

Engaging Post-Pandemic Tutor Support

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Abstract

The secret to steering students to academic support who would benefit the most was elusive before the COVID-19 exodus from campus, and the challenges have only diversified since the expansion of virtual learning. As enrollments rebound in the post-pandemic world, learning centers are striving to re-engage students returning to campus and those remaining online, especially those left further behind. This article is about an academic support center that endured losses in the transition to a virtual platform but remained resilient with faculty endorsement and flexible strategies.

Keywords: tutors, engagement, student success

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Introduction

Prior to the exodus of academe from the traditional campus during the coronavirus pandemic (COVID-19), few academic support programs provided a robust presence online, aside from informational websites about in-person services, or private

providers like Smarthinking (West & Fabre, 2021; Whitford, 2022). Online tutoring would have been superfluous for many students, except for late hours and the weekend, negating any incentive for most institutions to create a virtual presence of significant scope or quality (Pierce, 2020). Colleges and universities generally had some form of walk-in learning centers that provided peer tutors and face-to-face support. Research has largely validated the efficacy of sustained in-person tutoring (Cooper, 2010; Hendriksen et al., 2005; Kostecki & Bers, 2008), but when campuses were forced to close during the pandemic, tutors found themselves relocated from brick-and-mortar facilities to learning management systems (LMS) that were hastily assembled to house them. Marcus (2022) of *The New York Times* observed, "Then came the COVID-19 pandemic, forcing almost everyone on earth online and creating a randomized trial on a planetary scale with a control group so big, it was a researcher's wildest dream" (para 3).

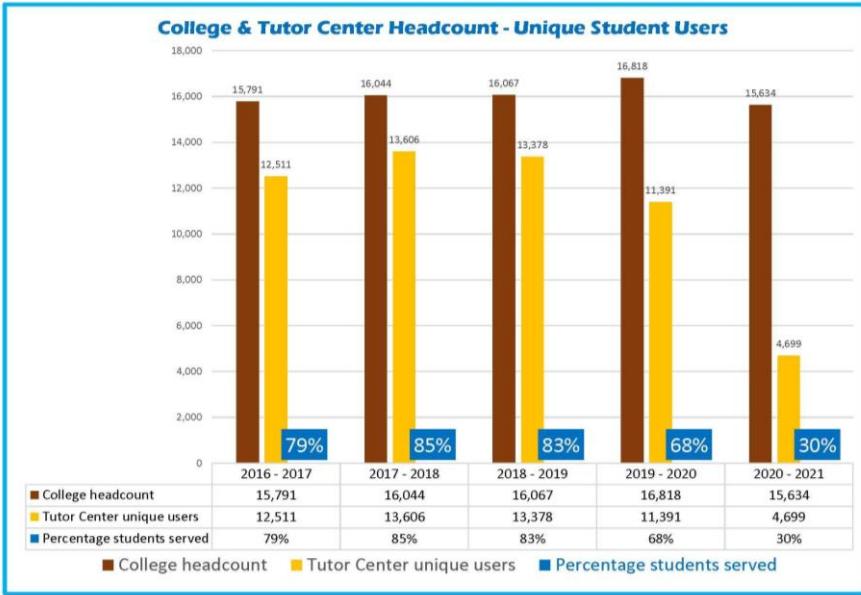
The sudden shift to a virtual interface created challenges for all facets of higher education, especially academic support and learning assistance centers. Nevertheless, the Peer Tutor Center (PTC) in California pivoted quickly to revive an idle course shell in the Canvas LMS. Support staff shifted 30 tutors online in two weeks with a structure that was built to provide the most engaging interface possible in a virtual context. The immediate challenge was to retain students who had thrived on face-to-face interaction. Most

barriers to virtual access could be surmounted with staff guidance; however, regional disparities with Wi-fi reception proved daunting. The complete migration of tutors online resulted in a significant loss of student traffic (Whitford, 2022), and many tutors and faculty did not readily take to serving online. Confronted by a host of fresh challenges, this quantitative study was designed to understand student engagement with the Peer Tutor Center (PTC) before and after the COVID-19 pandemic departure and how that engagement correlated with student success.

Until the pandemic arrived, this institution (hereafter referred to as the College) was one of the fastest growing in California. The College drew on the confluence of commerce and culture between two major metropolitan areas for sustained annual growth (California Community Colleges Chancellor's Office [CCCCO], 2021). Surging enrollment and a dominant Pell Grant distribution drove demand for Peer Tutor Center (PTC) services, the primary academic support provider at the College. Tracking systems detected that over 64% of the student headcount had visited a PTC lab annually for the last five years (Lin, 2021), as seen in Figure B1.

