

Introduction

In recent years, IUPUI has conferred a record number of undergraduate degrees at a time when the number of enrolled undergraduates has declined slightly. From this perspective, IUPUI has increased its undergraduate degree-granting productivity, as shown in Display 1 compared to the Bloomington campus. Most students earning degrees from IUPUI start their academic career at other colleges and universities (61% in 1999-2000). But traditional measures of student progress (retention and graduation rates) focus on the progress of first-time, full-time freshmen, based on where they begin their college careers, not on where they obtain their degree.

Fall semester, first-time, full-time freshmen represent slightly over one-third of IUPUI annual new students. In comparison, nearly four out of five students who enter the Bloomington campus annually start in this traditional cohort, as shown in Display 2. Although representing a minority of new IUPUI students, the first-time, full-time cohort is the focus of most attention regarding student persistence. Retaining first-time, full-time freshmen remains a vexing challenge for IUPUI. IUPUI's 'traditional cohort' is notably different from similarly defined cohorts that attend traditional residential campuses, such as IU Bloomington, and even different than those attending other urban public universities.

In this edition of *Enrollment Report and Analysis* we explore two specific aspects of first-time full-time student retention at IUPUI. First, we take stock of our current retention rates, examining recent trends in first-time, full-time retention within the context of our changing student profile. Second, we explore the impact that first-year student success initiatives have had on student retention rates. Most of our previous analyses have focused on overall program impact. In this analysis, we probe more deeply into some of the larger programs in an attempt to uncover the factors or conditions that promote program and student success.

Retention Trends

At IUPUI we have monitored closely the impact of initiatives to promote first-year student success. Despite solid evidence that these initiatives have a positive impact on student retention, the overall retention rate among first-time, full-time freshmen has not increased. Display

Highlights

IUPUI has established a high level of degree-productivity in recent years, producing more undergraduate degrees per enrolled student than any time in recent years. But this improvement runs counter to a more visible trend, that of a slightly declining retention rate among first-time, full-time freshmen.

Fall Semester, first-time, full-time freshmen represent about one-third of all new students at IUPUI in a given year, but this group is the focus of both retention and graduation rate measures that are used to judge institutional effectiveness in student progress.

Graduates from the eight-county Indianapolis metropolitan area are going on to postsecondary education in record numbers and percentages. The increase is largely among students with poorer academic records.

Compared to peers at other urban universities, IUPUI first-time freshmen have a lower academic profile (SATs and High School rank) and maintain significantly larger work commitments.

IUPUI's Learning Communities program continues to show a modest positive impact on student success, but this impact has lessened as the program has been scaled up to include most new freshmen. In addition, the program has varying levels of success across the different types of offerings.

Supplemental instruction continues to benefit students who take advantage of the program, but students who need the most help tend not to avail themselves of the service.

A pilot Structured Learning Assistance program appeared to work best when there were clear and enforceable consequences for student participation and non-participation.

A pilot Critical Inquiry program resulted in improved student performance in three of four implementations. Self-selection is confounded with the program impact, but the self-selected group included many students with significant academic deficiencies.

The overall DFW rate for IUPUI's top enrolling freshman courses is 32%. One-third of this rate is attributable to students who either withdraw or just stop attending classes.

3 shows the recent trend in first-time, full-time retention rates for IUPUI compared to Bloomington and the IU Regional Campuses.

The trend for all three groups is fairly stable, with a slight downward trend for IUPUI over the past four years, when some of our first-year success efforts have been most intensive. IUPUI retention rates include students entering the IUPUI Columbus campus, which has experienced a very steep decline in retention rates over the past five years. But even without the Columbus rates included, IUPUI's recent rates have held relatively stable at the low point for the past decade. To understand both the intractability of student retention rates, and especially the recent challenge, it is important to consider changes in the profile of new freshmen at IUPUI.

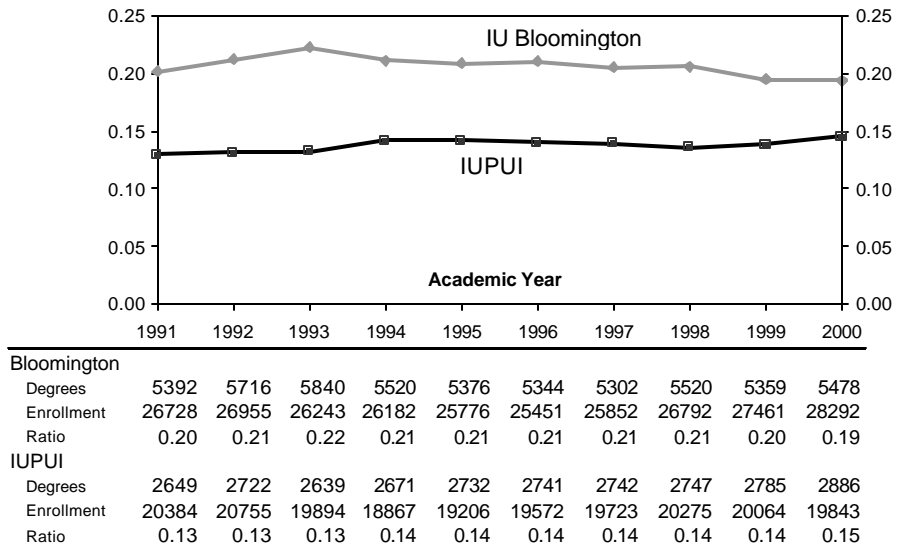
The Changing Profile of IUPUI First-Time, Full-Time Freshmen

Recent demographic trends in Indiana have resulted in a growing pool of traditional-aged college students and a decline in non-traditional student numbers. The number of students attending and graduating from Indiana high schools is expected to increase modestly over the next few years. At the same time, the 25-34 year old cohort is a relatively small group of working age adults. Display 4 shows the recent population trends for

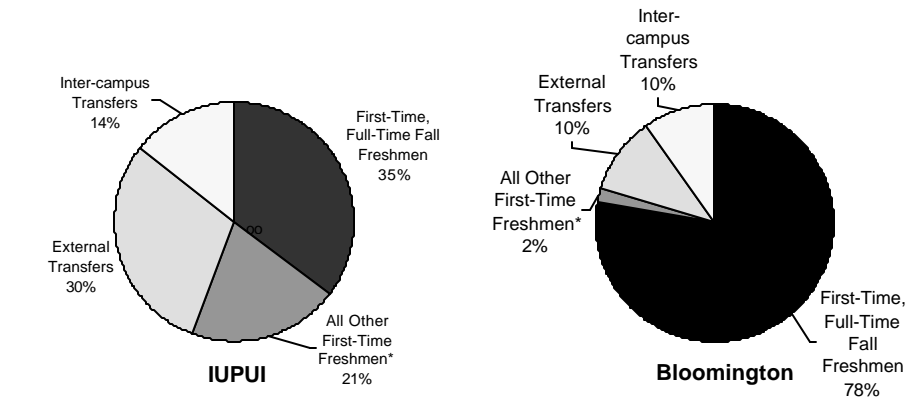
students approaching college age and those in the 'non-traditional college age' bracket. The strong economy of recent years has resulted in better employment prospects for working adults, thereby further reducing higher education interests.

The age profile of the IUPUI undergraduate student body has followed this trend closely. Display 5 shows the increasing proportion of traditional-aged undergraduates and declining proportion of non-traditional aged undergraduates.

Display 1. Ratio of Undergraduate Degrees and Certificates Conferred to Total Undergraduate Degree-Seeking Enrollment

