

# Transfer and Traditional Students: Patterns of Course-taking and Participation in Academic Programs

Jocelyn L. Milner  
Academic Planning and Analysis  
University of Wisconsin-Madison 53706  
608-263-5658  
jlmilner@facstaff.wisc.edu

Prepared for:  
Association for Institutional Research  
42<sup>nd</sup> Annual Forum  
June 2-5, 2002  
Toronto Canada

Revised for campus distribution 6/27/2002 10:51 AM

## **Introduction – Questions and Assumptions about Transfer Students**

At University of Wisconsin-Madison transfer students accounted for just 22% of new undergraduates in 2000, and new transfer students enrollments were lower in 2000 than any time the preceding 15 years. A year ago transfer students received 22% of undergraduate degrees, down from 26% just four years ago. While the numbers of new transfer students have been declining, the numbers of new first-year students have been increasing. What impact does this shift have on demand for academic programs and for specific curricular requirements? One approach to this question is to compare interest and participation in academic programs by traditional and transfer students.

Transfer students are sometimes viewed as students who “fill in” the spaces left by the traditional students (those who started as new first-year students) who leave before the beginning of their second or third year. At UW-Madison, about 15% of traditional students are not retained to the third year. Several assumptions follow from this perspective of transfer students. One assumption is that transfer students have the same levels of interest in various academic programs as traditional students. Another assumption is that the well-qualified transfer student will have completed many foundation courses and general education requirements before they enroll. Thus, they will by-pass the large introductory courses in subjects like Mathematics, English, Chemistry, and Spanish, which are so heavily populated by new freshmen, and will enroll instead in courses across the breadth of the upper-level curriculum.

Another viewpoint, which is contradictory to and held simultaneously with the “fill in” viewpoint, is that transfer students are only interested in professionally oriented programs in business, engineering, education, computer sciences, and the health sciences. Because access to these high-demand programs is limited, this assumption gives rise to concerns that accepting transfer students will only exacerbate problems associated with student demand for these programs.

Which, if any, of these assumptions are valid?

This paper examines these assumptions by focusing on three main questions. First, do traditional students and transfer students have the same intended majors at application? The intended major, collected as part of the application process, provides a picture of what students have in mind when they first seek to attend this university. Second, how do the course-taking patterns of traditional students and transfer students compare? The analysis places special emphasis on general education courses and the course level. Third, when traditional and transfer students graduate do they graduate at the same rates in all major programs, or are there differences? This analysis seeks to identify major programs that have a preponderance of transfer students, or majors in which transfer students are under-represented. An understanding of patterns of transfer student academic behavior will inform policy decisions associated with managing transfer student enrollment and advising.

## Methods of Analysis

For the purposes of this analysis, students are identified as one of two types – traditional or transfer – based on their status in their first term enrolled as an undergraduate at this institution. Each undergraduate can be “new” to the institution only once. Traditional students are defined as those who matriculated first at this institution as new first-year first-time undergraduates. Students who first matriculate at this institution and who subsequently stop out or who transfer out and re-enter this institution are considered traditional students by this definition. Transfer students are defined as those who first matriculated at another institution and enrolled at this institution after their experience as a college student at other institutions<sup>1</sup>.

The individual student record data used for this analysis were taken from the UW-Madison student record information data sources<sup>2</sup>. All of the UW-Madison undergraduate major programs were re-grouped into their respective CIP (Classification of Instructional Programs) categories for the intended major and degree major analysis.

The analysis includes the calculation of a “participation index”, which allows comparison of traditional and transfer student participation in courses or majors without reference to the absolute size of enrollments in the course or major and such that the populations are normalized relative to each other (Tables 1, 3, 5, 6). The index is the ratio of the percent of traditional students to the percent of transfer students, according to the following equation:  $(\# \text{ traditional students in category} / \# \text{ total traditional students}) / (\# \text{ transfer students in category} / \# \text{ total transfer students})$ . Index values *equal to* 1.0 indicate that traditional and transfer students are equally represented in a category. Index values *greater than* 1.0 signify a higher representation by traditional students, and index values *less than* 1.0 signify a higher representation by transfer students<sup>3</sup>. The participation index gives a value in terms of traditional students. The inverse of the participation index gives a value in terms of the transfer student population.

## Trends in New Transfer Student Enrollment

An overview of the trends in new transfer student enrollment reveals changes in recent years (Figure 1, Figure 2). New transfer students accounted for only 22% of new undergraduates in

<sup>1</sup> These definitions of transfer and traditional students are consistent with the Department of Education definitions of transfer and first-time first-year undergraduates, respectively, used for federal data collection.

<sup>2</sup> The analysis of the intended major was based on the longitudinal retention data views and the undergraduate admissions data views. Enrollment trends, degree trends, the degree major data, and the course-taking data were taken from the retention data views.

<sup>3</sup> To illustrate, consider an example from Table 3: 820 traditional students and 489 transfer students graduated with a major in Health Professions. This compares with a total of 12,956 traditional students and 4,032 transfer students who were awarded undergraduate degrees in the same period. The participation index is calculated as:  $(820 \text{ traditional students in Health Professions} / 12956 \text{ degrees to traditional students}) / (489 \text{ transfer students in Health Professions} / 4032 \text{ degrees to transfer students})$ . The index provides an answer to the question “Did Health Professions have relatively more or fewer transfer students compared with traditional students in the graduating class?” In this case, an index value of 0.52 indicates that proportionally half as many traditional students than transfer students graduated in the Health Professions. The inverse of the participation index, in this case giving an index value of 1.9, indicates that degrees in the Health Professions were awarded to proportionally almost twice as many transfer students as traditional students.