Figure B1

Student Headcounts College & Peer Tutor Center: Last Five Years



When the COVID-19 pandemic reached a critical point in the spring of 2020, College personnel were sent home on March 17th to work from a virtual platform. PTC staff were directed to sketch a rough portrait of what the next phase of services might resemble.

There were a number of video options available for conferencing, but since the College had a dedicated Zoom account, it was the logical vehicle for providing virtual tutor support. PTC personnel dedicated a single module in the department shell and created a menu of academic subjects. Each subject featured a rolling scroll of qualified tutor(s) for that topic, with brief biographies and photos accompanying the Zoom links. Some tutors posted engaging welcome videos to accompany their profiles. The immediate challenge students was to attract students who were accustomed to the

physical support facilities and engage those same services online (Wangrow et al., 2022). In addition, tutors had to be trained to utilize screen-sharing techniques and whiteboards in methods that supplemented the in-person experience as closely as possible. Staff trusted that the training would be beneficial, yet the outcomes were uncertain, given the unprecedented enormity of shifting all services online.

Support personnel reasoned that there had to be a strategy to sustain and encourage student engagement with PTC tutors in the virtual modality. The director worked with colleagues from Information Technology (IT) and Distance Education to ensure that there was a universal link to PTC Local Tutors, embedded in every course menu for every College student to access at will. Faculty have the option of hiding any Canvas links they desire; however, the Announcement and Dashboard options were still available for messaging everyone, and the PTC made good use of those tools for marketing services. Nevertheless, engagement plummeted. Support personnel needed insight that was specific to local students, to open pathways for interaction and eliminate factors that inhibited access to services. The PTC department director was just beginning a dissertation to conclude his doctoral program. He elected to conduct a quantitative study that could elicit data about student interactions with the PTC and analyze factors that dealt with incentives and motivation for engagement.

The secret to steering student traffic to academic support services—whether on campus or online—has been hotly debated since they were first conceived in the late 1960s, (Arendale, 2004; Christ, 1971). Friedlander (1980) evaluated trends in higher education and coined an axiom that is common to academic support services: students who need tutors the most are the least likely to use them, while students who need them the least are usually the first to request tutor support. The axiom assumes that students who use academic support services early and frequently will invariably have higher grade point averages (GPA) than the general population of students in a given institution. Rahimic (2020) analyzed College students for Institutional Research (IR) before the pandemic and this study, and IR data showed that students who used the PTC passed courses with a C-grade or better than their peers who did not use the services during the fall 2018 and spring 2019 terms, by a margin equal to, or greater than 10%. The Rahimic (2020) study did not correlate student GPAs with using or not using the PTC; however, this study analyzed that data. The pandemic-era data showed no strong correlation between high GPA students and engagement with the exclusively virtual PTC. While there was insufficient evidence prior to this study to suggest that the student traffic pattern shifted during the pandemic, there was fresh data to show that virtual engagement with PTC was more equally distributed among students with high and low GPAs. That finding

was significant since it showed that a greater percentage of lower-performing students were engaging in academic support than expected, but not at the volume that preceded the pandemic.

Methodology

Prior to the pandemic, the PTC provided comprehensive in-person support on campus that included walk-in tutor stations, dedicated study spaces, and banks of desktop computers with reliable Internet access. Student traffic to the PTC on campus was clocked at terminals using CI Track software by Card Integrators. After leaving campus, student engagement with the virtual PTC was collected by tutors and staff using Excel spreadsheets. That information was combined with the in-person data to chart the course of student usage over the span of five years, and compare that traffic with the institutional headcount. Lin (2021) collected tracking reports right up to campus closures and revealed what many suspected: the pandemic migration of academic support services cut the traffic flow of students from the previous year as shown in Figure B1. The PTC drew 11,391 students out of 16,818 the previous academic year (2019-2020) when services were in-person. Virtual services drew 4,699 out of 15,634 students (2020-2021) during the subsequent academic year. The PTC lost an annual headcount of 6,622 students.

The purpose of this quantitative study was to understand student engagement with the Peer Tutor Center (PTC) before and

after the COVID-19 pandemic departure, and how that engagement correlated with student success. This involved collecting data about students' knowledge about PTC services and the motivation or incentives to use or not use them—either in-person or on the virtual platform. The latter was defined as completion by passing courses with a C-grade or better. Research was conducted on the basis of exploring two research questions:

RQ1: What is the strength and direction of the association between variables relative to student interface with the PTC? Student engagement or non-engagement was the dichotomous dependent variable, the pivot for understanding the influence of three independent variables (knowledge, incentives, and membership) as a force of attraction or repulsion for students. A student survey was deployed to explore this behavior on SurveyMonkey (2021), and the complete survey is shown in the appendix. The instrument format included a variety of Likert Scale and open-ended responses to measure the relationship between variables. The remaining questions were devoted to demographic data. A notice was posted on the PTC Canvas Announcements, inviting all actively enrolled students at the College to participate.