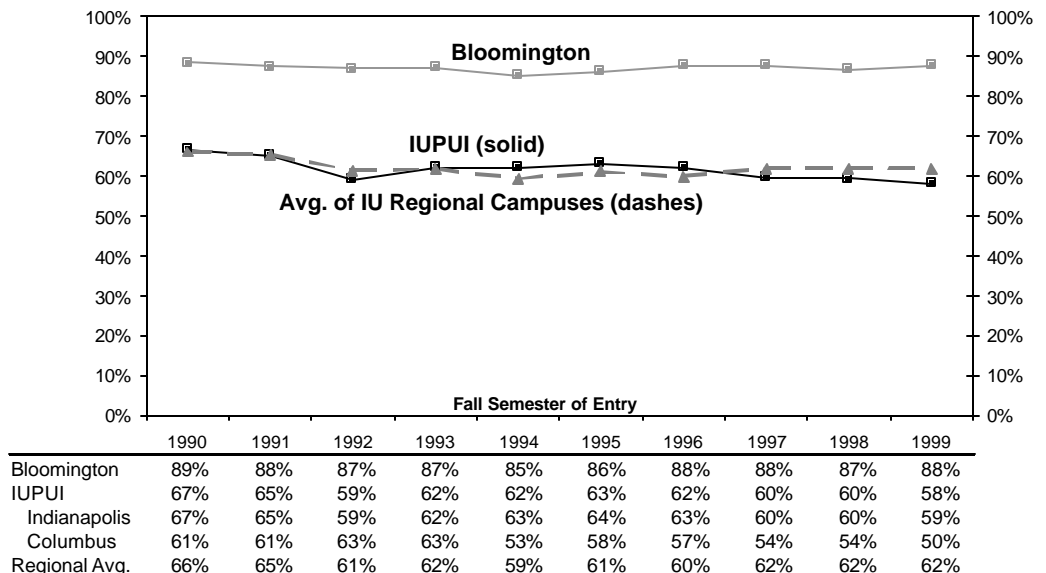


Display 2. Annual New Students by Mode of Admissions - IUPUI and Bloomington

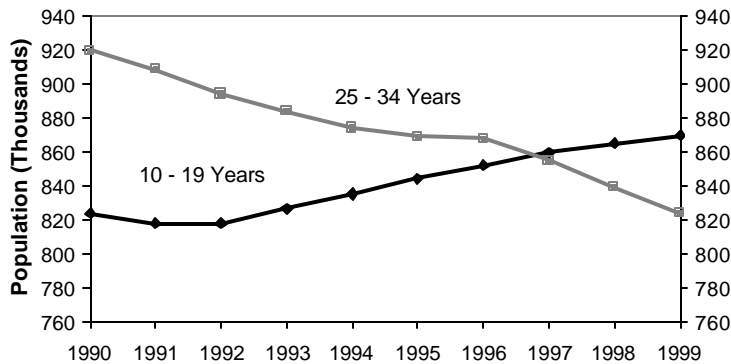


*Includes fall semester part-time freshmen and spring semester full- and part-time freshmen.

Display 3. Recent Trends in First-Time, Full-Time Freshmen One-Year Retention Rates, IUPUI, Bloomington, and the IU Regional Campuses



Display 4. Indiana Population Trends Among 10-19 Year Old and 25-34 Year Old Cohorts



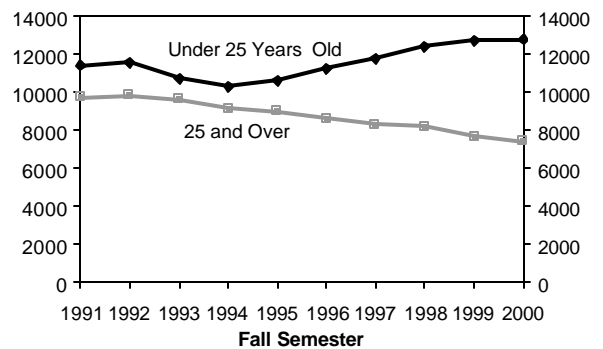
Source: Indiana Business Research Center, Stats Indiana, Population Estimates by Age, Sex, Race, and Hispanic Origin, <http://www.stats.indiana.edu/population/ageracesex.html>.

This demographic trend is accompanied by important changes in the goals and motivations of undergraduate students. Non-traditional learners, as a group, tend to take a more serious approach to their college studies than do traditional-aged college students. Although challenged by significant work and family obligations, they have a better understanding of the commitments required to succeed in their classes. Traditional-aged learners, on the other hand, typically have the advantage of more recent successful academic experiences, less significant work and family obligations, and, therefore, more time to devote to their studies. However, as shown in the next section, IUPUI's growing population of traditional-aged students includes an increasing number of under-prepared learners, with unrealistic expectations, unclear motivations, and significant concurrent work and family obligations.

IUPUI Freshmen and Common Retention Factors

Recent efforts to improve student retention at American colleges and universities generally follow from research findings that have demonstrated the importance of student involvement in their learning experiences, faculty interaction with students, and the development of a campus culture that engages students in the college social and academic communities. However, research has also demonstrated that students' socioeconomic, family, and academic background characteristics and their living situation while enrolled in college have far greater influence on retention than do college programs or climate. Specifically, students' prior academic success (i.e., the selectivity of the institution) and residential status (campus resident or commuter) are among the strongest predictors of student retention. More generally, research has demonstrated consistently that freshmen

Display 5. The Changing Age Profile of IUPUI Undergraduates

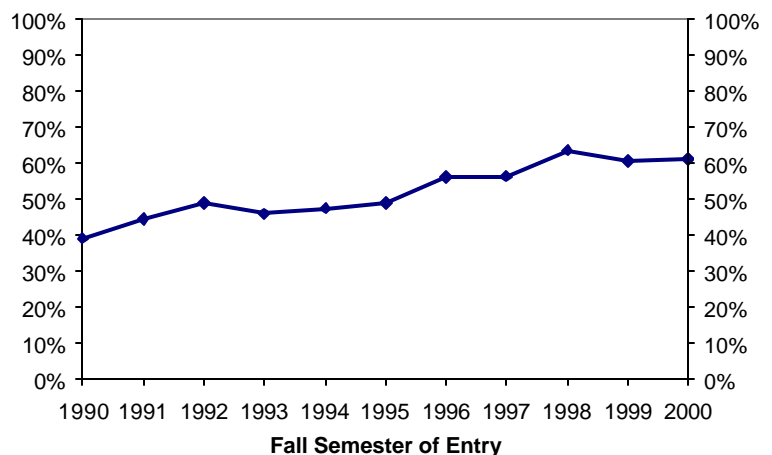


retention rates are influenced by two primary student characteristics: academic preparedness for college, and the time and effort devoted to college studies. The next two sections of this analysis consider the profile of IUPUI entering students in relation to these important correlates of student persistence.

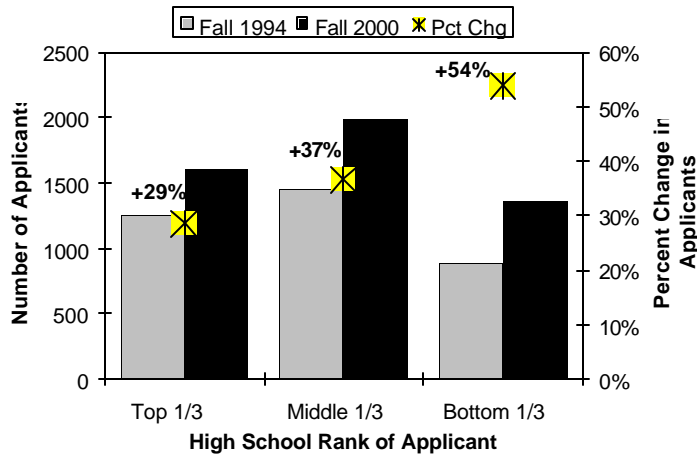
Academic Preparation

For students entering any campus of Indiana University, the trend in academic background is best indicated through the percent of students admitted conditionally. Conditional admissions status is determined by a set of criteria, sanctioned by The IU Board of Trustees, for judging students' level of preparation for admissions. Students who rank in the lower half of their high school class, score below the State average on either the SAT or ACT exam, or do not complete a requisite number of college preparatory courses in Math, English, Science, Social Studies, and Foreign Languages, are considered to be below the threshold for 'regular' admissions. As an open access institution, IUPUI admits many students below this threshold on a 'conditional' basis. Display 6 shows the trend in percentage of first-time, full-time freshmen admitted conditionally to IUPUI.

Display 6. Percentage of IUPUI First-Time, Full-Time Freshman Conditional Admits



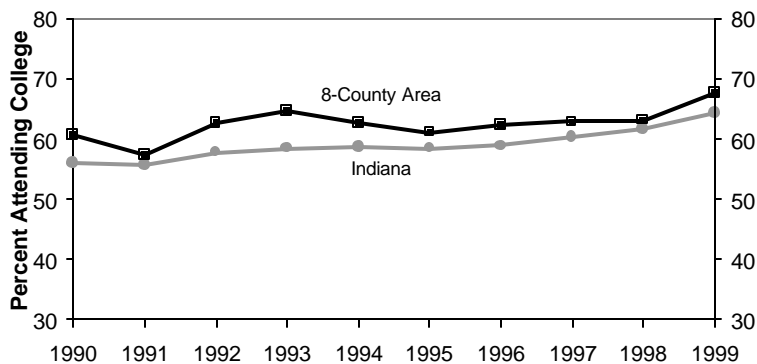
Display 7. Changes in Applications to IUPUI by H.S. Rank of Applicant, Fall 1994 v. Fall 2000



Although one-year retention rates can only be tracked for cohorts entering through Fall 1999, Display 6 shows the trend through the Fall 2000 entering cohort. Earlier analyses (*IUPUI Fall 2000 Enrollment Report – Part 1*) showed a decline in the overall percentage of conditional admits among freshmen. However, the conditional admit rate among first-time, full-time freshmen actually increased by a fraction of a percentage point. This does not bode well for the retention prospects of the Fall 2000 entering cohort.