2000, compared with 33% in 1990. New first-year students outnumbered new transfer students by a ratio of 3.5 to 1 in 2000, compared with 2.0 to 1 in 1990. In the last four years the ratio of new first-year students to new transfer students was higher than any time in the past fifteen years because of both a larger new first-year cohort and a smaller new transfer student cohort.

Figure 1.

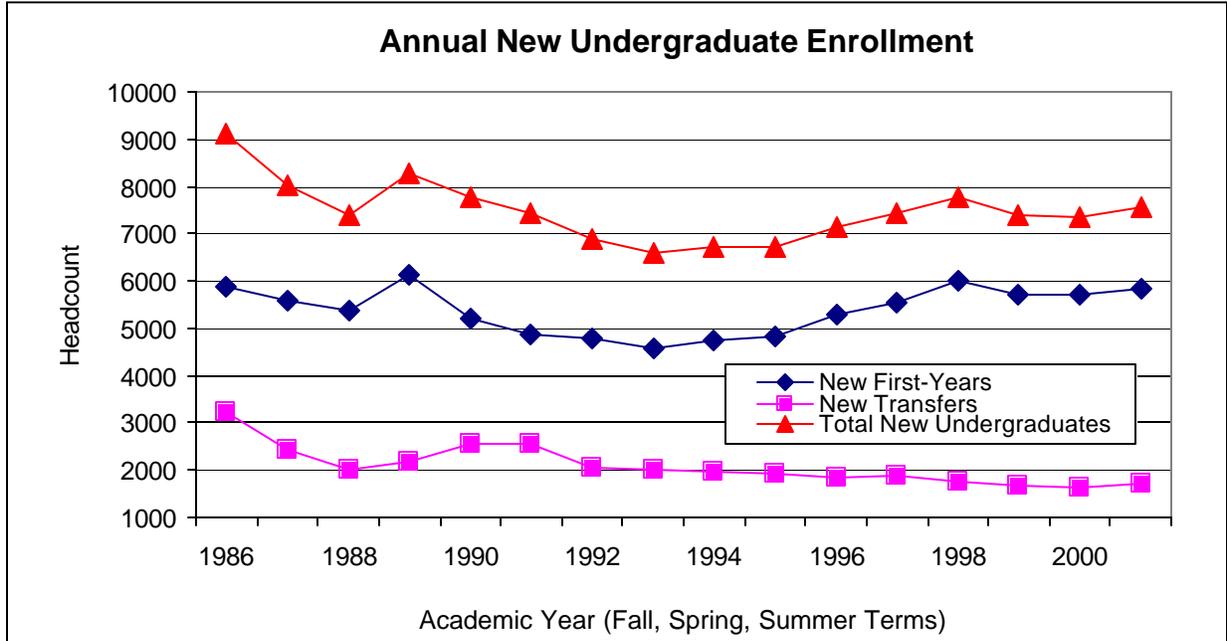
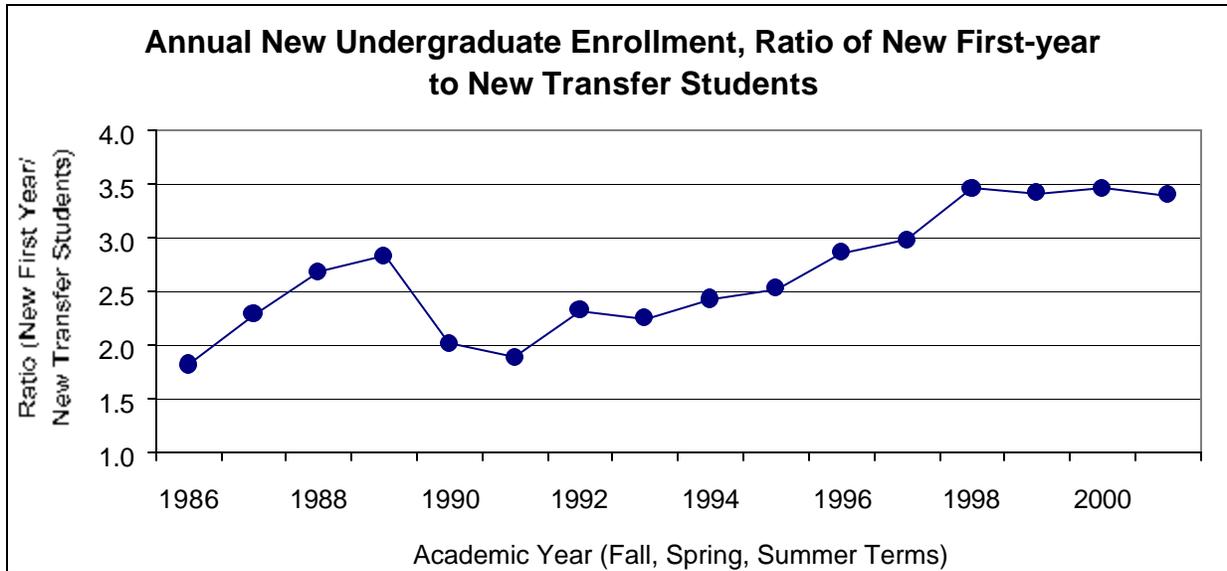
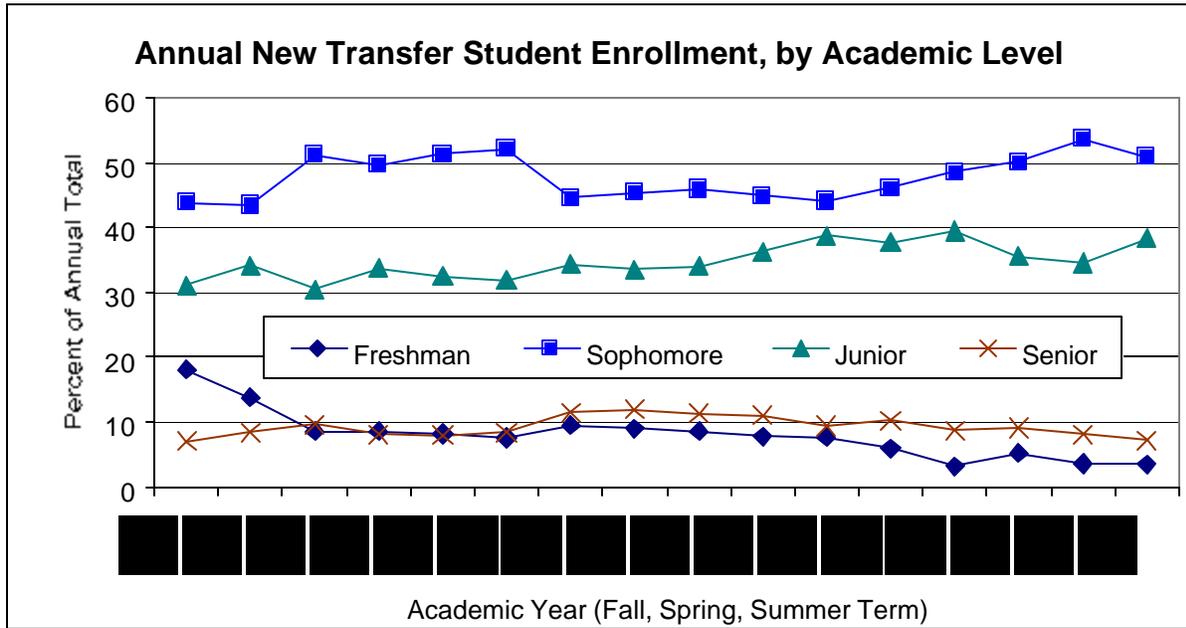


