

Residential Students Retention Rates from Fall 2004 through Spring 2013 and Comparisons of Residential and Commuter Students on GPAs and Responses to the NSSE and Thriving Quotient.

Prepared by Dr. Ron Eskew, Director for Institutional Research and Assessment
August, 2013

Summary Points

- Between fall 2004 and spring 2013 the average fall-to-spring retention rate for residential students was 90% with a return to residential status of 84%.
- The average spring-to-fall retention rate for the same period was 82% with an average return to residential status of 65%.
- The fall-to-fall retention rate for residential students was 74% with an average return to residential status of 57%.
- Trend lines for retention rates across period between fall 2004 and spring 2013 show a gradual but steady increase in the percentage of students returning.
- Between fall 2004 and fall 2008, Term and cumulative grade point averages for residential students were generally lower than those of commuter students, however since the fall of 2008 the grade point averages for residential students have 'caught up' to those of commuter students and are not statistically different.
- Over the past eight years there has been a trend of fewer residential students from nearby home zip codes (10 miles or less) and a greater proportion from distances greater than 30 miles.
- While the responses of residential students to the National Survey of Student Engagement (NSSE) were generally quite similar to those of commuter students, residential students had a significantly higher aggregated mean score on the Active and Collaborative Learning benchmark.
- Residential seniors had a significantly higher mean score on the NSSE Student-Faculty Interaction benchmark compared to senior commuters although there was no significant difference between first-year residential and commuter students.
- The NSSE data showed that residential students responses to items regarding the emphasis Hilbert places on academic work and attending campus events and activities was significantly higher (more emphasis) for the 2011 and 2012 surveys compared to responses to surveys administered in 2009 and 2010.
- Preliminary results from the Thriving Quotient survey (spring 2013) revealed no significant difference in the extent to which commuter and residential students perceive themselves as thriving at Hilbert College. On the other hand, commuter students were significantly more likely to strongly endorse statements indicating that they were proud of their college, say it as a good fit given their goals, and enjoy being a student here. Overall, commuter students expressed greater satisfaction with their experiences on campus.

Introduction

A previous study issued in April of 2012 examined patterns of retention among residential students by gender, class level, first-generation status, grade point averages and distance from home address. Among that study's findings were that there were few demographic differences associated with retention of residential students other than that the rate of non-return was greater among first-year students as would be expected. A majority of resident students came from communities greater than 25 miles away and fewer than 10% had a home address with a zip code 10 miles or less from the Hilbert campus. Grade point averages of commuter students appeared to be comparable to those of resident students between the fall 2008 and fall 2012 terms although no statistical tests were performed. As expected fall-to-spring return rates (approximately 90%) were higher than spring-to-fall rates (approximately 70%).

The present report expands on that earlier study in several ways. First, data on fall-to-spring and spring-to-fall retention rates are updated through the spring 2013 semester and fall-to-fall retention rates are included. The fall-to-fall rates provide a better comparison with the retention rates reported annually to the U.S. Department of Education (IPEDS) and the New York State Education Department (NYSED), albeit that those reports focus only on first-time, first-year college students.

Additionally, the present report includes statistical tests or differences in term and cumulative grade point averages between residential students and commuter students across the period from fall of 2004 through the spring of 2013.

Finally, responses from two surveys were examined for differences between commuters and residents. The National Survey of Student Engagement (NSSE) is an annual survey of first-year and senior college students at four-year institutions measuring students' self-reported participation in educational activities that prior research has associated with high levels of learning and development. Student responses to individual items are used to generate five benchmarks of effective educational practice: Level of Academic Challenge (AC), Active and Collaborative Learning (ACL), Student-Faculty Interaction (SFI), Enriching Educational Experiences (EEE), and Supportive Campus Environment (SCE). Hilbert College participated annually in the NSSE beginning in the spring of 2009 through the spring of 2012.