The increasing number of conditional admits comes despite recent adjustments to IUPUI's admissions procedures, wherein more students with poor academic records are referred for admissions to the Community College of Indiana. However, IUPUI continues to receive record numbers of applications from students with poor academic backgrounds. Display 7 shows the changes between Fall 1994 and Fall 2000 in number of applicants to IUPUI by high school class ranking (top third, middle third, bottom third). Although

Display 9. College-Going Rate of Regional and State High School Graduates

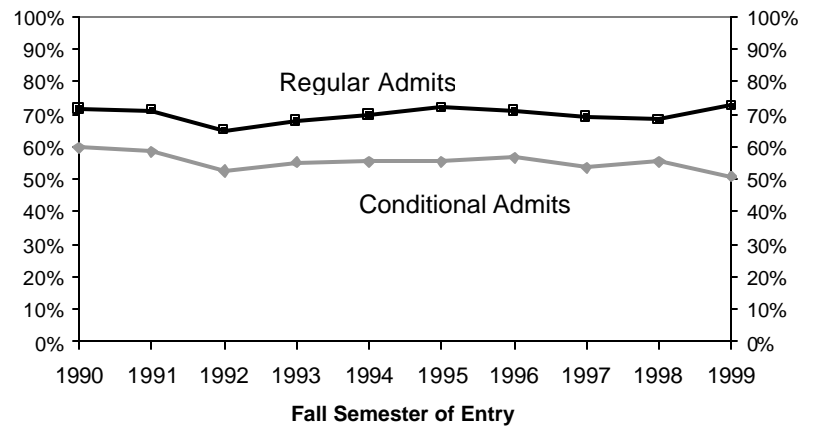


Note: The method for calculating college-going rate changed between 1995 and 1996. A constant was added to each earlier year value to adjust for this change.

there has been a growth in applications across the board, the largest growth is evident in the categories from which IUPUI draws most traditional admits: the bottom and middle thirds. Even though IUPUI has started to refer more students from the bottom third to the Community College of Indiana, the referrals have not outpaced the increase in demand for admissions among students with relatively poor high school records of achievement.

Conditional admissions status proves to be a fairly robust indicator of students' level of academic preparation. Display 8 shows that there is a consistently large gap in the retention rates of conditional admits compared to regular admits at IUPUI. Moreover, the recent downward trend in IUPUI first-time freshmen retention rates appears to be related to the combination of increasing proportions of and declining retention rates among conditional admits. The rate of retention among regular admits has improved notably this past year,

Display 8. Trends in the One-Year Retention Rate of IUPUI Conditional and Regular Admits (Indianapolis Only)



reaching a high point for the past decade (73%). This suggests that some of our interventions may work for better-prepared students, but not as well for less well-prepared students. We will return to this point when reviewing data on specific interventions.

The increase in conditional admits to IUPUI follows another recent demographic trend. The college-going rate among traditional-aged high school completers has increased considerably over the past ten years, as shown in Display 9. Since college going rates are already highest among top-performing high school students, the increase in rate reflects higher rates of college attendance among lower-performing high school students. These changes are clearly reflected in the increases in conditional admissions to IUPUI among traditional-aged freshmen.

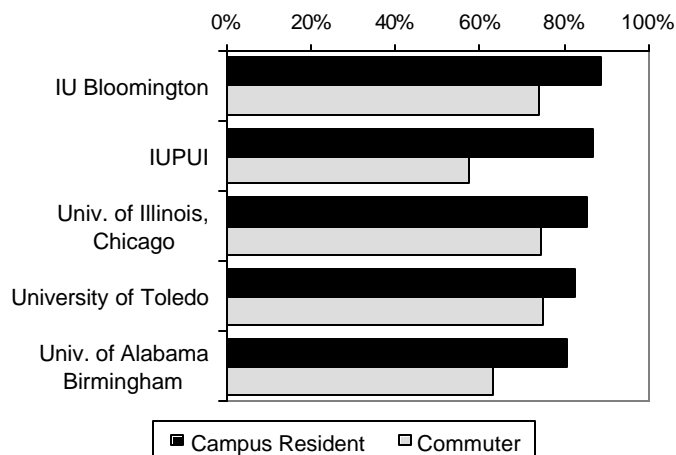
A recently released ‘state report card’ on education (Measuring Up 2000: State Profiles) provides further indicators of the levels of preparation among Indiana high school completers. Display 10 shows Indiana performance on the preparation measures. While Indiana students complete high school at a respectable rate (89%, compared to a ‘top state’ benchmark of 93%), completers lag significantly behind with regard to measures of college preparatory course taking and student achievement (e.g., 9-12 graders taking an upper level math course; SAT/ACT scores; advanced placement test scores).

Several State initiatives, such as the Core 40 curriculum, hold promise for increasing Indiana high school graduates’ preparation levels. However, record numbers of under-prepared students graduating from Indiana high schools are now enrolling in college. All of Indiana’s public colleges and universities are facing the challenges of educating students with comparatively poor academic backgrounds. However, IUPUI, and the regional campuses of IU and Purdue University receive the largest concentrations of poorly prepared students. This is then further compounded by the challenging circumstances that many commuter students face in terms of how work and family obligations require significant amounts of their time and attention, thus detracting from the amount of time and the quality of effort that they can devote to their college studies.

Time and Effort

The time and effort that students devote to their studies is the other primary factor that has been consistently related to student persistence throughout the country. The higher retention rate that is typical among campus resident students compared to commuter students is closely related to differences between those groups in time and effort opportunities for college study. Display 11 shows that

Display 11. Retention Among Campus Resident and Commuter Students at IUPUI, IUB, and Several Other Urban Universities



Display 10. Indiana Performance on Educational Preparation Component of the State Report Card*

PREPARATION:	Indiana	Top States
HIGH SCHOOL COMPLETION (20%) 18- to 24-year-olds with a high school credential	89%	93%
K-12 COURSE TAKING (40%) 9th to 12th graders taking at least one upper-level math course	45%	59%
9th to 12th graders taking at least one upper-level science course	31%	37%
8th grade students taking algebra	8%	28%
K-12 STUDENT ACHIEVEMENT (40%) 8th graders scoring at or above "proficient" on the national assessment exam:		
in math	24%	33%
in reading	n/a	38%
in writing	n/a	31%
Low-income 8th graders scoring at or above "proficient" on the national assessment exam in math	8%	19%
Number of scores in the top 20% nationally on SAT/ACT college entrance exam per 1,000 high school graduates	123	192
Number of scores that are 3 or higher on an Advanced Placement subject test per 1,000 high school juniors and seniors	45	158

Gaps in Data: In Indiana, data are unavailable for 8th graders’ performance in reading and writing, because the state declined to participate in national assessments.
*Measuring Up 2000: State Profiles, accessed February 15, 2001, <http://measuringup2000.highereducation.org/stateprofilenet.cfm>.

this difference exists for IUPUI, IU Bloomington, and several other urban universities that track these differences. Although relatively few IUPUI first-time, full-time freshmen live on campus (about 63 or 2% of the entering cohort), they have a retention rate that is comparable with Bloomington’s campus resident population. If IUPUI had more on-campus housing for first-year students, first to second year retention would increase dramatically. However, IUPUI’s large commuter student population of first-time, full-time freshmen is retained at a relatively low rate even compared to other urban universities.

The low ranking of IUPUI student retention compared to rates at other urban universities reflects some of the distinctiveness of the IUPUI entering first-time, full-time freshmen cohort. Again, the two primary retention correlates—student academic preparation and ability to devote time and effort to college studies—account for the most significant differences.

Display 12 compares IUPUI to other large public urban universities according to an available national indicator of student progress (the 6-year graduation rate for the Fall 1991 first-time, full-time freshman cohort), as well as available measures of entering student academic background (Average SAT Score or ACT equivalent, and percent of new enrollees from the top 10% of their high school classes, as reported on the 1999-2000 Common

Data Set and used U.S. News & World Report in their college ranking system).

IUPUI ranks 18th out of the 20 Urban 13 institutions for which 6-year graduation rate data is available. However, IUPUI ranks at the bottom in both average entering student SAT scores and proportion of its entering class that comes from the top 10% of their high school classes.

Through our participation in a recent national survey (the National Survey of Student Engagement), we now have data that compare our students' work and family obligations to their peers at five other participating public urban universities (Temple Univ., Univ. of Missouri-Kansas City, Univ. of Mass.-Boston, Virginia Commonwealth, and Southern Ill.-Edwardsville) and at 5 participating Big 10 universities (IU-Bloomington, Michigan State, Ohio State, Penn State, and Iowa). Display 13 shows that full-time IUPUI freshmen spend slightly less time on academic pursuits (preparing for class and co-curricular activities, such as student clubs), a similar amount of time relaxing and socializing and a significantly larger amount of time working for pay in off-campus jobs.

