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TO: Retention Committee

FROM: Shannon Tinney, Office of Institutional Research

DATE: October 25, 2005

SUBJECT: USM Transfer Student Analysis

As part of the retention efforts at UMBC, the Office of Institutional Research conducted an analysis of UMBC students who transferred to other USM institutions between 2001 and 2003 to understand where students transferred within the university system, and plausibly why they did so.¹

Demographic Characteristics of Students who Transferred to a USM Institution (2001 – 2003)

Table1 displays selected characteristics of undergraduates who transferred to other USM institutions compared to all undergraduates during that time period (2001 – 2003). African-Americans and Asians were more likely to transfer to another USM institution, while Whites were less likely to do so. As well, commuters and those who were enrolled full-time were more likely than their counterparts (residents and part-time students, respectively) to transfer from UMBC to another USM school. The finding that commuters were less likely to be retained is consistent with prior research, both at UMBC and more generally in the extant retention literature. Additional demographic information for undergraduates who transferred to other USM institutions are displayed in tables 1A through 1G. Of note, students who matriculated to UMBC as new degree-seeking transfers (58%) were more likely than those who matriculated as new freshmen (39%) to transfer to another system school.

Student Affiliation with Selected Campus Groups

A series of data capturing student engagement with a variety of special groups on campus was appended to the data file provided to OIR by USM. Tables 2 through 2E show the percentage of students who were affiliated with one of these six groups at UMBC. Generally, students who left UMBC to attend another USM university were much less likely to be affiliated with any one of these special groups or hold a special status as measured by these six variables: a scholarship student, a Meyerhoff Scholar, an Honors College student, affiliated with Shriver, participated in a living learning community, and an athlete.

¹ Cases included those students who were enrolled at UMBC in Fall 2001 and were enrolled at a USM school in Fall 2002; similarly, students who were enrolled at UMBC in Fall 2002 and enrolled at a USM school Fall 2003. Initially there were 300 students that USM had identified as transferring from UMBC to another USM institution during this time period. After a careful review of the data, 20 cases were identified as not having transferred from UMBC to another USM institution during the time period specified by USM, as the last term enrolled at UMBC was less than or greater than the transfer year indicated by USM. These cases were excluded from the analysis.

² For a review of literature regarding the relationships between student demographic characteristics and persistence see: Reason, R.D. (2003). Student variables that predict retention: Recent research and new developments. <u>NASPA Journal</u>, 40(4): 172 – 191.

Table 4 displays the USM institutions UMBC students transferred to during the examined time period (2001 – 2003). Over 80% of all undergraduates who transferred to another USM school matriculated to one of four schools: University of Maryland—College Park (UMCP) (30%), University of Maryland—University College (UMUC) (26%), Towson University (17%), or University of Baltimore (10%).³ A series of Chi-square analyses were conducted to understand the relationship between student demographic characteristics and transferring to UMCP, UMUC, Towson University, or all other USM schools during this time period.⁴ These bivariate analyses revealed that there were significant relationships between all student characteristics and the school transferred to (Table 10).

Separate descriptive analyses of transfers from UMBC to each of these universities revealed that there were certain demographic segments of the UMBC undergraduate student population that were drawn to sister institutions (Table 10).

- Undergraduates who transferred to the University of Maryland—College Park (n = 85) were more likely to be male (67%) than female (33%), more likely to have matriculated to UMBC as new freshmen (62%) than as new transfers (38%), and more likely to have attended UMBC full-time (85%). The average age of students who transferred to UMCP was quite young—between 20 and 21 years old. Finally, slightly more than one-half of transfers to UMCP chose a different major from what they declared at UMBC (55%).
- The University of Maryland—University College (n = 72) caters to the educational needs of the adult worker who is earning a degree part-time. Indeed, demographic characteristics of students who transferred to UMUC fit this niche. Ninety percent of students who transferred to UMUC originally matriculated to UMBC as new degree-seeking transfers. Moreover, 54% of these students were attending part-time at UMBC before their departure, and 53% were considered non-traditional students (≥ 25 years old).
- Undergraduates who transferred to Towson University (n = 48) were slightly more likely to be female (56%) than male (44%), relatively equally as likely to have matriculated to UMBC as new freshmen (50%) as new transfers (48%), and more likely to have attended UMBC full-time (73%). The average age of students who transferred to Towson University was between 22 and 23 years old. Finally, over three-quarters of transfers to Towson chose a different major from what they declared at UMBC (77%).
- Students who transferred to the University of Maryland at Baltimore (n = 28) were predominantly female (93%) and younger undergraduate students (≤ 24 years old: 86%). While the majority of students who transferred to University of Maryland at Baltimore (68%) originally majored in the allied health fields while at UMBC, those who had not majored in the allied health fields switched to the them once at University of Maryland at Baltimore (dental hygiene: 14%; medical laboratory technology: 4%; and nursing: 82%). Undoubtedly, the predominance of female transfers to University of Maryland at Baltimore is a function of studying in female-dominated fields, particularly nursing and dental hygiene.