Figure 2.



In the past 15 years, transfer students most frequently enrolled at the academic level of sophomore (24-53 credits). This is contrary to the general expectation that most transfer students enter as juniors (54-85 credits). In 2001, the percent of transfer students entering at each academic level was: freshman, 4%; sophomore, 51 %; junior, 38 %; senior, 7%. The percent of new transfer students who enter at the freshmen academic level has declined from 8% in 1990 to 4% in 2001. (According to the UW-Madison admissions policy, applicants with fewer than 24 credits would enter at the freshman academic level and need not be favored for admission as transfer students).

Figure 3.



Academic level is based on accumulated credits: freshman, <24 credits; sophomore, 24 to 53 credits; junior, 54-85 credits; senior, 86 or more credits.

**Intended Majors of New Students**

On the undergraduate application, applicants are required to specify an intended academic major. This information can be used to compare choices of intended major of traditional and transfer students before they have direct experience of the institution<sup>4</sup>. For new students who entered in the years 1999, 2000, and 2001, 23 % were transfer students (Table 1). Fewer traditional students (55 %) than transfer students (71 %) specified an intended major on their application.

<sup>4</sup> The other possible source for intended major, the declared major in the first term enrolled, is less useful. One reason is that restrictions are placed on what a student can declare in their first term. For example, new first-year students can indicate an interest in a Business major on the application but are not permitted to declare a business major until they accumulate at least 54 credits (junior academic level) and are admitted into the School of Business. In addition, students in the liberal arts college are not encouraged to declare a major until they are upper-level students. Because of these and other factors fewer than half of students (23% of traditional students and 49% of transfers) have a declared major in their first term enrolled.

**Table 1. Intended Major at Application for New Undergraduates, by CIP Category 1999-2001**

Program Category (CIP Categories)	Number of New Students		% of New Students by Category (# in Category/Total)x100		Participation Index
	Traditional Students	Transfer Students	% of Traditional	% of Transfer	% Traditional/ % Transfer
00 No Intended Major	7654	1492			
01 Agricultural Business and Production	14	14	0.2	0.4	0.39*
02 Agricultural Sciences	161	60	1.7	1.7	1.04
03 Conservation & Renewable Natural Resources	38	46	0.4	1.3	0.32*
04 Architecture and Related Programs	28	27	0.3	0.8	0.40*
05 Area, Ethnic, and Cultural Studies	17	19	0.2	0.5	0.35*
09 Communications	463	185	5.0	5.1	0.97
11 Computer and Information Sciences	525	190	5.7	5.3	1.07
13 Education	350	197	3.8	5.5	0.69*
14 Engineering	1391	352	15.0	9.8	1.53*
16 Foreign Languages	127	94	1.4	2.6	0.52*
19 Home Economics	89	80	1.0	2.2	0.43*
23 English Language and Literature	231	145	2.5	4.0	0.62*
26 Biological/Life Sciences	934	262	10.1	7.3	1.38*
27 Mathematics	154	60	1.7	1.7	1.00
30 Multi/Interdisciplinary Studies	7	2	0.1	0.1	1.36
31 Parks, Rec, Leisure and Fitness Studies	97	55	1.0	1.5	0.68*
38 Philosophy and Religion	18	37	0.2	1.0	0.19*
40 Physical Sciences	290	107	3.1	3.0	1.05
42 Psychology	498	215	5.4	6.0	0.90
44 Public Administration and Services	32	35	0.3	1.0	0.35*
45 Social Sciences and History	764	442	8.2	12.3	0.67*
50 Visual and Performing Arts	318	262	3.4	7.3	0.47*
51 Health Professions and Related Sciences	773	356	8.3	9.9	0.84*
52 Business Mgmt and Admin Services	1962	356	21.1	9.9	2.14*
Total	16935	5090			
Total excluding "No Intended Major"	9281	3598	100	100	1.0

