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ABSTRACT
        The effect of alternative census dates on the
determination of student enrollment and retention rates and the
accuracy of tuition revenue projections was analyzed at Indiana
University-Purdue University Indianapolis. A set of pseudo-extract
files was created for the first 8 weeks of two consecutive fall
semesters (1993 and 1994). The accuracy of the files was determined
by comparing student enrollment and credit hour counts for the end of
the first week to the official student census file. Student
enrollment counts and revenue projections were derived from each
weekly file for the Fall 1993 semester as well as for the end of the
semester. The retention rates were calculated by extracting a cohort
from each weekly fall 1993 file and determining students' enrollment
status from the corresponding fall 1994 weekly pseudo-census extract.
Data extracted at the end of the third week of the semester generated
the smallest combined deviations of the examined measures from their
semester optimum values. Several other factors are identified that
could influence the decision as to when official institutional data
should be generated. The study demonstrates the usefulness of taking
multiple criteria into account when determining the point-in-time at
which to extract data for these vital management functions. Contains
eight references and nine tables. (SW)

Setting a Census Date to Optimize Enrollment, Retention, and Tuition Revenue Projections

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Running Head: SETTING A CENSUS DATE

Setting a Census Date to Optimize Enrollment, Retention, and Tuition Revenue Projections

Abstract

Stude:t enrollment, student retention rates, and tuition revenue projections rep esent three critical areas of analysis for the enrollment management function at colleges and universities. Each of these measures is often derived using point-in-time or "census" extracts from an institution's student record system. This paper reports the results of an empirical analysis of the effect of alternative census dates on the determination of enrollment and retention rates and the accuracy of tuition revenue projections. Data extracted at the end of the third week of the semester generated the smallest combined deviations of the examined measures from their semester optimum values. Several other factors are identified that could influence the decision as to when to generate "official" institutional data.

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Setting a Census Date to Optimize Enrollment, Retention, and Tuition Revenue Projections

College and university officials have become increasingly dependent on receiving timely and reliable student enrollment data. Levels of enrollment, rates of retention and their corresponding influence on tuition revenues are critical indicators of institutional viability. Aside from their relevance to an institution's academic and financial health, an increasing number of state and federal agencies have promulgated regulations regarding the reporting of measures related to these aspects of college and university operations.

Student enrollments have always been a central component of the economic and academic viability of colleges and universities. For both public and private institutions, concerns have centered around the tuition revenues generated by enrollments balanced against the capacity of an institution's academic programs, facilities and support services. For public institutions, enrollments are additionally related to the allocation of increasingly scarce public funds.

Since 1991, federal agencies have passed a number of laws and regulations that require institutions to collect and disseminate student retention data. These include NCAA reporting requirements, the Student Right-to-Know Act, the National Education Goals, and the State Postsecondary Review Entity legislation. New and developing reporting regulations have forced all postsecondary institutions to track students from entry through graduation. These regulations have engendered a great deal of discussion and debate in the higher education sector regarding the difficulty of devising a single standard for comparing the diverse spectrum of colleges and

university in the US higher education system. But despite this sometimes acrimonious debate, it appears that retention rates are here to stay as a key college performance indicator.

The effective management of college student enrollment requires timely, reliable and accurate student enrollment data. This need is expressed throughout the pages of several notable resources on enrollment management. Virtually all of the chapters of Hossler's (1986) volume, Managing College Enrollments, cite this requirement. Within this volume, Davis-Van Atta and Carrier (1986) describe the need for timely and sound data collection to provide 'objective facts, untainted by bias' (p. 86). More generally, the importance of establishing valid and reliable institutional data resources is evidenced by the increase in the literature and organizational resources being devoted to data administration and data management. McKinney, Schott, Teeter and Mannering (1987) described the emergence of these roles. More recently, Borden (1995, forthcoming) relates the emergence of data warehousing as a maturation of these concerns into a coordinated activity to define and implement accessible data sources containing well articulated institutional measures.

Given the importance of establishing reliable and valid data resources and the specific importance of the three measures of institutional effectiveness considered here (tuition revenues, student enrollment and student retention), institutions of higher education and their overseers need to carefully consider the technical components of how such measures are derived. An institution's method for determining when to extract data for these analysis--that is, its census date--is one of the critical components for developing these measures.

The Census Date and Institutional Analysis

The census date is here defined as the point-in-time at which an extract is made from an institution's record system for subsequent use as a read-only source of institutional data. The creation of census extracts has been identified as a critical component for producing timely, consistent, and reliable institutional analyses (e.g., Borden, 1991; Borden & Delaney, 1989; Tetlow, 1990; and Wilton, 1990). To the degree that an institution maintains official census data for use by a variety of information providers, the resulting information will be consistent, replicable and more readily accepted by academic and administrative managers.