The Thriving Quotient (TQ) survey is a relatively new instrument developed to measure the academic, social, and psychological aspects of a student's college experience that are most predictive of academic success, institutional fit, satisfaction with college, and ultimately graduation. Hilbert College administered the TQ for the first time in the spring semester of 2013. All enrolled students were invited to participate. The response rate was 330 completed surveys or approximately 36%.

Retention Rates

Retention rates for residential students were examined for fall-to-spring returns, spring-to-fall returns and fall-to-fall returns. These rates were calculated only on students who began a term as a resident in on-campus housing. Students were counted as a return only if they were enrolled in the subsequent semester. This excluded a small number of students who were on a leave of absence even though some of these students may have returned in a later semester. The number of students in a beginning term

was adjusted by subtracting those who graduated at the end of that semester as well as those who were identified as spending the subsequent semester in a study abroad program. The retention rate was calculated by dividing number of students who enrolled in the subsequent term by the adjusted number from the beginning term. Students who enrolled but then officially withdrew were considered as non-returnees. Additionally, for each student who returned, the status as resident or commuter was noted in order to provide a returned-as-resident rate. Data on students' statuses were obtained from student records through ARGOS and PowerCampus.

Fall-to Spring Retention Rates

Figure 1 shows the fall-to-spring residential retention rates from the fall 2004 semester through the spring 2013 semester. The average retention rate across all nine academic years was 90.1%. The overall return to residential status was 83.6%. Trend lines in figure 1 show a gradual trend upward in both retention rates across the years.

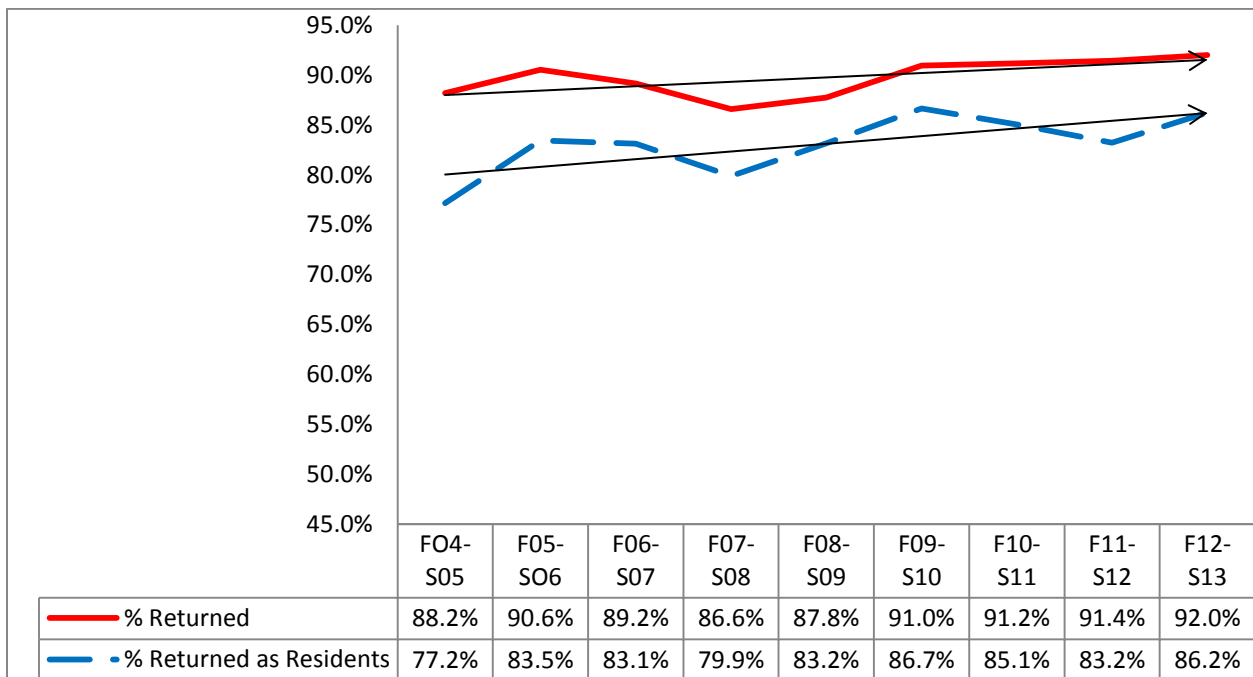


Figure 1. Residential students' fall-to-spring retention and return-as-resident rates with trend lines from fall 2004 through spring 2013.