Adding both on- and off-campus average work hours together, IUPUI full-time freshmen average 19.5 hours per week, compared to 13.5 hours per week for the urban peers and 6.0 hours per week for the Big 10 peers. Perhaps even more significantly, over three-quarters of the Big 10 full-time freshmen report working 5 or fewer

Display 12. Graduation Rates, Average Entering Student SAT Scores, and Percent of Entering Students from Top 10% of H.S. Class among Large Public Urban Universities*

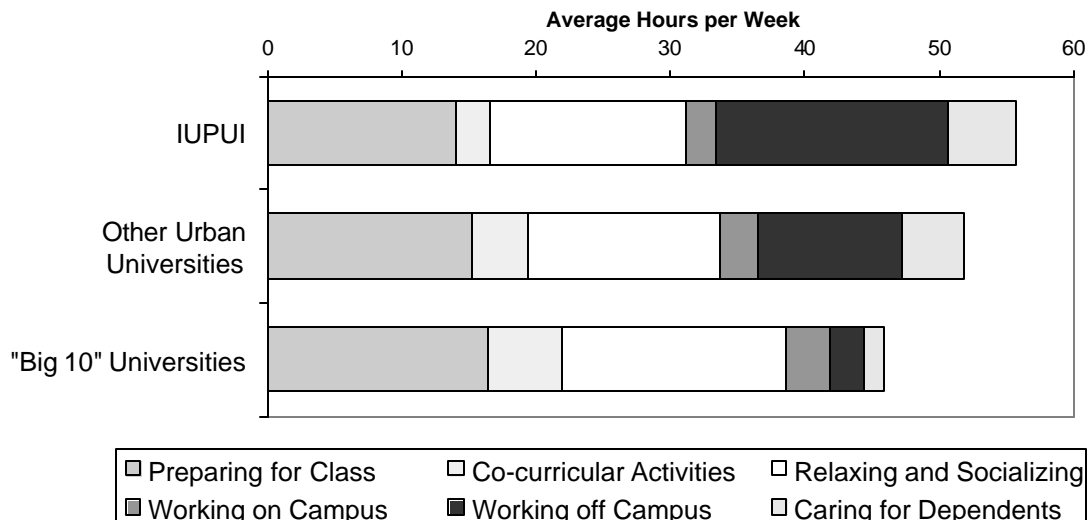
	6 Yr. Grad Rate		Avg. SAT Score		Top 10% HS Class	
	Rate	(Rank)	Score	(Rank)	Pct.	(Rank)
Virginia Commonwealth University	44.8	(1)	1020	(11)	13%	(8)
Florida A & M	44.6	(2)	na		na	
University of Cincinnati	40.6	(3)	1045	(5)	15%	(7)
University of Wisconsin-Milwaukee	40.3	(4)	1010	(12)	8%	(11)
University of Akron	37.4	(5)	970	(15)	13%	(8)
University of Missouri-Kansas City	36.6	(6)	1105	(1)	37%	(1)
Temple University	36.5	(7)	1040	(7)	17%	(5)
University of Houston	36.5	(7)	1025	(9)	20%	(4)
Portland State University	35.4	(9)	1035	(8)	na	
University of Missouri-St Louis	33.8	(10)	1065	(3)	16%	(6)
University of Alabama at Birmingham	33.2	(11)	1010	(12)	24%	(3)
University of Illinois at Chicago	32.3	(12)	1065	(3)	26%	(2)
University of Toledo	32.1	(13)	1025	(9)	13%	(8)
University of Memphis	31.9	(14)	1010	(12)	na	
University of Massachusetts-Boston	30.1	(15)	na		na	
Georgia State University	24.9	(16)	1045	(5)	8%	(11)
Cleveland State University	24.7	(17)	na		na	
IUPUI	23.5	(18)	945	(17)	7%	(13)
University of New Orleans	22.9	(19)	970	(15)	na	
Cuny City College	21.1	(20)	1085	(2)	na	
Wayne State University	na		na		na	

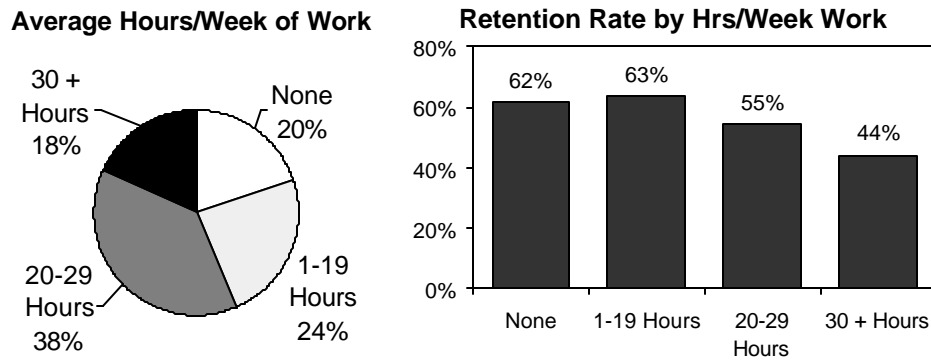
*Universities in the Urban 13 Coalition

hours per week (including not working any hours), just over one half (51%) of the urban full-time freshmen report working 5 or fewer hours, but less than one-quarter of the IUPUI full-time freshmen report working 5 or fewer hours per week. The majority (60%) of IUPUI full-time freshmen report working more than 15 hours per week.

The impact of work obligations on student persistence is further evident in Display 14. The left portion of the display illustrates the distribution of first-time, full-time freshmen according to the hours they intend to work during the school year, as reported on an entering student survey administered during the summer orientation program. The right side of the figure shows the one-year retention rate for each intended work category.

Display 13. Use of Time Among IUPUI Full-Time Freshmen Compared to Participating Peers at Other Urban Universities and "Big 10" Universities.



Display 14. Work Obligations and First-Time, Full-Time Freshmen Retention

IUPUI faculty face new challenges in teaching increasing numbers of traditional-aged, but academically and time/attention-challenged students, especially since many in this group are uncertain about their academic and career prospects. With their uncertainty, many of this growing group believes that they may well transfer before completing their college studies. Results from our most recent entering student survey reveal that over 40 percent of entering students indicate that they intend to transfer to another college or university. Another 17 percent say they are uncertain about their transfer plans. More importantly, there has been a significant increase in actual transfer as reported by respondents to our non-returning student survey. In the mid 1990s, one-quarter of non-returned indicated that they had transferred elsewhere. By 1998, nearly 30% indicated they had transferred. In our most recent survey of non-returning students, one-third of the respondents indicated that they had transferred elsewhere.

Students who transfer from IUPUI to other Indiana University campuses are tracked through our retention statistics and so do not negatively impact our retention rates. Recently, data have been made available on transfers from IUPUI to other Indiana public and private higher education institutions (Indiana Virtual Institutional Research prototype site, <http://indiana.vir.org/>, Creative Analytics, inc.). For both the Fall 1996 and Fall 1997 freshmen cohorts, 8 percent of IUPUI students transferred to other (non-IU) Indiana colleges and universities, compared to 4 percent that transferred to another IU campus. For the Fall 1999 cohort, 5 percent enrolled at another IU campus in Fall 2000. We expect that the transfer rate to non-IU campuses has increased similarly. Thus, **IUPUI's institutional retention rate significantly underestimates the college persistence rates of students who begin their academic careers as first-time, full-time freshmen at IUPUI.** Campus-based retention rates are especially inappropriate for a campus like IUPUI for where many students start with the intention of transferring, and many actually do transfer.

The success of IUPUI's retention efforts should be judged according to students' continued enrollment in any college or university, and not just at an IU campus.

As a measure of institutional effectiveness, the retention and graduation rates of first-time, full-time freshmen at IUPUI focus on our most challenging population of students. It is important to note that IUPUI has significant success providing a high quality undergraduate learning experience to many different types of students and is graduating an increasing number of them. However, we have devoted significant time and effort in recent years to the traditional-aged cohort. The next section of this analysis explores the impact of these interventions on student success.

Effectiveness of Interventions for Improving Student Success

As a commuter campus, the vast majority of students' academic and social experience at IUPUI revolves around the classroom. Even as IUPUI attracts more traditional-aged and full-time students, the campus will never have the level of student involvement in social activities found on a traditional residential campus. Although this makes it harder to engage students in the full life of the campus, it does help to focus our supports and interventions primarily on student academic success.

Throughout the 1990s, IUPUI has focused considerable effort and resources on developing programs and support services to improve the success rate of first-year students in their courses. In Spring 1997, the Office of Information Management and Institutional Research conducted a comprehensive analysis of the effectiveness of a range of these programs in preparation for the formation of University College (The Impact of Academic Support Programs on Student Performance and Persistence, *Research Brief 4*(4), February 1997, available at <http://www.imir.iupui.edu/imir/ar/asp97/asp97.htm>). Since that time, we have tracked the performance of the largest support initiatives and have

included relevant performance indicators in our annual Fall Enrollment Analysis.

In this next section, we again provide a more comprehensive review of the major academic support programs at IUPUI. The programs reviewed in this section include two that have been in operation for several years: Freshman Learning Communities and Supplemental Instruction. We also have some initial results on the impact of two new programs: Structured Learning Assistance and Critical Inquiry. We will also review recent findings on students' attitudes toward and use of advising in relation to recent efforts to improve advising structures and processes. Finally, students' general success in first-year courses will be considered in the context of the developing Gateway Program. Several other programs that are in earlier stages of development, such as the Math Assistance Center and Summer Bridge Program, cannot yet be evaluated. However, results of existing program evaluations can help guide the ongoing development of these new programs.