RQ2: What is the strength and direction of the association between student engagement with PTC and course completion?

Management Information System (MIS) files were sifted to correlate students who participated in the survey with their success

to completion rates. The records also provided reliable data about parent education level for each survey respondent, and consequently determined first-generation status (FGS) as another variable for engagement. After securing approval from the appropriate Institutional Review Board (IRB), the author of this study conducted research, collected the data, and combed the numbers from the first question with logistic regression. A chi-square was used to analyze the success to completion data with FGS.

The College had a total headcount of 15,634 students for the 2020 – 2021 academic year (fall through summer term) with annual headcounts and PTC usage shown in Figure B1. The PTC provided full in-person services until March 2020, when the College campus was closed. Only virtual, online courses were offered at the College in the summer of 2021, and 3,983 students were taking virtual classes when the survey instrument was deployed. According to a sample size calculator (Raosoft.com, 2021), the minimum number of participants recommended for this study based on the summer headcount was 254 students, calibrated to a 5% margin of error with a 90% level of confidence at 50% distribution. The survey had 264 respondents or at least ten more than the minimum needed for a valid sample. MIS database files (OIR, 2021) indicated that among the 264 survey respondents, 69% ($n = 181$) were identified as first-generation students (FGS). Respondents could have been enrolled

in any program of study and comprised both full-time and part-time students. No actively enrolled student at the College was excluded or deterred from taking the survey.

Demographic data indicated that the sample population was remarkably consistent with College percentages for ethnicity. For example: African-American respondents comprised 3% ($n = 8$) of the sample versus institutional headcount 3.36%, ($n = 46$), Hispanic 62% ($n = 164$) versus the institution 67% ($n = 910$), and White respondents numbered 16% ($n = 41$) versus the institution 19% ($n = 260$). However, the comparisons diverged sharply with gender. Females comprised 83% ($n = 220$) of the sample, whereas the institutional percentage of female students is 66% ($n = 2,612$). The disproportionately low number of male respondents 13% ($n = 34$) versus the institution 35% ($n = 1,368$), could be explained as a unique anomaly isolated to this survey topic, the instrument, or even the summer season when surveyed. However, the low male turnout could mirror a megatrend that has been observed nationally, wherein faculty and administrators alike note a significant decline with male engagement in higher education (Kelderman, 2020). Wangrow et al. (2022) indicated that the pandemic directly exacerbated the ongoing decline of male enrollment. Table A2 illustrates the complete list of demographic characteristics for respondents to this survey.

Table A2
Demographic Characteristics of Student Survey Respondents

Variable	N	%
Gender		
Female	220	83.3
Male	34	12.9
Other	6	2.3
No Answer	4	1.5
Race/ethnicity		
African American	8	3.0
Asian	8	3.0
Hispanic	164	62.1
Latinx	20	7.6
White	41	15.5
Other	23	8.7
Student status		
Full-time	168	63.6
Part-time	96	36.4
First-Generation Status*	181/204	89/204

*Number and percentage of sample correlated with MIS files

Results

Research Question 1: What is the strength and direction of the association between variables relative to student interface with the PTC?

The majority of the 264 survey sample respondents had one or more instances of engagement with the PTC before and/or during the COVID-19 pandemic period, with 84% ($n = 222$) of the sample indicating at least one contact and 16% ($n = 42$) had no contact. Among the students who had interfaced with the PTC, 56% ($n = 147$) of the total sample made one or more visits to the virtual PTC

during the pandemic period. The survey featured an open-ended question about which services had been utilized, and the top three selections with redundancies included the following: PTC tutors ($n = 222$), PTC staff ($n = 31$), Smarthinking commercial tutor services ($n = 25$), and PTC language lab support that included ESL ($n = 8$).

Students were asked whether they would like to use PTC services, but their schedules or obstacles got in the way. At least 66% ($n = 173$) of students surveyed replied affirmatively that personal schedules or something else had some measurable effect on deterring engagement with the PTC, in-person or virtual services.

Knowledge / Access

When asked if students knew about the virtual services that the PTC offered during the COVID-19 pandemic, 89% ($n = 236$) agreed or strongly agreed that they were aware of them. Basic internet navigation was factored into the survey, and when asked if surveyed students knew how to access the new PTC virtual services in the Canvas LMS, 78% ($n = 205$) of the sample replied affirmatively. A key piece of research dealt with how students knew about this change of venue from the physical campus to the exclusively virtual environment and where they learned about it. Among students surveyed, 82% ($n = 215$) indicated that they agreed or strongly agreed that information about the PTC migration to Canvas was included in their course syllabi.

