



Office of Institutional Research & Effectiveness

FTEIC Retention into Spring

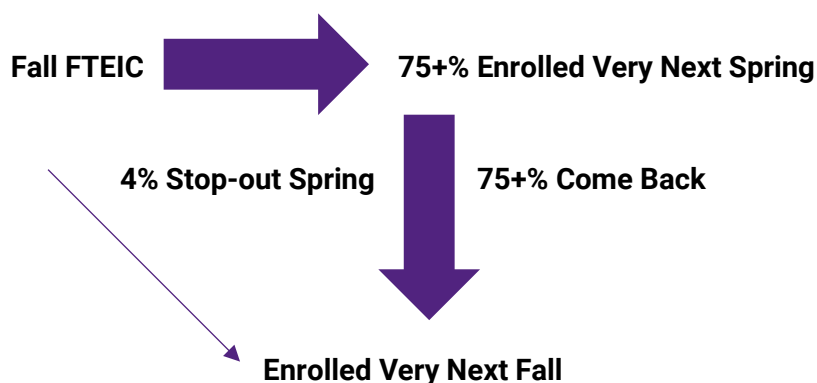
Predictive Factors & a Spotlight on Encounters
Documented with Counseling and Advising Faculty

October 2022

Dr. Brian Ault, Senior Research Analyst

FTEIC Retention into Spring: Predictive Factors & A Spotlight on Encounters Documented with Counseling and Advising Faculty

For the last three “First Time Ever in College” cohorts (FTEIC2019-FTEIC2020-FTEIC2021), the overall retention rate into the very next spring has been three-fourths or higher (average is 77.6%). The one-year fall-to-fall overall retention rate has been shy of two-thirds (average is 63.7%). From prior OIRE research, we know that if FTEIC students return the very next spring, three-fourths of them will come back the very next fall. The following flow chart graphically represents the general MC retention flow:



Given the extreme importance of retaining FTEIC students into the very next spring, what are the factors most predictive of these students actually returning? A logistic regression model was created, combining the data from the last three FTEIC cohorts (over 10,000 cases), and regressing spring enrollment (yes/no) on the following factors:

- 1) Fall part-time status (yes/no)
- 2) Had financial aid (yes/no)
- 3) Was male (yes/no)
- 4) Was Black (yes/no)
- 5) Was LatinX (yes/no)
- 6) Was Asian (yes/no)
- 7) Age at Term Start
- 8) Needed Developmental English (yes/no)

9) Needed Developmental Math (yes/no)

10) Fall Term GPA

11) # of Encounters Documented With C&A Faculty (# from prior March through December of Fall Term)

Covariates #1-10 above come from, or were derived from, Banner/DMT, and #11 from a Starfish extract (student encounters merged using MC ID). The table below provides the results of the logistic regression analysis:

Table 1: Variables in the Model Equation						
	B	S.E.	Wald	df	Sig.	Exp(B)
Needed Dev English	-0.148	0.065	5.121	1	0.024	0.863
Needed Dev Math	0.107	0.101	1.122	1	0.290	1.113
Fall Term GPA	0.670	0.022	891.362	1	0.000	1.954
Was LatinX	-0.184	0.073	6.278	1	0.012	0.832
Was Black	-0.148	0.079	3.530	1	0.060	0.862
Was Asian	-0.054	0.107	0.253	1	0.615	0.948
Was Male	0.045	0.058	0.593	1	0.441	1.046
Was Part-Time in Fall	-0.770	0.060	163.060	1	0.000	0.463
Had Financial Aid	0.775	0.060	164.163	1	0.000	2.171
# of C&A Encounters (March thru December)	0.232	0.016	217.071	1	0.000	1.261
Age at Fall Term Start	-0.028	0.004	41.062	1	0.000	0.972
Constant	-0.020	0.126	0.025	1	0.874	0.980
Statistically Significant .06 or lower						
Omnibus Test of Model Coefficients	Significance = 0.000					
Hosmer and Lemeshow Test	Significance = 0.252					
Nagelkerke R Square	0.307					

The results from the Omnibus Test of Model Coefficients and the Hosmer and Lemeshow Test show that the fit of this model is statistically significant. Nagelkerke R Square, somewhat analogous to the R Square of linear regression, shows that this model has moderate strength (scale of 0-1).