Program Area Category -- Intended major of student at application, categorized by the CIP (Classification of Instructional Programs) Codes.

Traditional Student -- first matriculated at this institution as a new first-year student.

Transfer Student -- first matriculated at another institution before entering this institution.

% of New Students by Category -- denominator excludes students with "No Intended Major"

Participation index values marked with an asterisk (\*) are significantly different from 1.00 at the 95% confidence level.

This analysis of intended majors is based on the subset of enrolled students who specified an intended major on their application. Excluding the students with no intended major may introduce bias in the analysis, however the nature of such a bias was not investigated.

The intended major categories specified by the highest numbers of undergraduates were Business (18 % of new students who specified an intended major), Engineering (14 %), and Social Sciences and History (9 %) (Table 1). For traditional students, the intended majors most frequently specified were: Business, 21%; Engineering, 15%; Biological Science, 10%; and Health Professions, 8%. By comparison, for transfer students the most frequently specified intended major categories were: Social Sciences and History, 12%; Business, 10%; Engineering, 10%; and Health Professions, 10%.

So, the program category specified most commonly by transfer students was social sciences, a liberal arts discipline. And transfer students were proportionally *less* likely to intend to major in Business and Engineering than traditional students. The Health Professions was the one high-interest program category that was proportionally more frequently specified by transfer students. A contributing factor may be that some programs in the health professions, for example Nursing, make extra efforts to attract transfer students.

The participation index helps to identify program categories that are favored by traditional or by transfer students without reference to the size of the program category. Traditional students specified majors in the Business program category proportionally more than twice as often than transfer students as an intended major (participation index is 2.14). Traditional students were 1.5 times as likely to be interested in Engineering than transfer students. Conversely, some program areas were selected by transfer students proportionally twice as often or more than traditional students: Philosophy and Religion (0.19); Conservation & Renewable Natural Resources (0.32); Area, Ethnic, and Cultural Studies (0.35); Agricultural Business and Production (0.39); [Landscape] Architecture and Related Programs (0.40); Home Economics (0.43); Visual and Performing Arts (0.47). With the exception of Visual and Performing Arts, the numbers of students in any of these categories is small with no other category accounting for more than 2% of the students.

In summary, both traditional and transfer students expressed high levels of interest in Business, Engineering and the Health Sciences. But transfer students were proportionally *less* interested in Business and Engineering than traditional students. And transfer students were *more* likely than traditional students to intend to major in health sciences (especially Nursing), social sciences, fine art, agriculture and life sciences, and human ecology. This analysis debunks the myth that transfer students have narrow interests in professionally oriented programs.

The intended major data is not an ideal or pure measure of what undergraduates want out of college. Several factors related to institutional policy and to student experience influence choices students make. In most cases, undergraduates are admitted to the university independent of their intended major. However, some categories of applicants are considered separately based on their intended major or other factors. For example, specific sets of rules and policies apply to all Engineering applicants, Nursing transfer applicants, School of Education transfer applicants,

and transfer applicants from the University of Wisconsin Colleges<sup>5</sup>. In addition, at the time of application, transfer students are experienced college students and are likely to be more aware of their interests and aptitudes than traditional students. Transfer students' additional college experience may also make them more aware of the full range of major programs available to them at this institution. In addition, some students transfer to UW-Madison because of their interest in majors that are available at this institution and not at other public universities in Wisconsin. Given this difference of experience, it is not surprising that traditional students are more likely to be undecided at entrance (45%) than transfer students (29%) (Table 1). It is also possible that transfer students, with more self-knowledge of their aptitude for college-level work and more opportunities for college-level advising, have more realistic expectations than traditional students about their chances of being admitted into high-demand limited-access programs. All of these factors, and others, influence the selection of the intended major beyond the simple wants of the applicant.

**Degree Major of Graduates**

Transfer students received about 26% of the undergraduate degrees awarded in 1998-99 compared with 22% in 2000-01 (Table 2). This 4% decrease is consistent with the decrease in admissions of transfer students over the past decade (Figure 1).

Table 2. Undergraduate Degrees Awarded

Student Type	Undergraduate Degrees Awarded			
	1998-99	1999-00	2000-01	3 Year Average
Traditional Students	4114	4243	4599	4319
Transfer Students	1440	1303	1289	1344
All Undergraduate Degrees	5554	5546	5888	5663
% Traditional	74.1	76.5	78.1	76.3
% Transfer Students	25.9	23.5	21.9	23.7

The academic major of students when they graduated reflects a number of factors including their interests, aptitudes, and the sum of influences of their college experience on their choice of major. The distribution of traditional and transfer students across the academic majors can give an indication if differences evident in the intended major persist to graduation. The UW-Madison degree major was re-categorized for this analysis by CIP program categories. The three program categories with the highest number of degrees overall – Social Sciences and History (17% of undergraduate degrees), Business (12%), and Engineering (9%) – account for 39% of all undergraduate degrees awarded in the past three years. These three program categories were the top ranked categories by number of degrees awarded to both traditional students and transfer students (Table 3).