The survey queried students about whether they would be more

likely to use PTC local tutors and staff support if they were available for more hours, including evenings and weekends. Among students surveyed, 88% ($n = 232$) replied affirmatively that they would be willing to engage PTC services if the schedule was expanded. Since the PTC schedule of operations remained consistent in the transition, with the same hours and days of operation for student access, students were asked if they knew about the virtual schedule during the COVID-19 pandemic. Eighty percent replied that they still knew this schedule during this transition. See Table A3 for a full list of access and knowledge questions on the survey.

Table A3*Results from Survey: Student Knowledge/Access*

Survey question	N	%
Access		
Q5. I have used PTC services on campus, at a physical location		
More than 10 times	35	13.31
5 – 9 times	24	9.13
1 – 4 times	64	24.33
Never	140	53.23
Q6. I have used PTC services online, through Canvas		
More than 10 times	18	6.84
5 – 9 times	20	7.60
1 – 4 times	109	41.44
Never	116	44.11
Q7. I would like to use PTC, but my work/life schedule gets in the way		
Strongly agree	43	16.35
Agree	130	49.43
Disagree	75	28.52
Strongly disagree	15	5.70

Q20. If PTC was open more hours, including late evenings and weekends, I could or would use those services

Strongly agree	101	38.40
Agree	131	49.81
Disagree	26	9.89
Strongly disagree	5	1.90

Survey question	N	%
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Knowledge

Q12. I knew about the services PTC offered online during COVID-19, such as tutors, staff assistance, language lab support, and/or STG

Strongly agree	119	45.42
Agree	117	43.51
Disagree	24	9.16
Strongly disagree	5	1.91

Q16. I knew how to access the virtual PTC services during COVID-19 season

Strongly agree	73	27.86
Agree	132	50.38
Disagree	51	19.47
Strongly disagree	6	2.29

Q21. I know when virtual PTC services were available, such as days and hours of operation

Strongly agree	71	27.10
Agree	138	52.67
Disagree	46	17.56
Strongly disagree	7	2.6

Q23. Information about PTC is included on my course syllabi

Strongly agree	75	28.63
Agree	140	53.44
Disagree	39	17.89
Strongly disagree	8	3.05

Incentives: Intrinsic & Extrinsic

The survey instrument provided questions about the incentives for students to pursue academic support services at the PTC and if those incentives were derived from an internal motivation to succeed or if they were derived from extrinsic sources. Rotter's (1966) locus of control concept provided a theoretical basis for exploring these questions. In simple terms, Rotter (1966) theorized that individuals attribute the outcome of certain events to either

internal or external forces or actions, and these perceptions are flexible. Students who believe that outcomes are mostly dependent on their efforts or actions have an internal locus of control. In contrast, students who believe that outcomes are mostly shaped by other people or events (such as fate, society, or authority figures) have an external locus of control. This theory has implications for student perceptions about how to achieve academic success in a practical sense (Bailey et al., 2015). The director wanted to understand how students translate internal motivation (or intrinsic incentives) to succeed into commitments to activities such as tutoring or support services that promote their own best interests. Likewise, PTC management wanted to understand how extrinsic motivation, such as professors and peers, contributed to active responses on the part of the survey sample. Appropriate questions were crafted for each aspect. All of the survey questions that dealt specifically with the incentive factor are shown in Table A4.

Table A4*Results from Survey: Incentives for Engaging PTC*

Survey question	N	%	
Intrinsic incentives			
Q9. I am motivated to seek out a tutor if I need one			
Strongly agree	124	47.33	
Agree	119	45.42	
Disagree	19	7.25	
Strongly disagree	0	0.00	
Q14. Which PTC service(s) do you find most useful, such as: tutors, language lab, STG, or staff assistance? (233 answered, and students made multiple entries)			
Tutors	222	n/a	
Staff Assistance	31	n/a	
STG	25	n/a	
Language Lab	8	n/a	
Writing tutors	3	n/a	

Q15. I am motivated to sacrifice non-essential activities to be successful in college		
Strongly agree	124	47.15
Agree	118	44.87
Disagree	18	6.84
Strongly disagree	3	1.14

Q18. I am responsible for my academic success		
Strongly agree	190	72.24
Agree	72	27.38
Disagree	0	0.00
Strongly disagree	1	0.38

Extrinsic incentives

Q8. At least one of my college friends encourages me to use PTC		
Strongly agree	50	19.01
Agree	122	46.39
Disagree	68	25.86
Strongly disagree	23	8.75

Q13. At least one of my professors gives extra credit for getting tutor help		
Strongly agree	29	11.11
Agree	74	28.35
Disagree	108	41.38
Strongly disagree	50	19.16

