Will They Stay or Will They Go:
Early Signs of UM Undergraduate Student Retention/Attrition
The Retention Subgroup of the Campus Assessment Working Group consists of the following members:

- **Pat Hunt, Chair**  
  Research Analyst, Counseling Center and Student Affairs
- **Michelle Appel**  
  Associate Director, Office of Institutional Research, Planning, and Assessment
- **John Bowman**  
  Associate Director, University Career Center
- **Corbin Campbell**  
  Graduate Assistant, Office of Institutional Research, Planning, and Assessment
- **Chip Denman**  
  Research Associate, Office of Information Technology
- **Jonathan Kandell**  
  Assistant Director, Counseling Center
- **Dora Elias McAllister**  
  Coordinator for Human Resources, Department of Resident Life
- **Jen Meyers**  
  Graduate Assistant, Office of Institutional Research, Planning, and Assessment
- **Jessica Mislevy**  
  Graduate Assistant, Office of Institutional Research, Planning, and Assessment
- **Jennifer Rossignol**  
  Counselor/Advisor, Academic Achievement Programs
- **Dawn Marie Smith**  
  Assistant Director, EDCI Undergraduate Advising
- **Pathe’ Sow**  
  English Coordinator, Academic Achievement Programs
- **Rob Waters**  
  Associate Vice President for Academic Affairs and Special Assistant to the President
- **Mycah Wilson**  
  Graduate Student, College Student Personnel
Table of Contents

I. Executive Summary .................................................. 4
II. Introduction ......................................................... 5
III. At First Glance: Who Are They? ................................. 6
IV. Characteristics that Tipped the Scale ............................... 8
V. At Second Glance .................................................... 12
VI. Discussion of the Findings ......................................... 13
VII. Limitations .......................................................... 14
VIII. Implications ....................................................... 14
IX. Future Research .......................................................... 15
X. References ............................................................... 16

Tables

Table 1. Demographic and institutional variables of the respondents by the four enrollment categories ........................................ 7

Table 2. Variables that Distinguish Stayers from Other Enrollment Categories:
   a. Men only ............................................................... 12
   b. Women only ............................................................ 13

Appendix

2002 Beginning Student Survey ........................................... 17
I. Executive Summary

The purpose of this study was to determine which first semester freshmen’s self-reported behaviors, attitudes, and expectations are related to their enrollment status five semesters later. National Student Clearinghouse data were used to categorize survey respondents into one of four enrollment categories: continuously enrolled at UM (Stayers); enrolled at UM five semesters after matriculation but with at least one semester not enrolled here (Stop-outs); enrolled at another institution of higher education five semesters after matriculation (Transfer-outs); and not enrolled anywhere and not graduated five semesters after matriculation (Not Enrolled).

Descriptive profiles (At First Glance, p. 6) of each of the four enrollment categories were created using demographic and institutional data. The descriptive analysis found several general observations across the four enrollment categories. Differences were found across the enrollment categories by gender, declared/undeclared major, race, residency, living on/off campus the freshman year, and academic abilities (high school GPA, SAT scores, academic action).

An exploratory analysis (Characteristics that Tipped the Scale, p. 8) was conducted using multinomial logistic regression (MLR) to assess possible associations between student characteristics – using institutional data as well as survey data from CAWG’s Beginning Study Survey 2002 - and subsequent (Fall 2005) enrollment outcomes. Because enrollment patterns were different by gender, separate multinomial logistic regression analyses were run for men and women. The MLR identified three early risk factors for men and six for women. Among those risk factors, two were common to both men and women: race and a less-than-positive general attitude toward UM. The four other risk factors for female respondents consisted of an academics factor (comprised of self-reported items), in-state/out-of-state residency, whether UM was their first choice, and future direction (major and career clarity). The other risk factor for male respondents was self-reported study skills.

Another descriptive analysis (At Second Glance, p. 12) provides comparisons across the four enrollment categories within the significant variables from the MLR.

Recognizing the exploratory nature and the limitations of this study, some possible early interventions based on the associations observed in this investigation were suggested.

A future study will replicate the present study, using the Beginning Student Survey 2004 and looking at enrollment categories five semesters later, in the Fall semester of 2007. A separate sub-study will look only at respondents who transferred out to see if differences exist between those who transfer to a two-year and a four-year institution.
II. Introduction

Non-persisting students have traditionally been defined as students who by an arbitrary date are not enrolled at the institution at which they matriculated and have not graduated from there (Pascarella & Terenzini, 1980; Spady, 1971; Tinto, 1993). There has been little published about what these students did once they discontinued enrollment at that institution, despite the fact that some may have transferred elsewhere. Institutions can learn from investigating the reasons behind discontinued enrollment – temporarily or permanently – of their undergraduate students. What causes some students to “stop out” temporarily? Why do some students transfer elsewhere? What is behind other students’ discontinued enrollment anywhere? Are there early signs of future enrollment status that the institution of initial matriculation could respond to by policy, program, or practice in order to encourage continuous enrollment at that institution?

