



UNIVERSITY OF
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OFF-TRACK BUT GRADUATED: CHARACTERISTICS AND EXPERIENCES OF STUDENTS WHO RECOVER

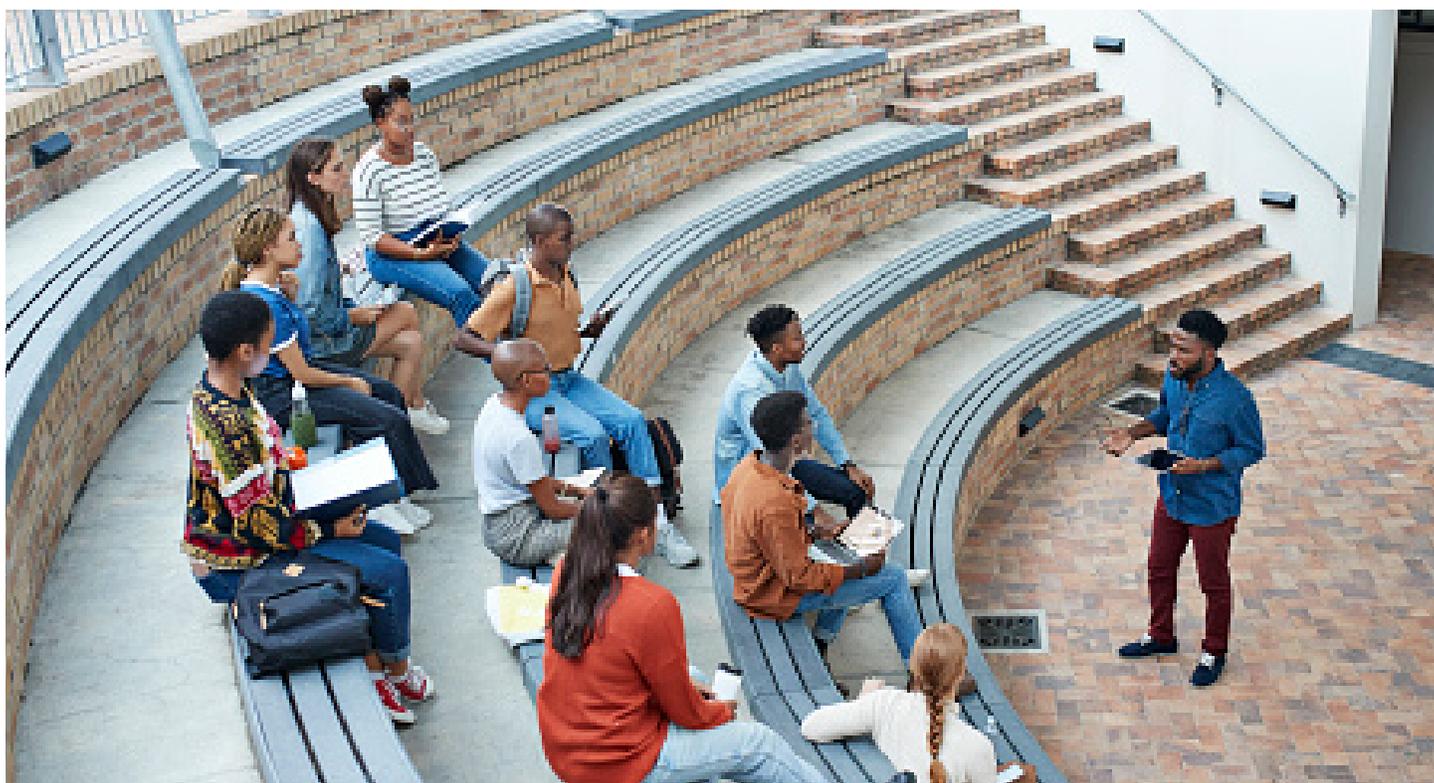


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INTRODUCTION

Freshman OnTrack (FOT) was developed by researchers at the University of Chicago Consortium on School Research (Allensworth & Easton, 2005) and indicates if a student is “on-track” for high school graduation. For students to be on-track, they must meet two requirements during freshman year: 1) a minimum of five, full-year course credits earned, and 2) no more than one semester failure in a core course. FOT is highly predictive of high school graduation and provides a clear early success indicator at the student level. Indeed, it correctly predicts graduation 80% of the time across Chicago Public Schools (CPS). CPS has increased its FOT rates by 20 percentage points in the past 14 years and has seen parallel increases in high school graduation rates (Allensworth et al., 2018). Further, the increases in FOT rates are more pronounced in some subgroups of students; for example, the FOT rate for Black males has increased from 43% to 71% across CPS (Allensworth et al., 2018).

Previous research has identified an on-track index for college, known as first-year on-track (FYOT; Farruggia et al., 2020). FYOT consists of four indicators, including student’s GPA during the first

term (2.4 or above), credits earned during the first year (22 or more), grade earned in the first year writing 160 course (C or better), and no unresolved financial holds in first term (Farruggia et al., 2020). FYOT is aligned with FOT as it includes both grades and credits in the first year. It also recognizes that finances are a major barrier to success in college (Farruggia et al, 2016).

While the index is highly predictive of college graduation (75% accurate, Farruggia et al., 2020), like FOT, FYOT is not exact. There are a number of students who “recover”, meaning they were off-track at the end of their first year in college, but did ultimately graduate. Questions arise as to why these students recovered. Who were the students, and did they have particular experiences that enabled them to recover? Answering these questions will provide guidance on how to develop intervention programs for those who are off-track. Therefore, this study aims to understand who the recovery students are in terms of their background factors, such as student and family characteristics, academic preparation, early indicators of college success, and early college experiences.

METHOD