Q19. My professors encourage students to use the library and/or PTC		
Strongly agree	112	42.75
Agree	131	50.00
Disagree	16	6.11
Strongly disagree	3	1.15

Q22. At least one of my professors requires me to use PTC		
Strongly agree	39	14.89
Agree	71	27.10
Disagree	112	42.75
Strongly disagree	40	15.27

Q23. Information about PTC is included on my course syllabi		
Survey option	N	%
Strongly agree	75	28.63
Agree	140	53.44
Disagree	39	17.89
Strongly disagree	8	3.05

Survey data about intrinsic incentives, or an internal locus of control, revealed that 99% ($n = 262$) of students sampled accepted personal responsibility for their academic success. Among students surveyed at the College, 92% ($n = 243$) indicated they would be

willing to seek a tutor if the student felt they needed one. This result closely correlated with a similar question where 92% ($n = 242$) of students surveyed indicated that they would be willing to sacrifice non-essential activities to be successful in college. This data suggested that students in the sample identified with a high level of internal motivation, but those numbers did not translate into a correspondingly high engagement with the PTC during the pandemic period.

Extrinsic incentive questions invited students to reflect on the role that external actors or forces (an external locus of control) played in influencing their decisions to engage the PTC, including friends, faculty, or marketing. Assessing the extent to which tangible incentives influenced desired behavior, 92% ($n = 242$) of the students sampled indicated that faculty encouraged them to use the PTC for academic support. When asked about the influence of peers, 65% ($n = 172$) of students sampled agreed or strongly agreed that a friend encouraged them to use the PTC. When assessing the extent to which tangible incentives were used for desired behavior, students indicated that just 42% ($n = 110$) of their professors offered extra credit for seeking tutor assistance. This response was key to understanding faculty endorsement for academic support services beyond the classroom. The literature review affirmed that this element is extremely important for determining student engagement with college-based services, and especially academic

support (CCCSE, 2012). The intersection of knowledge and extrinsic incentives met on course syllabi. Among students surveyed, a notable 81% ($n = 215$) indicated that some form of information about PTC was included in their course syllabi.

Tinto (1993, 2007) developed a student integration model over the course of decades and theorized that students who get involved in campus activities beyond the classroom are more likely to identify with their institution and its goals to promote their own student success. Tinto (1993) observed, "The commitment of individuals to the institution appears to be directly linked to the quality of one's education broadly conceived" (p. 177).

Membership

The survey instrument included questions to determine if there was a measurable relationship between student engagement with the academic support services of PTC and student membership in extra-curricular activities such as clubs, organizations, and sports. Tinto (1993) produced research indicating that "competent membership in the communities of college" (p. 208) generally contributed to the holistic and academic success of the students involved. The PTC director discovered that most College students sampled valued extra-curricular activity at the institution and felt that the College promoted those activities as viable pursuits; however, 51 students answered the question about specific involvement, and only 23 students (8.7%) listed an extra-curricular

affiliation. This data showed no statistically significant correlation between student membership in the College and engagement with the academic support services of the PTC.

Engagement Summary

Logistic regression was used to analyze the student survey results. Data analysis revealed a significant relationship between *student knowledge and accessibility* in correlation with use of the PTC, such that more knowledge was associated with a greater likelihood of using the PTC such as, $B = 1.571$, $SE = .435$, $p < .001$, odds ratio = 4.814. Additionally, there was a significant relationship between *extrinsic incentives* and use of the PTC, such that extrinsic incentives were associated with a greater likelihood of using the PTC, $B = .693$, $SE = .293$, $p = .018$, odds ratio = 2.000. Conversely, data for *intrinsic incentives* and *membership* did not reveal a significant impact on student engagement with the PTC.

Research Question 2: What is the strength and direction of the association between student engagement with PTC and course completion?

The second research question focused on the strength and direction of the association between student engagement with the PTC and course completion in the spring 2021 term. This data was collected by using the student identification numbers volunteered by respondents on the survey instrument and then using a crosswalk decoder provided by the Office of Institutional Research

(OIR, 2021) to match students with the identification number assigned by the institution for database identification. Once those numbers were aligned, the researcher isolated and extracted data about each respondent from over 387,000 entries for course completion and parent education level, such as first-generation status. There were challenges with correlating all of the survey respondents with MIS data due to a variety of reasons that include new summer students; thus, 204 of the 264 survey respondents had complete records, and 89% ($n = 181$) of that sample identified as first-generation students (FGS). This condition resulted in a sample comparison of 204 students for study with the second research question.