The Retention subgroup of the Campus Assessment Working Group (CAWG) at the University of Maryland has been investigating these questions. The present study uses pre-existing data to explore issues behind degree-seeking undergraduate students’ enrollment patterns. We used two sets of data:

- The Beginning Student Survey is an instrument crafted by the CAWG Beginnings subgroup, and is given to first-time freshmen eight weeks into their first fall semester. In the fall of 2002, the Beginning Student Survey, hereafter referred to as the BSS’02, was administered to students in classes designated for freshmen (e.g., English 101, UNIV100, Gemstone 100, Honors 100, and some College Park Scholars colloquia). The BSS’02 asked students about their expectations, attitudes and behaviors.

- The National Student Clearinghouse (NSC) uses student identification numbers to search data from every participating institution to supply semester-by-semester enrollment information on these individuals. All fifty states are represented as well as some territories.

The sample was initially comprised of 2110 first-time, full-time, degree-seeking freshmen in Fall 2002 who both completed the BSS’02 and gave a valid university identification number. The 26 International respondents were removed from the analyses because of possible confounding issues related to visas and/or their family’s possible transient diplomatic status. National Student Clearinghouse data were used to categorize the remaining 2084 respondents according to their enrollment status in the fall of 2005, three years after they matriculated at UM. The four categories included:

- **Stayers**: Respondents who were continuously enrolled at UM between Fall 2002 and Fall 2005, or had graduated from UM by Fall 2005 (n = 1588, 76%);

- **Stop-outs**: Respondents who were enrolled at UM in Fall 2005 after having temporarily discontinued enrollment at UM for at least one semester between Fall 2002 and Fall 2005 (n = 239, 12%);
- **Transfer-outs**: Respondents who, at some point between Fall 2002 and Fall 2005, discontinued enrollment at UM, and were enrolled at another institution in Fall 2005 or had graduated from another institution by Fall 2005 (n = 158, 8%);

- **Not enrolled**: Respondents who were enrolled at UM in Fall 2002, had left UM, and had no NSC graduation data or enrollment data for Fall 2005 (n = 99, 5%).

The self-reported experiences of respondents in these four enrollment categories form the basis of the exploration of early signs of later enrollment.

Section II of this report – **At First Glance: Who Are They?** – uses institutional data to develop profiles of each of the enrollment categories. While this section discusses demographic information by enrollment category, it is to be understood as descriptive - and not at all as predictive – of the particular enrollment category.

Section III – **Characteristics That Tipped The Scale** – describes the findings of the multinomial logistic regression analysis (MLR) used to assess possible associations between student characteristics and *Beginning Study Survey ’02* responses, and subsequent (Fall 2005) enrollment outcomes.

Section IV – **At Second Glance** – takes a comprehensive look at the characteristics that tipped the scale, allowing for comparisons across the four enrollment categories within each of the significant variables. This section has separate discussions for men and women.

The report concludes with a discussion of the findings, the study’s limitations, implications for practice, and suggestions for future research.

**III. At First Glance: Who Are They?**

This section uses institutional data to develop profiles of each of the enrollment categories. As mentioned above, while this section discusses demographic information by enrollment category, it is to be understood as descriptive - and not at all as predictive – of the particular enrollment category.

Table 1 shows demographic and institutional variables of the individuals in each of the four enrollment categories.
Table 1. Demographic and institution variables of the respondents by the four enrollment categories

<table>
<thead>
<tr>
<th>Variables</th>
<th>Stayers (n=1588)</th>
<th>Stopouts (n = 239)</th>
<th>Transfer-outs (n=158)</th>
<th>Not enrolled (n=99)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Institutional variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>48</td>
<td>71</td>
<td>51</td>
<td>53</td>
</tr>
<tr>
<td>Men</td>
<td>52</td>
<td>29</td>
<td>49</td>
<td>47</td>
</tr>
<tr>
<td>Asian</td>
<td>14</td>
<td>9</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Black</td>
<td>12</td>
<td>6</td>
<td>11</td>
<td>28</td>
</tr>
<tr>
<td>Hispanic</td>
<td>6</td>
<td>3</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>White</td>
<td>63</td>
<td>76</td>
<td>69</td>
<td>50</td>
</tr>
<tr>
<td>Other/Unknown</td>
<td>5</td>
<td>6</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>In-state resident</td>
<td>72</td>
<td>51</td>
<td>54</td>
<td>76</td>
</tr>
<tr>
<td>Out-of-state resident</td>
<td>28</td>
<td>49</td>
<td>46</td>
<td>24</td>
</tr>
<tr>
<td>Fall 2002 Advising College:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGNR</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>ARCH</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>ARHU</td>
<td>4</td>
<td>6</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>BMGT</td>
<td>6</td>
<td>8</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>BSOS</td>
<td>8</td>
<td>8</td>
<td>9</td>
<td>14</td>
</tr>
<tr>
<td>CLFS</td>
<td>11</td>
<td>5</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>CMPS</td>
<td>7</td>
<td>3</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>EDUC</td>
<td>3</td>
<td>2</td>
<td>&lt;1</td>
<td>3</td>
</tr>
<tr>
<td>ENGR</td>
<td>18</td>
<td>3</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>HLHP</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>JOUR</td>
<td>3</td>
<td>3</td>
<td>&lt;1</td>
<td>0</td>
</tr>
<tr>
<td>L&amp;S/UGST</td>
<td>34</td>
<td>56</td>
<td>45</td>
<td>36</td>
</tr>
<tr>
<td>Fall 2002 on-campus residency</td>
<td>91</td>
<td>94</td>
<td>90</td>
<td>79</td>
</tr>
<tr>
<td>Age in Fall 2002</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 18</td>
<td>20</td>
<td>18</td>
<td>16</td>
<td>15</td>
</tr>
<tr>
<td>18</td>
<td>76</td>
<td>80</td>
<td>76</td>
<td>75</td>
</tr>
<tr>
<td>Above 18</td>
<td>4</td>
<td>3</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Honors/College Park Scholars</td>
<td>44</td>
<td>38</td>
<td>24</td>
<td>28</td>
</tr>
<tr>
<td>Last academic action:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Probation</td>
<td>0</td>
<td>0</td>
<td>17</td>
<td>25</td>
</tr>
<tr>
<td>Dismissal</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>SAT Combined</td>
<td>1263/136</td>
<td>1271/121</td>
<td>1217/137</td>
<td>1198/146</td>
</tr>
<tr>
<td>High School GPA</td>
<td>3.9/.4</td>
<td>3.9/.5</td>
<td>3.8/.4</td>
<td>3.7/.5</td>
</tr>
</tbody>
</table>