Tables 5, 5A, and 5B display major information for those students who transferred to another USM institution during the examined time period (2001 - 2003). UMBC does offer a variety of pre-professional programs of which the lion's share are in the allied health areas. Thirteen percent of students transferred to another school to pursue these programs; 76% of these students transferred to the University of Baltimore to pursue allied health programs.

Over one-half of all transfers chose a different major from the one they had while at UMBC (56%). Twenty-five percent of undergraduates who departed UMBC pursued a major that UMBC did not offer (Table 5B). Of those who pursued a major not offered at UMBC, 43% are now majoring in business-related majors, 16% are majoring in specialized education majors, and 10% are majoring in Communications.

³ Please view Tables 6 through 9 for profiles of these universities based on the major switching behavior of those who transferred to that university during the examined time period.

⁴ University of Baltimore was not established as a distinct category because there were less than 30 cases.

⁵ A differences of means test (t-test) revealed that students who chose a different major from the one they had at UMBC were significantly more likely to have switched majors more often than those students who chose the same major at another USM institution as the one they had while at UMBC ($p \le .001$).

Concluding Remarks

The findings from this analysis of UMBC students who transferred to USM sister institutions between 2001 – 2003 revealed three themes. First, consistent with the larger retention literature and studies conducted by the Office of Institutional Research, students who were commuters were more likely to depart UMBC. Second, students who continued their education at other USM institutions were likely to do so because another institution could accommodate their circumstances (full-time worker, part-time student), or allowed them to begin a pre-professional program at UMBC and complete it at a sister institution. Finally, a notable percentage of undergraduates transferred to other USM institutions because UMBC did not offer their program of interest.

Table 1. Selected Demographic Characteristics of Undergraduates who Transferred to USM Institutions Compared to Population Demographics

	Transfers ^a	<u>Total</u> ^b
Demographics		
<u>Gender</u>		
Female	51%	49%
Male	49%	51%
<u>Race</u>		
African-American	19%	16%
Native American	0%	1%
Asian	22%	18%
Hispanic	2%	3%
White	52%	56%
International	3%	5%
Unknown	1%	2%
<u>Dorm Status</u>		
Resident	22%	33%
Commuter	78%	67%
Enrollment Status		
Full-time	71%	81%
Part-time	29%	19%

^a Undergraduates that transferred AY2001 or AY 2002.

Source: EIS files, Student Semester Profiles

^b "Total" represents the average percentage in each category across the four semesters (Fall 2001, Spring 2002, Fall 2002, and Spring 2003) that comprise the examined time period.

Demographic Characteristics of Undergraduates who Transferred to USM Institutions (2001 to 2003)

TABLE 1A:	GENDER	
	#	%
Female	143	51%
Male	137	49%
Total	280	100%

TABLE 1E: DORM STATUS			
	#	%	
Resident	62	22%	
Commuter	218	78%	
Total	280	100%	

TABLE 1B: RACE/ETHNICITY			
	#	%	
African-American	54	19%	
Native American	1	0%	
Asian	61	22%	
Hispanic	6	2%	
White	146	52%	
International	9	3%	
Unknown	3	1%	
Total	280	100%	

TABLE 1F: GRADE POINT	
AVERAGE ^b	
Mean	2.424
25th percentile	1.952
50th percentile	2.567
75th percentile	3.081