Spring-to-Fall Retention Rates

Figure 2 shows the spring-to-fall residential retention rates from the spring 2005 semester through the fall 2012 semester. The average retention rate 81.9% and the overall return to residential status was 64.7%. Trend lines in figure 2 show a fairly consistent retention rate and a gradually increasing rate of return-as-resident.

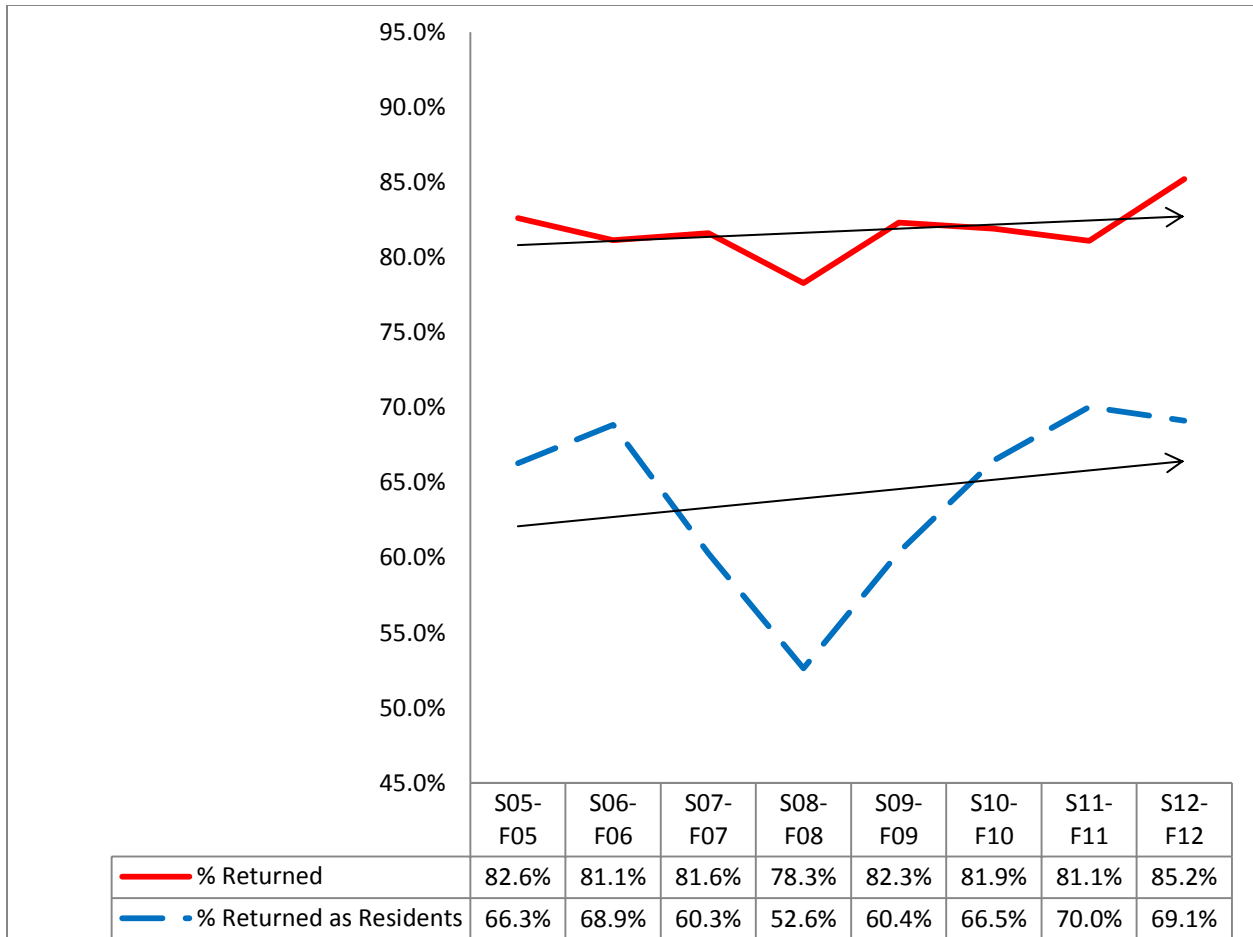


Figure 2. Residential students' spring-to-fall retention and return-as-resident rates with trend lines from spring 2005 through fall 2012.

Fall-to-Fall Retention Rates

Figure 3 examines the fall to fall retention rates for residential students. The overall fall-to-fall retention rate was 74.2% with a return to resident status rate of 56.9%. While the trend lines indicate gradually improving rates for both retention and return to residence it is noted that there were downward trends from fall 2004-2005 through fall 2007-2008 which were apparently reversed going forward through the most recent fall 2011-2012 period.