Source: BSS'02 respondents - Direct Admits only

CAWG Retention
Fall 2008
At first glance, some general observations can be made from examining the institutional data that describe the characteristics of the respondents in the four enrollment categories of this study. Notable findings include:

**Gender**
Stop-outs had the highest percentage of women, and Stayers had the highest percentage of men, compared to the three other categories.

**Race/Citizenship**
While at least 50% of the students in each category were White, the Not Enrolled category had the highest percentage of non-White students, in particular Black students (28%).

**Residency**
More than 70% of Stayers and Not Enrolled were in-state students, while Stop-outs and Transfer-outs were divided almost equally between in-state and out-of-state residency.

Seventy-nine percent of Not Enrolled respondents lived on campus their first semester compared to 90% or more respondents in the three other categories.

**Advising College**
About 50% of Stop-outs and Transfer-outs were in Letters and Sciences or Undergraduate Studies, while 36% or less of the Stayers and Not Enrolled were in either of these schools.

**Academic Abilities**
Stayers and Stop-outs appeared to have higher academic abilities than Transfer-outs and Not Enrolled as evidenced by higher percentages of respondents in those two enrollment categories who participated in UM’s Honors or College Park Scholars programs, had higher combined SATs, and higher high school GPAs. Further, none of the Stayers or Stop-outs were academically dismissed or placed on academic probation.

At first glance, there are some differences among the four enrollment groups that raise questions about the role of gender, race, residency, etc in students’ subsequent enrollment patterns. These questions led us to try to identify specific variables that explained the enrollment patterns of students who stopped out, transferred out, or discontinued their enrollment in higher education - when compared with the students who were continuously enrolled at UM. The Multinomial Logistic Regression (MLR) analysis described in the next section of this report addresses these issues.

**IV. Characteristics That Tipped the Scale**

Questions on the BSS’02 covered a broad range of topics. (See the Appendix for a copy of the BSS’02.) Items from the survey that were selected for inclusion in this study were based on the following criteria: 1) potential usefulness, at eight weeks into the semester, in identifying future enrollment patterns (i.e., outcome variables such as GPA at UM were not included); 2) having sufficient variability; and 3) having face validity with the retention literature or with a previous study conducted by the CAWG Retention subgroup - see “A Delicate Balance: Stop-outs and Transfer-outs Tell Their Story” - available at [www.umd.edu/CAWG/](http://www.umd.edu/CAWG/).
In order to reduce the number of items to be included in the Multinomial Logistic Regression (MLR), maximum likelihood factor analysis was used to distinguish thematic clusters of survey items with the same response options. Three factors were identified, with items relating to academic issues, self-assessment of study skills, and a sense of connection to the institution.

- **Academics factor:**
  - I am earning the grades I want.
  - I’ve stayed motivated.
  - I feel adequately prepared for academic demands here.
  - I’m adjusting to the academic work of college.

- **Study Skills factor:**
  - At present, how do you think you compare with other freshmen at UM in the following areas:
    - Oral communication skills
    - Math skills
    - Note taking
    - Listening
    - Managing time
    - Understanding what you read
    - Reading speed
    - Writing – organization
    - Writing – grammar
    - Managing stress
    - Memory
    - Preparing for exams
    - Taking exams

- **Institutional Connectedness factor**
  - There are social/leisure activities on campus that I like.
  - If I run into problems here, I know someone who’ll listen to and help me.
  - I’m adjusting to the social life of college.
  - There are sufficient campus activities on weekends to meet my interests and needs.
  - I’m satisfied with my current living arrangements.
  - I’m as involved in campus activities as I want to be.
  - I can develop a class schedule that fits my needs.
  - I feel safe on campus.
  - I know where to get help on campus with reading and study skills.
  - I understand the purpose of the CORE program.