GPA is based on those who had
accumulated at least 1 credit as of their last
semester at UMBC

TABLE 1C: AGE		
	#	%
18 years	25	9%
19 years	26	9%
20 years	51	18%
21 years	45	16%
22 years	27	10%
23 years	20	7%
24 years	14	5%
\geq 25 years	71	25%
Total	279	100%

TABLE 1G: ENROLLMENT STATUS		
	#	%
Full-time	198	71%
Part-time	82	29%
Total	280	100%

TABLE 1D: MATRICULATION TYPE (Official Entry Status)			
# %			
New Freshmen	109	39%	
New Degree Transfer	163	58%	
Other ^a	8	3%	
Total	280	100%	

a "Other" includes Continuing undergraduates, New Non-degree Transfers, and New Readmits Sources: HEIS, EIS, MIC files

Student Affiliation with Selected Campus Groups for Undergraduates who Transferred to USM Institutions (2001 to 2003)

TABLE 2	2: SCHOLARSHI	P
	#	%
Yes	19	6.8%
No	261	93.2%
Total	280	100%

TABLE 2C: AFFILIATED with the SHRIVER CENTER			
# %			
Yes	21	7.5%	
No	259	92.5%	
Total	280	100%	

TABLE 2A: HO	NORS COLL	EGE
	#	%
Yes	4	1.4%
No	276	98.6%
Total	280	100%

TABLE 2D: PARTICIPATED in a LIVING LEARNING COMMUNITY			
# %			
Yes	3	1.1%	
No	277	98.9%	
Total	280	100%	

TABLE 2B: MEYERHOFF SCHOLAR					
	#	%			
Yes	1	0.4%			
No	279	99.6%			
Total	280	100%			

TABLE 2E: ATHLETE					
	#	%			
Yes	4	1.4%			
No	276	98.6%			
Total	280	100%			

Source: Retention database

TABLE 3: # OF TERMS ELAPSED FROM THE FIRST TO LAST SEMESTER ENROLLED AT UMBC (UNDERGRADUATES WHO TRANSFERRED 2001 - 2003)				
	#	%		
One term ^c	72	26%		
Two terms ^d	42	15%		
Three terms	49	18%		
Four terms	39	14%		
≥ Five terms	78	28%		
Total	280	100%		

Note: Fall and Spring are those terms counted.

Source: HEIS file.

TABLE 4: USM INSTITUTIONS UMBC UNDERGRADUATES **TRANSFERRED TO (2001 - 2003)** # % University of Maryland College Park 85 30% University of Maryland University College 72 26% Towson University 48 17% University of Maryland @ Baltimore 28 10% University of Baltimore 5% 13 Salisbury University 11 4% **Bowie State University** 3% 7 Frostburg State University 6 2% University of Maryland Eastern Shore 6 2% Coppin State College 4 1% 100% Total 280

Source: USM

TABLE 5: % OF UNDERGRADUATES WHO DECLARED A DIFFERENT MAJOR WHEN TRANSFERRING TO ANOTHER USM INSTITUTION (2001 - 2003) ^a				
	#	%		
Different Major	158	56%		
Same Major	122	44%		
Total	280	100%		

^a Majors are based on the 2-digit HEGIS code.

Source: EIS file and USM

^c Fifteen of these students did not earn any credits.

^d One student did not earn any credits.

TABLE 5A: UMBO	CMAJOR	
(UNDERGRADUATES WHO TRA	NSFERRED 2001 - 2003) a	
	#	%
American Studies	1	0%
Classics	3	1%
Dramatic Arts	1	0%
English, General	5	2%
Fine Arts, General	6	2%
Foreign Languages, General	3	1%
Music, Liberal Arts Program	2	1%
Philosophy	2	1%
Total Arts & Humanities	23	8%
Chemical Engineering	3	1%
Computer and Information Sciences, General	36	13%
Engineering, General	3	1%
Information Sciences and Systems	63	23%
Mechanical Engineering	3	1%
Other, Engineering	15	5%
Total Engineering, Computer & Information		
Science	123	44%
Biology, General	25	9%
Chemistry, General	4	1%
Mathematics, General	5	2%
Physics, General	3	1%
Total Math & Sciences	37	13%
Economics	14	5%
Geography	3	1%
History	7	3%
Political Science & Government	11	4%
Psychology, General	18	6%
Sociology	4	1%
Social Work & Helping Service	5	2%
Total Social Sciences	62	22%
Dental Hygiene	4	1%
Health Professions, General	1	0%
Medical Laboratory Technology	2	1%
Nursing	16	6%
Other, Health Professions	2	1%
Pharmacy	3	1%
Physical Therapy	4	1%
Total Health Professional Studies	32	11%
Total Interdisciplinary Studies	3	1%
Grand Total	280	100%

