Inside IR

Elina Belyablya's research on the three academic risk levels was described in the Fall 2012 issue of Inside IR.

Mary Ann M. DeMario's research on the ways in which MCC's child care center helps our students was described in the Spring 2013 issue of Inside IR.

Andrew Welsh's research on the socioeconomic risk factors that predict students' graduation or transfer to a four-year college was described in the Spring 2012 and Fall 2016 issues of Inside IR.

All issues of Inside IR are available on our homepage www.monroecc.edu/depts/research/ by clicking on the "Newsletters" link on the left hand side.

An IR Director's Retrospective

As I approach retirement and look back at my years of experience in IR, I have come to an irrefutable fact: as Director of IR I've been able to do what I have done because of the incredible talents of three other researchers whom many at MCC may not know.

Elina Belyablya, Assistant Director, started as a technical assistant back in the IR Office in the early 2000s. Elina is responsible for the official reporting of data to SUNY, the Federal Department of Education, the New York State Education Department, and the various benchmarking projects that we are involved in (Voluntary Framework of Accountability, the National Community College Benchmarking Project, and Student Achievement Measure, to name a few). She also completes many ad hoc requests, and was the author of the research report that identified the three academic risk levels that are used in MCC's Report Card and other analyses.

Mary Ann Matta DeMario, Specialist, has spent 10+ years in the IR Office and is currently working part-time. She produces the "*What Happened to the Class of …?*" report each year, is responsible for reporting CTEA data to the New York State Education Department, and assists the Strategic Resource Development and Grant Management office with research for grant proposals and follow-ups. She also performs ad hoc requests, conducts surveys using Qualtrics, and serves as editor-in-chief of this newsletter. Her

research project that showed the ways in which MCC's child care center helps our students has been cited by the Association of Community College Trustees, the Institute for Women's Policy Research, and the *Washington Post.*

Andrew Welsh, Specialist, has spent eight years in the IR Office and is responsible for preparing the common data set that is used for admissions publications, conducting dual enrollment research, maintaining IR's enrollment and fall-to-fall/fall-to-spring databases, and completing ad hoc requests. He created the research that identified first-generation status and race as socioeconomic risk factors regarding students' graduation or transfer to a four-year college.

It has been a privilege to work with these very smart individuals who have brought many insights and solutions to very complex research problems.

Folks may think that IR is just data. It isn't. We do provide (a lot of) data, but one of our most underutilized skills is analysis, particularly regarding action research.

My advice: Involve IR at the front-end of projects, not at the back-end when projects are over. The best way to understand a project is to begin with a sound research design.

Math Course Level Completion

MCC has four math course levels:

1. **College Level** – Credit-bearing courses that count toward a degree or certificate (e.g., MTH175)
2. **Preparatory** – Courses required for the college algebra/science sequence that count as elective credits (e.g., MTH099/104, MTH104, MTH135)
3. **Non-Credit MTH** – Non-credit courses that are required prerequisites for Preparatory math or statistics courses (e.g., MTH098, MTH096)
4. **Non-Credit TRS** – Non-credit courses that are required for entry into Non-Credit MTH courses (e.g., TRS092, TRS094)

Recently, the IR Office analyzed data on students who started at MCC in fall 2012 and fall 2013, and their math course progress. We found that one-third started in a non-credit TRS math course, one-fifth started in a college level math course, one-fifth started in a non-credit MTH/preparatory level course, and another one-third did not attempt any math course in their first semester.

Table 1 shows the first level math course students attempted in their first semester at MCC as well as the highest level math course they completed (i.e., earned a C or better in) within two-and-a-half years.

As illustrated, 80% of the students who started in college level math in their first semester were able to complete a credit-bearing math course within two-and-a-half years. Almost a half of the students (49%) who started in a preparatory level course were able to complete a Level 8 or higher math course.

Though not shown in the table, there was a statistically significant difference in math course progress based on the initial math course attempted.

One-third of entering fall students started in a non-credit TRS course. Twelve percent started in a non-credit MTH course.

Almost a half of the students (49%) who started in a preparatory level course were able to complete a Level 8 or higher math course.

Table 1. First Level Math Course Attempted by Highest Level Math Course Completed

Math Course Level in First Semester	N	Highest Math Course Completed within 2 1/2 Years			
		No College Credit-Bearing MTH Course	Credit-Bearing MTH Courses		
			MTH130/ MTH150	MTH104/ MTH135	MCC Level 8 or Higher MTH Course†
College Level	1,825 (100%)	20%	13%	2%	65%
Preparatory	1,351 (100%)	22%	4%	25%	49%
Non-Credit MTH	835 (100%)	49%	7%	18%	26%
Non-Credit TRS	2,803 (100%)	72%	10%	7%	11%
Total	6,814 (100%)	45%	9%	11%	35%

†MTH140, 141, 156, 160, 161, 162, 164, 165, 172, 175, 200, 210, 211, 212, 220, 225, 230

Preliminary Analyses of Starfish Data

Starfish, MCC's retention software, was implemented in fall 2015. In its first two semesters, it was used for first time, matriculated Transitional Studies and ESOL majors, EOP students, athletes, and online students. In fall 2016, it was expanded college-wide.