Multinomial Logistic Regression was used to evaluate possible associations between student characteristics and survey responses, and Fall 2005 enrollment outcomes (i.e., Stayers, Stop Outs, Transfer Outs and Not Enrolled). This approach tests for effects on the likelihood of each enrollment outcome relative to that of being continuously enrolled. Each factor or variable’s contribution to that likelihood can be assessed as if all the other factors/variables were equal.
In addition to the three factors identified by the maximum likelihood factor analysis and listed above, the following items were also included in the MLR analyses:

- At present, your general attitude about UM is: Very negative (1) – Very positive (5)
- I am concerned about my ability to finance my college education: Strongly disagree (1) – Strongly agree (5)
- I've selected a field of study/major: Strongly disagree (1) – Strongly agree (5)
- I've identified a career direction or interest: Strongly disagree (1) – Strongly agree (5)
- Work at an on campus job: Yes or No
- Work at an off campus job: Yes or No
- UM was first choice: Yes or No

The MLR analyses also included two categorical variables from institutional records:

- Race
- In-state vs. out-of-state residency

Finally, an interaction between state residency and financial concern was included to allow for the possibility that financial concern may act differently for in-state and out-of-state students.

Results

The MLR gives results in terms of positive or negative changes to the odds - that is, the likelihood of the relevant outcome divided by the likelihood of staying continuously enrolled, given certain student characteristics. In order to simplify the description of the findings but also remain true to the MLR, we describe these odds ratios in terms of “relative risk.”

It is important to bear in mind that the MLR results provide a screening tool for identifying issues that are associated with certain enrollment patterns (Stayers, Stop-outs, Transfer-outs, or Not Enrolled). The MLR does not claim to prove causal relationships, and therefore should not be used to make predictions for individual students. The exploratory p value was p < .075.

Over the last several decades, the literature on retention of college students has consistently demonstrated that gender is an important predictor variable for retention (e.g., Astin, 1975; Peltier, Laden, & Matranga, 1999; Reason, 2003; Tinto, 1993). Furthermore, our initial analyses showed significant interactions between gender and the other variables in the model. Therefore, we ran separate analyses for men and women, and report the separate findings below.

Enrollment Categories of Male Students

According to the Multinomial Logistic Regression for male respondents, there were three variables that distinguished Stayers from other enrollment categories.

- General attitude toward UM \( p < .01 \)
- Race \( p < .03 \)
- Study skills factor \( p < .07 \)
Compared with male Stayers:

**Male Stop-outs**
- The relative risk of stopping out increased as their general attitude toward UM was less-than-positive.

**Male Transfer-outs**
- There were no main effect variables that distinguished between male respondents who transferred out and those who were continuously enrolled.

**Male Not Enrolled**
- The relative risk of being not enrolled increased as their general attitude toward UM was less-than-positive.
- For African American men, the risk of being not enrolled was greater than it was for White men.
- The lower the male respondent’s score on the study skills factor (i.e., “below average”), the greater his relative risk of being not enrolled.

**Enrollment Categories of Female Students**

According to the Multinomial Logistic Regression for female respondents, there were six variables that distinguished Stayers from other enrollment categories.

- General attitude toward UM $p < .01$
- Race/citizenship $p < .01$
- Academics factor $p < .03$
- In-state/out-of-state residency $p < .04$
- UM was first choice $p < .03$
- Future (major/career) direction $p < .01$

Compared with female Stayers:

**Female Stop-outs**
- The relative risk of stopping out was greater for those who did not know their future direction.
- The higher the female respondent’s score on the Academics factor, the greater her relative risk of stopping out.
- Female respondents for whom Maryland was their first choice institution had a lower relative risk of stopping out.
- African American women had a lower relative risk of stopping out compared with White women.

**Female Transfer-outs**
- A less-than-positive general attitude toward UM indicated a greater relative risk of transferring out.
- Out-of-state women had a greater relative risk of transferring out compared with in-state women.

**Female Not Enrolled**
- Asian American women had a lower relative risk of being not enrolled compared with White women.
V. At Second Glance

This section builds on the results of the previous section’s MLR analyses in order to help increase an understanding of the relationship between responses on a survey in fall of 2002 and enrollment patterns in fall of 2005. As with the above analyses, the discussion is presented separately for men and women.

Tables 2a and 2b show characteristics that distinguish Stayers from the other enrollment categories. While Tables 2a and 2b show percents, it is important to bear in mind that the MLR’s findings are based on the odds ratios that used the percents.