All participants in this study were part of the first-year student 2014 entering cohort (N = 3030). Of those students, 1178 (39%) were off-track at the end of their first year in college. Over one-third (423) of the off-track student (14% of all students and 36% of off-track students) still graduated from UIC and were identified to be students who recovered. Others, 755 (25% of all students and 64% of off-track students), did not recover as indicated by them not graduating from UIC. Table 1 provides student demographics of all students in the 2014 first-year cohort as well as the students who were off-track that year. As demonstrated, off-track students were more likely to be male, Pell-eligible, and first-generation in college. In addition, there is some variation by race/ethnicity as Asian and White students are less likely to be off-track and Latinx students are more likely to be off-track.

All data were downloaded from the UIC institutional data warehouse or placement testing portal. Data are clustered together into five types of data, including: 1) student and family background characteristics (i.e., gender, race/ethnicity, age in years, Pell-eligibility status); 2) student academic preparation (e.g., high school GPA); 3) indicators of college success (e.g., on-track indicators, retention); 4) college demographics and experiences (e.g., major, living in on-campus housing); and 5) noncognitive assets.

TABLE 1
Student Demographics in the 2014 Cohort by Percentage or Mean (SD)

Demographics	All Students	Off-Track Students
Gender		
Female	47%	53%
Male	53%	47%
Race/Ethnicity		
Asian American	26%	21%
Black	9%	11%
Latinx	32%	38%
White	28%	24%
Other	5%	6%
Age in Years	18.50 (.60)	18.51 (.50)
Pell-Grant Eligible		
Pell-Eligible	56%	60%
Non-Pell Eligible	44%	40%
First-generation in college		
First-Generation in College	44%	50%
Continuing Generation	56%	50%





RESULTS

The results of these analyses are reported in the following five sections. The first section examines differences between off-track students who did and did not recover on the actual indicators of the index. The next section examines differences between these two student groups on student and family background characteristics, including student academic preparation for college. Additional college-related variables are then examined starting with students' initial area of study, including their college major and whether or not they have a declared major. In the fourth section, differences in early indicators of college success, such as early alerts and retention, are presented followed by an examination of differences in students' noncognitive assets. Finally, analyses on differences between the two groups in early college experiences are reported.

