

MCCC “Leaver” Study

Challenge: Student Retention

The retention rate from Fall 2013 to Winter 2014 was 74% ($N = 686$), which is higher than other institutions in our Voluntary Framework of Accountability (VFA) cohort. However only 47.2% ($N = 434$) of the original Fall 2013 cohort returned in Fall 2014. In Winter 2015, 43.2% ($N = 397$) of the original cohort enrolled.

Question

What student characteristic predicted Fall 2013 to Fall 2014 retention? In other words, who were the “leavers”?

Participants

The Fall 2013 cohort defined by VFA: All students ($N = 919$) who were enrolled for the first time at MCCC; they may or may not have had previous postsecondary experience. The cohort included students who earned college credits during high school, as long as this was their first enrollment for credit at MCCC after receipt of the high school diploma or equivalent. Current dual enrollment students were not included.

Measures

Pell Status: Whether or not one was awarded a Pell Grant in Fall 2013.

Developmental Status: Whether or not one was referred to a developmental course.

Ethnicity: Caucasian vs. non-Caucasian

Coursework Completed: Total number of credit hours completed during Fall 2013, including the conversion of developmental classes to credits.

PT vs. FT: Fall 2013 enrollment status; part-time was less than 12 credit hours per semester.

Age: Age in years during Fall 2013.

Gender: Male vs. female

First-Time in College: Degree or certificate-seeking students (based on course-taking, not intention) who had no prior postsecondary experience aside from advanced standing credit and/or Summer 2013 classes.

GPA: Fall 2013 term GPA; developmental students who had never taken credit courses but were coded as having a 0.0 GPA in Colleague, were recoded as having missing data.

Residence: Outside of Monroe County vs. within Monroe County.

Transferred In: Whether or not students self-reported transferring from another institution to MCCC on their admissions application (as opposed to being “first-time”).

Educational Goal: Coded as undecided/non-degree/transfer vs. associate/certificate-seeking from admission form data.

For statistical reasons, two variables of interest, high school GPA (over half of participants had missing data) and enrollment in COLL-145 (only 3%), could not be included in the model.

Logistic Regression Results

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
Pell Status	-.141	.154	.834	1	.361	.869	.642	1.175
Developmental Status	-.239	.170	1.980	1	.159	.787	.564	1.099
Ethnicity	.159	.186	.734	1	.392	1.172	.815	1.687
Coursework Completed	-.037	.030	1.599	1	.206	.963	.909	1.021
PT vs. FT	.775	.206	14.163	1	.000	2.170	1.450	3.249
Age	-.048	.011	18.491	1	.000	.953	.933	.974
Gender	-.073	.155	.225	1	.635	.929	.686	1.258
First-Time in College	-.429	.262	2.686	1	.101	.651	.390	1.088
GPA	.644	.075	73.728	1	.000	1.904	1.644	2.206
Residence	.271	.170	2.556	1	.110	1.312	.941	1.829
Transferred In	-.575	.240	5.763	1	.016	.563	.352	.900
Educational Goal	.476	.265	3.244	1	.072	1.610	.959	2.704
Constant	-.611	.379	2.592	1	.107	.543		

Normally one can predict with 51% accuracy whether or not a student will return in the Fall. This model predicted retention with 69% accuracy. Controlling for the other variables in the model...

- Those who were enrolled full-time in Fall 2013 were 117% (aka “two times”) more likely than part-timers to return in Fall 2014.
- For every one year increase in age, the odds of returning in Fall 2014 decreased by 4.7%.
- For every one point increase in Fall 2013 term GPA, one was 90.4% more likely to return in Fall 2014.
- Those who self-reported transferring to MCCC on their admissions application (16% of the cohort) were 43.7% less likely to return in Fall 2014 than those who identified themselves as being first-time or continuing students.

Thirty students who only took developmental courses were excluded from the previous model since they had no first-semester GPA. Given that administrators might want to predict student retention prior to MCCC first-semester completion, a second analysis was conducted without coursework completed, GPA, or first-time in college status, which the VFA defines according to actual course-taking behavior. Thus those 30 excluded students were included in the next analysis.

Logistic Regression Results (Minus MCCC Coursework-Related Metrics)

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
							Lower	Upper
Gender	-.230	.142	2.604	1	.107	.795	.601	1.051
PT vs. FT	.617	.142	18.782	1	.000	1.854	1.402	2.451
Age	-.031	.010	9.858	1	.002	.970	.951	.988
Pell Status	-.324	.142	5.228	1	.022	.723	.548	.955
Developmental Status	-.536	.151	12.510	1	.000	.585	.435	.788
Ethnicity	-.031	.169	.034	1	.854	.969	.695	1.351
Educational Goal	.044	.146	.093	1	.760	1.045	.786	1.391
Residence	.203	.156	1.689	1	.194	1.225	.902	1.663
Transferred In	-.467	.204	5.224	1	.022	.627	.420	.936
Constant	.594	.308	3.716	1	.054	1.812		

Normally one can predict with 52.8% accuracy whether or not a student will return in the Fall. This model predicted retention with 62.4% accuracy. Controlling for the other variables in the model...