<sup>5</sup> The University of Wisconsin Colleges is a public two-year college. Like UW-Madison it is a member of the University of Wisconsin System. UW System and UW-Madison policies exist to facilitate and promote transfer of students from the UW Colleges to UW-Madison.

**Table 3. Undergraduate Degree Major, by CIP Category, for Degrees Awarded 1998-2001**

Program Category (CIP Categories)	Number of Degrees Awarded (FTE-majors)		% of Degrees Awarded by Category ((#in Category/Total)x100)		Participation Index
	Traditional Students	Transfer Students	% of Traditional	% of Transfer	% Traditional/ % Transfer
01 Agricultural Business and Production	67	18	0.5	0.4	1.19
02 Agricultural Sciences	220	77	1.7	1.9	0.89
03 Conservation and Renewable Natural Resources	242	80	1.9	2.0	0.94
04 Architecture and Related Programs	62	23	0.5	0.6	0.83
05 Area, Ethnic, and Cultural Studies	162	48	1.2	1.2	1.05
09 Communications	1110	241	8.6	6.0	1.44*
11 Computer and Information Sciences	277	99	2.1	2.5	0.87
13 Education	365	155	2.8	3.8	0.73*
14 Engineering	1238	430	9.6	10.7	0.90
16 Foreign Languages	520	111	4.0	2.8	1.46*
19 Home Economics	510	135	3.9	3.3	1.18
23 English Language and Literature	485	159	3.7	3.9	0.95
26 Biological/Life Sciences	1113	228	8.6	5.7	1.52*
27 Mathematics	131	31	1.0	0.8	1.32
30 Multi/Interdisciplinary Studies	20	6	0.2	0.1	1.05
31 Parks, Rec, Leisure and Fitness Studies	188	35	1.5	0.9	1.67*
38 Philosophy and Religion	90	47	0.7	1.2	0.59*
40 Physical Sciences	229	51	1.8	1.3	1.39
42 Psychology	661	192	5.1	4.7	1.07
44 Public Administration and Services	172	52	1.3	1.3	1.03
45 Social Sciences and History	2271	651	17.5	16.2	1.08
50 Visual and Performing Arts	438	213	3.4	5.3	0.64*
51 Health Professions and Related Sciences	820	489	6.3	12.1	0.52*
52 Business Mgmt and Admin Services	1567	463	12.1	11.5	1.05
<b>Total</b>	<b>12956</b>	<b>4032</b>	<b>100</b>	<b>100</b>	<b>1.00</b>

Program Area Category – Degree major, categorized by the CIP (Classification of Instructional Programs) Codes.

Traditional Student -- first matriculated at this institution as a new first-year student.

Transfer Student -- first matriculated at another institution before entering this institution.

Participation index values marked with an asterisk (\*) are significantly different from 1.0 at the 95% confidence level.

This participation index for degrees awarded (Table 3) shows that proportionally more degrees were awarded to transfer students than traditional students in several program categories: Health Professions (0.52), Philosophy and Religion (0.6), Visual and Performing Arts (0.64), and Education (0.73). Conversely, proportionally more degrees were awarded to traditional students than transfer students in Parks, Recreation and Leisure Studies (1.7), Biological Sciences (1.5), Foreign Languages (1.5), and Communications (1.4). For several other program categories, including Engineering and Business, the relative numbers of degrees awarded to traditional and transfer students were similar (index values not significantly different from 1.0).