On-Track Indicators

The first set of analyses examined the on-track indicators to see if there were differences between off-track students who recovered and off-track students who did not recover. When comparing the number of indicators met, recovery students were more likely to be “close” to being on track than the students who did not recover. Only 33% of the non-recovery students met 3 of the 4 indicators, whereas 75% of the recovered students met 3 of the 4 indicators (Table 2). Further, when examining individual indicators, recovered students were consistently more likely to meet the thresholds for each indicator compared to the non-recovery students.



TABLE 2
2014 Cohort Who Recovered and Graduated Versus those that Did Not Recover on Threshold Indicators

	Recovered	Did Not Recover	Significance Test
Number of Indicators Met			
3 Met	75%	33%	$\chi^2 = 193.14^{***}$
2 Me	23%	37%	$\chi^2 = 102.10^{***}$
1 Met	2%	7%	$\chi^2 = 89.45^{***}$
0 Met	0.2%	2%	$\chi^2 = 26.09^{***}$
First Term in College GPA	2.42 (0.68)	1.74 (1.09)	$t = -11.69^{***}$
Earned at Least a “C” in Writing Class	96%	83%	$\chi^2 = 44.31^{***}$
Credits Earned in the First Year of College	21.4 (5.2)	12.8 (8.1)	$t = -19.62^{***}$
Had an Unresolved Financial Hold	3%	13%	$\chi^2 = 31.77^{***}$

*** $p < .001$.

Student and Family Background Characteristics

Next, off-track students who recovered were compared to off-track students who did not recover on student and family background characteristics. As shown in Table 3, for race/ethnicity, Asian

students, followed by White students and Other students, were more likely to recover compared to Latinx or Black students. Significant differences were not found by other demographic characteristics.

TABLE 3

Demographic Comparison of Students Recovered and Did Not Recover

Demographics	Recovered	Do Not Recover	Significance Test
Gender			
Female	37%	63%	$\chi^2 = .24, n.s.$
Male	35%	65%	
Race/Ethnicity			
Asian American	49%	51%	$\chi^2 = 26.03^{***}$
Black	30%	70%	
Latinx	31%	69%	
White	36%	64%	
Other	36%	64%	
Age in Years	18.48 (.43)	18.52 (.53)	$t = 1.27, n.s.$
Pell-Grant Eligible			
Pell-Eligible	34%	66%	$\chi^2 = 2.07, n.s.$
Non-Pell Eligible	38%	62%	
First-generation in College			
First-Generation	33%	67%	$\chi^2 = 2.47, n.s.$
Continuing Generation	38%	62%	
All Off-Track Students	36%	64%	

*** $p < .001$.

Indicators of college academic preparation were also examined for differences between recovered and non-recovered off-track students. With the exception of a statistically significant, but somewhat trivial difference in high school GPA, no differences

were found for indicators of college academic preparation, including ACT composite scores and number of AP credits earned. This suggests that recovered and non-recovered off-track students were similarly academically prepared for college.

TABLE 4

Academic Preparation Indicators and Recovery Status

	Recovered	Did Not Recover	Significance Test
High School GPA	3.19 (.33)	3.12 (0.37)	$t = -3.25^{**}$
Number of AP Credits Earned	7.24 (6.81)	6.03 (5.32)	$t = -1.88, n.s.$
ACT Composite	23.44 (3.15)	23.25 (3.22)	$t = -.97, n.s.$

** $p < .01$.

Initial Areas of Study

Next, initial areas of study were examined. The college that students enrolled in when they matriculated to UIC, as well as their major declaration status (declared or non-declared major), were also examined for differences between off-track students who recovered and those who did not recover. While there were no

significant differences by declaration status, there were significant differences by college. Off-track students in the College of Education, followed by the College of Architecture, Design, and the Arts had the lowest recovery rates whereas the College of Engineering and the College of Applied Health Sciences had the highest rates of recovery.