The point at which such an extract is made can greatly affect enrollment, student tracking measures, and tuition projections. Typically, enrollments are highest early in the semester, tuition projections are most accurate after refund periods have passed, and retention and graduation rates increase as the semester progresses.

Like many colleges and universities, the eight campuses of Indiana University employ a student census extract file for "official" external reporting. This extract is taken at the end of the first week of each semester. Although several administrative units use data from other sources for internal reporting and analysis, the end-of-first week extract file is used for responding to all state and federal reporting requirements as well as for university-wide analyses of enrollment and student retention and graduation rates.

Two primary factors influenced the decision to extract official enrollment data as of the end of the first week of classes. First, faculty and administrators were eager to have official enrollment counts available as early as possible. Since the largest campus of the system, IU-

Bloomington, achieved stable enrollments early in the semester, the first week counts were seen as representative of the semester. Second, university enrollments were known to decrease after this point and so the first week would generate relatively high counts that were defensible based on the stability of counts at the largest campus.

The first week census date served well the reporting of student enrollment but was known from the beginning to be less suitable for projecting enrollment revenues. To counter this, the University Budget Office monitored enrollments over the course of the semester and developed "fudge" factors to derive projections from the first week data. More recently, interest in student retention and the growth of the other campuses that have less stable first week enrollments, has led to concern over the timing of the university-wide census.

In order to assess the effect of differing census dates on these three areas of institutional analysis, the authors developed a set of pseudo-extract files for the first eight weeks of two consecutive fall semesters for the second largest campus of the Indiana University system. Indiana University-Purdue University Indianapolis (IUPUI) is a relatively young urban campus that serves the Indianapolis metropolitan area. IUPUI enrolls fewer students than IU-Bloomington (26,000 compared to 35,000), but it is the home of most IU health programs, including the medical school as well as two Purdue schools (Science and Engineering & Technology). IUPUI has a larger number of academic programs and a larger overall budget compared to the Bloomington campus. More important for the current study, IUPUI's predominantly commuter student population balances school, work, and family obligations which results in higher rates of both within and between semester enrollment changes.

Method

A set of pseudo-extract files was created for the first eight weeks of two consecutive fall semesters (1993 and 1994). The files were derived from student billing history files using the date of course add and drop transactions. The accuracy of these files was determined by comparing student enrollment and credit hours counts for the end of the first week to the official student census file. Credit hour counts from the first week pseudo-census file were within 0.5% of the "official" census file (241619.5 credit hours (more/less) on a base of 240,481.5 total credit hours).

Student enrollment counts and revenue projections were derived from each weekly file for the Fall 1993 semester as well as for the end of the semester. The retention rates were calculated by extracting a cohort from each weekly Fall 1993 file and determining students' enrollment status from the corresponding Fall 1994 weekly pseudo-census extract. For all three measures, analyses were conducted for the appropriate overall student populations as well as for meaningful subgroups. The results are presented for each measure followed by a combined analysis of the three measures.

Results

Student Enrollment

For the present study, student enrollment was characterized by two measures: an unduplicated 'headcount' of students enrolled in at least one credit-bearing course; and the number of credit hours generated by all students. These measures of enrollment were generated for each of the first eight weeks of the Fall 1993 semester as well as for the end of the semester.

Within each week, differences by student demographic and enrollment characteristics were examined.

Table 1 displays headcount enrollment by student level for the first eight weeks of the semester as well as at the end of the semester (week 16). Overall, enrollment is highest at the end of the first week, when the official census extract is made. However, Table 1 also shows that enrollment among students in IUPUI's first professional degree programs (medicine, dentistry, and law) reaches its peak at the end of the fourth week. The data also indicate that student enrollment varies least for professional students, more for graduate students, and most for undergraduate students. Figure 1 depicts these weekly changes graphically.

Table 1. Weekly Census Headcount Enrollment

| Week	Grand Total		Undergraduate		Graduate		Professional	
	N	% of Max.	N	% of Max.	N	% of Max.	N	% of Max.
1	26,135	100.0%	19,052	100.0%	4,824	100.0%	2,259	99.7%
2	26,059	99.7%	18,991	99.7%	4,806	99.6%	2,262	99.9%
3	25,933	99.2%	18,889	99.1%	4,780	99.1%	2,264	100.0%
4	25,812	98.8%	18,772	98.5%	4,775	99.0%	2,265	100.0%
5	25,759	98.6%	18,728	98.3%	4,768	98.8%	2,263	99.9%
6	25,678	98.3%	18,665	98.0%	4,751	98.5%	2,262	99.9%
7	25,568	97.8%	18,573	97.5%	4,734	98.1%	2,261	99.8%
8	25,368	97.1%	18,413	96.6%	4,694	97.3%	2,261	99.8%
End of Sem.	25,047	95.8%	18,119	95.1%	4,673	96.9%	2,255	99.6%
Chg. in 8 Wks	767	2.9%	639	3.4%	130	2.7%	6	0.3%