- Those who were enrolled full-time in Fall 2013 were 85.4% more likely than part-timers to return in Fall 2014.
- For every one year increase in age, the odds of returning in Fall 2014 decreased by 3.0%.
- Pell recipients were 27.7% less likely than non-Pell recipients to return in Fall 2014.
- Developmental students were 41.5% less likely than non-developmental students to return in Fall 2014.
- Those who self-reported transferring to MCCC on their admissions application (16% of the cohort) were 37.3% less likely to return in Fall 2014 than those who identified themselves as being first-time or continuing students.

Where Did Students Transfer?

Transfer: As per the VFA definition, students who started at MCCC in Fall 2013, and then left to take classes *exclusively* at another institution during the 2014-15 academic year.

	Frequency	Percent	Valid Percent	Cumulative Percent
DIDN'T TRANSFER	824	89.7	89.7	89.7
HENRY FORD COLLEGE	11	1.2	1.2	90.9
UNIVERSITY OF TOLEDO	9	1.0	1.0	91.8
WAYNE COUNTY COMMUNITY COLLEGE	9	1.0	1.0	92.8
MICHIGAN STATE UNIVERSITY	7	.8	.8	93.6
BAKER COLLEGE - FLINT	5	.5	.5	94.1
CENTRAL MICHIGAN UNIVERSITY	5	.5	.5	94.7
UNIVERSITY OF PHOENIX	4	.4	.4	95.1
EASTERN MICHIGAN UNIVERSITY	3	.3	.3	95.4
JACKSON COLLEGE	3	.3	.3	95.8
DAVENPORT UNIVERSITY	2	.2	.2	96.0
GRAND VALLEY STATE UNIVERSITY	2	.2	.2	96.2
OAKLAND COMMUNITY COLLEGE	2	.2	.2	96.4
REGENCY BEAUTY INSTITUTE	2	.2	.2	96.6
SIENA HEIGHTS UNIV- UNDERGRADS	2	.2	.2	96.8
UNIVERSITY OF MICHIGAN DEARBORN	2	.2	.2	97.1
WASHTENAW COMMUNITY COLLEGE	2	.2	.2	97.3
WAYNE STATE UNIVERSITY	2	.2	.2	97.5

WESTERN MICHIGAN UNIVERSITY	2	.2	.2	97.7
ADRIAN COLLEGE	1	.1	.1	97.8
AMERICAN INTERCONTINENTAL UNIVERSITY	1	.1	.1	97.9
BERKLEE COLLEGE OF MUSIC - ONLINE	1	.1	.1	98.0
CLARK STATE COMMUNITY COLLEGE	1	.1	.1	98.2
DELTA COLLEGE	1	.1	.1	98.3
EASTERN KENTUCKY UNIVERSITY	1	.1	.1	98.4
FERRIS STATE UNIVERSITY	1	.1	.1	98.5
HEIDELBERG UNIVERSITY	1	.1	.1	98.6
INDIANA UNIVERSITY EAST	1	.1	.1	98.7
ITT TECHNICAL INSTITUTE	1	.1	.1	98.8
LANSING COMMUNITY COLLEGE	1	.1	.1	98.9
MADONNA UNIVERSITY	1	.1	.1	99.0
MERCY COLLEGE OF OHIO	1	.1	.1	99.1
MUSKEGON COMMUNITY COLLEGE	1	.1	.1	99.2
OAKLAND UNIVERSITY	1	.1	.1	99.3
OWENS COMMUNITY COLLEGE	1	.1	.1	99.5
POINT PARK UNIVERSITY	1	.1	.1	99.6
SCHOOLCRAFT COLLEGE	1	.1	.1	99.7
SPRING ARBOR UNIV - GRADS	1	.1	.1	99.8
TERRA COMMUNITY COLLEGE	1	.1	.1	99.9
TEXARKANA COLLEGE	1	.1	.1	100.0
Total	919	100.0	100.0	

Conclusion

Predictors of non-retention from Fall 2013 to Fall 2014, in order of descending importance, were part-time enrollment, developmental status, prior college experience, Pell status, and age. When first-semester MCCC coursework and GPA were included in the model, the lower one's GPA, the less likely they were to return.