

# Research

## Brief

IUPUI

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### Have levels of satisfaction changed as student characteristics have changed? A comparison of overall satisfaction and respondent characteristics using the Continuing Student Satisfaction and Priorities Survey

#### Introduction

The Continuing Student Satisfaction and Priorities Survey (CSS) was initiated in 1993 to collect representative data about students' satisfaction with their experiences at IUPUI. Revisions to the survey over time have added items concerning the Principles of Undergraduate Learning (PULs), IUPUI's Climate for Diversity, student employment, and participation in opportunities associated with the RISE initiative (Graunke and Lui, 2011).

Collecting data in order to monitor trends in student satisfaction has been among the purposes of the CSS since its inception (Graunke, 2011). The most recent iteration of the CSS contains several items that are intended to measure satisfaction with academic experiences, satisfaction with faculty, and satisfaction with the quality of instruction (see sidebar). Many of these items have been included since the CSS's inception.

However, the student population of IUPUI has changed considerably over time. Information released by the Office of Information Management and Institutional Research (2011) reveals that the percentage of students who are of African-American, Hispanic, or of Native American/Alaska Native descent has increased gradually since 2007 (13.5% in Fall 2007 compared to 15.8% in Fall 2011). Likewise, the percentage of undergraduate students who were 25 years of age or older has decreased over that same time period (35.9% in 2007 compared to 31.6% in Fall 2011). Examining trends in student satisfaction, while

Two scales were calculated for this analysis using items from the CSS. All items included a five-point scale (1 = very dissatisfied, 2 = dissatisfied, 3 = neutral, 4 = satisfied, 5 = very satisfied).

#### Overall Academic Experiences ( $\alpha = 0.76$ )

- Overall, how satisfied are you with your academic experiences at IUPUI?
- How satisfied are you with the quality of academic programs at IUPUI?

#### Faculty and Instruction ( $\alpha = 0.82$ )

- How satisfied are you with the faculty at IUPUI?
- Satisfaction with overall quality of instruction.
- Satisfaction with quality of teaching by faculty in your major area.
- Satisfaction with quality of teaching by other faculty at IUPUI.

controlling for the changing demographics of respondents, would be enlightening and could highlight specific targets for institutional improvement.

The following Research Brief examines changes in reported levels of overall academic satisfaction and satisfaction with faculty and instruction using data from Continuing Student Survey administrations from 2005 to 2011. Specifically, this analysis seeks to identify differences in students' levels of academic satisfaction and satisfaction with faculty and instruction while controlling for changes in the demographic or enrollment characteristics of the respondents completing the survey. The results may be used to gain a more accurate picture of trends in student satisfaction because the trends are not dependent on the response tendencies of different groups of students.

### Trends in Students' Overall Levels of Satisfaction

Two separate scales, one measuring satisfaction with overall academic experiences ( $\alpha = 0.76$ ) and another measuring satisfaction with faculty and instruction ( $\alpha = 0.82$ ) were used in this analysis. The unadjusted means for the six items comprising each of the scales are presented in Table 1. Analysis of variance (ANOVA) revealed statistically significant differences in the means for overall satisfaction with academic experiences and satisfaction with the quality of academic programs by year. Specifically, follow-up tests revealed that the mean overall academic satisfaction in 2011 was significantly higher than in 2005 (4.16 compared to 4.05). Likewise, respondents' mean satisfaction with the quality of academic programs was significantly greater in 2011 than it was in either 2005 or 2010. A significant difference by year was also revealed for satisfaction with the quality of teaching by faculty in their major area, but follow-up tests did not reveal any differences between pairs that were statistically significant. No significant differences were observed between years with regard to the other faculty satisfaction items.