^a Majors are based on the 2-digit HEGIS code.

Source: EIS file.

TABLE 5B: NEW MAJOR AT THE USM I		HE
UNDERGRADUATE TF (2001 - 2003)		
(2001 - 2003)	#	(
Art	1	00
Dramatic Arts	1	0
English, General	2	1
Fine Arts, General	4	1
Latin	1	0
Linguistics	1	0
Philosophy	1	0
Russian	5	0 2
Spanish Fotal Arts & Humanities	17	6
Civil, Construction, & Transportation Engineering	2	1
Computer and Information Sciences, General	19	7
Electrical, Electronics, & Communications	5	2
Engineering Technologies	1	0
Information Sciences and Systems	45	16
Mechanical Engineering	2	1
Other, Computer & Information Sciences	1	0
Other, Engineering	5	2
Total Engineering, Computer & Information		
Science	80	29
Biology, General	17	6
Chemistry, General Earth Sciences, General	2	1 0
Earth Sciences, General Ecology	1	0
Mathematics, General	1	0
Microbiology	1	0
Physics	3	1
Total Math & Sciences	26	9
Agricultural Economics	1	0
Communications	7	3
Criminology	5	2
Economics	8	3
Geography	1	0
History	6	2
Law Enforcement & Corrections	1	0
Political Science & Government	8	3
Psychology, General	17	6
Social Sciences, General	1	0
Sociology	2	1
Speech Pathology & Audiology	1	0
Speech, Debate, and Forensic Science		0
Total Social Sciences Art Education	59	21
Elementary Education, General	1	0
Music Education	2	1
Physical Education	7	3
Pre-Elementary Education	3	1
Special Education, General	1	0
Total Education	15	5
Accounting	3	1
Business & Commerce, General	6	2
Business Management & Adminsitration	16	6
Marketing & Purchasing	1	0
Operations Research	2	1
Personnel Management	2	1
Total Business	30	11
Dental Hygiene	4	1
Medical Laboratory Technology	1	0
Nursing	30	11
Other, Health Professions	2	1
Total Health Professional Studies	37	13
Natural Resources Management	1	0
Parks & Recreation Management	1 2	0
Total Forestry Professional Studies Total Law Professional Studies		1
Total Law Professional Studies Total Pre-Professional Studies	1 40	0
Total Interdisciplinary Studies Total Interdisciplinary Studies	13	14 5
Total Interdisciplinary Studies Grand Total	280	100

Grand Total 280

^a Majors are based on the 2-digit HEGIS code as provided by the University System of Maryland.

 $^{^{}b}$ Highlighted majors represent those not offered at UMBC.