Figure 1. Headcount Enrollment over the Semester as a Percent of the Maximum
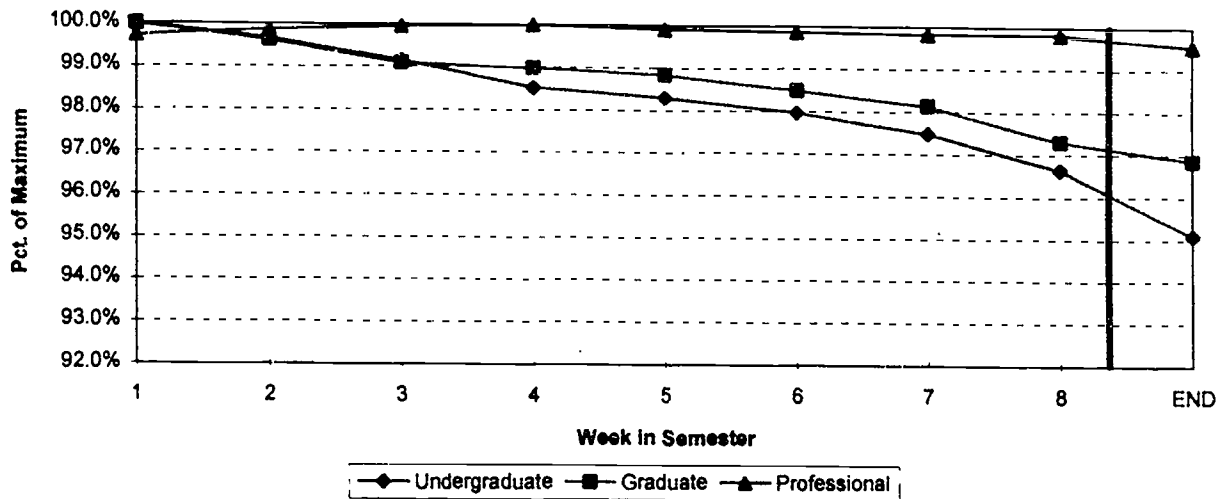
Table 2 summarizes how the changes in headcount enrollment over the eight weeks of the

semester differ among groups of students as identified through several demographics and

enrollment characteristics. For example, African American student enrollment doesn't reach its

maximum until the end of second week of the semester and it changes by a total of four percent

over the first eight weeks of the semester compared to the overall change rate of 2.9 percent.

Enrollment also peaks during the second week for students of "All Other" ethnic backgrounds,

which includes both Asian-American and foreign students.

Enrollment patterns differ most for full-time students compared to part-time students.

This difference reflects more than just declining numbers of full-time students. A sizable

number of full-time students drop some courses during the semester and thus change their

enrollment status to part time. Thus some of the decline in full-time enrollment is offset by

increases in part-time student enrollment, which does not reach its peak until the end of the

semester. Table 2 also shows that enrollment changes vary widely among different academic units.

Table 2. Headcount Enrollment Changes by Student Characteristics

Student Characteristic	Maximum Enrollment	Week of Max. Enr.	Pct Change Over 8 Weeks
Ethnicity			
African American	2,125	2	4.0%
Hispanic	295	1	3.4%
White	22,466	1	2.9%
All Other	1,260	2	2.1%
Age			
Under 25	11,861	1	2.3%
25 +	14,274	1	3.5%
Gender			
Male	11,185	1	2.9%
Female	14,950	1	3.0%
Enrollment Level			
Full-Time	11,737	1	9.1%
Part-Time	15,196	END	2.4%
Academic Program			
Health Programs	4,987	1	1.8%
Arts & Sciences	7,002	1	3.7%
Access Center	2,665	1	5.4%
All Others	11,481	1	2.4%

Table 3 and Figure 2 summarize weekly credit hour enrollment changes. For all course levels, credit hour enrollments are highest at the end of week 1. Combined add and drop activity after that point results in decreasing enrollments. These declines are relatively small in the early part of the semester when students can both add and drop courses. Credit hour declines are greater toward the end of the semester. This may be attributed partly to a growing trend among poorly performing students to withdraw from courses rather than accept a failing grade. Table 3 also shows that enrollment changes most among lower division courses compared to upper division and graduate level courses.