The variables highlighted in dark gray are the statistically significant variables in the model. The column, $\text{Exp}(B)$, reports the log odds of retention into spring for every one-unit increase in the highlighted variable, controlling for all other variables in the model. If we multiply these by 100 and subtract from 100, we will arrive at the positive and negative odds of returning into the spring.

The statistically significant factors positively predicting retention into spring were:

- 1) Had Financial Aid +117.1%
- 2) Fall Term GPA +95.4%
- 3) # of Encounters Documented with C&A +26.1%

The statistically significant factors negatively predicting retention into spring were:

- 1) Was Part-Time -53.7%
- 2) Was LatinX -16.8%
- 3) Was Black -13.8%
- 4) Had Developmental English Need -13.7%
- 5) Was Older -2.8%

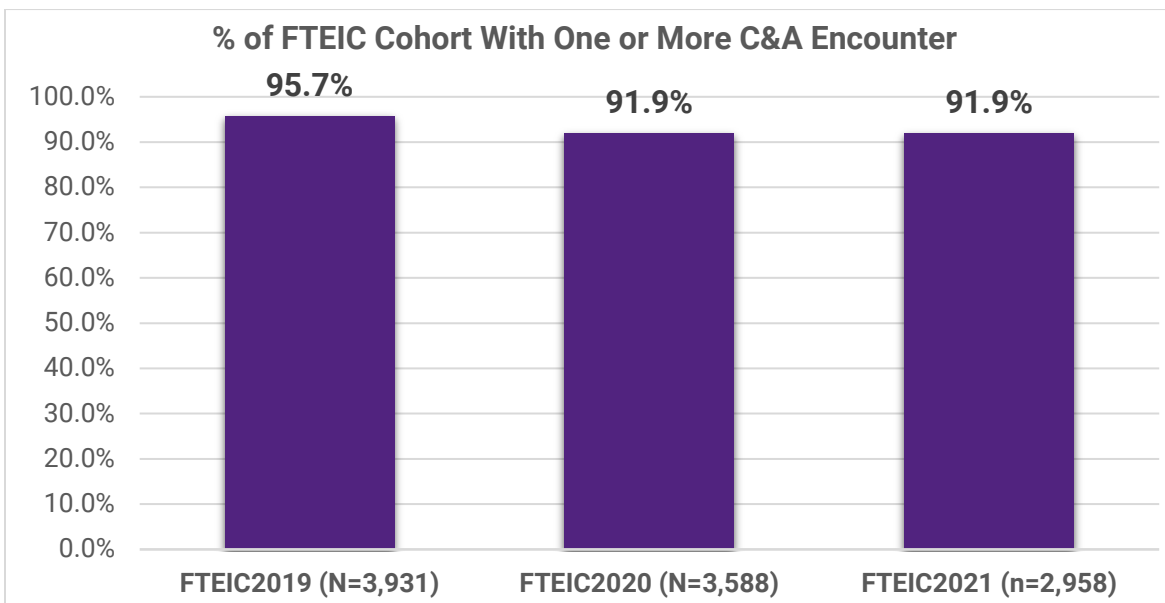
The negative predictors are not surprising, and a source of constant monitoring and operational initiatives as an institution. Having financial aid and performing well in the fall term are not surprising as well. We would hypothesize that those academically performing better were more likely to return the next spring. In addition, amid the challenging economic implications of the COVID pandemic, having financial aid is almost imperative. It is so significant; our **next** research paper will focus on financial aid, its varied types, and dollar amounts, as they relate to student success. The last positive predictor, the number of encounters documented with Counseling and Advising, from the prior March through December of the fall term, points to the importance of establishing a connection with someone in the Counseling and Advising discipline for the purposes of academic advising and educational planning.