A chi-square was used to analyze this data and determine how likely it was that the observed distribution between engagement and course completion was due to chance. This method is also called the "goodness of fit" statistic since it measures how well the observed distribution of data fits with the expected results, provided that the variables are independent (Triola, 2018). The calculation with the MIS data was conducted and compared against critical values from the distribution, allowing the researcher to assess whether the observed cell counts were significantly different from expected. The procedure revealed an association between the frequency of PTC engagement and student success, amounting to: $\chi^2 = 3.807$, $p = .283$ and a Likelihood Ratio of 3.827. Among the 204

students surveyed and correlated, those who visited PTC one to four times were the most likely to be academically successful, with 21 more students passing all their courses than not in that frequency range (54/87) and over half of the modified sample passed their courses 54% ($n = 111$). When all other engagement rates were accounted for, including non-engagement, the completion results were nearly equal for course success or failure. Table A5 provides a graphic illustration of those findings and demonstrates the relationship between the number of visits to PTC and course completion. The results were quite surprising since additional engagement with the PTC did not increase students' academic success. Additional study needs to be done to determine whether these findings present a singular anomaly or an ongoing pattern that must be addressed by PTC personnel.

Table A5*Course Completion and Engagement with PTC: Crosstabulation*

Correlation between course completion and number of student engagements with PTC		Student Success		Total
		0 - No Pass	1 - Pass	
Range of student engagements with PTC virtual services	0 / None	45	44	89
	1 - 4	33	54	87
	5 - 9	8	6	14
	10 - 14	7	7	14
Total		93	111	204

Discussion

This quantitative study was designed to understand student engagement with the Peer Tutor Center (PTC) before and after the COVID-19 pandemic departure and how that engagement correlated with student success. In-person services at the PTC were officially closed on March 17, 2020, and PTC staff did not return to campus until August 2021, and the resumption of the fall term. Departure for the College campus lasted nearly a year and a half, and during that time, student traffic to the PTC was decimated compared with the pre-COVID era. Virtual migration incurred a loss of 6,622 students from the previous academic year. The PTC preserved a remnant of student engagement after the move, based on institutional tracking data. This study used a survey instrument that was distributed over a year into the campus closure induced by the pandemic and just before students returned to campus. The survey data provided fresh insight into the influences of faculty and peers on students and how those influences affected engagement patterns before and after the pandemic. The subsequent effect on student success has implications for the future of academic support and the strategic placement of those services.

Logistic regression analysis demonstrated that student knowledge about services and extrinsic incentives had a significant influence on active engagement with the PTC, whereas intrinsic incentives and membership in extra-curricular activities did not

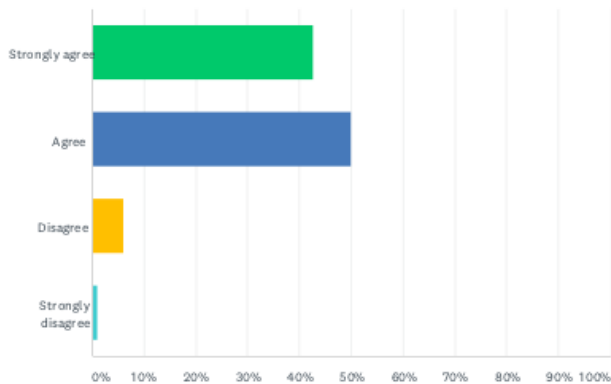
have the same level of impact. Students indicated that knowledge about the PTC was primarily derived from faculty at the College, who provided both verbal and written information on their syllabi, showing when and how to access support. According to the survey, 92% ($n = 242$) of students sampled indicated that faculty encouraged them to use the PTC for academic support as shown in Figure B2.

Figure B2

Professors Encourage Students to Use the PTC

Q19. *My professors encourage students to use the library and/or PTC*

Answered: 262 Skipped: 2



ANSWER CHOICES	RESPONSES	
Strongly agree	42.75%	112
Agree	50.00%	131
Disagree	6.11%	16
Strongly disagree	1.15%	3
TOTAL		262

Among students sampled, 81% ($n = 215$) indicated that some form of information about the PTC was included on their course syllabi. This data makes the case for strong faculty endorsement of PTC services at the College and vindicates the efforts that were made to build those relationships prior to the pandemic.

It is noteworthy, however that students sampled indicated that just 39% ($n = 103$) of their professors offered extra credit or points for seeking tutor assistance. This data could provide a point of friendly discussion between PTC personnel and instructional faculty to explore the possibility that adding material incentives might induce greater student engagement with the PTC or other supports outside the classroom. Compulsory usage is not an institutional mandate at the College; however, when student respondents were asked to indicate whether one or more of their instructors required some form of interaction with the PTC, 42% ($n = 110$) replied affirmatively.