Freshman Learning Communities

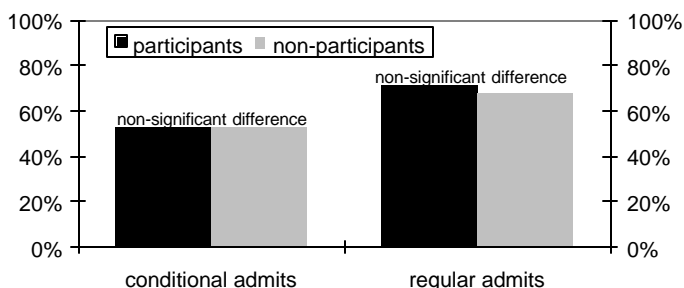
The Learning Community program at IUPUI has been evolving steadily over the past five years. Although there are a variety of freshman Learning Communities at IUPUI, they all revolve around a freshman seminar that is team-taught by a faculty member, an advisor, a librarian, and a student mentor. The freshman seminar is offered through almost all IUPUI schools, with the largest number offered through University College. A growing number of the freshman seminars are cross-linked with other introductory courses so that the learning community extends beyond the freshman seminar.

Display 16. Impact of Learning Communities on One-Year Retention Rate

	Learning Community	N	Retention Rate	Adjusted Rate*
Regular Admits	Non-Participants	217	63.1%	68.2%
	Participants	594	73.4%	71.6%
	Overall	811	70.7%	
Conditional Admits	Non-Participants	313	47.0%	53.3%
	Participants	941	54.7%	52.6%
	Overall	1254	52.8%	

*Adjusts for differences in academic background among participants and non-participants. Notes. Excludes students who placed in remedial reading and/or who enrolled in the X150 learning community.

Differences in Adjusted Retention Rates

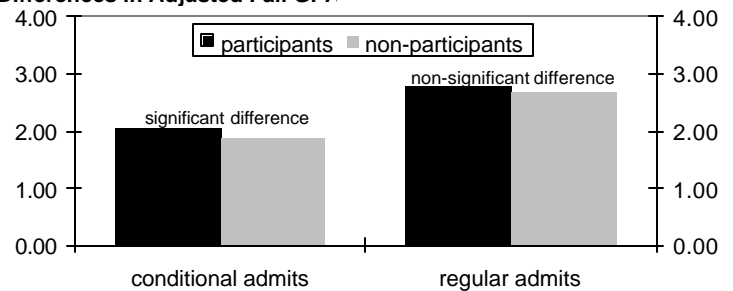


Display 15. Impact of Learning Communities on Fall Grade-Point Average

	Learning Community	N	Average Fall GPA	Adjusted Means*
Regular Admits	Non-Participants	186	2.68	2.68
	Participants	549	2.80	2.80
	Overall	735	2.77	
Conditional Admits	Non-Participants	221	1.89	1.87
	Participants	793	2.05	2.06
	Overall	1014	2.02	

*Adjusts for differences in academic background among participants and non-participants. Notes. Excludes students who placed in remedial reading and/or who enrolled in the X150 learning community.

Differences in Adjusted Fall GPA



The Learning Community program reached an implementation peak in Fall 1999 when 108 sections were offered enrolling the vast majority of new freshmen. Prior analyses have examined the impact of Learning Community participation on first-year grades (GPA) and one-year retention rates, controlling for any significant background differences between participants and non-participants. With most freshmen now enrolling, the analysis of participants and non-participants has become more problematic, as the non-participant group is now much smaller than the participant group, and the two groups represent very different populations (non-participants have either been granted permission to forego the requirement, or enrolled too late to find an open seat).

Earlier studies have shown that the Learning Communities program has a modest positive impact on both freshmen grades and their one-year retention rates. However, this impact has been different for regular and conditional admits. Specifically, the program was shown to improve the grades of conditional admits more so than regular admits. Display 15 shows the results of our typical 'participant v. non-participant' analysis of freshmen grades for the Fall 1999 cohort. Although this analysis statistically controls for background differences in the two groups, the more systematic differences noted above for the Fall 1999 cohort make the control process less reliable. With this caveat in mind, the results show that the Learning Community program still has a significant positive impact on the grades of conditional admits. The higher grade-point average among regular admits in the Learning Community program compared to regular admits who do not participate is not statistically significant.

Display 17. Characteristics Examined to Assess Effectiveness of Learning Community Sections

Student Characteristics	Course characteristics	Outcomes
Number of Students in Section	Section Linked to Other Course (y/n)	Retention Rate of Students
Percent Conditional Admits	Student Mentor Assigned to Section (y/n)	DFW Rate
Percent Beginning Freshmen	Instructor Type:	Average Course Grade
Average Semester Hours	Tenured/Tenure-Track Faculty	
Average SAT/ACT Score	Faculty/Administrator	
Percent in Remedial Math	Full-time Lecturer	
Percent Full-Time Students	Part-Time Faculty	
Average Age		
Average H.S. Percentile Rank		
Percent in Remedial Writing		

Earlier research had also established that Learning Communities result in a 3 to 5 percent increase in retention for participants compared to non-participants when controlling for differences in the background characteristics of students. Display 16 shows that the retention rate differences among the Fall 1999 cohort participant and non-participant groups are reduced to non-significance when controlling for background and ability differences.

With the diminution of the overall program effect as the base of participation has increased, it becomes more crucial to explore differences in effectiveness across the various implementations of the Learning Community program. Toward this end, data were assembled for every section of the Fall 1999 Learning Communities program, including characteristics of the students and of the course. Display 17 shows the section-level student and course characteristics that were used in the analysis, as well as the three outcome variables used as indicators of program success.

An initial linear regression analysis was performed on this section-level dataset to determine the student background characteristics that best predicted the three section-level outcomes. The six background factors indicated in bold in the left column of Display 17 produced the strongest prediction model. Together, these six characteristics accounted for 40 percent of the variation in section retention rate, 28 percent of the variation in section DFW rate, and 34 percent of the variation in average section grade.¹

In the next stage of the analysis, the course characteristics (linkage, mentor, and instructor type) were added to determine their impact on the outcomes. For the retention rate outcome, none of these characteristics had a statistically significant impact, in themselves, but together they add 4 percentage points to the amount of explained variance, bringing the total explained variance to 44

percent. For the DFW rate, the impact of having an assigned mentor was marginally significant ($p < .10$), with the size of the effect indicating that the presence of a mentor reduced the section DFW rate by four percentage points on average. One of the faculty type characteristics was statistically significant. If the course was taught by a tenured/tenure track faculty, the DFW rate was higher by 7 percentage points compared to sections taught by full-time lecturers or part-time instructors ($p < .05$). Together, the course characteristic factors added 7 percentage points to the explained variation in course DFW rate, bringing the total explained variance up to 35 percent (with both student and course characteristics).

The impact of the course characteristic factors was most pronounced on the average course grade outcome. Students in linked learning community sections had a 0.17 higher course GPA on average compared to students in unlinked sections ($p < .10$). The assignment of a student mentor added almost a quarter of a grade point (0.23, $p < .05$). Course grades were lowest on average among sections taught by the faculty/administrators, with grades averaging a full half of a grade-point lower (0.52) than the reference group of part-time instructors ($p < .01$). Tenured/tenure track faculty-taught sections averaged a quarter of a grade point lower (0.23) than the reference group ($p < .10$), and those taught by full-time lecturers had the highest student grades, more than a quarter of a grade point (0.28) higher than sections taught by part-time instructors. The course characteristics added 17 percentage points to the variance explained in course grades, resulting in a total of 52 percent.

In sum, students in Learning Community sections with assigned student mentors, and those in sections linked to other freshman courses, had better grades on average than students in non-mentored or unlinked sections. However, these factors did not have a significant impact on student retention. It appears that tenured/tenure track faculty, and especially those in administrative roles, grade lower on average than full-time lecturers and part-time instructors. And, although the tenured/tenure track faculty sections do not have statistically significantly lower retention rates,

¹ Complete technical specifications and results for these analyses are available, upon request, from the Office of Information Management and Institutional Research.

they are lower on average than in sections taught by full-time lecturers and part-time instructors.

The final models described above were used to generate 'predicted' retention rates, DFW rates, and average grades for each section. These predicted outcomes were then compared to actual section outcomes in order to assess the effectiveness of Learning Communities across the offering departments. Displays 18 through 20 rank the course sections, aggregated by offering department, according to the differences in actual and predicted retention rates (Display 18), section DFW rates (Display 19), and average course grades (Display 20). It is important to note that although the differences between the top and bottom ranked departmental offerings are always statistically significant, the small differences among courses in the middle of the list are not statistically significant.