TABLE 6: PROFILE OF UNDERGRADUATES WHO TRANSFERRED (2001 - 2003) TO UNIVERSITY OF MARYLAND--COLLEGE PARK

(UMBC MAJOR vs. NEW MAJOR) a, b, c

	UMBC Major		New Major	
	#	%	#	%
Art			1	1%
Dramatic Arts	1	1%	1	1%
English, General	2	2%		
Fine Arts, General	1	1%		
Foreign Languages, General	1	1%		
Latin			1	1%
Linguistics			1	1%
Music Liberal Arts Program	1	1%		
Philosophy	1	1%	1	1%
Russian			1	1%
Spanish			3	4%
Total Arts & Humanities	7	8%	9	11%
Chemical Engineering	2	2%		
Civil, Construction, & Transportation Engineering			2	2%
Computer and Information Sciences, General	19	22%	13	15%
Electrical, Electronics, & Communications			5	6%
Engineering, General	2	2%		
Information Sciences and Systems	11	13%		
Mechanical Engineering	1	1%	2	2%
Other, Engineering	10	12%	5	6%
Total Engineering, Computer & Information Science	45	53%	27	32%
Biology, General	6	7%	9	11%
Mathematics, General	2	2%		1170
Microbiology		270	1	1%
Physics	3	4%	3	4%
Total Math & Sciences	11	13%	13	15%
Agricultural Economics			13	1%
Criminology			4	5%
Economics	6	7%	8	9%
History	1	1%	2	2%
Political Science & Government	6	7%	5	6%
Psychology, General	5	6%	6	7%
Social Work & Helping Service	1	1%		
Speech Pathology & Audiology	1	1 /0	1	1%
Speech, Debate, and Forensic Science			1	1%
Total Social Sciences	19	22%	28	33%
Art Education			1	1%
Elementary Education, General			1	1%
Physical Education			1	1%
Total Education	0		3	4%
Accounting			1	1%
Business & Commerce, General			2	2%
Operations Research			2	2%
Total Business	0	0%	5	6%
	1	1%		
Nursing Physical Thorapy				
Physical Therapy Total Health Professional Studies	1	1%		00/
Total Health Professional Studies Total Professional Studies	2 2	2%	0	0%
Total Pre-Professional Studies		2%	0	0%
Total Interdisciplinary Studies	1 95	1%	0	0%
Grand Total a Note that switching behavior does not follow the individual per se.	85	100%	85	100%

^a Note that switching behavior does not follow the individual per se.
^b Majors are based on the 2-digit HEGIS code as provided by the University System of Maryland.
^c Highlighted majors represent those not offered at UMBC.

TABLE 7: PROFILE OF UNDERGRADUATES WHO TRANSFERRED (2001 - 2003) TO UNIVERSITY OF MARYLAND--UNIVERSITY COLLEGE

(UMBC MAJOR vs. NEW MAJOR) $^{a, b, c}$

	UMBO	UMBC Major		Major
	#	%	#	%
English, General	1	1%	1	1%
Philosophy	1	1%		
Total Arts & Humanities	2	3%	1	1%
Computer and Information Sciences, General	10	14%	3	4%
Information Sciences and Systems	39	54%	37	51%
Mechanical Engineering	1	1%		
Other, Engineering	1	1%		
Total Engineering, Computer & Information Science	51	71%	40	<i>56%</i>
Biology, General	3	4%		
Mathematics, General	2	3%		
Total Math & Sciences	5	7%	0	0%
Criminology			1	1%
Economics	3	4%		
History	2	3%	1	1%
Political Science & Government	2	3%		
Psychology, General	1	1%	3	4%
Social Sciences, General			1	1%
Sociology	2	3%		
Social Work & Helping Service	2	3%		
Total Social Sciences	12	17%	6	8%
Accounting			1	1%
Business Management & Adminsitration			8	11%
Marketing & Purchasing			1	1%
Personnel Management			2	3%
Total Business	0	0%	12	17%
Other, Health Professions	1	1%		
Total Health Professional Studies	1	1%	0	0%
Natural Resources Management			1	1%
Total Forestry Professional Studies	0	0%	1	1%
Total Law Professional Studies			1	1%
Total Pre-Professional Studies	1	1%	2	3%
Total Interdisciplinary Studies	1	1%	11	15%
Grand Total	72	100%	72	100%

^a Note that switching behavior does not follow the individual per se.

^b Majors are based on the 2-digit HEGIS code as provided by the University System of Maryland.

^c Highlighted majors represent those not offered at UMBC.