The influence of peers prompted 65% ($n = 172$) of students sampled to agree or strongly agree that a friend encouraged them to use the PTC. The reliable power of peer persuasion (another form of extrinsic incentive) has prompted PTC personnel to involve student tutors and workers in videos and other marketing materials. Research (Bailey et al., 2015; Tinto, 1993) has shown that the guidance of peers can be leveraged strategically to help students navigate obstacles to student services. These could include poor Wi-fi connections, technical interface confusion, or basic scheduling conflicts with novel suggestions and workarounds. The PTC relied heavily on peer guides to steer students through a succession of steps to the Canvas LMS and then to the PTC course shell. Peers may also help to diversify the demographics of student visitors to

the PTC, and that might be instrumental in providing a welcoming environment for males to utilize these services. That is a point of concern that was not readily apparent at the PTC until this study was conducted.

There was a significant gender skew in the survey sample that could simply suggest that the survey topic did not appeal to males enrolled that term, but the skew was so dramatic that it might indicate something larger and more pervasive since females comprised 83% ($n = 220$) of this survey sample, versus 13% ($n = 34$) male respondents. The fact that the survey was conducted during the second summer of the pandemic provided sufficient time for any measurable fallout of campus closures to surface and manifest in the survey data. According to data collected by the National Student Clearinghouse Research Center (NSCRC, 2021), "Male undergraduates are increasingly falling behind their female counterparts during this pandemic..." (para 7). This research resonates with a study conducted by *The New York Times*, where Marcus (2022) observed that prior to the pandemic, "...students in online programs did worse than students in in-person courses... Outcomes were especially bad for men, Black students and students who had fared poorly in their earlier educations" (para 15). These findings challenge the PTC and other academic support centers to identify ways to engage males and other impacted students more effectively. This may involve more specialized research to add

insight.

The researcher wanted to explore the influence of another key characteristic of students that could have an influence on engagement and success—first-generation status. Among the survey students who could be correlated with the institutional MIS files, 89% ($n = 181/204$) were identified as first-generation students (FGS) based on the absence of a college degree from either parent or guardian. The Pew Research Center (Fry, 2021) amassed data from several key sources to show that contemporary FGS students were half as likely than their peers with a college-educated parent to complete a baccalaureate degree. Choy (2001) and McPhail (2011) suggest that FGS do not actively engage their instructors or pursue extra-curricular activities to the same degree as their peers with parents who went to a university or college, and that deficit becomes critical in times of personal adversity.

Choy (2001) and Tinto (1993) attributed this lack of engagement to a complex matrix of economic and sociological realities that includes intensive demands on student time, such as working 20 or more hours a week to sustain a living, caring for children, and having to raise siblings in the vacuum left by absent or single-parent households. These demanding activities invariably diminish opportunities to seek academic support outside the classroom or establish a sense of community with the institution. Hutchison (2017) observed, "This reduced interaction may affect FGS' success

in college: Research has shown that higher levels of interaction with faculty strongly correlate with improved student outcomes" (para 3). Nevertheless, a majority of the respondents to this survey indicated that faculty was instrumental in recommending the academic support services of the PTC as a voluntary and worthwhile activity, backed with syllabus contact information. Given that most of the survey sample engaged the PTC before and after the pandemic, this suggests that College faculty may have an above-average rapport with their students—FGS and otherwise—that is unique in higher education.

The success data collected for this study revealed a curious finding. Among students surveyed and correlated with institutional files, those who visited PTC one to four times were the most successful at completing courses with a C-grade or better, compared with peers who visited five or more times. One of the faculty members supervising the study theorized that the first group of students (one to four visits) was the "just in time crowd," coming to shore up minor deficits in course material, whereas "frequent fliers" (students with five or more visits to the PTC) were more apt to struggle with fundamental concepts that impeded significant achievement in challenging subjects (Goben, 2021). This finding seems to run contrary to the literature about the efficacy of sustained student engagement with academic support services; however, this data could mirror the troubling enrollment trend

wherein substantial numbers of students take and repeat courses year after year without substantially progressing forward (McPhail, 2011). These findings warrant additional investigation to assess ongoing contact outcomes with students engaging the PTC.

Technical and personal challenges posed formidable barriers for 66% ($n = 173$) of students accessing the PTC, based on the survey sample and direct feedback received by staff. Those findings resonated with a national analysis by the Wall Street Journal that identified key deterrents to student enrollment during the pandemic, as Korn (2020) noted, "Poor internet connections, wariness about taking classes online, financial strain and the need to care for children or younger siblings" (para 6). In response to these challenges, College leadership coordinated efforts in October 2020 to remedy poor internet connections by providing free Wi-fi access for students on the property of campus sites. Enrolled students could borrow Wi-fi devices and laptop computers as needed, based on availability. Counselors and staff at the College used social media outlets to assuage student fears about continuing their education online. These measures helped to avert some loss of students during the pandemic, sustaining a degree of engagement with tutors and the PTC in the process.