TABLE 5
UIC College and Declared Status at the Start of College

Demographic	Recovered	Did Not Recover	Significance Test
College			
Applied Health Sciences	46%	55%	
Architecture, Design, and the Arts	28%	72%	
Business Administration	35%	65%	$\chi^2 = 25.56^{***}$
Education	7%	93%	
Engineering	47%	53%	
Liberal Arts & Sciences	36%	64%	
Declared/ Undeclared			$\chi^2 = .95, n.s.$
Declared	37%	63%	
Undeclared	34%	66%	

*** $p < .001$.

Early Indicators of College Academic Success

We next examined other early indicators of academic success for differences between off-track students who did and did not recover; these

early indicators include early alerts, academic probation, and academic dismissal. Early alerts are issued by course instructors to warn students and their advisors that the student is not doing well in



the course and action is needed to remediate the problem. For early alerts, we first examined whether or not recovery and non-recovery students received an alert (see Table 6). For both Fall 2014 and Spring

2015, the recovery group was less likely to have an early alert compared to the students who did not recover.

TABLE 6
Early Alerts for Fall 2014 and Spring 2015

	Recovered	Did Not Recover	Significance Test
Fall 2014			
Alert	9%	13%	
No Alert	91%	87%	$\chi^2 = 5.34^*$
Spring 2015			
Alert	4%	14%	
No Alert	96%	86%	$\chi^2 = 30.72^{***}$

*** $p < .001$, * $p < .05$.

Next, the classes in which students earned the early alert were examined for differences between off-track students who did and did not recover. Only Fall semester was examined for this analysis as the types of classes that students take second semester vary more and could introduce additional bias. Recovered students were more likely to earn

an alert in math and those who did not recover were more likely to earn an alert in writing. It is important to note that this pattern does not indicate causation. It is highlighted as a means to identify students who would particularly benefit from additional focus to ensure they do not go off-track (e.g., students who earn an alert in writing).

TABLE 7
Classes Associated with the Fall 2014 Early Alerts

	Recovered	Did Not Recover	Significance Test
Fall 2014			
Language	11%	10%	
Math	65%	39%	$\chi^2 = 12.96^{**}$
Writing	24%	51%	

** $p < .01$.



The third area of early alerts examined the reason the students received an alert. Again, this was examined for the fall semester only. As shown in Table 8, recovery students were more likely to receive an alert for poor performance, whereas those who did not recover were more likely to receive an alert for missing work. While an

exact causal relationship cannot be determined, these differences may reflect a different level of engagement by the students. The recovery students were completing work, although not at an appropriate level, whereas the students who did not recover were not submitting the work, and, thus, engaging less in the course.

TABLE 8
Reasons Associated with the Fall 2014 and Spring 2015 Early Alerts

	Recovered	Did Not Recover	Significance Test
Fall 2014			
Attendance/Participation	19%	24%	
Missing Work	27%	53%	$\chi^2 = 16.10^{**}$
Poor Performance	54%	23%	

** $p < .01$.

Other early indicators of academic success are probation and dismissals. For probation, this was looked at being put on probation first or second term. For dismissals, this examines dismissals after first term or anytime in the first year, including after first term. Table 9 provides a summary of the differences between off-track students who did and did not recover. For both first term and second term

probation, those who did not recover had higher levels of being on probation compared to those who did recover. For dismissal, the pattern is the same as those who did not recover had higher levels of first term and first year dismissals. For those who did not recover, almost one in four had been dismissed by the end of the year, whereas only 1% of those who recovered were dismissed.