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Table 3. Weekly Student Credit Hour Enrollment by Course Level

Week	Grand Total		Lower Division		Upper Division		Graduate	
	N	% of Max.	N	% of Max.	N	% of Max.	N	% of Max.
1	241,620	100.0%	130,698	100.0%	55,102	100.0%	55,820	100.0%
2	240,797	99.7%	129,986	99.5%	55,020	99.9%	55,791	99.9%
3	239,179	99.0%	128,545	98.4%	54,893	99.6%	55,742	99.9%
4	237,383	98.2%	127,023	97.2%	54,638	99.2%	55,722	99.8%
5	236,530	97.9%	126,332	96.7%	54,528	99.0%	55,671	99.7%
6	235,099	97.3%	125,192	95.8%	54,319	98.6%	55,589	99.6%
7	233,168	96.5%	123,634	94.6%	54,007	98.0%	55,527	99.5%
8	229,730	95.1%	120,928	92.5%	53,428	97.0%	55,374	99.2%
End of Sem.	222,211	92.0%	114,424	87.5%	52,574	95.4%	55,213	98.9%
Chg. in 8 Wks	11,890	4.9%	9,770	7.5%	1,675	3.0%	446	0.8%

Figure 2. Credit Hour Enrollment over the Semester as a Percent of the Maximum
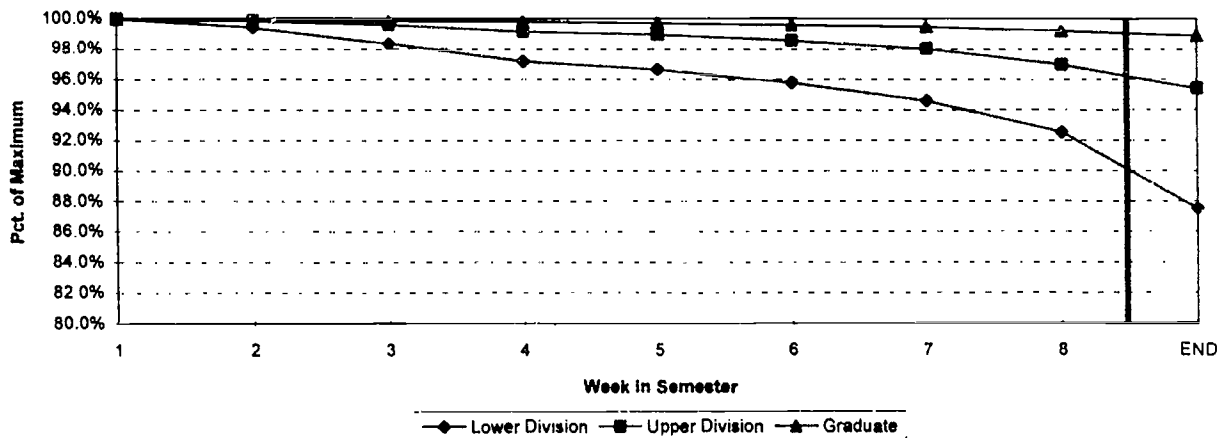
Table 4 summarizes further differences in credit hour enrollment changes over the course of the semester by academic unit and residency status. Among academic units, the changes are greatest among the Arts & Science courses. This is related to the greater changes among lower division course enrollments since the Arts and Sciences departments offer the vast majority of the university's lower division courses.

Table 4. Summary of Credit Hour Changes by Course and Student Characteristics

Characteristic	Maximum Cred. Hrs.	Week of Max. Crds.	Pct Change Over 8 Weeks
Academic Area of Course			
Health	48,669	1	0.9%
Arts & Sciences	110,542	1	8.1%
Other Gen Acad	82,409	1	3.1%
Residency Status of Student			
Indiana Resident	231,350	1	5.1%
Out-of-State	10,290	3	1.3%

Table 4 also shows that out-of-state student credit hour enrollments are more stable than in-state enrollments but they don't reach their semester maximum until the end of the third week of the semester. At IUPUI, nearly 28% of out-of-state enrollments are accounted for by foreign students, who often do not arrive on campus until the first week of classes and may not finalize their schedules right away.

Student Retention Rates

Retention rates have gained increasing prominence over the past several years instigated in part by federal and state reporting regulations. There are many significant issues surrounding the definition of cohorts and tracking procedures for calculating retention rates. Among these are a set of timing-related issues. For example. if one establishes a cohort in the first week of the semester, then students who withdraw early enough to receive a complete tuition refund would still be counted among the entering cohort and considered part of the attrition pool.

In the current study, undergraduate student cohorts were defined for each of the first eight weeks of the Fall 1993 semester and tracked to the corresponding week of the Fall 1994

semester. For example, the cohort defined by the end of the fourth week of the Fall 1993

semester was tracked to the end of the fourth week of the Fall 1994 semester. Students were said

to be retained if they were enrolled at the appropriate point of the Fall 1994 semester, or if they

had graduated between the 1993 and 1994 Fall semesters. These cohorts include students who

first entered IUPUI in Fall 1993, both first-time college students and transfers from other

institutions.