Although these analyses do not reveal the particular reasons why students in some Learning Communities implementation do better or worse than expected, it would be informative to examine in particular the implementations that represent the extremes shown in these displays, especially the top and bottom two or three instances. There are also some curious patterns, such as for the Construction Technology (CNT) and Restaurant, Hotel, and Institutional Tourism (RHIT) Learning Communities: The CNT Learning Community has a lower than predicted retention rate but higher than predicted grades while the RHIT implementation exhibits the opposite pattern—higher than expected retention rate but lower than expected grades.

It will also be very informative to review departmental offerings that exhibit the largest positive changes in actual versus predicted outcomes from one year to another. Although the one-year retention rate is not yet available for Fall 2000 Learning Community participants, data are available on course DFW rates and average grades. Displays 21 and 22 show the results of a parallel analysis for these Fall 2000 offerings.

One notable change for Fall 2000 is the drop in grade performance of students in the School of Liberal Arts (SLA) Learning Community. Changes like this one, and the continued lower than expected performance of students in the Psychology (PSY) Learning Community warrant follow-up research that may help uncover ways to promote the positive impacts of Learning Communities on student performance and retention.

Display 18. Actual v. Predicted One-Year Retention Rate - Fall 1999

	Actual	Predicted	Difference
SLA	70.0%	50.8%	19.2%
ENGR	76.6%	72.1%	4.6%
RHIT	53.8%	51.6%	2.2%
HER	75.8%	73.9%	1.9%
SWK	65.2%	63.8%	1.4%
BUS	61.5%	60.9%	0.6%
NURS	67.9%	67.4%	0.5%
EDUC	48.0%	47.6%	0.4%
SPEA	51.8%	51.4%	0.4%
UCOL	55.8%	55.5%	0.3%
CPT	57.1%	57.5%	-0.4%
AHLT	48.5%	49.4%	-1.0%
SCI	67.0%	69.6%	-2.6%
TECH	48.0%	51.8%	-3.9%
CNT	47.6%	53.8%	-6.2%
JOUR	52.4%	60.5%	-8.1%
PSY	51.0%	62.0%	-10.9%

Display 19. Actual v. Predicted Course DFW Rate - Fall 1999

	Actual	Predicted	Difference
SWK	13.6%	24.3%	-10.7%
CNT	23.8%	33.2%	-9.4%
TECH	27.0%	31.4%	-4.4%
SLA	35.0%	39.4%	-4.4%
BUS	20.0%	22.2%	-2.2%
EDUC	36.8%	38.8%	-2.0%
HER	12.1%	14.0%	-1.9%
AHLT	34.7%	36.5%	-1.8%
NURS	21.2%	23.0%	-1.7%
SCI	13.0%	13.2%	-0.2%
UCOL	26.6%	26.7%	-0.2%
ENGR	14.3%	14.3%	0.0%
JOUR	28.6%	27.4%	1.2%
SPEA	36.0%	34.6%	1.3%
CPT	45.3%	33.6%	11.7%
RHIT	59.0%	37.1%	21.8%
PSY	46.8%	23.0%	23.8%

Display 20. Actual v. Predicted Course GPA - Fall 1999

	Actual	Predicted	Difference
SWK	3.53	2.80	0.73
NURS	3.51	3.10	0.41
SLA	2.48	2.16	0.33
EDUC	2.21	2.10	0.12
TECH	2.64	2.53	0.11
ENGR	3.37	3.27	0.11
BUS	3.08	3.01	0.07
SPEA	2.33	2.29	0.04
HER	3.34	3.31	0.03
UCOL	2.74	2.74	-0.01
CNT	2.54	2.55	-0.02
SCI	3.32	3.39	-0.06
JOUR	2.49	2.58	-0.09
AHLT	1.70	1.84	-0.14
CPT	2.00	2.50	-0.50
RHIT	1.78	2.30	-0.51
PSY	1.97	2.87	-0.90

Display 21. Actual v. Predicted Course DFW Rate - Fall 2000

	Actual	Predicted	Difference
MET	20.0%	36.4%	-16.4%
CNT	16.7%	31.3%	-14.6%
SWK	14.3%	23.7%	-9.4%
CIMT	26.7%	36.0%	-9.3%
ENGR	14.1%	19.7%	-5.6%
NURS	31.8%	36.2%	-4.4%
AHLT	33.3%	36.7%	-3.4%
BUS	15.6%	17.6%	-2.0%
UCOL	24.9%	26.1%	-1.2%
TECH	27.5%	27.8%	-0.3%
HER	8.0%	7.6%	0.4%
SCI	21.8%	21.1%	0.6%
JOUR	32.8%	29.8%	3.1%
CPT	30.6%	26.0%	4.6%
SPEA	40.6%	30.6%	10.0%
RHIT ¹	50.0%	36.5%	13.5%
PSY	33.3%	19.7%	13.6%
SLA	57.4%	43.5%	14.0%

Display 22. Actual v. Predicted Course GPA - Fall 2000

	Actual	Predicted	Difference
MET	3.34	2.57	0.77
CIMT	3.03	2.46	0.57
NURS	3.16	2.64	0.52
ENGR	3.19	2.95	0.24
CNT	2.91	2.70	0.21
TECH	2.87	2.70	0.18
SWK	2.89	2.80	0.08
BUS	3.14	3.06	0.08
UCOL	2.84	2.82	0.02
AHLT	2.34	2.35	-0.01
HER	3.19	3.27	-0.07
SCI	2.96	3.04	-0.08
CPT	2.75	2.87	-0.12
JOUR	2.19	2.49	-0.30
SPEA	2.25	2.57	-0.32
SLA	1.83	2.20	-0.37
RHIT ¹	1.91	2.32	-0.41
PSY	2.29	3.00	-0.72

¹ Offered under the new discipline designation, TCEM, but listed here as RHIT to track with prior Fall 1999 offering.

Supplemental Instruction

Supplemental Instruction at IUPUI is a program of student-led group mentoring sessions that are associated with mostly introductory level courses that have traditionally high DFW rates (i.e., low rates of student success). The students who lead these sessions are those who successfully completed the course in a prior semester, and who have an interest in helping other students succeed. They are also paid for their efforts.

Prior analyses of supplemental instruction have shown that students who take advantage of this opportunity obtain significantly higher grades compared to students who do not. However, it has also been found that the students who need these services most are least likely to participate. To accommodate this ‘self-selection’ factor, previous analyses have controlled in one way or another for background differences in participants and non-participants. In the present analysis, this was achieved by stratifying the participant sample first according to their entry status (beginning freshman/other), and then by an indicator of academic preparedness (conditional admissions status for beginners, above or below average GPA for others) and gender (females tend to participate in

rates higher than males). Non-participants were then sampled by strata to generate a comparison population that was distributed across strata in the same proportions as participants. Participation in supplemental instruction was defined as attending three or more mentoring sessions. The use of this threshold is supported by the research literature.

Display 23 shows the overall impact of participation in supplemental instruction on course grades and withdrawal rate among the matched samples. The difference in average course grade is highly significant ($p < .01$) and the difference in percent withdrawn is marginally statistically significant ($p < .10$).

Display 23 also illustrates the effectiveness of the matched sample control process. There was still a small difference in the prior cumulative GPA among the non-beginners in the participant sample, but this difference was not statistically significant. There was no difference in H.S. percentile rank among the beginners in the participant and matched non-participant samples.

This impact analysis was then extended, where applicable, to the individual courses for which mentoring was available. Display 24 shows the results—the impact

Display 23. Impact of Supplemental Instruction on Course Grade and Withdrawal Rate

	Course Grades (GPA)			Percent Wdrwn	Prior Cumulative GPA			H.S. Percentile Rank		
	Mean	N	SD		Mean	N	SD	Mean	N	SD
Non-Participant	2.19	470	1.39	19.1	2.68	475	0.75	56	444	24.5
Participant	2.40	495	1.18	14.8	2.76	481	0.70	55	417	24.8
Total	2.30	965	1.29	16.9	2.72	956	0.73	55	861	24.6

Display 24. Impact of Supplemental Instruction on Course Grade and Withdrawal Rate in Specific Courses