**Table 1**  
**Unadjusted Means by Year <sup>a</sup>**

	2005	2007	2008	2010	2011
<b>Overall Academic Experiences</b>					
Overall, how satisfied are you with your academic experiences at IUPUI?*	4.05	4.07	4.12	4.07	4.16
How satisfied are you with the quality of the academic programs at IUPUI?*	3.98	4.06	4.05	3.99	4.10
<b>Faculty and Instruction</b>					
How satisfied are you with the quality of the faculty at IUPUI?	3.91	3.95	3.97	3.92	3.96
How satisfied are you with the overall quality of instruction?	3.92	3.95	3.98	3.91	3.94
How satisfied are you with the quality of teaching by faculty in your major area?*	4.03	4.08	4.13	4.04	4.07
How satisfied are you with the quality of teaching by other faculty at IUPUI?	3.72	3.76	3.76	3.69	3.75

<sup>a</sup> Scale: 1 = Very Dissatisfied, 2= Dissatisfied, 3= Neutral, 4= Satisfied, 5= Very Satisfied

\* Anova revealed significant difference by year at  $\alpha \leq 0.05$ .

Table 2 provides the percentage of students who were very satisfied or satisfied with their overall academic experiences and social experiences at IUPUI, as well the physical environment quality of the faculty, and quality of academic programs at IUPUI from 2005 to 2011.

**Table 2**  
**Percentage Very Satisfied or Satisfied by Year**

	2005	2007	2008	2010	2011
<b>Overall Academic Experiences</b>					
Overall, how satisfied are you with your academic experiences at IUPUI?	84.3%	85.3%	87.6%	84.6%	87.5%
How satisfied are you with the quality of the academic programs at IUPUI?	80.9%	82.8%	81.2%	80.7%	84.0%
<b>Faculty and Instruction</b>					
How satisfied are you with the quality of the faculty at IUPUI?	77.8%	78.5%	77.6%	77.3%	77.8%
How satisfied are you with the overall quality of instruction?	80.9%	82.2%	83.8%	81.1%	81.3%
How satisfied are you with the quality of teaching by faculty in your major area?	79.2%	80.5%	83.5%	80.4%	80.8%
How satisfied are you with the quality of teaching by other faculty at IUPUI?	68.4%	70.7%	69.9%	66.0%	68.9%

Overall satisfaction with academic experiences has been between 84% and 88% every year measured. The percentage of students indicating they were very satisfied or satisfied with the quality of academic programs saw a notable increase from 2010 to 2011, rising from 81% in 2010 to 84% in 2011. Satisfaction with the quality of faculty at IUPUI has been relatively stable. Satisfaction with the quality of teaching by faculty in their major was at 79.2% in 2005 and 83.5% in 2008, but has been between 80% and 81% in every other year. Satisfaction with the quality of teaching by other faculty was at 66% in 2010, but has been between 68% and 71% in every other year.

### **Trends in Demographic and Enrollment Characteristics of Respondents**

Table 3 provides information regarding the demographic and enrollment characteristics of respondents. More than 70% of respondents were female in 2007. However, the percentage of female respondents was between 65.3% and 67.2% in every other year. The percentage of underrepresented minority respondents has remained relatively steady, between 11.5% and 13.1% every year. There was a substantial decrease in the percentage of respondents age 25 or older between 2008 and 2010 (44% in 2008 compared to 34% in 2010). The percentage of undergraduates at IUPUI 25 years of age or older had also decreased over this period (IMIR, 2011). However, the decrease in the percentage of survey respondents was more substantial. There was also a statistically significant increase in the number of full-time respondents from 2008 (71.6%) to 2010 (78.7%).

**Table 3**  
**Demographic Characteristics of Respondents in Data Set by Year**

	2005	2007	2008	2010	2011
Percent female	65.3%	70.6%	67.2%	65.9%	66.0%
Percent underrepresented minority	11.5%	12.3%	13.1%	12.9%	11.7%
Percent 25 years of age or older*	46.1%	43.8%	44.0%	34.4%	36.0%
Percent full-time*	66.9%	69.6%	71.6%	78.7%	79.8%

\* ANOVA revealed statistically significant differences by year at the  $\alpha \leq 0.05$  level.

