of General Population students utilizing AC retained or graduated by fall 2020 compared to 89% of the non-AC comparison group despite starting the semester with similar mean cumulative GPA.

Table 6

Retention for General Population & Comparison Group students by class year spring 2020 to fall 2020

Class Year spring 2020	Total N		Mean GPA Start of spring 2020		Graduated by fall 2020		Still Enrolled in fall 2020		% Retained or graduated	
	AC	Non-AC	AC	Non-AC	AC	Non-AC	AC	Non-AC	AC	Non-AC
Freshman	21	2244	3.22	3.22	0	0	19	1967	90%	88%
Sophomore	18	1800	2.77	2.80	0	0	18	1584	100%	88%
Junior	16	1636	2.91	3.00	0	1	16	1512	100%	92%
Senior	24	2564	3.04	3.05	10	1143	12	1147	92%	89%
Total	**79**	**8244**	**3.00**	**3.03**	**10**	**1144**	**65**	**6210**	**95%**	**89%**

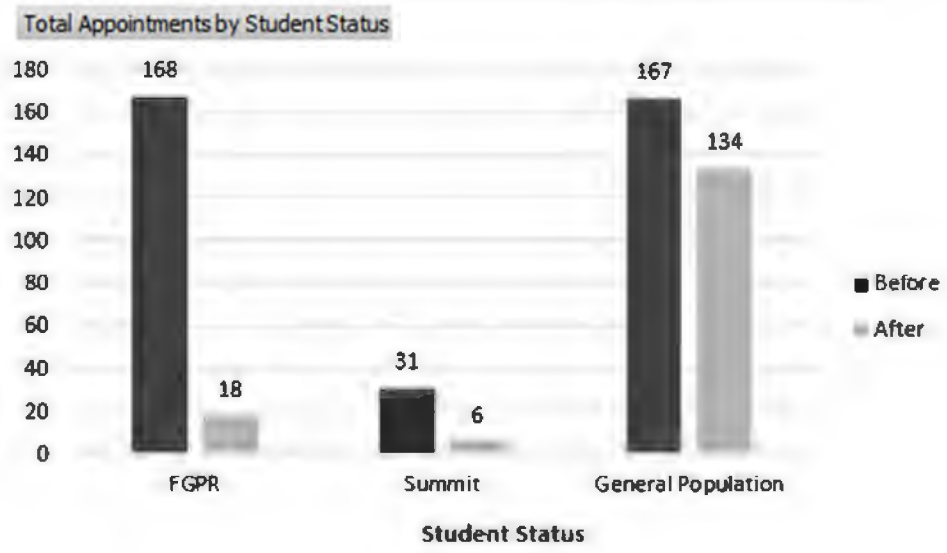
Pandemic Impact

The spring 2020 semester at MSU started on January 22nd, 2020 and ended on May 12th, 2020. Spring break started on March 7th and due to the pandemic, students did not return to campus after spring break. Academic coaching resumed services online and appointments over Zoom started on March 25th, 2020. Essentially, there was a loss of 7 working days. There were 32 working days recorded before the pandemic started and 34 working days afterward. Figure 1 shows the drop in the number of appointments after the start of the pandemic. The bigger drop in FGPR student

appointments may be due to the requirement of having one appointment to lift their registration hold, which may have been satisfied earlier in the semester.

Figure 1

Chart of appointments before and after the start of the pandemic



Discussion

Retention, persistence, and completion are major challenges for higher education institutions in the nation. The major barriers to academic success and retention for students are lack of access to appropriate information, students' academic preparation and performance, and lack of integration into the university community (Bettinger & Baker, 2014). In the past, institutions have implemented various interventions to address these barriers, such as academic advising, faculty/peer mentoring, counseling, and tutoring (Robinson, 2015). Academic coaching is another such intervention

that addresses all the aforesaid barriers to student success and retention (Robinson, 2015). Academic coaching programs vary in their definition and implementation of coaching. At MSU, academic coaching provides various services geared towards student success and retention for academically at-risk students and students in good standing.

In the current work, the academic coaching program at MSU was evaluated for the spring 2020 semester using ex-post-facto, quasi-experimental design. The program was evaluated for FGPR, Summit, and General Population student groups separately by examining the cumulative GPA changes, term GPA comparisons to matched groups, and student retention comparisons with matched groups. Results indicated that students in academic recovery programs, FGPR and Summit, showed a significant increase of 0.55 and 0.54 in cumulative GPA respectively. This is consistent with the pilot study by Sepulveda et al. (2019), which showed an increase in the mean GPA for the coached students compared to the non-coached students, although this increase was not statistically significant and may be due to the low participation numbers. For the term GPAs, the FGPR and Summit AC students reported a significant increase of 0.42 and 0.89 compared to matched non-AC students respectively. These results are consistent with studies by Alzen et al. (2021) and Capstick et al. (2019), who reported similar

term GPA gains for academically at-risk students with cumulative GPAs below 2.0.