Table 5 shows the changes in retention rates for the cohorts defined by the eight weekly

and end-of-semester enrollment extract files. The table contrasts the changing rates among full-

time students and part-time students. Overall undergraduate one-year retention rates do not vary

much over the course of the semester. However, Table 5 shows that the overall stability of

retention rates disguises opposing trends among full- and part-time students. Whereas full-time

retention rates increase over the course of the semester, part-time retention rates decrease. Figure

3 illustrates these trends graphically.

Table 5. Weekly Retention Rates of First-Time Undergraduate Students

Week	Grand Total		Full-Time		Part-Time	
	N	% of Max.	N	% of Max.	N	% of Max.
1	53.2%	99.7%	58.9%	94.8%	46.2%	100.0%
2	53.3%	99.9%	58.9%	95.0%	46.1%	100.0%
3	53.4%	100.0%	59.4%	95.7%	45.9%	99.4%
4	53.2%	99.7%	59 3%	95.6%	45.7%	99.0%
5	53.1%	99.5%	59.2%	95.4%	45.7%	98.9%
6	53.2%	99.6%	59.8%	96.4%	45.4%	98.3%
7	53.0%	99.3%	59.9%	96.5%	45.2%	97.8%
8	52.7%	98.8%	60.3%	97.2%	44.6%	96.7%
End of Sem.	52.4%	98.2%	62.1%	100.0%	43.8%	94.9%
Chg. in 8 Wks	0.6%	1.2%	1.4%	2.4%	1.5%	3.3%

The differing patterns among full- and part-time student retention is related to the earlier cited shift of some full-time students to part-time status during the semester. Students who change from full- to part-time status have lower retention rates compared to students who retain full loads and also compared to students who retain part-time loads. Among Fall 1993 students who changed from full- to part-time, only 41% re-enrolled in Fall 1994 compared to an average retention rate of 64% for students who retained full-time status and a rate of 47% for students who retained part-time status.

Figure 3. First-Time Undergraduate Retention Rates over the Semester as a Percent of the Maximum
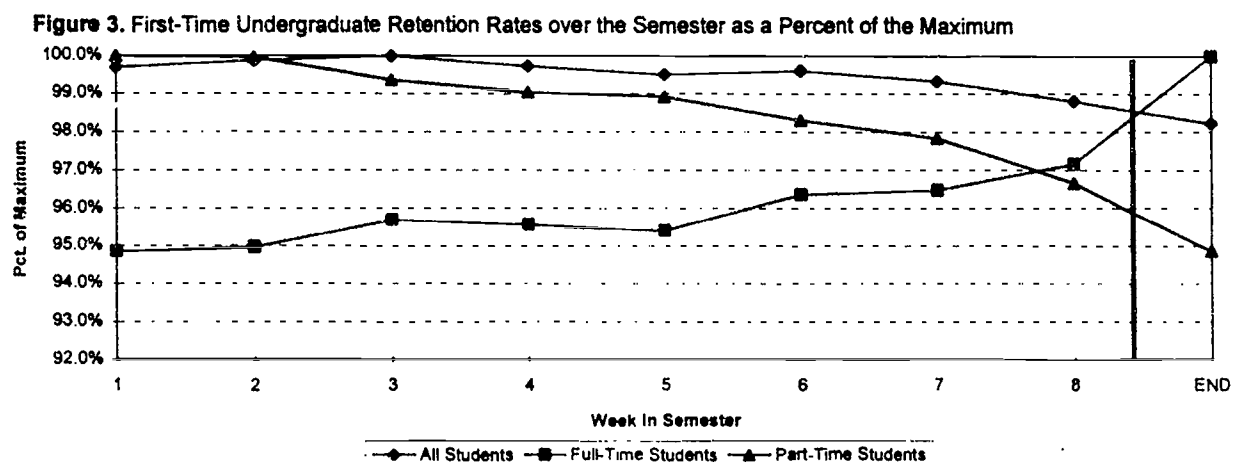
Tables 6 summarizes changes in retention rates according to several demographic and enrollment status characteristics. Retention rates differ among various groups of students. Some of these differences are associated with relatively low enrollments as among Fall 1993 new Hispanic students (n=40) and seniors (n=82). Compared to changes in enrollment counts over the semester, there are larger difference as to when in the semester retention rates reach their maximum across various subgroups of students.