Effects of C&A Advising

The Starfish software is used by the Counseling and Advising discipline to capture their encounters with students. Others at the College certainly advise students and enter data into Starfish, but the preponderance of academic advising occurs between MC students and C&A faculty, especially with the new FTEIC students. Within Starfish, the code “L6” refers only to C&A faculty and affiliated faculty cadre, and the L6 data are our sole focus herein. These data reflect the day/time of the session, location/modality of each session, the reason for the encounter and the MC IDs of both student and provider. Looking at the encounters around and through the fall term (prior March through December of the fall term) and merging this with our student record data, the following findings accrue.

What is the reach of Counseling and Advising discipline with our FTEIC students? Chart 1 reveals that at least 9 out of every 10 FTEIC students has at least one encounter with Counseling and Advising in this time period:

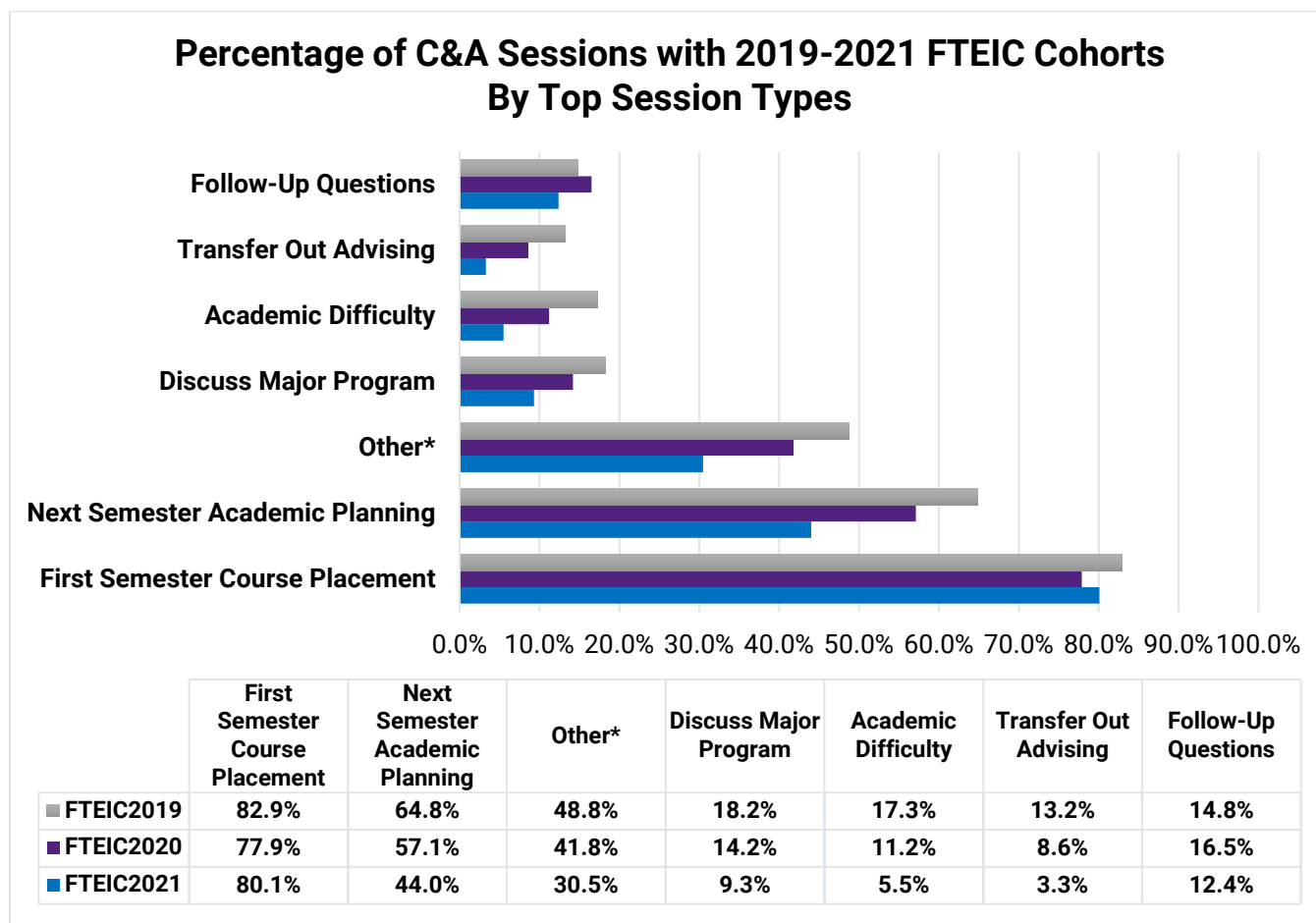
Chart 1



The pandemic presented an opportunity for the C&A discipline to greatly expand the modalities by which it engaged with FTEIC students. C&A faculty certainly embraced all modalities to carry out student encounters (e.g., Zoom, Comm 100, in-person, email, and phone call). What

were the reasons for student encounters? Chart 2 below shows that the majority of these encounters, while running the gamut of important student concerns, were mostly about first semester course placement and next semester academic planning.

Chart 2



*Other includes such things as: Discussed/Provided Override (Pre or Co-Requisite), Reviewed Non-MC Transcript (unofficial), Visiting Student (enrolled elsewhere), Explained/Reviewed Enrollment Steps, Assisted with Registration Process (TI-TD), Referred to Academic Department or Instructor, etc.

Does an encounter with FTEIC students make any difference? Chart 3 shows the impact on retention that multiple encounters has on FTEIC students in the three-year frame. For both full-time and part-time FTEIC students, the more encounters they had with the faculty associated with the C&A discipline faculty in this period, the higher their retention into the very next spring term.