TABLE 8: PROFILE OF UNDERGRADUATES WHO TRANSFERRED (2001 - 2003) TO TOWSON UNIVERSITY

(UMBC MAJOR vs. NEW MAJOR) a, b, c

	UMBC Major		New Major		
	#	%	#	%	
Classics	1	2%			
English, General	2	4%			
Fine Arts, General	4	8%	3	6%	
Foreign Languages, General	1	2%			
Music Liberal Arts Program	1	2%			
Spanish			1	2%	
Total Arts & Humanities	9	19%	4	8%	
Chemical Engineering	1	2%			
Computer and Information Sciences, General	4	8%	2	4%	
Information Sciences and Systems	3	6%	2	4%	
Other, Engineering	2	4%			
Total Engineering, Computer & Information Science	10	21%	4	8%	
Biology, General	2	4%	3	6%	
Chemistry, General	3	6%	2	4%	
Ecology			1	2%	
Mathematics, General	1	2%	1	2%	
Total Math & Sciences	6	13%	7	15%	
Communications			7	15%	
Economics	1	2%			
Geography	2	4%			
History	2	4%			
Political Science & Government	1	2%	1	2%	
Psychology, General	5	10%	3	6%	
Sociology	1	2%	2	4%	
Social Work & Helping Service	1	2%			
Total Social Sciences	13	27%	13	27%	
Pre-Elementary Education			1	2%	
Music Education			2	4%	
Physical Education			6	13%	
Total Education	0	0%	9	19%	
Accounting			1	2%	
Business Management & Administration			3	6%	
Total Business	0	0%	4	8%	
Health Professions, General	1	2%			
Nursing	2	4%	5	10%	
Othere, Health Professions	1	2%			
Pharmacy	2	4%			
Physical Therapy	3	6%			
Total Health Professional Studies	9	19%	5	10%	
Total Pre-Professional Studies	9	19%	5	10%	
Total Interdisciplinary Studies	1	2%	2	4%	
Grand Total	48	100%	48	100%	

^a Note that switching behavior does not follow the individual per se.

^b Majors are based on the 2-digit HEGIS code as provided by the University System of Maryland.
^c Highlighted majors represent those not offered at UMBC.

TABLE 9: PROFILE OF UNDERGRADUATES WHO TRANSFERRED (2001 - 2003) TO UNIVERSITY OF MARYLAND AT BALTIMORE

(UMBC MAJOR vs. NEW MAJOR) a, b, c

	UMBC Major		New	Major
	#	%	#	%
Total Arts & Humanities	0	0%	0	0%
Computer and Information Sciences, General	1	4%		
Other, Engineering	1	4%		
Total Engineering, Computer & Information				
Science	2	7%	0	0%
Biology, General	5	18%		
Total Math & Sciences	5	18%	0	0%
Economics	1	4%		
Sociology	1	4%		
Total Social Sciences	2	7%	0	0%
Total Business	0	0%	0	0%
Dental Hygiene	4	14%	4	14%
Medical Laborartory Technology	2	7%	1	4%
Nursing	12	43%	23	82%
Pharmacy	1	4%		
Total Health Professional Studies	19	68%	28	
Total Pre-Professional Studies	19	68%	28	100%
Total Interdisciplinary Studies	0	0%	0	0%
Grand Total	28	100%	28	100%

^a Note that switching behavior does not follow the individual per se.

^b Majors are based on the 2-digit HEGIS code as provided by the University System of Maryland.

^c Highlighted majors represent those not offered at UMBC.

Table 10. Comparison of Students who Departed UMBC and Transferred to UMCP, UMUC, Towson, and All Other Schools

	UMCP	UMUC	Towson	All Other
D 1:	$(\mathbf{n} = 85)$	$(\mathbf{n}=72)$	$(\mathbf{n}=48)$	$(\mathbf{n}=75)$
Demographics				
Gender ***				
Female	33%	49%	56%	71%
Male	67%	51%	44%	29%
Race				
White ***	49%	36%	81%	52%
Black ***	7%	29%	10%	29%
Asian ***	32%	28%	4%	16%
Non-traditional student (> 25 years old) ***	15%	53%	19%	16%
Matriculation Type				
New Freshman ***	62%	6%	50%	37%
Enrollment Status ***				
Full-time	85%	46%	73%	77%
Part-time	15%	54%	27%	23%
Dorm Status ***				
Resident	29%	4%	23%	31%
Commuter	71%	96%	77%	69%
Different major (yes) *	55%	50%	77%	51%

<u>Note</u>: Asterisk denotes a significant relationship between demographic characteristic and where students transferred to within USM between 2001 and 2003.

Source: Student Information System, USM.