Table 6. Retention Rate Changes by Student Characteristics

Student Characteristic	Maximum Retention	Week of Max. Ret.	Pct Change Over 8 Weeks
Ethnicity			
African American	42.2%	8	2.5%
Hispanic	60.5%	6-8	9.1%
White	54.0%	3	1.5%
All Other	70.1%	END	3.5%
Age			
Under 25	53.0%	2-3	1.4%
25 +	54.8%	4	1.2%
Sex			
Female	56.9%	3	1.4%
Male	49.2%	2	1.2%
Class Level			
Freshman	52.2%	3	1.4%
Sophomore	63.6%	7	1.8%
Junior	58.2%	8-9	1.4%
Senior	51.2%	1-2	4.8%
Academic Unit			
Arts & Sci	55.5%	7-END	1.5%
Education	72.0%	2-3	4.9%
Engr & Tech	58.5%	END	1.3%
Health	64.6%	END	2.4%
Other School	59.1%	8	1.6%
Undeclared	57.8%	6	1.2%
Access Center	46.5%	3	3.3%

Tuition Revenue Projections

Until the end of the first week of the semester, Indiana University students may drop any

or all of their classes and receive a full refund of instructional fees. One quarter of the fees paid

become forfeit at the beginning of each of the subsequent three weeks, so that at the end of the

fourth week no refund is made to the student who drops any sections. The end of the fourth

week therefore marks the end of the refund period. After this time, no further accounting entries

are made if students drop enrollments; that is, no reductions in instructional fee income with

concomitant increases in forfeited fee income are made, so that, except for minor adjustments,

the end of the fourth week income does not change materially by the end of the semester. This is

an important point at IUPUI, where a Responsibility Center Management budgeting system

provides for the academic centers to retain their own fee income.

Table 7 displays the changes in projected fee income based exclusively on the credit hour

enrollments from the weekly census files. This table differs from the previous tables relating to

enrollment and retention because there is an identifiable criterion to which weekly estimates can

be compared--actual tuition income. The actual income is provided in the first row of the Table

7 and subsequent weekly estimates are compared as a percentage of the actual amount. Table 7

shows the larger variation in weekly estimates for IUPUI's general academic programs compared

to its health programs. It also shows that the health program estimates are closest after week 3

while the larger general academic estimates come closest to actual revenues after week 4. Figure

4 illustrates these trends graphically.

Table 7. Weekly Census Revenue Projections

	Grand Total		Health		General Academic	
	$ Amount	% of Actual	N	% of Actual	N	% of Actual
Actual	$19,652,957	-	$2,748,162	-	$16,904,795	-
Week						
1	$20,028,226	101.9%	$2,756,997	100.3%	$17,271,229	102.2%
2	$19,957,691	101.6%	$2,753,400	100.2%	$17,204,291	101.8%
3	$19,818,098	100.8%	$2,748,947	100.0%	$17,069,151	101.0%
4	$19,659,816	100.0%	$2,741,532	99.8%	$16,918,284	100.1%
5	$19,586,633	99.7%	$2,736,701	99.6%	$16,849,933	99.7%
6	$19,454,757	99.0%	$2,729,010	99.3%	$16,725,746	98.9%
7	$19,282,005	98.1%	$2,724,946	99.2%	$16,557,059	97.9%
8	$18,974,494	96.5%	$2,709,760	98.6%	$16,264,734	96.2%
End of Sem.	$18,303,551	93.1%	$2,682,113	97.6%	$15,621,437	92.4%

Figure 4. Weekly Revenue Projections as a Percent of Actual Income
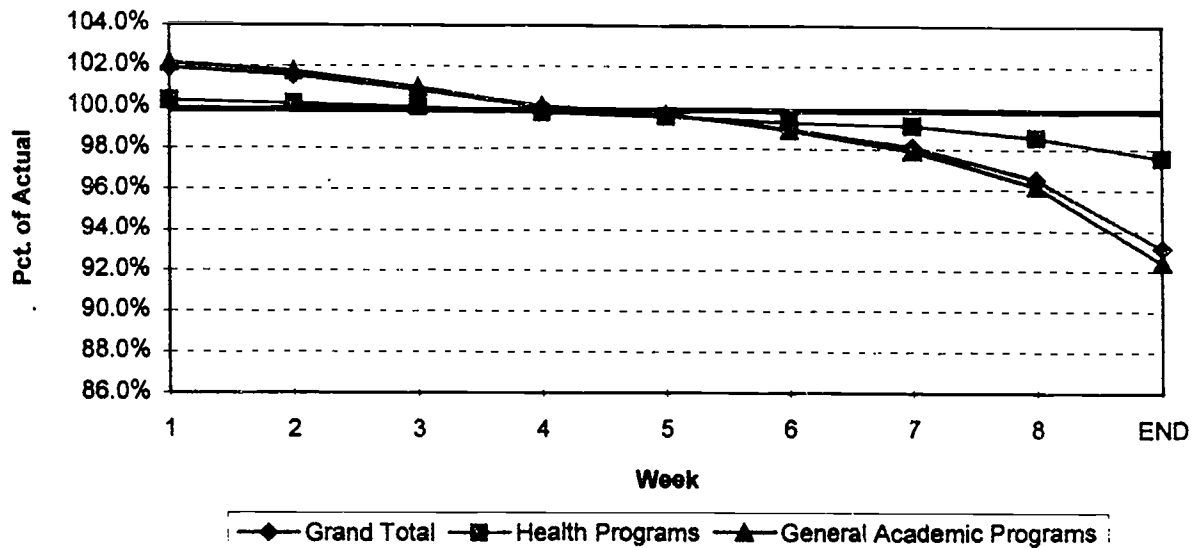
Differences also are evident at the course level. For purposes of estimating instructional