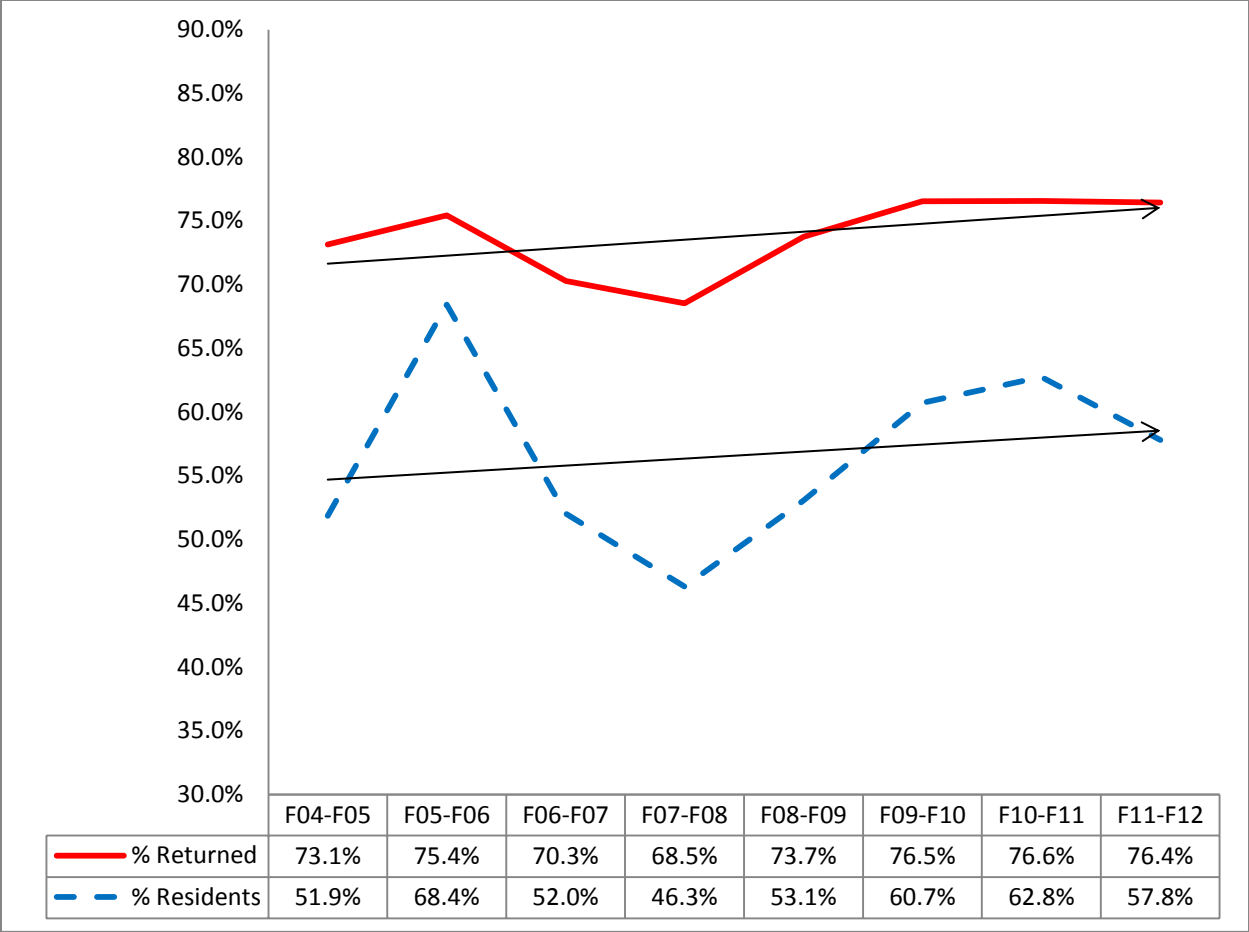
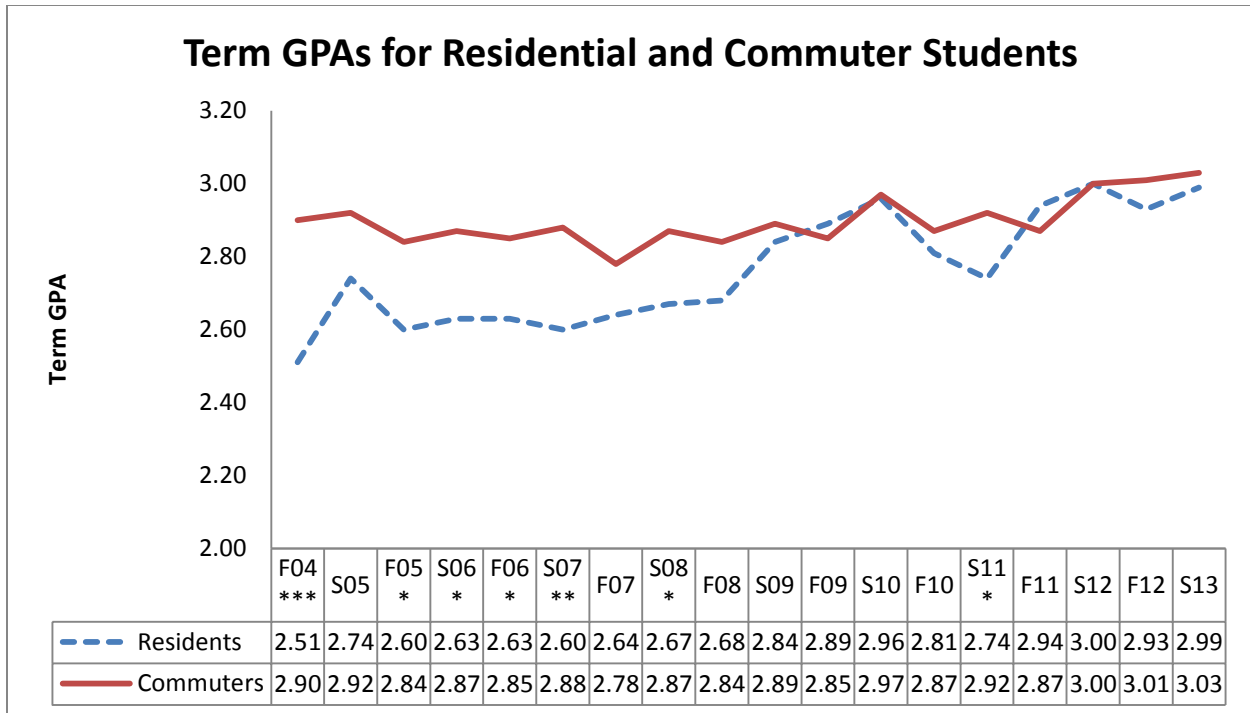


Figure 3. Residential students' fall-to-fall retention and return-as-resident rates with trend lines from fall 2004-2005 through fall 2011-2012.