In general, the retention and persistence rates for the students in the pilot groups have not significantly changed since the implementation of Starfish, as shown in Table 2.

Table 3 shows the fall-to-spring persistence of the broader first time, matriculated MCC student population from fall 2016. This is the first such analyses conducted since Starfish was expanded college-wide. The results indicate that there is no statistically significant difference pre- and post-Starfish.

In fall 2017, we will analyze the data on the fall-to-fall retention rate of the larger student population.

There are a few caveats to keep in mind when reviewing the preliminary analyses.

First, Starfish's most direct impact might be more readily seen in course outcomes rather than general persistence or retention. There are other retention initiatives that may independently affect outcomes as well (such as Pathways).

Second, the dynamics of an enterprise such as Starfish change when it is expanded college-wide. For example, student outcomes may evolve as faculty members and students become more accustomed to the software.

Third, it is important to consider the long-term historical variations in persistence and retention rates. (See sidebar.) Starfish's impact on MCC students will be more clearly revealed as time goes on. In other words, the data doesn't show an increase in persistence and retention right now, but it may over time.

Currently, the IR Office is analyzing data on student retention and performance within courses. In other words, since Starfish was implemented…

- has the number of course withdrawals decreased?
- have course C or better rates increased?

We will publish the results in a future issue of *Inside IR*.

There is natural variation in persistence and retention rates over time. The data doesn't show an impact on persistence and retention yet, but may do so over time.

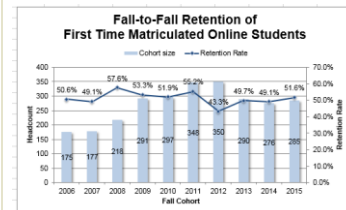*The following graph shows the 10-year trends in fall-to-fall retention of online students.*

Fall-to-Fall Retention of First Time Matriculated Online Students

Table 2. Persistence and Retention Rates of Students in the Starfish Pilot

	Persistence Rates		Retention Rates	
	Pre-Starfish (Fall 2014 to Spring 2015)	Post-Starfish (Fall 2015 to Spring 2016)	Pre-Starfish (Fall 2014 to Fall 2015)	Post-Starfish (Fall 2015 to Fall 2016)
Transitional Studies Majors	77.7% (n=422)	75.5% (n=424)	43.7% (n=423)	43.9% (n=424)
ESOL Majors	85.9% (n=64)	89.8% (n=88)	73.4% (n=64)	75.0% (n=88)
EOP Students	87.1% (n=93)	91.8% (n=98)	53.8% (n=93)	65.3% (n=98)
Athletes	92.7% (n=231)	89.6% (N=237)	75.2% (n=231)	69.3% (N=237)
Online Students	74.5% (n=276)	74.3% (n=285)	49.1% (n=276)	51.6% (n=285)

Table 3. Fall-to-Spring Persistence Rates of Students College-Wide

	Pre-Starfish (Fall 2015 to Spring 2016)	Post-Starfish (Fall 2016 to Spring 2017)
Total MCC Student Population	80.7% (n=3252)	80.4% (n=3011)

Completion Rates of Black Males

Recently, the IR Office analyzed data on first time, full-time, degree-seeking students who entered MCC in fall 2008, fall 2009, fall 2010, fall 2011, and fall 2012. The purpose was to see which variables influence three-year completion rates for Black males.

Figure 1 shows the completion rates of three groups of students: Black males, White males, and all other students. The completion rate of Black males is lower than both of the other groups, a difference that is statistically significant.

Deeper analyses reveal several predictors of Black males' successful three-year completion. The biggest predictor

is passing (i.e., earning a C or better) in all of one's first semester courses. In fact, nearly three-quarters of the Black males who graduated within three years had passed all of their courses in their first semester while less than one-third of those who didn't graduate within three years had done so.

Other predictors of completion among Black males were:

- Being age 30 or older
- Not receiving Pell grants
- Being placed at math level 5 or higher
- Starting in an AAS program.

Of the 118 Black males in the study who graduated from MCC within three years, 73% passed all of their first semester courses.

Of the 1,469 Black males who didn't graduate within three years, 29% completed all of their first semester courses.

Figure 1. Graduation Rates of First Time, Full-Time, Degree-Seeking Students
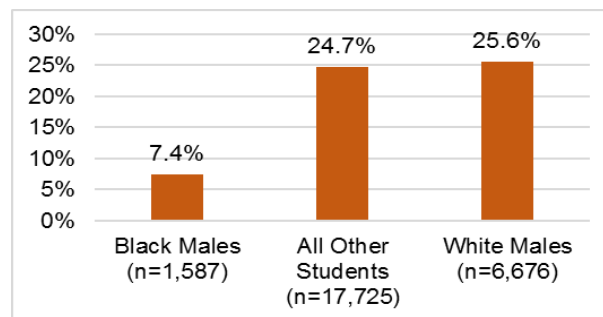
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