fee income (tuition), first week credit hours generate an overestimated projection of the actual

amounts of instructional fee income for undergraduate courses because more credit hours are

dropped during the refund period than are added. During the tuition refund period, credit hours

in undergraduate courses changed an average of 2.2% compared to just 0.2% for courses at the

graduate level. Table 8 further summarizes differences in tuition revenue projection and their

relative accuracy among differing groups of fee-generating programs. These data show that

week four credit hour enrollments are a fairly accurate predictor of actual income, but for some

program areas, data from other weekly files generate closer estimates.

Table 8. Summary of Revenue Projection Changes by Program Characteristics

Program Characteristic	Actual Income	Week 4 as Pct of Actual	Week Closest to Actual	% of Actual at Closest Wk.
Course Level				
Graduate	$6,931,784	98.9%	1	99.2%
Undergraduate	$32,374,130	100.3%	5	99.8%
Student Residency Status				
Out-of-State	$4,037,714	100.7%	6	100.0%
Indiana Resident	$35,268,200	100.0%	4	100.0%
Largest Academic Units				
Arts & Sciences	$9,795,677	100.2%	4	100.2%
Nursing	$1,265,347	100.2%	5	100.1%
Engineering & Technolog	$1,568,542	100.4%	5	100.1%
Education	$1,237,960	99.9%	4	99.9%
All Other	$5,785,431	99.6%	3	100.2%

Since there is an "actual" income against which projections can be compared, budget
analysts have devised an adjustment mechanism based on prior corresponding semesters'
experience to reduce the estimate obtained by multiplying census (first-week) credit hours by the
relevant fee rate.[1] Without the adjustment factor, estimating fee income based strictly on first-
week (census) credit hours in the Fall of 1993 would exceed actual income for undergraduate and
graduate programs by $375,000. The adjustment factor is a moving average calculated by
dividing end-of-the-refund period income by census-date income for the corresponding semester
of the past two years. The accuracy of the projection based on first week credit hours, adjusted
by the computed factor for the Fall 1993 semester overestimated final income by only $50,000, a

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[1] There are distinct fee rates for resident undergraduates, nonresident undergraduates, resident graduates, and
nonresident undergraduates, in addition to differential fees for certain other graduate programs and for the
professional programs.

0.3% error. However, as Table 8 shows, the adjustment factor does not accommodate differences among revenue centers (that is, academic units), or other programmatic factors.

Optimizing the Census Date

Table 9 and Figure 5 illustrate the combined patterns of enrollment, retention, and tuition projection patterns described above. These measures are compared according to the respective weekly estimates as a percentage of corresponding semester optimum values. For enrollment and retention, the optima are characterized by the highest value during the semester. For tuition revenue projections, the optimum is characterized by the actual income for the semester.

Two additional columns are provided in Table 9 to express the variation among measures within each week. The first column (RMSD100) expresses the variation among the weekly enrollment and tuition revenue numbers as the square root of the average squared deviation of each percentage measure from their 100% optima. This measure is similar to a population standard deviation, except the criterion value replaces the mean as the point of deviation. The second measure is calculated as the traditional standard deviation around the mean percentage values in each week. The measures based on the end of third week enrollment extract minimize RMSD100. The third week also represents one of three consecutive minima for the standard deviation measure. However, the following two weeks of similarly low standard deviation values are characterized by increasing deviation of the measures from their 100% optima.