<table>
<thead>
<tr>
<th>Table 2a. Variables that distinguish Stayers from the other enrollment categories: Men only</th>
<th>Stayers n=826</th>
<th>Stopouts n=70</th>
<th>Transfer-outs n=77</th>
<th>Not enrolled n=47</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>14</td>
<td>10</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>Black</td>
<td>8</td>
<td>7</td>
<td>9</td>
<td>30</td>
</tr>
<tr>
<td>Hispanic</td>
<td>5</td>
<td>3</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>White</td>
<td>67</td>
<td>70</td>
<td>68</td>
<td>45</td>
</tr>
<tr>
<td>Other/Unknown</td>
<td>5</td>
<td>10</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Study Skills Factor: 4 pt. scale: <em>(Below average, Average, Above average, Highest 10%)</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study Skills Factor Mean</td>
<td>2.59/.49</td>
<td>2.62/.55</td>
<td>2.36/.55</td>
<td>2.32/.48</td>
</tr>
<tr>
<td>Oral communication</td>
<td>2.68/.82</td>
<td>2.99/.69</td>
<td>2.66/.77</td>
<td>2.66/.89</td>
</tr>
<tr>
<td>Math skills</td>
<td>2.98/.87</td>
<td>2.64/.74</td>
<td>2.44/.82</td>
<td>2.32/.86</td>
</tr>
<tr>
<td>Note-taking</td>
<td>2.35/.80</td>
<td>2.31/.73</td>
<td>2.19/.74</td>
<td>2.02/.68</td>
</tr>
<tr>
<td>Listening</td>
<td>2.72/.79</td>
<td>2.72/.75</td>
<td>2.45/.80</td>
<td>2.47/.83</td>
</tr>
<tr>
<td>Managing time</td>
<td>2.29/.92</td>
<td>2.45/.88</td>
<td>2.01/.95</td>
<td>1.87/.88</td>
</tr>
<tr>
<td>Understanding what you read</td>
<td>2.66/.83</td>
<td>2.64/.82</td>
<td>2.44/.88</td>
<td>2.51/.95</td>
</tr>
<tr>
<td>Reading speed</td>
<td>2.30/.89</td>
<td>2.26/.91</td>
<td>2.34/.98</td>
<td>2.32/.96</td>
</tr>
<tr>
<td>Writing - organization</td>
<td>2.55/.86</td>
<td>2.81/.84</td>
<td>2.43/.88</td>
<td>2.26/.92</td>
</tr>
<tr>
<td>Writing - grammar</td>
<td>2.51/.89</td>
<td>2.64/.98</td>
<td>2.36/.92</td>
<td>2.38/.92</td>
</tr>
<tr>
<td>Managing stress</td>
<td>2.79/.91</td>
<td>2.81/.97</td>
<td>2.47/.98</td>
<td>2.66/1.2</td>
</tr>
<tr>
<td>Memory</td>
<td>2.87/.85</td>
<td>2.69/.77</td>
<td>2.53/.82</td>
<td>2.40/.99</td>
</tr>
<tr>
<td>Preparing for exams</td>
<td>2.39/.75</td>
<td>2.44/.81</td>
<td>2.09/.80</td>
<td>2.11/.73</td>
</tr>
<tr>
<td>Taking exams</td>
<td>2.60/.82</td>
<td>2.60/.86</td>
<td>2.29/.92</td>
<td>2.21/.86</td>
</tr>
<tr>
<td>General attitude toward UM: 5 pt. scale from Very negative to Very Positive)</td>
<td>4.16/.75</td>
<td>3.96/.86</td>
<td>3.90/.95</td>
<td>3.74/99</td>
</tr>
</tbody>
</table>
Table 2b. Characteristics that distinguish Stayers from the other enrollment categories: Women only

<table>
<thead>
<tr>
<th></th>
<th>Stayers n=762</th>
<th>Stopouts n=169</th>
<th>Transfer-outs n=81</th>
<th>Not enrolled n=52</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>15</td>
<td>8</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Black</td>
<td>16</td>
<td>6</td>
<td>12</td>
<td>27</td>
</tr>
<tr>
<td>Hispanic</td>
<td>6</td>
<td>3</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>White</td>
<td>57</td>
<td>78</td>
<td>70</td>
<td>54</td>
</tr>
<tr>
<td>Other/Unknown:</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>UM was FIRST choice</td>
<td>61</td>
<td>52</td>
<td>52</td>
<td>62</td>
</tr>
<tr>
<td><strong>Future direction items (Percent Agree/Strongly Agree)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I've selected a field of study/major</td>
<td>66</td>
<td>50</td>
<td>51</td>
<td>77</td>
</tr>
<tr>
<td>I've identified a career direction or interest</td>
<td>67</td>
<td>59</td>
<td>55</td>
<td>82</td>
</tr>
<tr>
<td><strong>Work at an on-campus job</strong></td>
<td>10</td>
<td>8</td>
<td>5</td>
<td>22</td>
</tr>
<tr>
<td><strong>Work at an off-campus job</strong></td>
<td>12</td>
<td>7</td>
<td>12</td>
<td>25</td>
</tr>
<tr>
<td><strong>Residency</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Out-of-state</td>
<td>29</td>
<td>52</td>
<td>58</td>
<td>27</td>
</tr>
<tr>
<td>In-state</td>
<td>71</td>
<td>48</td>
<td>42</td>
<td>73</td>
</tr>
</tbody>
</table>