Chart 3

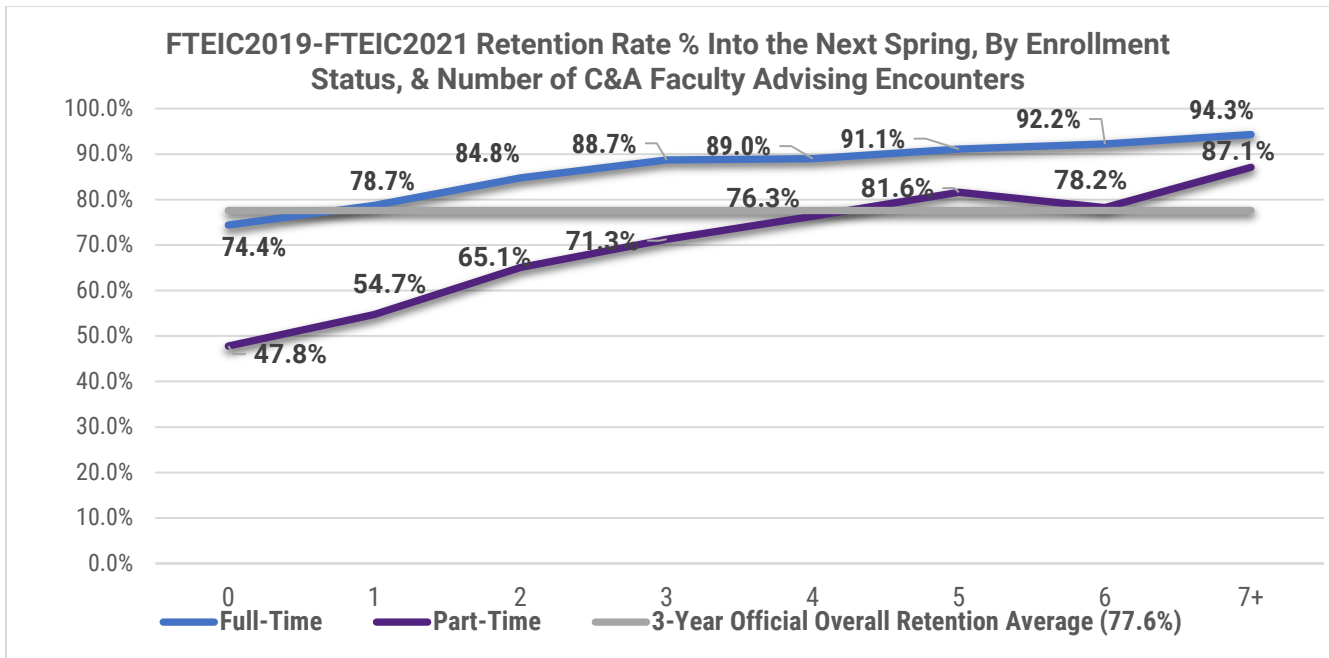
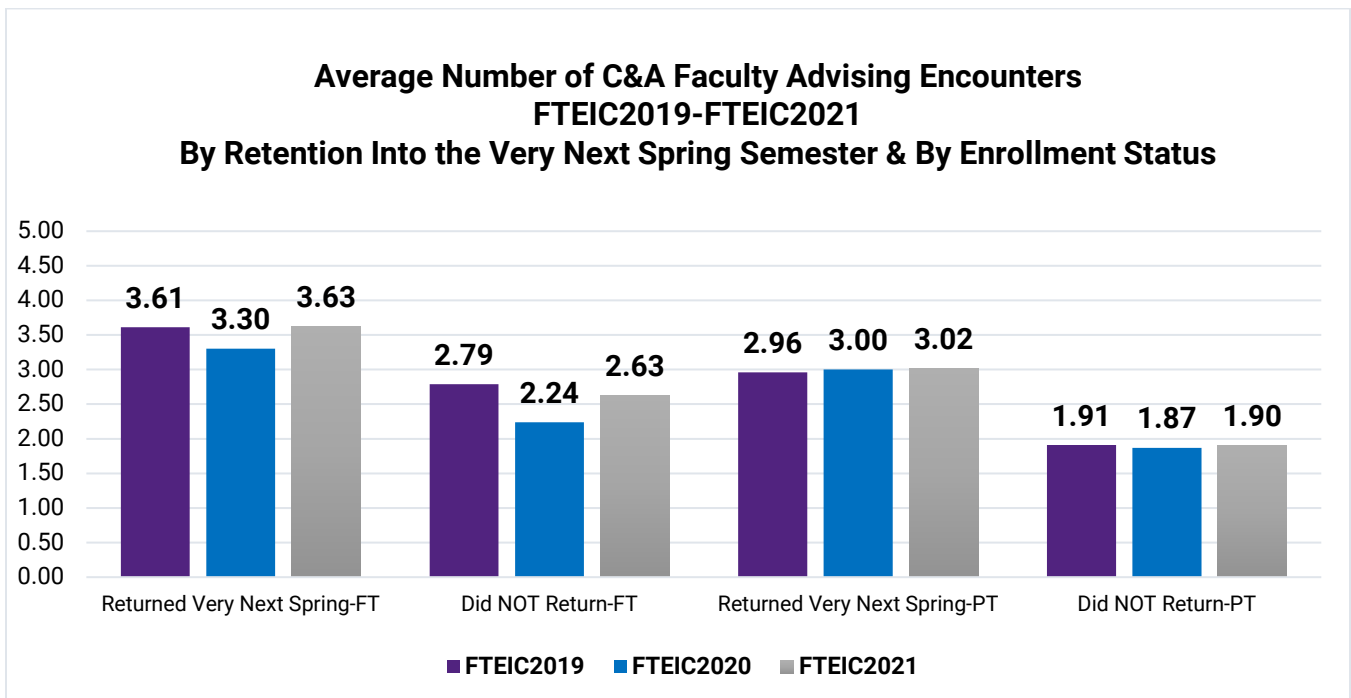


Chart 4 shows it another way. The average number of encounters documented with the faculty associated with the C&A discipline for those full- and part-time FTEIC students who were retained was one encounter higher than those not retained:

Chart 4



Frequency of interaction matters, but what about timing of the sessions? Using the specific day/time of the advising encounters, Chart 5 shows what retention looks like for those FTEIC students starting the interactions well in advance of the fall term, versus those who wait until the last month before fall classes begin.