Since the academic coaching service at MSU also works with students in good academic standing, their performance was examined, and the results showed a significant cumulative GPA increase of 0.12 for AC students. However, the term GPA for these AC students (M = 3.15) compared to a matched group of non-AC students (M = 3.10) was not significantly different (p=0.671). This may be because all AC students were examined together in one group regardless of the number of meetings they attended, and the majority of these students attended only one meeting. In the future, multiple groups can be developed for analysis depending on the number of coaching appointments attended, similar to the approach used by Alzen et al. (2021) in classifying students into Participants (i.e., 1-2 meetings attended) and Completers (i.e., 3 or more meetings attended) separately. As compared to the FGPR and Summit students, it is also possible that General Population students are less motivated for improving their academic performance because they do not have the fear of dismissal or loss of financial aid. Furthermore, the FGPR and Summit students meet with academic advising at the beginning of the semester at a minimum and possibly other times based on need, which may provide more motivation for them to improve academic performance. The above results could not be compared to prior

studies because none of them have examined the term GPA differences with matched comparison groups for students who are not academically at-risk.

In terms of student retention, the results indicate that the AC students in the spring 2020 semester had better retention in the fall 2020 semester compared to matched non-AC students for all three groups - General Population (95% over 89%), Summit (82% over 68%), and FGPR (74% over 70%). The increase in retention of coached students is consistent with findings reported by Alzen et al. (2021), Bettinger and Baker (2014), Capstick et al. (2019) and Lehan et al. (2018). The services offered by academic coaching at MSU help in improving integration with the university community by providing various referrals to other university services. Engagement is further enhanced because the academic coaches are graduate students studying at the same institution, so they can relate to the students' experiences at the institute. As Tinto (2006) has pointed out, student engagement is the biggest factor in student retention, especially in the critical first year of college. Most of the students using academic coaching at MSU were first-year students (131, 64.5%), and the engagement with academic coaches likely helped with their retention.

The program evaluation results suggest that academic coaching may be helpful in improving academic performance and student retention at MSU. It is important to note that the start of the COVID-

19 pandemic and subsequent online learning may have had an impact on academic performance and retention. As reported above, the number of students using academic coaching and the number of appointments decreased after the start of the pandemic. In the absence of the pandemic, these results may have shifted positively. The general findings for the academic coaching intervention at MSU are consistent with the conclusions of several other prior studies (Alzen et al., 2021; Bettinger & Baker, 2014; Capstick et al., 2019; Lehan et al., 2018; Robinson and Gahagan, 2010). This may be encouraging news for other institutions who are trying to implement academic coaching programs for student success and retention.

Limitations and Future Research

The current program evaluation is a single-semester, single-institution study using ex-post-facto, quasi-experimental design. There is a self-selection bias for the General Population of AC students, though FGPR and Summit students may be motivated by their desire to return to good academic standing to maintain financial aid and avoid academic dismissal. General Population AC students logged an average of 3.46 visits during the spring 2020 semester, whereas the FGPR group had an average of 1.73 visits and Summit an average of 1.94 visits. For a more robust investigation of academic coaching as an intervention, a future study could cover multiple semesters over multiple institutions with random

assignments for an experimental design. Bettinger and Baker (2014) had some success with that design using the InsideTrack data, however, InsideTrack is an external agency, and most of the higher education institutions are implementing the academic coaching service in-house (Robinson, 2015). The intent of the current study was to evaluate just the academic coaching program at MSU for one semester.

The improvement in academic performance and student retention for AC students at MSU could have been due to other factors which were not controlled, such as first-generation status, non-traditional age, financial aid support, tutoring assistance, academic advising, student accessibility services support, counseling, and external workload. Some of the prior studies have accounted for certain demographic factors (Alzen et al., 2021; Bettinger & Baker, 2014; Capstick et al., 2019; Lehan et al., 2018; Sepulveda et al., 2019), but it does not seem that they have accounted for other academic support interventions, such as tutoring, advising, counseling, and accessibility services. These services are all responsible for increasing engagement which is a key factor for student retention (Tinto, 2006). Future research can control for the above factors, especially the usage of other student support services.

Conclusion

The effectiveness of the academic coaching service at a mid-sized public university was evaluated by examining the cumulative GPA changes, term GPA comparisons to matched groups, and student retention comparisons with matched groups. The results suggest that academic coaching can improve academic performance and retention of students for both academically at-risk students and those in good academic standing. This work adds to the body of knowledge available on the effectiveness of academic coaching programs and the rich program description provides insights for colleges and universities interested in implementing such programs.

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