Means/Standard Deviations

**Academics Factor**: 5 pt. scale from Strongly disagree to Strongly agree

<table>
<thead>
<tr>
<th>Item</th>
<th>Stayers mean/SD</th>
<th>Stopouts mean/SD</th>
<th>Transfer-outs mean/SD</th>
<th>Not enrolled mean/SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academics Factor mean</td>
<td>3.48/.75</td>
<td>3.62/.71</td>
<td>3.44/.69</td>
<td>3.41/.75</td>
</tr>
<tr>
<td>I am earning the grades I want</td>
<td>2.97/1.1</td>
<td>3.19/1.1</td>
<td>2.91/1.0</td>
<td>2.88/1.1</td>
</tr>
<tr>
<td>I’ve stayed motivated</td>
<td>3.51/.99</td>
<td>3.60/1.0</td>
<td>3.49/1.0</td>
<td>3.50/.90</td>
</tr>
<tr>
<td>I feel adequately prepared for academic demands here</td>
<td>3.74/.92</td>
<td>3.94/.90</td>
<td>3.75/.90</td>
<td>3.59/1.0</td>
</tr>
<tr>
<td>I’m adjusting to the academic work of college</td>
<td>3.71/.94</td>
<td>3.75/.85</td>
<td>3.60/.87</td>
<td>3.65/.90</td>
</tr>
</tbody>
</table>

**General attitude toward UM**: 5 pt. scale from Very Negative to Very Positive

<table>
<thead>
<tr>
<th>Item</th>
<th>Stayers mean/SD</th>
<th>Stopouts mean/SD</th>
<th>Transfer-outs mean/SD</th>
<th>Not enrolled mean/SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>I've selected a field of study/major</td>
<td>4.15/.75</td>
<td>4.23/.75</td>
<td>3.57/.95</td>
<td>4.02/.75</td>
</tr>
</tbody>
</table>

**VI. Discussion of the Findings**

Research shows that gender seems to play a role in higher education graduation rates, both nationally and over time. In this study, gender also – and perhaps relatedly - seems to play a compelling role in enrollment patterns. The MLR identified three early “risk factors” for men and six for women. There were two risk factors that men and women had in common: general attitude toward UM, and race. However, these risk factors influenced subsequent enrollment categories of men and women somewhat differently. A positive general attitude toward UM early in the first semester was indicative of a greater likelihood of being continuously enrolled at UM for both men and women. For men, the relative risk of their stopping out or being not enrolled was higher if they had a less-than-positive general attitude toward UM eight weeks into their first semester. For women, a less-than-positive general attitude toward UM indicated a higher relative risk of transferring out.

Race also played a different role for men and women in terms of subsequent enrollment. The relative risk of not being enrolled was higher for African American men than for White men. The relative risk
of stopping out was higher for White women than for African American women. In addition, the relative risk of not being enrolled was higher for White women than for Asian American women.

The relationship between self-assessed study skills and subsequent enrollment was significant only for men. Male respondents who assessed their study skills as below average when compared to other freshmen at UM had a higher relative risk of being in the Not Enrolled category.

Women (but not men) had a higher relative risk of transferring out as opposed to being continuously enrolled if they were an out-of-state resident and/or they had a less-than-positive initial general attitude toward UM.

Women (but not men) had a higher relative risk of stopping out as opposed to being continuously enrolled when 1) their sense of their future direction in terms of academic major and career was unclear to them; 2) UM was not their first choice; and/or 3) their scores on the Academics factor - which focused on motivation, earning the grades they wanted, and feeling both adequately prepared for and adjusting to the academic demands at UM – was higher.

And, women (but not men) who were clear about their major and career direction were at greater relative risk of being not enrolled as opposed to being continuously enrolled.

VII. Limitations

This report provides some useful insight into issues that can influence undergraduates’ enrollment patterns. However, the study has some limitations:

- Only first-time full-time freshmen who both responded to the BSS’02 and gave their UID were included;
- The analyses were limited to questions that appeared on the BSS’02 and to institutional data;
- The BSS’02 is a self-report questionnaire. The accuracy of the responses has not been validated by other independent measures;
- The National Student Clearinghouse data, although quite comprehensive, reflect only participating colleges and universities;
- No analyses were done using the individual advising colleges or academic departments;
- Fall 2005 was selected as the cutoff by which to categorize respondents’ enrollment status. An earlier or later cutoff date could have categorized some students differently (e.g. a Stop-out in Fall 2005 might have transferred later on or someone not enrolled in Fall 2005 may be stopping out from another institution during that semester).

VIII. Implications

Possible early interventions based on the associations observed in this investigation are suggested below. However, because the associations do not suggest causality, the effectiveness of these recommendations must be investigated to determine their impact on subsequent enrollment behavior.

- Many of the issues discussed are identifiable eight weeks into the semester through a few simple questions that could be asked by an advisor or an RA, and by looking at institutional records.
• Early general attitude toward UM plays an active role in subsequent enrollment patterns. Therefore, faculty, administrators, and staff can take a proactive approach by asking students first hand what is behind their attitude toward UM and what might enhance their experience.