Table 9. Weekly Census Statistics as Percent of Optimum

Week	Headcount Enrollment	Cred Hour Enrollment	1st-Time Ugrad Retention	Revenue Projections	Variation indicators RMSD100*	SD**
1	100.0%	100.0%	99.7%	101.9%	0.97	0.88
2	99.7%	99.7%	99.9%	101.6%	0.81	0.78
3	99.2%	99.0%	100.0%	100.8%	0.76	0.72
4	98.8%	98.2%	99.7%	100.0%	1.08	0.72
5	98.6%	97.9%	99.5%	99.7%	1.31	0.72
6	98.3%	97.3%	99.6%	99.0%	1.70	0.86
7	97.8%	96.5%	99.3%	98.1%	2.29	1.01
8	97.1%	95.1%	98.8%	96.5%	3.40	1.34
END	95.8%	92.0%	98.2%	93.1%	5.75	2.43

*RMSD100 is the Root Mean Square Deviation from 100 percent, expressed in percentage points
*SD is the population standard deviation expressed in percentage points.

Figure 5. Weekly Census Statistics as Percent of Optimum

Headcount Enrollment ── Credit Hour Enrollment ── Ugrad Retention Rates ── Revenue Projections
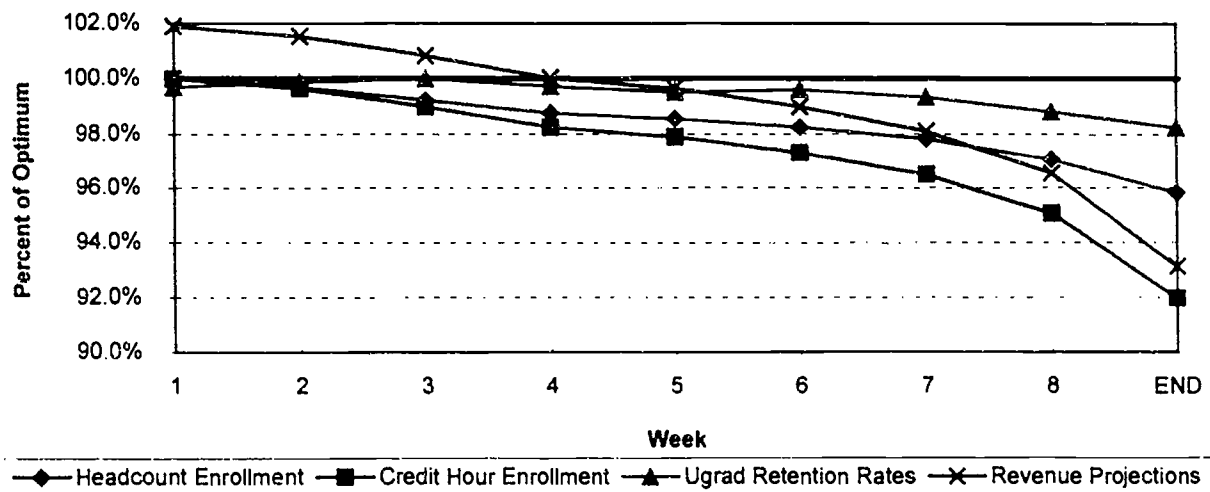
Discussion

If one were to choose an extract date based exclusively on the joint criteria presented

above, the third week would seem the likely choice. But there are other factors that can and

should be considered when selecting a census date. Several of these factors support the case for

an earlier extract date. Earlier discussion pointed to the press for information among vested

parties early in the semester. Also mentioned above was the ability to define 'compensation' or 'fudge' factors to adjust income estimates based on early semester data.

Other factors suggest the need to wait at least several weeks before extracting official census files. Variation among the current estimates as percent of optima were smallest during the third through sixth week of the semester. In addition, retention rates among full-time students, the most visible retention statistic, increases through the course of the semester. Another crucial factor that may push back the choice of census date is likely increases in data integrity through the first few weeks of the semester. The volume of early semester registration activity often results in less than ideal data. Some transactions are deferred until time allows their entry. For example, students major field of study and class level may not be updated until after the initial flurry of activity required to register students, resolve financial aid packages, and generate semester bills. Waiting an additional week or two can allow data custodians to clean up the databases and ensure better information for a wide variety of analysis and reporting purposes.

Summary and Implications

Student enrollment, retention and graduation rates, and tuition revenue projections are becoming increasingly important indicators of college and university performance. The point-in-time that a college or university chooses to create an official census extract has important implications for the resulting measures. The present study revealed the pattern at one institution of changes in these measures associated with moving the census date back through the weeks of a fall semester.

The major impetus for developing census extract files is to ensure the proper management of critical institutional functions. The present study focuses on the implications of creating coordinated census extracts of student data for enrollment and revenue management. The establishment of coordinated census dates for other types of information is equally important. Ultimately, a college's or university's ability to plan and operate depends on the availability of timely, reliable and consistent information across all critical information domains. This study demonstrates the usefulness of taking multiple criteria into account when determining the point-in-time at which to extract data for these vital management functions.

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