Conclusion

The decline of undergraduate enrollment that accompanied the pandemic years appears to be finally subsiding, according to a

recent, updated report (NSCRC, 2023), and that trend could revive traffic to learning assistance programs. Since students at the College returned to campus, approximately half of the course offerings for the 2022-2023 academic year at the College have been taught online exclusively or in a hybrid combination that mirrors the national trend, showing little evidence of changing course soon. Marcus (2022) at *The New York Times* observed that the pandemic provided insight about virtual study, "Now the results of this experiment are starting to come in. They suggest that online higher education may work better than pre-pandemic research suggested and that it is evolving decisively toward a combination of in-person and online, or 'blended,' classes" (para 5). The question of what "work[s] better" and how, is a matter of debate among scholars, but students are clearly voting with their choices to enroll in online courses at traditional institutions (Marcus, 2022), and that trend will likely challenge traditional academic support services to preserve a presence online.

Since returning to campus, the Peer Tutor Center (PTC) has retained a modest quarter of its online services in the Canvas LMS to serve virtual students; however, the greatest resurgence of student usage has been in-person, with 17,482 visits in fall 2022, versus 375 visits online, during the same term. PTC personnel have theorized that online students have 24/7 access to recorded lectures and videos that preserve vital course material that can be reviewed

repeatedly, serving as kind of a surrogate tutor that might negate the need to seek out a live, virtual tutor to flesh out notes taken from classroom lectures that dissolve in time and space. Online, recorded lectures might dissuade students from digging through dense textbooks for the same reason, thus making a helpful tutor superfluous. The survey data clearly shows that maintaining ongoing relationships with faculty provide a basis for relevant learning support that builds endorsement in the classroom—both in-person and online. This constantly evolving environment with enrollment challenges PTC personnel to remain reflective and to remain flexible to adapting strategies for optimum student engagement.

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Appendix

PTC Engagement Survey

Let your voice be heard! This survey is about the Peer Tutoring Center (PTC) at the College Institute. The survey should take less than five minutes of your time. Your responses are voluntary and confidential. You may elect not to answer any or all questions at your discretion and you may disengage from the survey at any time.

1. What is your email address?

2. What is your gender?
 - Female
 - Male
 - Other or prefer not to say

3. What is your race or ethnicity?
 - African American
 - Asian
 - Hispanic or Latinx
 - White (Non-Hispanic)
 - Other

4. I am a full-time student or part-time student
 - Full-time
 - Part-time

5. I have used PTC services at a physical location

More than 10 times

5 - 9 times

1 - 4 times

Never

6. I have used PTC services online, with a computer

More than 10 times

5 - 9 times

1 - 4 times

Never

7. I would like to use PTC, but my work/life schedule gets in the way

Strongly agree

Agree

Disagree

Strongly disagree

8. At least one of my friends encourages me to visit PTC

Strongly agree

Agree

Disagree

Strongly disagree

9. I am motivated to seek out tutors at PTC as needed

Strongly agree

Agree

Disagree

Strongly disagree

10. I would like to participate in clubs and organizations

Strongly agree

Agree

Disagree

Strongly disagree

11. I am a member of these clubs and organizations

12. I know which services PTC offers during COVID-19

Strongly agree

Agree

Disagree

Strongly disagree

13. Which PTC service(s) do you find most useful?

14. At least one of my professors offer additional points/credit for getting tutor help

Strongly agree

Agree

Disagree

Strongly disagree

15. I am motivated to sacrifice other activities to be successful in college

Strongly agree

Agree

Disagree

Strongly disagree

16. I know how to access support at PTC during COVID-19

Strongly agree

Agree

Disagree

Strongly disagree

17. The college encourages me to join extra-curricular activities at
COD

Strongly agree

Agree

Disagree

Strongly disagree

18. I am responsible for my academic success

Strongly agree

Agree

Disagree

Strongly disagree

19. At least one of my professors encourages us to seek tutors

Strongly agree

Agree

Disagree

Strongly disagree

20. If PTC was open more hours, including evenings and weekends,
I could/would use those services

Strongly agree

Agree

Disagree

Strongly disagree

21. At least one of my professors encourages us to use PTC

Strongly agree

Agree

Disagree

Strongly disagree

22. I know the service hours for PTC during COVID-19

Strongly agree

Agree

Disagree

Strongly disagree

23. At least one of my professors requires me to use PTC

Strongly agree

Agree

Disagree

Strongly disagree

24. Information about PTC is included on my course syllabi

Strongly agree

Agree

Disagree

Strongly disagree