• The University of Maryland has ample resources for its undergraduate students. Making a conscious effort to guide students to these resources could positively affect their future enrollment decisions.

• The relative risk for African American men of being Not Enrolled is greater than it is for White men. Programming efforts designed specifically for this population, such as mentoring programs, special study sessions, and motivational academic lectures, not only might serve as a means of preventing discontinued enrollment but also would contribute to the university’s academic mission of fostering diversity.

• The relative risk for White women of stopping out is greater than it is for African American women. Since other risk factors for women’s stopping out included an unclear major and career direction, it would be advisable to steer students with unclear future direction toward major and career clarification resources early in their undergraduate career.

IX. Future Research

This study is exploratory and the most of the variables used in the MLR model are from a survey given early in respondents’ first semester at UM. The study is the first of its kind on this campus in terms of looking at early signs of subsequent enrollment patterns. Therefore replication would be beneficial. The Beginning Student Survey items used in the model are repeated in alternate years. A future study will test the replicability of the present study, using respondents of the BSS from Fall 2004 - and will determine their enrollment status in Fall 2007 by means of data from the National Student Clearinghouse.

While the MLR findings offered insight into the role of certain issues in students’ subsequent enrollment patterns, further questions were raised and need to be explored:

• What factors influence the role that gender plays in a student’s subsequent enrollment? Why are more female students stopping out than male students? Why are more men than women who leave UM seemingly not enrolled in higher education three years after their matriculation at UM?

• What dynamics influence the role that race plays in a student’s subsequent enrollment? Why do more male Black students not enroll anywhere after leaving UM? What role, if any, did finances ultimately play in the decision not to enroll anywhere?

• What shapes the early less-than-positive general attitude toward UM that influences a student’s subsequent enrollment?

• What role does coming to UM with self-perceived lower study skills play in a student’s subsequent departure from UM and apparently from higher education generally? The lower the male respondents’ scores on their self-assessed study skills, the higher their odds of being Not Enrolled. Does this tendency have to do with confidence or abilities? What role does coming to UM with self-perceived lower study skills play not only in their departure from UM but in
their not enrolling in another institution? Did male students in the Not Enrolled category leave school altogether because they felt they had below average skills for any college/university? Were these students knowledgeable of academic support resources on campus?

- What role does being undecided about one’s major or not being accepted into one’s intended major at UM play in a female student’s subsequently deciding to stop out? Did they do so because they needed more time to decide on their field of study?

- Are there differences between students who transferred out to a two-year and a four-year institution? Can these differences help practitioners to better understand and perhaps intervene with these groups of students?

These are topics for future surveys and/or focus groups.

X. References


University of Maryland
Beginning Student Survey
Fall 2002

Dear Student,

UM needs your help to obtain the best possible information about your experience here. Your honest and thoughtful responses are very important and very much appreciated.

In accordance with University policy, your responses are treated as confidential and used only for university advising and research purposes. Further release would only be provided with your permission.

Summarized results will be reported to campus departments and/or staff to help plan and provide better services to students. Group results may appear in many locations, including campus media.

Thank you for participating!

Campus Assessment Working Group

Instructions:

Use a #2 pencil only. Please do not use ink or ballpoint pen.

Erase any changes completely and cleanly.

Completely fill in the oval for each response.

Please indicate how much you agree/disagree with the following:

- I've made campus friends.
- I've been able to get the classes I wanted.
- I am earning the grades I want.
- My math course placement is appropriate for my skills.
- Faculty are available outside class time if I have questions.
- I've stayed motivated.
- I've asked a faculty member for help.
- I've asked a staff member or administrator for help.
- I've asked another student for help.
- I've selected a field of study/major.
- I am usually on time for class.
- Faculty care about me as an individual.
- Getting a broad and well-rounded education is important to me.
- My math course is organized and taught in a way that allows me to learn well.
- I am familiar with the procedures for course registration.
- I've identified a career direction or interest.
- I've been able to maintain physical health and well-being.
- Faculty provide timely feedback about my progress in my courses.
- I know how to contact an advisor in my college/department.
- I understand the purpose of the CORE (general education) program.
- I'm satisfied with my current living arrangements.
- I feel adequately prepared for the academic demands here.
- Overall, my courses are intellectually stimulating.
- I am concerned about my ability to finance my college education.
- I'm meeting people different from myself at Maryland.
- My family encourages me to continue my college education.
- There are sufficient campus activities on weekends to meet my interests and needs.
- I'll be able to afford to enroll next semester.
- My English 101 course is organized and taught in a way that allows me to learn well.
- I can develop a class schedule that fits my needs.
- I know where to get help on campus with reading and study skills.
- I'm adjusting to the social life of college.
- I'm as involved in campus activities as I want to be.
- I'm adjusting to the academic work of college.
- If I run into problems here, I know someone on campus who'll listen to and help me.