	SI Participant	Course Grades (GPA)			Percent Wdrwn	Prior Cumulative GPA			H.S. Percentile Rank		
		Mean	N	SD		Mean	N	SD	Mean	N	SD
BIOL K103	Non-Participant	2.79	29	1.15	17.1	3.08	35	0.63	63	24	24.2
	Participant	3.33	6	0.37	14.3	2.86	7	0.54	71	6	13.8
	Total	2.88	35	1.08	16.7	3.04	42	0.62	64	30	22.5
BIOL N217	Non-Participant	1.63	154	1.06	18.5	2.97	189	0.53	65	149	23.4
	Participant	2.16	43	1.05	8.5	3.02	47	0.58	70	33	19.6
	Total	1.75	197	1.08	16.5	2.98	236	0.54	66	182	22.8
BIOL N261	Non-Participant	2.55	219	1.20	17.4	2.80	265	0.56	64	205	20.9
	Participant	3.05	46	1.06	8.0	2.88	50	0.55	60	30	24.0
	Total	2.64	265	1.19	15.9	2.81	315	0.56	63	235	21.3
PHYS P201	Non-Participant	2.48	46	1.22	9.8	3.00	51	0.51	75	39	19.1
	Participant	2.88	13	0.78	13.3	3.10	15	0.59	78	10	15.7
	Total	2.57	59	1.14	10.6	3.02	66	0.53	76	49	18.3
MATH M010 and 001	Non-Participant	1.85	182	1.32	20.9	2.33	126	0.87	41	156	21.3
	Participant	2.14	72	1.27	21.7	2.44	50	1.03	40	65	23.2
	Total	1.93	254	1.31	21.1	2.36	176	0.91	41	221	21.9
MATH 111 and 110	Non-Participant	2.28	216	1.25	17.2	2.37	188	0.75	50	218	23.5
	Participant	2.29	87	1.11	14.7	2.43	73	0.70	49	79	24.4
	Total	2.28	303	1.21	16.5	2.39	261	0.74	50	297	23.7
Other 100 Level Math	Non-Participant	2.07	348	1.39	23.0	2.78	425	0.67	59	347	23.7
	Participant	2.40	200	1.19	15.3	2.83	223	0.61	56	168	24.0
	Total	2.19	548	1.33	20.3	2.80	648	0.65	58	515	23.8

Note: Other 100 level Math courses include: 151, 153, 154, 163, 164, M118 and M119.

Pairs of values in **bold** are statistically significantly different ($p < .05$), pairs of values in *italics* are marginally different ($p < .10$)

on course grade and withdrawal rate and the effectiveness of the matched sampling strategy—for the individual courses. The matched sampling strategy had to be adjusted slightly to accommodate variations in the student characteristics across sections, but the resulting comparisons of prior GPA and H.S. percentile rank show that these strategies were generally successful in yielding a matched sample for comparison purposes.

The results shown in Display 24 generally support the effectiveness of the supplemental instruction program. However, they also show that the program has been more effective in some implementations (e.g., BIOL N217, BIOL N261, 100-Level Math other than 111 and 110), and less effective in others (e.g., Math 111/100 and remedial Math courses M010 and 001). Controlling for differences among students who do and do not take advantage of available mentoring helps establish the positive impact for this service, but it also points to the program's ongoing primary challenge: students who

would most benefit from supplemental instruction do not take advantage of the program.

Structured Learning Assistance

For this very reason (self-selection), a new form of supplemental instruction was piloted in two high-risk courses in Fall 2000: Introductory Psychology (PSY B104) and Concepts of Biology I—Plants (BIOL K103). The Structured Learning Assistance (SLA) program makes supplemental instruction a requirement for the course. It is typically required of all students at the very beginning of the semester, and then for students who fail to maintain a specified level of performance throughout the remainder of the semester. Display 25 summarizes the results of the pilot evaluation.

The PSY B104 pilot yielded very positive results. Students in the three SLA sections obtained higher grades and had a much lower withdrawal rate than a matched

Display 25. Impact of Structured Learning Assistance on Student Graduates and Course Withdrawal Rate

		Course Grades (GPA)			Percent Wdrwn	Prior Cumulative GPA			H.S. Percentile Rank		
		Mean	N	SD		Mean	N	SD	Mean	N	SD
PSY B104	Non-SLA Sections	2.16	109	1.41	12.1	2.38	59	0.75	51	104	24.6
	SLA Sections	2.48	118	1.40	4.8	2.27	58	0.97	48	110	24.0
	Overall Sample	2.33	227	1.41	8.5	2.33	117	0.86	50	214	24.3
BIOL K101	Non-SLA Sections	2.32	30	1.01	28.6	3.51	28	0.34	80	34	15.7
	SLA Sections	2.04	66	1.29	9.6	3.36	41	0.40	72	60	20.7
	Overall Sample	2.13	96	1.21	16.5	3.42	69	0.38	75	94	19.4

Display 26. Impact of Critical Inquiry Courses on Student Performance

		Average Grade in Discipline Course	Average Grade in CI Course	n	Sem. GPA in Other Courses	% W Grades	Avg. H.S. Pctile Rank	Avg. SAT Score
ANTH A104	Non-CI Participant	2.59	na	17	2.74	10.5%	62	990
	CI Participant	2.68	2.90	15	2.53	11.8%	43	940
BIOL N100	Non-CI Participant	1.82	na	30	2.22	23.1%	62	973
	CI Participant	2.24	2.66	10	2.41	23.1%	42	856
ENG W001	Non-CI Participant	2.45	na	151	2.13	11.2%	48	831
	CI Participant	2.37	2.42	52	2.02	8.2%	41	853
PSY B104	Non-CI Participant	2.23	na	9	2.53	10.0%	54	1013
	CI Participant	2.52	3.47	19	2.46	5.0%	51	936

sample of students in other B104 sections (excluding sections participating in the Critical Inquiry pilot described in the next section). These positive results were especially notable since the students in the comparison sections had marginally higher average prior grades (non-beginners) and higher average H.S. percentile rankings (beginners), although these background differences were not statistically significant.

The Biology pilot yielded a lower withdrawal rate for participants, but did not result in higher grades. One notable difference between the two pilot implementations is that there was a consequence for not attending required mentoring sessions for the Psychology course, but not for the Biology course. That is, students in one of the three Psychology sections were notified at the beginning of the year that they would be withdrawn from the course if they did not follow through on the mentoring requirement. Although not given as severe a consequence in the other Psychology sections, attendance itself was tied to the course grade. For the Biology course, attendance in mentoring was monitored, but there was no formal consequence for non-attendance.

Critical Inquiry

Another pilot program in Fall 2000, Critical Inquiry (CI), is a set of courses designed to support students who are taking courses that have challenging reading assignments. The CI course is linked to the specific content course and designed to support the specific readings in that course. In Fall 2000, CI was implemented to support courses with challenging reading assignments in five disciplines: Afro-American Studies, Anthropology, Biology, English, and Psychology. In order to have a meaningful comparison, CI participants are compared to other beginning freshmen enrolled in the same discipline content course. Due to the small number of CI participants in the Afro-American Studies course, this course was removed from the comparisons.

Display 26 summarizes the results of the Critical Inquiry evaluation, showing that the program resulted in higher

content course grades for three of the four courses (Anthropology, Biology, and Psychology), and reduced withdrawal rates in two of the four courses (English and Psychology). The higher grades are especially notable given the lower H.S. percentile rank and generally lower SAT score averages of the participant group.

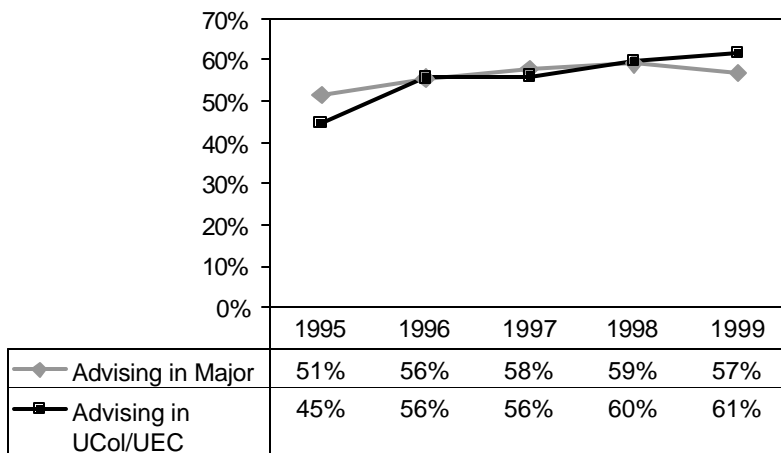
The Critical Inquiry pilot program for Fall 2000 included a modest self-selection bias. Students identified by advisors as potential prospects were offered the choice of enrolling in the pilot. This bias was less notable for the remedial English class (W001), where registration restrictions provided for less choice. The negligent impact of the program on students' grades in this course suggests that the self-selection factor may be unduly influencing the results in the other sections. However, the fact that the CI participants outperformed the non-participants in the other three pilot sections suggests that the program may well provide needed support for students with prior academic deficiencies.

Student Advising

For a variety of reasons, college students often feel less positive about advising than other aspects of their academic experience. Surveys of student perceptions of advising at IUPUI (IUPUI Advising Survey, <http://www.imir.iupui.edu/imir/ar/adv99/entadv99.htm>) have revealed both positive and negative aspects of students' perceptions. Students indicate highest levels of satisfaction with their advisors' integrity, knowledge of University programs and procedures (i.e., rules and requirements, courses), and the general quality and quantity of information provided. However, students are less positive about their advisors' familiarity with their individual life situations and goals, and with helping students attain those goals.