TABLE 9
First Term and First Year Dismissals and Probation

	Recovered	Did Not Recover	Significance Test
First Term Probation			
Probation	28%	34%	$\chi^2 = 4.89^*$
No Probation	72%	66%	
Second Term Probation			
Probation	25%	33%	$\chi^2 = 8.10^{**}$
No Probation	75%	67%	
First Term Dismissal			
Dismissal	0.2%	12%	$\chi^2 = 52.00^{***}$
Non-Dismissal	100%	88%	
First Year Dismissal			
Dismissal	1%	23%	$\chi^2 = 108.71^{***}$
Non-Dismissal	100%	77%	

*** $p < .001$, ** $p < .01$, * $p < .05$.

Like dismissals, retention is extremely important for the recovery process. Students need to still be in school in order to recover and graduate. This need is seen in the differences between recovery and non-recovery students for both first-to-second semester retention and first-to-second year retention (Table 10). For instance, 94% of the recovery students were back for the second year of college whereas only 43% of the students who did not recover were retained to the second year.

As mentioned, finances can have a profound impact of success in college. Two financially-related variables that can occur in or at the end of the first

year are SAP (Satisfactory Academic Progress) and financial holds. SAP is an academic requirement for continued federal Pell grant support and not meeting this requirement will result in a cancellation of Pell grant aid. Almost half of the students who did not recover had a SAP cancellation, meaning they were no longer eligible for Pell grant aid, whereas only 8% of the recovery students had their financial aid cancelled at the end of the first year in college. Also, students that did not recover had higher rates of financial holds in the first year compared to students who did recover. These holds may or may not have been resolved.

TABLE 10

Retention and Satisfactory Academic Progress (SAP) Differences Between Students Who Did and Did Not Recover

	Recovered	Did Not Recover	Significance Test
Retention 1st to 2nd Semester	97%	71%	$\chi^2 = 111.23^{***}$
Retention 1st to 2nd Year	94%	43%	$\chi^2 = 304.92^{***}$
Had a Financial Hold	26%	40%	$\chi^2 = 21.33^{***}$
Had SAP Cancellation	8%	49%	$\chi^2 = 210.36^{***}$

*** $p < .001$.**Noncognitive Assets**

In the middle of their first term in college, UIC students from the 2014 cohort completed a survey that assessed their noncognitive strengths. Comparisons were made between off-track students who did and did not recover (Table 11). Differences were found for academic self-efficacy and subjective well-being, such that students who

recovered reported greater levels academic self-efficacy, or beliefs in their abilities to be successful in school, and greater levels of subjective well-being, or their perceptions of their own well-being, as compared to the students who did not recover. The two groups of students did not significantly differ on the other assets.

TABLE 11

Non-Cognitive Assets

	Recovered	Did Not Recover	Significance Test
Family Obligations	3.15 (.59)	3.12 (.66)	$t = -.67$, n.s.
Self-Regulated Learning	3.28 (.81)	3.20 (.84)	$t = -1.39$, n.s.
Academic Self-Efficacy	3.55 (.70)	3.41 (.74)	$t = -2.74^{**}$
Sense of Belonging	2.88 (.67)	2.81 (.69)	$t = -1.43$, n.s.
Time Management	2.48 (.80)	2.40 (.84)	$t = -1.40$, n.s.
Academic Motivation	3.62 (.59)	3.60 (.65)	$t = -.38$, n.s.
Feeling Lost in the System	2.51 (.67)	2.60 (.70)	$t = 1.99^*$
Subjective Well-being	3.27 (.81)	3.15 (.85)	$t = -2.02^*$
Perceived Efficacy of the Instructor	3.96 (.70)	3.98 (.72)	$t = .38$, n.s.

Note. Means and standard deviations reported. For all noncognitive strengths, independent-samples t-test were conducted. ** $p < .01$, * $p < .05$.

Early College Experiences

Finally, we examined early college experiences, including living in on-campus housing and participation in a first-year seminar, of those off-track students who did and did not recover.