Chart 5

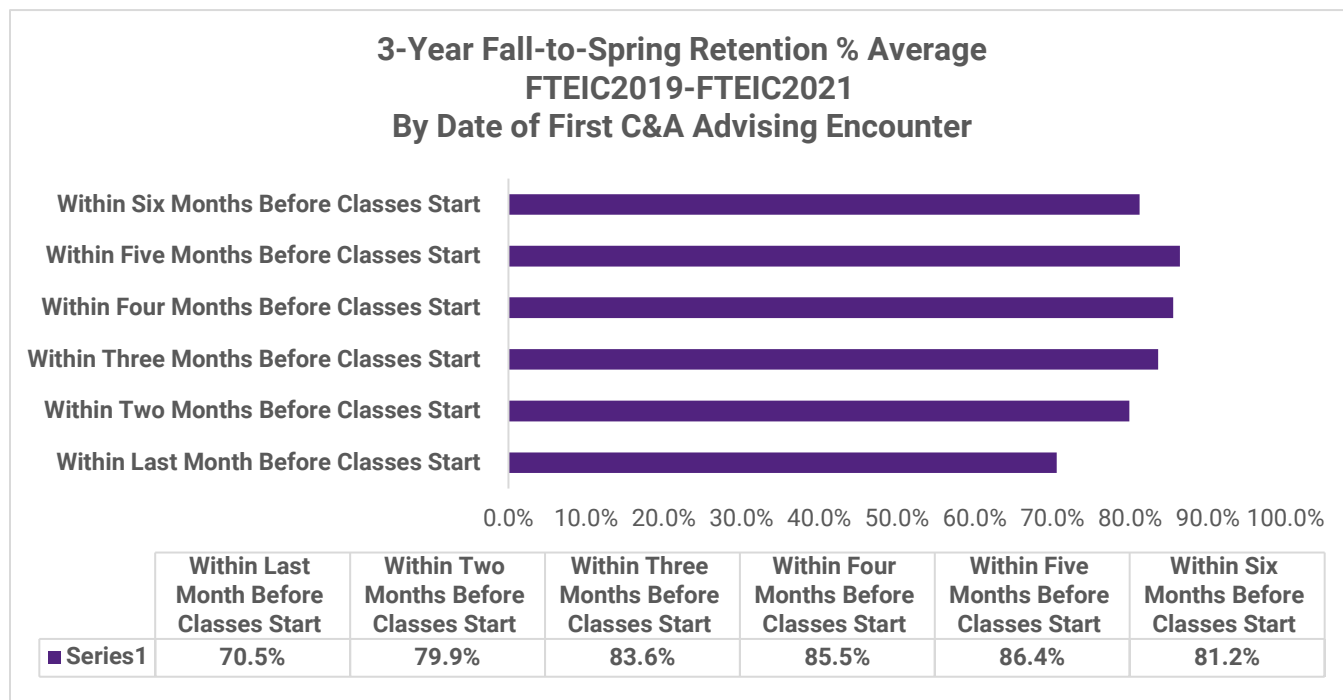
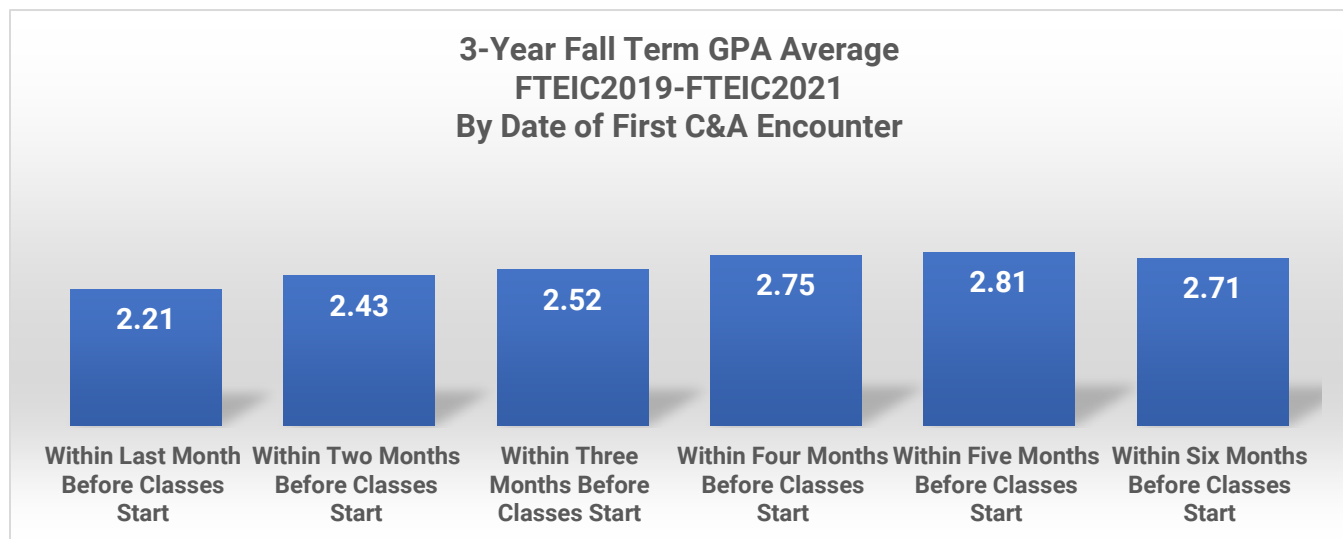