### **Comparing the Intended Major and the Degree Major**

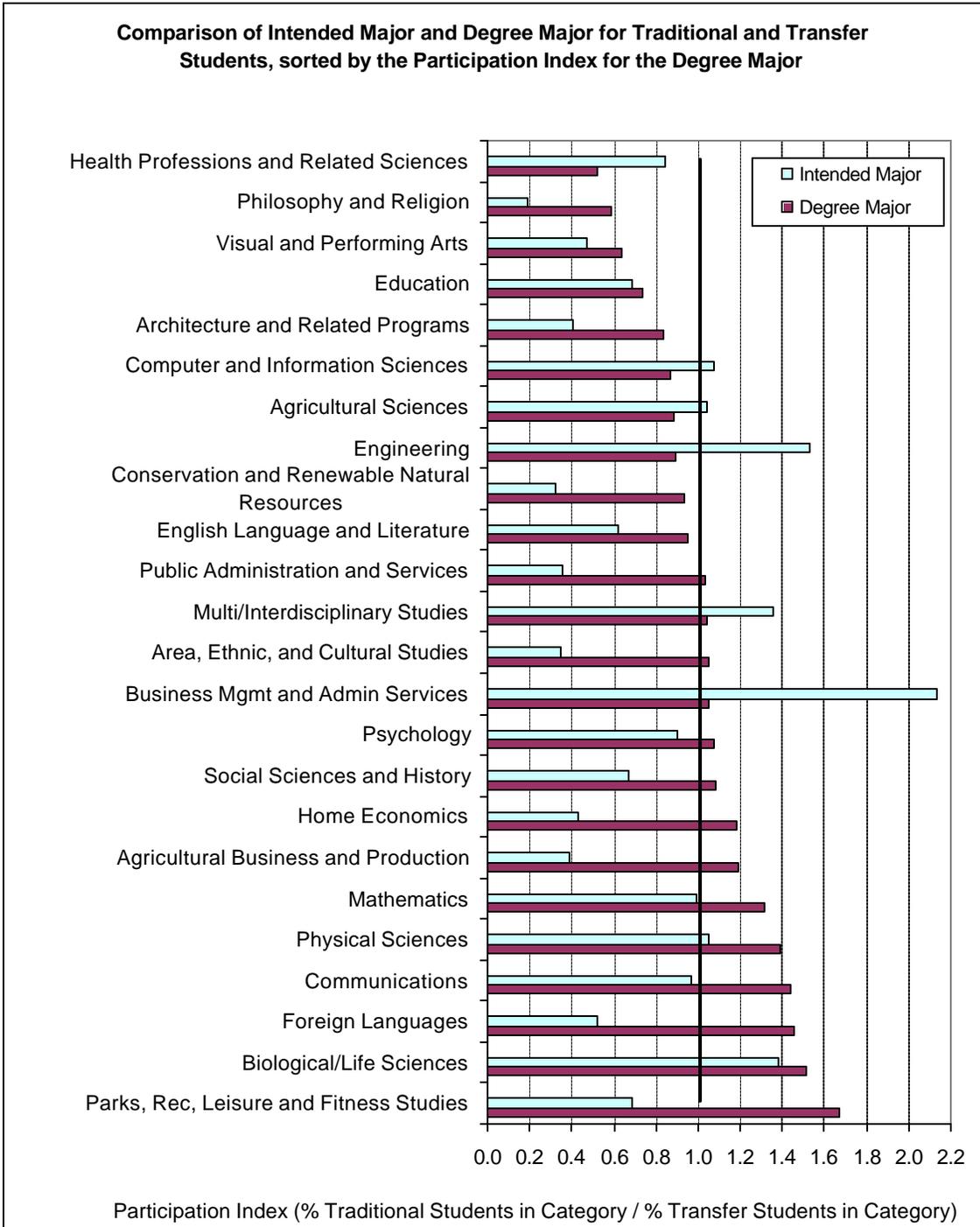
Figure 4 provides a comparison of the proportional representation of traditional and transfer students over the intended major categories and the degree major categories. The participation index for the intended major and the degree major (Tables 1 and 3) are shown side-by-side. Index values *greater than* one [1] (longer bars) of the participation index indicate that traditional students are more likely than transfer students to participate in the category. Values *less than* one [1] (shorter bars) indicate that transfer students are more likely to participate in the category. If the intended major and degree major participation index values are similar, then transfer and traditional students were as likely to be interested in the program category when they applied as when they completed a degree. If the intended major and degree major participation index values differ, then the representation of transfer and traditional students changed from the time of application to graduation.

The range of values of the participation index was narrower for the degree major (1.7 to 0.52) than for the intended major (2.1 to 0.19) (Table 1, Table 3, Figure 4). So, for the intended major there are some categories in which transfer students are proportionally five times as likely to participate than traditional students. For the degree major, transfer students are no more than twice as likely to participate than traditional students. In general, traditional and transfer students were more evenly distributed across the academic program categories among degree recipients than among new students when they applied for admission.

### **Progress-to-Degree Indicators**

Do traditional students and transfer students do equally well in terms of their progress to degree completion? Indicators of progress-to-degree include such measures as time to degree, credits to degree, and degree GPA (Table 4). An analysis of three graduation cohorts combined shows that, in aggregate, the *median* cumulative GPA for traditional students (3.23) was very similar to transfer students (3.21).

Figure 4.



Index > 1.0 indicates proportionally more traditional students in program category.  
 Index = 1.0 indicates equal proportion of traditional and transfer students in the program category.  
 Index < 1.0 indicates proportionally more transfer students in the program category.

Among students who graduate, traditional students accumulated a *median* of 130 total credits to degree from all sources compared with 133 credits to degree for transfer students. So over the course of their college career, transfer students take about one additional three-credit course compared with traditional students.

**Table 4. Undergraduate Degree Recipients, Indicators of Progress to Degree For Degrees Awarded in 1998-99, 1999-00, 2000-2001**

Progress Indicator	Student Type	Academic Level at Entrance				All Students
		Freshman	Sophomore	Junior	Senior	
Headcount of Undergraduate Degrees	Traditional	12451	[459]	[13]	[0]	12923
	Transfer	199	1902	1555	351	4007
Median Cumulative TOTAL Credits to Degree From ALL Sources (this institution, transfer credit, AP credit, etc)	Traditional	130	[146]	[164]		130
	Transfer	137	127	135	166	133
Median Cumulative Credits to Degree Taken at This Institution	Traditional	122	[113]	[116]		121
	Transfer	111	90	70	61	83
Median Cumulative Degree GPA	Traditional	3.2	[3.6]	[3.4]		3.23
	Transfer	3.2	3.1	3.2	3.5	3.21
Median Elapsed Calendar Years to Degree	Traditional	4.3	[3.7]	[3.7]		4.0
	Transfer	3.7	3.3	2.4	2.3	3.0
Median Number of Fall and Spring Terms Enrolled to Degree	Traditional	8	[8]	[8]		8
	Transfer	8	6	5	4	6

Academic Level at Entrance is based on the number of degree credits a student is awarded at entrance from advanced placement credits, transfer course credits, or other sources. Traditional students usually enter as freshmen (less than 24 credits) but may enter with sufficient credits for sophomore (24-53 credits) or junior standing (54-85 credits), and data for these students is enclosed in square brackets to emphasize the exceptional status of this small group of students.