Please indicate how important the following college goals/outcomes are to you:

- Learning to communicate effectively in writing.
- Learning to communicate effectively orally.
- Acquiring technology skills for work and life.
- Learning to think and reason.
- Acquiring knowledge and skills in my academic interest area.
- Acquiring knowledge in areas that complement/enhance my academic interest area.
- Developing appreciation of differences, other than my own.
- Developing leadership skills.
- Participating in community service.

CAWG Retention
Fall 2008
At present, how do you think you compare with other freshmen at UM in the following areas?

oral communication skills
math skills
note taking
listening
managing time
understanding what you read
reading speed
writing - organization
writing - grammar
managing stress
memory
finding library resources
preparing for exams
taking exams
clarity of career goals
word-processing on a computer
browsing the Internet for specific information (research)
creating Web pages
interacting with others via e-mail

At present, how often do you do the following?

review/revise/update class notes
prepare for class by reading ahead
put off studying
have trouble deciding what to study
speak up in class
study with other students
attend classes

During your 1st semester, what grade/average do you think you will earn?

English
Math
Overall

Please indicate how many hours per week you typically do each of the following:

more than 30 hours
21-30 hours
11-20 hours
1-10 hours
0 (no hours)

work at an off-campus job
work at an on-campus job
prepare for class or study outside the classroom
participate in organized student activities

In the future, you plan to work:

about the same number of hours as you're working now.
more hours after adjusting to college-level work.
fewer hours after adjusting to college-level work.
do not plan to work.

Please indicate the importance of reasons you plan to work while in college:

not a reason for me
minor reason
major reason

help pay for your college education (tuition, books, etc.)
take care of personal or family obligations
earn extra spending money (clothes, snacks, gas, etc.)
gain general job experience
gain job experience related to your anticipated major
career exploration
career networking

I plan to complete my bachelor's degree at:

the University of Maryland.
another school at which I'll feel more comfortable and be happier.
another school that offers a degree not offered at UM.
another school that has a more "prestigious" academic reputation than UM.
don't know/not sure where.

I expect to receive my bachelor's degree:
in fewer than 4 years.
in 4 years.
in 5 years.
in more than 5 years.
may not finish.

When you entered this institution, it was your:

1st choice.
2nd choice.
3rd choice or lower.

At present, your general attitude toward University of Maryland is:

very positive.
positive.
neutral.
negative.
very negative.

All in all, if you had to do it all over again, would you enroll here?

Yes.
Probably.
I'm not sure.
Probably not.
No.

Your plan for enrollment next semester is to:

enroll full time at the University of Maryland.
enroll part time at the University of Maryland.
enroll elsewhere (transfer).
not enroll in higher education.
According to University policy, what GPA do you need to maintain to remain in good academic standing?

- There is no minimum GPA required.
- Cumulative GPA of 1.5
- Cumulative GPA of 2.0
- Cumulative GPA of 2.5
- I don't know

This year, UM selected The Laramie Project as the First Year Book. It is viewed by some as a controversial selection because it presents a variety of viewpoints.

Should UM use a First Year Book to engage in discussions about values?

- Yes
- No
- Not sure

Should a First Year Book be required reading for all new students?

- Yes, the summer prior to the start of the semester
- Yes, during the fall semester
- No
- Not sure

Have you read the book?

- No, and I don't plan to read it
- No, but I plan to read it
- Yes, as part of a class assignment
- Yes, on my own

At the present time how would you rate your abilities in the following:

- Seeing relationships, similarities and differences among ideas
- Revising your thinking based on new information
- Listening effectively
- Writing effectively
- Speaking effectively
- Presenting a persuasive argument
- Acquiring information technology skills
- Leading others effectively
- Evaluating the reliability of information
- Applying what you learn to other situations
- Understanding diverse cultural, political, and intellectual views
- Clarifying your values
- Identifying careers that reflect your values, interests, and abilities

For your academic use, do you have your own:

desktop computer?

- No
- Yes, but my desktop is only partially adequate for my academic work.
- Yes, and my desktop is fully adequate for my academic work.

laptop computer?

- No
- Yes, but my laptop is only partially adequate for my academic work.
- Yes, and my laptop is fully adequate for my academic work.

hand-held computer (e.g. Palm Pilot)?

- No
- Yes

Have you used a computer in a university computer lab?

Have you used a computer in the classroom in any of your courses?

Have any of your instructors used a computer in the classroom?

Do you plan to acquire a personal computer this academic year?

Have you used the UM wireless network?

Please record your STUDENT ID number. This will only be used to link to demographic data.

In which location are you completing this survey?

- Academic Achievement Programs / IED
- ANSC 101
- BSOS 191
- College Park Scholars Colloquium
- EDCP 108N
- EEMS 100
- UNIV 100/101
- ENGL 101
- HONR 100
- other

Today is:

- Month: October
- Day: 12

IF THERE IS ANYTHING ELSE YOU WOULD LIKE TO TELL US ABOUT YOUR TRANSITION TO THE UNIVERSITY OF MARYLAND, PLEASE WRITE IT ON THE BACK OF THE SURVEY.

Thank you very much!