### Levels of Satisfaction controlling for Demographic Characteristics

Unadjusted means were compared based on gender, ethnicity, age, and whether or not the student was attending full-time. Table 4 presents the results of those comparisons. Female respondents scored significantly higher than male respondents on both the overall academic experiences scale and the faculty and instruction scale. Respondents who were 25 years of age or older scored significantly higher than respondents who were younger than 25 years of age with regards to their satisfaction with their overall academic experiences and with faculty and instruction. Counter to expectations, no significant differences were noted based on underrepresented minority status or based on enrollment full or part-time.

**Table 4**  
**Unadjusted Means by Demographic Characteristics**

	Underrepresented							
	Female		Minority		25 or over		Full-time	
	No	Yes	No	Yes	No	Yes	No	Yes
Overall academic experiences	4.01	4.09*	4.07	4.04	4.04	4.09*	4.05	4.07
Faculty and instruction	3.88	3.94*	3.92	3.93	3.89	3.97*	3.95	3.91

\* T-test revealed statistically significant differences by year at the  $\alpha \leq 0.05$  level.

An analysis of covariance (ANCOVA) was conducted for both the satisfaction with overall academic experiences and satisfaction with faculty and instruction. Gender (the percentage of female respondents), underrepresented minority status, age (the percentage of students 25 years of age or older) and the percentage of full-time students were included as covariates in the model in order to adjust for differences in the makeup of respondents across survey years.

Table 4 below provides the unadjusted and adjusted university means for overall academic experiences controlling for the aforementioned variables. The adjusted mean in 2005 (4.02) was below the confidence interval for both 2008 and 2011, signifying a large difference between these years. Likewise, the adjusted mean for 2011 was above the confidence interval for all four previous years, suggesting a large difference between 2011 and previous years. Given the differences in satisfaction between respondents based on age, as well as the differences in unadjusted means between years, this difference is not surprising.

**Table 4**  
**Unadjusted and Adjusted Means for Overall Academic Experiences**

	Unadjusted Mean	Adjusted Mean	Standard Error	95% Confidence Interval	
				Lower Bound	Upper Bound
2005	4.02	4.02	0.02	3.98	4.06
2007	4.06	4.06	0.02	4.02	4.10
2008	4.08	4.08	0.02	4.04	4.12
2010	4.04	4.04	0.02	4.00	4.08
2011	4.13	4.13	0.02	4.09	4.17

Unadjusted and adjusted means for satisfaction with faculty and instruction controlling for gender, underrepresented minority status, age, and full-time status are included in Table 5. The only year outside of the confidence intervals for any other year is 2008, which was significantly higher than the mean for either 2005 or 2010. However, distinct groups did not emerge with this data as they had with satisfaction with overall academic experiences.

**Table 5**  
**Unadjusted and Adjusted Means for Faculty and Instruction**

	Unadjusted Mean	Adjusted Mean	Standard Error	95% Confidence Interval	
				Lower Bound	Upper Bound
2005	3.90	3.89	0.02	3.86	3.93
2007	3.93	3.93	0.02	3.89	3.97
2008	3.96	3.96	0.02	3.92	3.99
2010	3.89	3.90	0.02	3.86	3.93
2011	3.93	3.93	0.02	3.90	3.97

## Discussion

In general, these data suggest a modest increase in students' overall satisfaction with their academic experiences from 2005 to 2011. This increase remains even after taking into account differences in the percentage of female respondents, underrepresented minority respondents, respondents that were 25 years of age or older, and part-time respondents. Satisfaction with faculty and instruction remained relatively constant even after accounting for the differences in respondents' demographic characteristics. Future analysis will explore the extent to which these differences persist over time. Other variables (such as transfer student status) should also be included in future analysis. An exploration of changes in satisfaction with the social environment of IUPUI would also be warranted.

## References

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