Grade Point Averages (GPAs) for Residential and Commuter Students

Grade point averages (GPAs) on a 0 to 4.0 scale were compared across the fall 2004 through spring 2013 semesters for residential and commuter students. Both term GPAs and cumulative GPAs were examined as shown in figures 4 and 5 below.

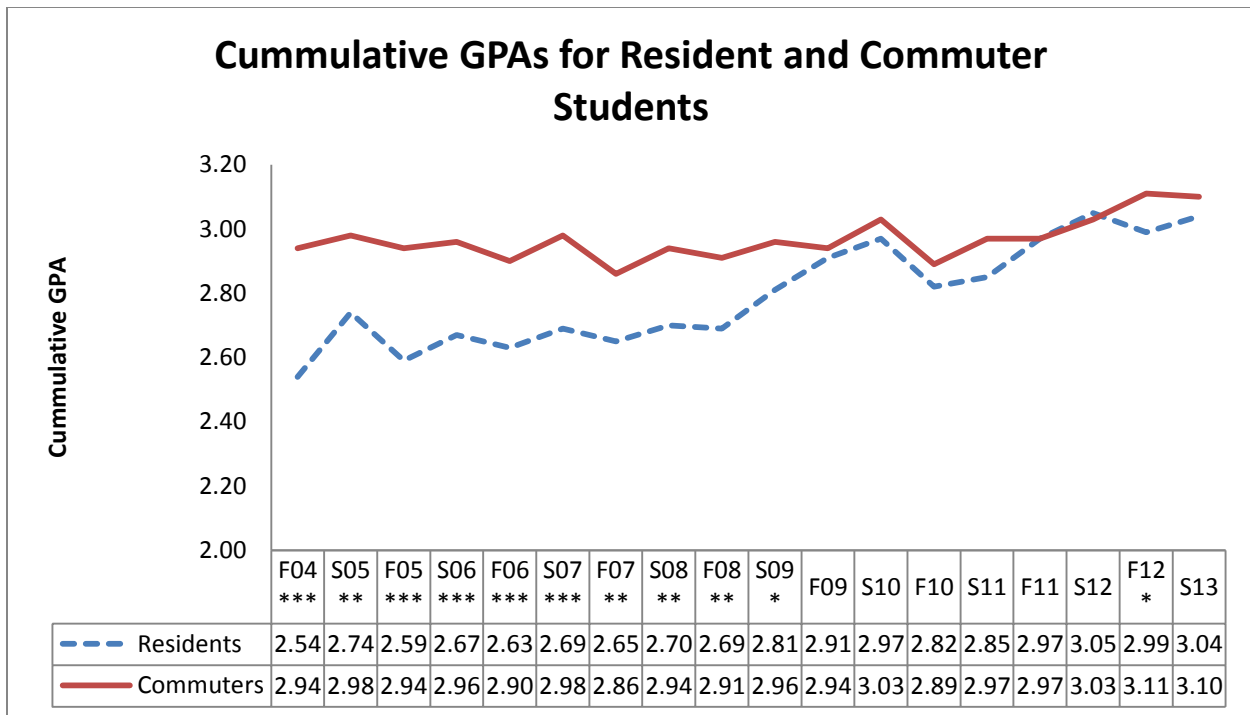


Note: *** p<.001; ** p < .01; * p < .05

Figure 4. Term grade point averages (GPAs) for residential and commuter students from fall 2004 through spring 2013.

The average term GPAs of commuter students were significantly higher than those of residential students in the terms fall 2004 through spring 2008. However, since the fall 2008 term through the most recent term, spring 2013, the GPAs are statistically comparable except for the spring 2011 term when the commuter students' average GPA was again significantly higher than that of the residential students. Figure 4 shows that during this period the commuter students average GPAs had been relatively steady while the residential students GPAs, while initially lower, were gradually catching up to those of the commuter students.

A similar trend is seen in figure 5 showing cumulative GPAs of residential and commuter students over the same period of time. Residential students had a mean cumulative GPA significantly below that of commuter students from fall 2004 through spring 2009. Since then, with exception of the fall 2012, commuter students' and residential students' cumulative GPAs have been statistically equivalent.