For living in on-campus housing, there was no difference between the students. For both groups of off-track students, just over one-third lived in campus housing (Table 12).

TABLE 12

Campus Housing Status in 2014

	Recovered	Did Not Recover	Significance Test
Did Not Live on Campus	64%	65%	$\chi^2 = .07$, n.s.
Lived on Campus	36%	35%	

The second early college experience examined was participation in a first-year seminar. For the 2014 cohort, 58% of first-year students participated in a first-year seminar; the proportion was lower for off-track students at 50%. Students who passed the course were considered to be successful in the course, whereas students who did not pass the course were considered to be unsuccessful. Off-track students who did and did not recover were compared on first-year seminar experiences

(Table 13). Recovery students were more likely to have a successful seminar experience and less likely to have an unsuccessful seminar experience compared to non-recovery students. While it is not clear if having a successful seminar experience enables students to recover or if this is a means of identifying students who will not graduate, at a minimum, attention should be paid to those students with an unsuccessful experience.

TABLE 13

2014 First Year Seminar Participation Among Off-Track Students

First Year Seminars	Recovered	Did Not Recover	Significance Test
Successful	48%	37%	$\chi^2 = 28.30^{***}$
Unsuccessful	4%	12%	
No Seminar	48%	51%	

*** $p < .001$.



SUMMARY

This report examines differences between off-track students who unexpectedly graduate from college (or “recover”) and those who expectedly do not graduate from college. This recovery group is important to better understand as their experiences can provide guidance for how to support students who are off-track. Some key findings are discussed. First, the number of indicators met, as well as the average performance on each indicator, were examined. Students who recovered were more likely to be “close,” in that 75% met three indicators, whereas, only 33% of those who did not recover met three indicators. This highlights both the importance of intervening with students who are at-risk for being off-track in multiple domains as their likelihood of graduating is greatly diminished. Generally-speaking, there were few differences in background characteristics between those

who did and did not recover, with the exception of race/ethnicity. Future research needs to better understand the experiences of Black and Latinx students to understand why their recovery rates are lower. Similarly, there were few differences in academic preparation for those who did and did not recover. This suggests that contextual factors are more likely to provide an understanding as to why students recover.

As seen by initial areas of study, there were large differences by college. Again, from an intervention perspective, colleges need to examine their own practices to see what is working and what is not. Importantly, it does not appear to matter if students start undeclared from a recovery perspective, as undeclared students are not disadvantaged.

Turning to early indicators of college academic success, students who recover consistently out-perform students who do not recover. This is important as both groups are off-track, with academic performance being three of the four indicators. Early alerts can occur very early on, sometimes as soon as the fourth or fifth week of the semester. The early alerts help identify students who are at-risk for not being on-track at the end of the semester. It is clearly important to provide comprehensive support to students, particularly those who seem to be less engaged, as soon as possible. There also seems to be a lost opportunity in terms of retention. While the proportion of students who did not recover are less likely to be retained to the second semester compared to those who did recover (97% versus 71%), there was still a large number of those students who returned for the second semester. Warning signs will likely be in place, such as early alerts, so it is imperative that support is provided to those students to help ensure they return for the second year of college.

Finally, the importance of engaging successfully in a first-year seminar is demonstrated by differences between those who do and do not recover. Off-track students, in general, were less likely than on-track students to take a first-year seminar course. Students who were off-track and did recover were more likely to have a successful seminar experience than those who did not recover. Seminars are important for many reasons, including the content that students learn, providing a small-class experience to help students connect with each other as well as their instructors, but they also are one of the few classes that typically take attendance. Instructors typically know early on if students are attending class and can alert their advisors if they are not. This report provides a description of differences between off-track students who do and do not recover. While it starts to provide guidance concerning how to support off-track students, it is important to also better understand why successful students go off-track, meaning students who are on-track at the end of their first year in college, but do not graduate. Future research needs to understand who those students are and what happened that would explain why they did not graduate.

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