The median, rather than the mean, is reported as the measure of central tendency because the various progress indicators do not follow a normal distribution.

The *median* elapsed time to degree from the first term enrolled to graduation *at this institution* is about a year longer for traditional students (4.0 years) than transfer students (3.0 years). For the majority of traditional students who enter as freshmen<sup>6</sup>, their *median* time to degree is 4.3

<sup>6</sup> Academic level is based on the number of credits accumulated. First-time first-year students may receive credit for prior college work or advanced placement work taken while in high school. Freshmen are students who have accumulated fewer than 24 credits.

calendar years. Transfer students most commonly enter as sophomores<sup>7</sup> (Figure 3, Table 4) and their *median* time to degree is 3.3 calendar years, about one year less than the traditional students who enter as freshmen. Overall, among students who graduate, transfer students are enrolled at this institution for about a year less, or about 2 fall/spring terms fewer than traditional students from the time they first enroll until they complete a degree.

### General Education Courses

It is assumed that well-qualified transfer students have completed introductory courses and general education requirements before they enroll at this institution and transfer the credit for those requirements from their prior preparation. In doing so, they are expected to by-pass the lower-level courses that are heavily populated by new first-year students in subjects such as introductory Mathematics, English, Chemistry, and Spanish, for example. It is often assumed that they enter with the academic preparation necessary to enroll directly in to the broad array of upper-level course offerings.

UW-Madison has university-level general education requirements for all undergraduates (listed in Table 5). Every undergraduate who is awarded a degree must satisfy these requirements by coursework, or by testing, or by transferring course credit from another institution. Among these requirements are the Communications requirement and the Quantitative Reasoning requirement. The Communications requirement is satisfied by taking two courses, one at the first-year level that is dedicated to reading, discussion, and especially writing (Part A)<sup>8</sup> and a second more advanced course that emphasizes literacy proficiency within the context of the major area of study (Part B). The Quantitative Reasoning requirement is structured similarly: Part A is satisfied by an introductory course in mathematics, statistics or logic<sup>9</sup>, and Part B is satisfied by a second, more advanced course in quantitative reasoning. For traditional students, Communications Part A and Quantitative Reasoning Part A requirements are satisfied by college-preparatory work or by taking the appropriate lower-level courses in their first year.

If transfer students satisfy general education requirements with prior work, then we would predict that they would be proportionally less likely to enroll in courses that satisfy the general education requirements compared with traditional students. Analysis of course enrollments in three consecutive terms indicates that traditional students are proportionally three times more likely to enroll in Communications Part A and 2.2 times more likely to enroll in Quantitative Reasoning Part A courses than transfer students (Table 5). Thus, transfer students are proportionally less likely to take enroll in course work at this institution to satisfy these lower-level general education requirements.

Courses that satisfy Part B of the general education requirements are often higher-level courses than those that satisfy Part A requirements. For Communications Part B, few transfer courses

---

<sup>7</sup> Sophomores are students who have accumulated between 24 and 53 degree credits from transfer credits, advanced placement course credit, or other sources.

<sup>8</sup> Students may be exempted from Communications Part A by approved high school course work, approved prior college-level coursework or by appropriate achievement on a placement test.

<sup>9</sup> Students may be exempted from Quantitative Reasoning Part A by approved high school course work, approved prior college-level coursework or by appropriate achievement on a placement test.

satisfy this requirement and so there is little expectation that students will be able to satisfy this requirement except by taking a designated UW-Madison course. Thus, it is not surprising that traditional students are only marginally more likely to take Communications B courses than transfer students (Table 5).

**Table 5. New Undergraduate Student Enrollments in General Education Courses  
Averages for Fall 1999, Fall 2000, Fall 2001 Combined**

General Education Requirement	Headcount Enrollments		% Enrollments ((enrollments in course type / total enrollments) x 100)		Participation Index (% Traditional / % Transfer)
	Traditional Students	Transfer Students	% Traditional	% Transfer	
Communications Part A	2071	133	1.9	0.6	3.0
Communications Part B	3207	574	3.0	2.8	1.1
Quantitative Reasoning A	2322	200	2.2	1.0	2.2
Quantitative Reasoning B	9213	1314	8.6	6.4	1.4
Ethnic Studies	4121	661	3.8	3.2	1.2
Total Undergraduate Course Enrollments	107283	20673	100.0	100.0	1.0

Counts include course enrollments of undergraduates who were either new first-year students or new transfer students over three fall terms.

Many courses in math, statistics and related disciplines satisfy the Quantitative Reasoning B requirement. Traditional students are 1.4 times more likely than transfer students to take Quantitative Reasoning B courses (Table 5), which indicates that some transfer students satisfy the requirement with transfer course credit. However, many traditional and transfer students, especially those in quantitative disciplines, will enroll in numerous courses classified as Quantitative Reasoning B, not only to satisfy the general education requirement, but also to satisfy major requirements.

### Course Level

If transfer students have completed introductory course work elsewhere and transfer at the sophomore or junior academic level, how likely are they, compared to traditional students, to enroll in lower-level courses? There are two ways to identify the level of a course. First, the three-digit course number indicates the level of a course. Courses numbered 100 to 299 are introductory undergraduate courses open only to undergraduates; courses numbered from 300 to 699 are upper-level undergraduate courses that can also be taken for credit by graduate students; courses numbered 700 and above are restricted to graduate students. Secondly, many

undergraduate courses are labeled with a course level indicator designating them as elementary, intermediate, or advanced level courses.

