The Impact of Adjunct Faculty on Second Year Retention

A Preliminary Study

June 2015

 The Maryland Higher Education Commission asked Morgan State University to assess the impact of adjunct faculty on the second year retention rate. An initial assessment has been completed. For the purposes of this assessment, adjunct faculty included both full and part-time non-tenure track faculty. Also this assessment only included 100 level classes.

**Methodology**

Jaeger and Eagan (2010) served as a model for the methodology for this assessment.

**Participants**

 The fall 2013 first-time, full-time cohort was used for this assessment; 885 students were included. Of those, 676 returned in fall 2014 and 209 did not return.

**Variables included**

 The following variables were included in this assessment:

1. Percent of student’s classes taught by adjuncts (exposure to adjuncts)
2. Students cumulative GPA as of spring 2014
3. Tuition status in fall 2013 (in-state or out-of-state)
4. Pell recipient status
5. Gender
6. Major (STEM, including biology, computer science, information science, civil engineering, electrical engineering, industrial engineering, mathematics, physics, engineering physics, and chemistry; non-STEM)
7. Parent loan amount
8. Student loan amount
9. Grant amount
10. Scholarship amount
11. Work study amount
12. Unmet need (defined as cost of attendance – (expected family contribution + total aid awarded; negative unmet need was set to zero)
13. Percent of academic credit hours (credit hours in classes that were not developmental or were not Orientation).

 Descriptive statistics for the returning students are included in Tables 1 and 2; descriptive statistics for the non-returning students are included in Tables 2 and 3.

**Results**

**Factors with a positive impact on retention**

Results indicate that students with higher cumulative GPAs are four times more likely to return. Results also indicate that students paying in-state tuition are nearly three times as likely to return. Also, STEM majors are slightly more likely to return. Financial aid has a positive impact on retention, but not as great of an impact as cumulative GPA or tuition status. The order of impact from high to low for financial aid types is work study, student loans, grants, Parent loans, and scholarships. Higher percentages of academic credit hours also slightly increase the odds of returning. Results are displayed in Table 4.

**Factors with a negative impact on retention**

 Results indicate that increased exposure to adjunct faculty (higher percentages the student’s classes being taught by adjuncts) slightly decreases the odds of returning. Female students are slightly less likely to return. Pell recipients are less likely to return as are students with higher unmet need. Results are displayed in Table 4.

**Overall model**

The Nagelkerke statistic indicates that the model accounts for 37% of the variation in retention.

**Discussion**

 Results suggest that the factors which have the greatest impact on second year student retention are cumulative GPA, tuition status, and to a lesser degree major and financial aid. Increased exposure to adjuncts, unmet need, Pell recipient status and being female negatively impact second year retention.

 A limitation of this study is the use of only one cohort. The Office of Institutional Research is planning a study that will include additional cohorts.

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| Table 1 |  |  |  |  |  |
| *Descriptive Statistics for Interval Variables for Returning Students* |
| Variable | N | Mean | Standard Deviation | Minimum | Maximum |
| Percent adjunct | 676 | 72.6706 | 15.8941 | 16.67 | 100.00 |
| Percent academic credit hours | 676 | 87.5164 | 9.9719 | 46.15 | 100.00 |
| GPA | 676 | 2.7531 | .6808 | 0.00 | 4.00 |
| Parent loans | 639 | 2625.2848 | 6293.9117 | 0.00 | 28264.00 |
| Student loans | 639 | 6285.1894 | 4083.3988 | 0.00 | 26610.00 |
| Grants | 639 | 5198.72 | 4508.661 | 0.00 | 22629.00 |
| Scholarships | 639 | 2965.61 | 6420.293 | 0.00 | 30326.00 |
| Work-study | 639 | 74.22 | 389.333 | 0.00 | 5820.00 |
| Unmet need | 639 | 5221.3052 | 5781.1289 | 0.00 | 26063.00 |

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| Table 2 |  |  |  |  |
| *Descriptive Statistics for Categorical Variables*  |  |  |
|  | Returning | Non-Returning |
| Variable | N | % | N | % |
| Male | 301 | 77.4 | 88 | 22.6 |
| Female | 375 | 75.6 | 121 | 24.4 |
| In-state tuition | 467 | 80.1 | 116 | 19.9 |
| Out-of-state tuition | 209 | 69.2 | 93 | 30.8 |
| STEM major | 189 | 81.5 | 43 | 18.5 |
| Non-STEM major | 487 | 74.6 | 166 | 25.4 |
| Pell recipient | 388 | 74.9 | 130 | 25.1 |
| Non-Pell  | 251 | 78.9 | 67 | 21.1 |
| Missing Pell data | 37 | 75.5 | 12 | 24.5 |

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| Table 3 |  |  |  |  |  |
| *Descriptive Statistics for Interval Variables for Non-Returning Students* |
| Variable | N | Mean | Standard Deviation | Minimum | Maximum |
| Percent adjunct | 209 | 74.8798 | 16.1496 | 30.00 | 100.00 |
| Percent academic credit hours | 209 | 82.8626 | 13.6871 | 50.00 | 100.00 |
| GPA | 209 | 1.7162 | 1.0369 | 0.00 | 3.91 |
| Parent loans | 197 | 2169.8122 | 5738.8610 | 0.00 | 26378.00 |
| Student loans | 197 | 5798.3604 | 4078.7002 | 0.00 | 24750.00 |
| Grants | 197 | 4759.94 | 3918.613 | 0.00 | 23934.00 |
| Scholarships | 197 | 2523.45 | 6869.043 | 0.00 | 26975.00 |
| Work-study | 197 | 29.80 | 265.756 | 0.00 | 2850 |
| Unmet need | 197 | 8797.9188 | 7888.0412 | 0.00 | 28810.00 |

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| Table 4 |  |  |  |  |  |  |  |
| *Logistic Regression for Second Year Retention* |
| Variable | B | Standard Error | Wald | *P* | Exp(B) | 95% CI for Exp(B)Low High |
| Percent adjunct | -.002 | .007 | .100 | .752 | .998 | .984 | 1.012 |
| GPA | 1.400 | .128 | 118.845 | .000 | 4.055 | 3.153 | 5.216 |
| Gender  | -.275 | .213 | 1.676 | .195 | .759 | .501 | 1.152 |
| Major | .305 | .250 | 1.492 | .222 | 1.357 | .831 | 2.216 |
| Tuition status | 1.010 | .280 | 12.967 | .000 | 2.745 | 1.584 | 4.756 |
| Pell status | -.041 | .327 | .016 | .900 | .960 | .505 | 1.824 |
| Percent academic credit hours | .006 | .010 | .332 | .565 | 1.006 | .987 | 1.025 |
| Parent loans | .031 | .024 | 1.747 | .186 | 1.032 | .985 | 1.081 |
| Student loans | .060 | .034 | 3.100 | .078 | 1.062 | .993 | 1.135 |
| Grants | .058 | .037 | 2.429 | .119 | 1.060 | .985 | 1.141 |
| Scholarships | .016 | .025 | .417 | .518 | 1.016 | .967 | 1.068 |
| Workstudy | .175 | .327 | .288 | .592 | 1.192 | .628 | 2.262 |
| Unmet need | -.037 | .023 | 2.658 | .103 | .963 | .921 | 1.008 |

References

Jaeger, A.J., & Eagan, M.K. (2010). Examining retention and contingent faculty use in a state

 system of public higher education. *Educational Policy, 25*(3), 507-537.