Chart six shows average fall term GPA based on the timing of C&A faculty advising:

Chart 6



Recommended Next Steps

All told, FTEIC students with more than one encounter documented with Counseling and Advising, and had the encounter well in advance of the start of the fall term had better outcomes. More research will ensue on these dynamics-but it seems clear that the following recommendations ensue from these findings:

1. Continue collaboration between OIRE and Counseling and Advising to refine data definition, collection and analysis (e.g., what is considered an advising encounter, how do we account for encounters documented outside of Starfish (Accommodate-DSS), how can we improve our methods for collecting advising-related data, and should we establish learning outcomes for the FTEIC cohort?).
2. Encourage students to seek out encounters with Counseling and Advising early and often. Work with the Office of Communications to share the insights gleaned from this initial analysis into a student-friendly format that can be shared and distributed by those most heavily involved in onboarding processes (e.g., Raptor Central, Recruitment).
3. Incorporate data reflecting encounters with Program Advisors (Department Chairs and Faculty designated to advise in specific majors).
4. Incorporate data reflecting encounters with others more closely involved with supporting students in their first year (e.g., Raptor Central staff, Recruiters, English & Reading Placement team, ELAP Placement team, Assessment Center staff, Financial Aid Staff & Counselors, International Student Coordinators).
5. Drill down into the (L6) data already examined in this brief to look for additional insights or questions that could be answered through further analysis.
6. Rebuild Counseling and Advising discipline resulting from faculty attrition and an extended period of hiring freezes to increase availability of Counseling and Advising services through all modalities (e.g., email, chat, zoom, phone and in-person services and during critical periods of engagement with the FTEIC cohorts).

Acknowledgments

Special thanks goes to all of the C&A faculty who read, pondered and suggested ways to make this a better product. Particular thanks to Julie Levinson, Katie Mount, Elisabeth Kirby, and Tim Kirkner for being champions of the cause.