An analysis of course enrollments by level (Table 6) shows that traditional students were more likely than traditional students to take lower-level courses and transfer students are more likely than traditional students to take in upper-level courses. If the course level is identified by course number, the analysis shows that traditional students were proportionally 1.3 times more likely to take 100- and 200-level courses than transfer students, and the reverse is the case for 300-level courses and above. For the course level indicator analysis, traditional students were proportionally 1.4 times more likely to take ‘elementary’ courses and transfer students were 1.25 times more likely to take advanced courses.

**Table 6. New Undergraduate Enrollments in Undergraduate Courses by Course Level Averages for Fall 1999, Fall 2000, Fall 2001 Combined**

Level by Course Number	Headcount Enrollments		Percent of Enrollments		Ratio
	Traditional	Transfer	Traditional	Transfer	% Traditional / % Transfer
100-199	32523	4468	30	22	1.40
200-299	25033	3927	23	19	1.23
300-399	23418	5579	22	27	0.81
400-499	8922	2355	8.3	11	0.73
500-599	7128	1755	6.6	9	0.78
600-699	5569	1493	5.2	7	0.72
<b>Level by Course Level Indicator</b>					
Elementary	41382	5726	39	28	1.39
Intermediate	32357	6252	30	30	1.00
Intermediate/Advanced	3478	834	3.2	4	0.80
Advanced	11554	2620	11	13	0.85
<b>Total Undergraduate Course Enrollments</b>	<b>107283</b>	<b>20673</b>	<b>100</b>	<b>100</b>	<b>1.0</b>

Counts include course enrollments of undergraduates who were either new first-year students or new transfer students over three fall terms.

Courses numbered greater than 699 enroll graduate students only and are not included in this analysis so percent of enrollments for the “Level by Course Number” do not add to 100%.

Courses with no Course Level Indicator are not included in the analysis so percent of enrollments in the “Level by Course Level Indicator” section do not add to 100%.

### Summary and Conclusions

New transfer student enrollments accounted for 22% of new undergraduates in 2000, down from 33% in 1990. The percent of degrees awarded to students who started as transfer students in the past three years has also decreased from 26% in 1998-99 to 22% in 2000-01.

Like traditional students, large numbers of transfer students entered UW-Madison with the intention to major in the professionally oriented disciplines of business, engineering, and the health sciences. But transfer students were proportionally *less* interested in these program

categories than traditional students. Transfer students were proportionally *more* likely than traditional students to be interested in some program areas, for example: Philosophy and Religion; Conservation & Renewable Natural Resources; Area, Ethnic, and Cultural Studies; Agricultural Business and Production; [Landscape] Architecture; Home Economics; and Visual and Performing Arts. Thus, transfer students apply to UW-Madison with broad interests in the liberal arts, agriculture and life sciences, human ecology, and fine arts, in addition to their interests in the professionally oriented programs.

The program categories awarding the largest number of degrees were similar for both traditional and transfer students (Social Science and History, Business, Engineering). And transfer and traditional students were distributed more evenly across the program categories for the degree major than for the intended major. In most program categories the transfer students and traditional students were proportionally represented about equally. In some program areas proportionally more degrees were awarded to transfer students: Health Professions, Philosophy and Religion, Visual and Performing Arts, and Education. In others proportionally more degrees were awarded to traditional students: Parks, Recreation and Fitness Studies; Biological Sciences; Foreign Languages; and Communications.

Traditional students and transfer students completed their degrees with similar numbers of total accumulated credits and similar degree grade point averages. Transfer students, who are most likely to enter as sophomores, were enrolled *at this institution* about one calendar year or two academic terms fewer than traditional students, who most often enter as freshmen, to degree completion.

Transfer students were less likely than traditional students to enroll in lower-level general education courses and also less likely to enroll in lower-level courses in general.

A similar analysis to the one presented here was conducted for on-campus use. That report used campus designations for all intended majors, degree majors, large enrollment courses, and timetable departments. That detailed information, which is not presented here, identified some specific programs and curricular areas that are dominated either by transfer students or by traditional students. Some program and curricular areas rarely have transfer student participants because elements of the program are directed to first-year students. One example is the Integrated Liberal Studies program. In other cases, some programs have strong efforts to attract transfer students, Nursing for example, and in those programs transfer students are strongly represented.

In general, this analysis demonstrates that transfer students enter the university with interests in many programs, they succeed academically and earn grades that are similar to traditional students, and they graduate in academic majors in all the program categories. For many program areas, the view of transfer students as “fill-in” students is consistent with these findings. In some other specific program areas, transfer students play a lesser or greater role. Further analysis will focus on developing a better understanding of the academic preparedness of transfer students and their academic progress.

## **Bibliography**

Assessing Transfer and Native Student Performance at Four-Year Institutions. Stephen Porter. AIR 1999 Annual Forum. 1999.

Transfer Shock in the Academic Discipline: the Relationship between Students' Majors and their Academic Performance. B.D. Cejda, A.J. Kaylor, K.L. Rewey. Community College Review. 26:1-14. 1998.

Transfer Students. Occasional Research Brief. University of Wisconsin System. 1998

Transfer/Articulation Quick Facts. Education Commission of States Issue Page. August 2000.

What do we know about Transfer? An Overview. James C. Palmer. Peer Review 2:8-11 (AACU) 2000.

Classification of Instructional Programs (CIP) 1990 Version. National Center for Education Statistics. 1999.