Overall freshman perceptions of academic advising in University College and its predecessor organization, the Undergraduate Education Center, have increased steadily over the past five years. Display 27 compares this trend to the advising satisfaction of students enrolled in degree-

Display 27. University College Freshman Satisfaction with Advising Compared to Student Satisfaction with Advising in the Major



Note. Freshman satisfaction with University College advising is based on responses from freshmen in University College (1999) and the Undergraduate Education Center for prior years. Student satisfaction in the major is based on the responses of all students who have gained entry into degree-granting programs.

Source. Continuing Student Satisfaction and Priorities Survey, Spring 1995 through 1999.

granting programs (all class levels), as monitored through an annual survey of students' satisfaction and priorities. The display shows the percentage of students who choose one of the two satisfaction responses (satisfied or very satisfied) from a five-point response scale that also includes a 'neutral' response and two dissatisfaction responses (dissatisfied and very dissatisfied).

In recent years, academic advising for freshmen has been tied closely to the support programs promoting first-year success. Specifically, students are initially advised as part of their summer orientation program and are then served in their first semester by the advisor that is part of their freshman seminar Learning Community. Although data are not available for the Fall 1999 cohort, data from earlier cohorts show that Learning Community participants indicated marginally higher rates of satisfaction with advising (58% satisfied or very satisfied) compared to non-participants (49%), although this difference does not reach statistical significance.

The Gateway Program

Faculty in academic departments that offer some of the top enrolling freshman courses have been working in recent years to improve student success in these courses. Initial work of this group led to a study of student performance in large v. small lecture classes (available at <http://www.imir.iupui.edu/air99/Lrgclass.doc>) and a set of discussions among faculty who teach these courses to identify best practices and areas of potential improvement. Faculty in several disciplines (e.g., Math, English, Psychology, and Sociology) continue working

diligently to develop and test new models of course management and delivery.

During Summer 2000, a team of IUPUI faculty developed the Gateway Program as a way to facilitate and coordinate further improvements in first-year student success by focusing resources on the top enrolling freshman courses. During the 2000-01 academic year, Gateway Forums have involved a large number of faculty, staff, and students in discussions and brainstorming sessions. Gateway Course grants were made available to support efforts to understand and improve student learning in these important first-year courses.

As part of this ongoing program, student success in Gateway courses has been monitored through examining the course DFW rates, that is, the percentage of students who start but do not successfully complete these courses. Display 28 lists the Gateway courses and shows their DFW rates for the

past two fall semesters (1999 and 2000), revealing a two percent increase in the overall rates, but showing a varied range of rates and changes in rates among specific courses.

One consistent finding among faculty studying these courses is that a significant proportion of the failure rate in these courses is predictable after the first two weeks of courses. That is, many first-time freshmen at IUPUI come for one or two classes and then stop attending, without officially withdrawing from the class. To assess this phenomenon, a new grade was established for research purposes to indicate an 'F' that was earned by a student who stopped attending class. The last two columns of Display 28 show that over 10 percent of all grades in these courses is attributable to the combination of FN and W grades, that is, students who either officially or unofficially withdraw from their first semester classes. Moreover, course non-completion accounts for more than one-third of the DFW rate overall and just over one-half of the DFW rate in Learning Communities.

The large proportion of students who stop attending their first semester classes is a significant component of IUPUI's retention problem. It is difficult to provide support to students who are absent from class. Faculty involved with the Gateway Program are exploring administrative and programmatic steps that can be taken to improve student attendance, thereby providing further opportunities to help support students during the first semester.

Display 28. DFW Rates and Course Non-Completion by First-Time, Full-Time Freshmen in Gateway Courses

	Number of FT Frosh		DFW Rate			Course Non-Completers	
	1999	2000	1999	2000	change	% of Total	% of DFW
Learning Communities	1818	1683	25%	24%	-1.1%	12%	51%
ANTH A104	100	143	31%	26%	-5.1%	18%	70%
BIOL N100	61	75	43%	31%	-12.0%	15%	48%
BIOL N261	15	21	40%	38%	-1.9%	14%	38%
BUS A100	121	79	45%	37%	-7.9%	20%	55%
BUS K201	43	61	23%	38%	14.4%	11%	30%
BUS X100	304	324	21%	31%	9.8%	5%	15%
BUS X204	6	7	0%	29%	28.6%	29%	100%
CHEM C101	73	72	44%	28%	-16.1%	8%	30%
COMM C180	120	118	17%	26%	9.6%	18%	68%
COMM R110	260	252	25%	29%	3.2%	13%	47%
CPT 106	113	127	39%	35%	-3.5%	15%	42%
ENG W001	308	217	29%	31%	2.4%	23%	74%
ENG W131	940	970	26%	26%	0.1%	14%	54%
ENG W132	9	8	22%	25%	2.8%	25%	100%
HIST H105	110	126	33%	47%	14.1%	20%	42%
HIST H106	82	102	26%	26%	0.9%	13%	48%
HPER H160	62	80	19%	18%	-1.9%	9%	50%
MATH 001	1091	560	39%	44%	4.9%	21%	46%
MATH 110	43	218	23%	34%	10.7%	15%	43%
MATH 111	438	327	20%	31%	11.0%	13%	41%
MATH 153	87	124	38%	52%	14.5%	23%	43%
MATH M010	86	343	45%	43%	-2.8%	22%	52%
MATH M118	77	67	19%	31%	11.9%	9%	29%
MATH M119	35	43	14%	51%	36.9%	12%	23%
MUS E241	72	69	24%	23%	-0.4%	13%	56%
PHIL P110	36	52	39%	38%	-0.4%	10%	25%
PHIL P120	64	78	25%	38%	13.5%	12%	30%
POLS Y103	55	117	25%	48%	22.4%	17%	36%
PSY B104	713	719	40%	39%	-1.0%	11%	29%
PSY B105	96	68	49%	35%	-13.7%	21%	58%
SOC R100	197	273	36%	37%	1.3%	12%	33%
SPEA J101	64	52	59%	60%	0.2%	23%	39%
Grand Total	9698	9575	30%	32%	2.1%	11%	35%

Conclusions and Recommendations

IUPUI provides educational opportunities to a broad range of students. We have been especially effective at serving the needs of time-restricted and place-bound non-traditional adult learners. But as this population is at least temporarily diminished in size, IUPUI will continue to see an increase in demand among the growing number of traditional-aged students, many of whom will have less than stellar high school records. And, while we are frustrated that the accepted measures of institutional effectiveness focus disproportionately on the most challenging portion of our student population, we cannot escape the responsibility for providing all students with opportunities for success.

The analysis of student retention trends in this report suggests that our retention rates will be most affected by the prior academic experiences of our entering students, and the time and attention that these students can devote to their studies once enrolled at IUPUI. There are several promising trends, such as the increase in college preparatory course taking among high school graduates. In addition, IUPUI has increased significantly referrals of the most under-prepared applicants to the Community College of Indiana. The development of on-campus housing for first-time freshmen is also likely to contribute to an improved retention rate, even though this only affects a small proportion of entering students.

The current findings also suggest that our freshman orientation program should continue to emphasize to incoming students and their parents that off-campus work obligations are particularly detrimental to students' first-

year success. Efforts should be made to minimize these work obligations and, where possible, to consider on-campus employment as an alternative.

The current analysis of first-year student success programs supports several themes consistent with past research:

1. Academic support programs work for students who show some level of motivation toward their studies.
2. Some implementations work better than others. We can learn by studying in more depth the features of implementations that appear to work well, and the challenges of those that are not producing desired results.
3. Especially for the most at-risk students, programs work best when there are clear and enforceable consequences for student behavior. That is, positive consequences for desirable behaviors (e.g., attending mentoring sessions) and negative consequences for undesirable behaviors (e.g., unexcused absences).

A large focus of IUPUI's efforts to retain a larger proportion of first-year students derives from concerns related to serving a large number of students with relatively poor prior academic experiences in high school. However, IUPUI new students represent a broad range of student backgrounds including a significant number of top-performing high school students, as well as many from the middle ranks of their high schools. IUPUI students are similarly diverse in terms of age, family, and cultural background. To be broadly successful, student support initiatives need to accommodate the diversity of student backgrounds.

For Further Details

This Enrollment Report and Analysis is the second of two parts that provides an overview for the IUPUI campus. The Office of Information Management and Institutional Research (IMIR) provides this analysis as part of its Fall Enrollment Report series. Part 1 of this series focused on recent enrollment trends. Profile and trend reports for each school are also generated. Copies of these reports are circulated to campus executive administrators, school deans, and faculty and staff who serve on campus committees concerned with academic and student affairs. In addition, IMIR posts the campus-wide reports on its web site. These reports can be accessed at our URL:

<http://www.imir.iupui.edu/imir>

under the "Enrollment Reports and Analysis" section. IMIR also encourages members of the campus community to request more specific views of these and other relevant institutional data by contacting our office by phone (278-2282), or by using the "Information Request" form on our web page.