Note: *** p<.001; ** p < .01; * p < .05

Figure 5. Cumulative grade point averages (GPAs) for residential and commuter students from fall 2004 through spring 2013.

Distance from Home Zip Code

A majority (54%) of residential students provided a home address with a zip code more than 30 miles distant from the 14075 zip code of the Hilbert Campus while less than 10% give a home address within 10 miles of the campus. As seen in figure 6 the trend for residential students to be more than 30 miles away from home has increased over the past 8 years with an especially notable increase since the 2010-11 academic year. The addresses most frequently represented within this greater than 30 miles group are from the New York State counties of Monroe (Rochester & suburbs), Niagara (Lockport, Ransomville), and Cattaraugus (Fredonia, Jamestown).

Figure 7 shows the distance from home zip code for all students, residential and commuter, between fall 2004 and spring 2013. Over the past eight years there has been a trend of fewer students from the nearby zip codes (45% in fall 2004 to 38% in fall 2012) and a greater proportion from distances greater than 30 miles (16% in fall 2004 to 21% in fall 2012).

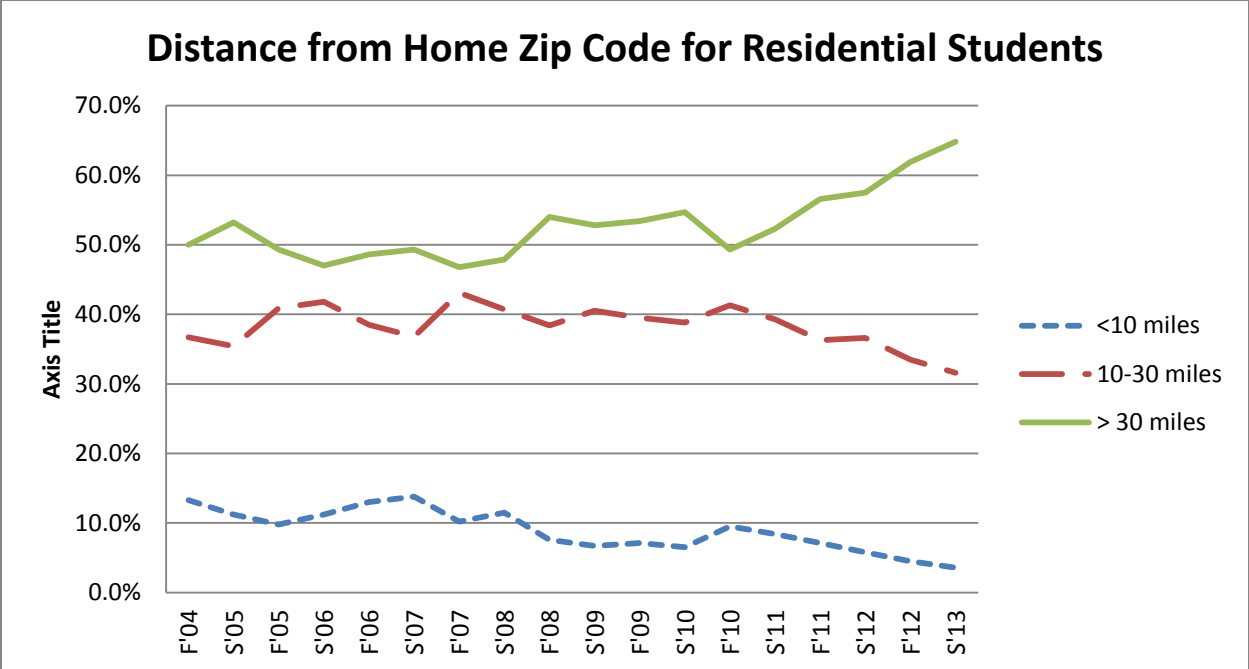


Figure 6. Distance radii of residential students' home zip codes from 14075 (Hilbert) between fall 2004 and spring 2013.

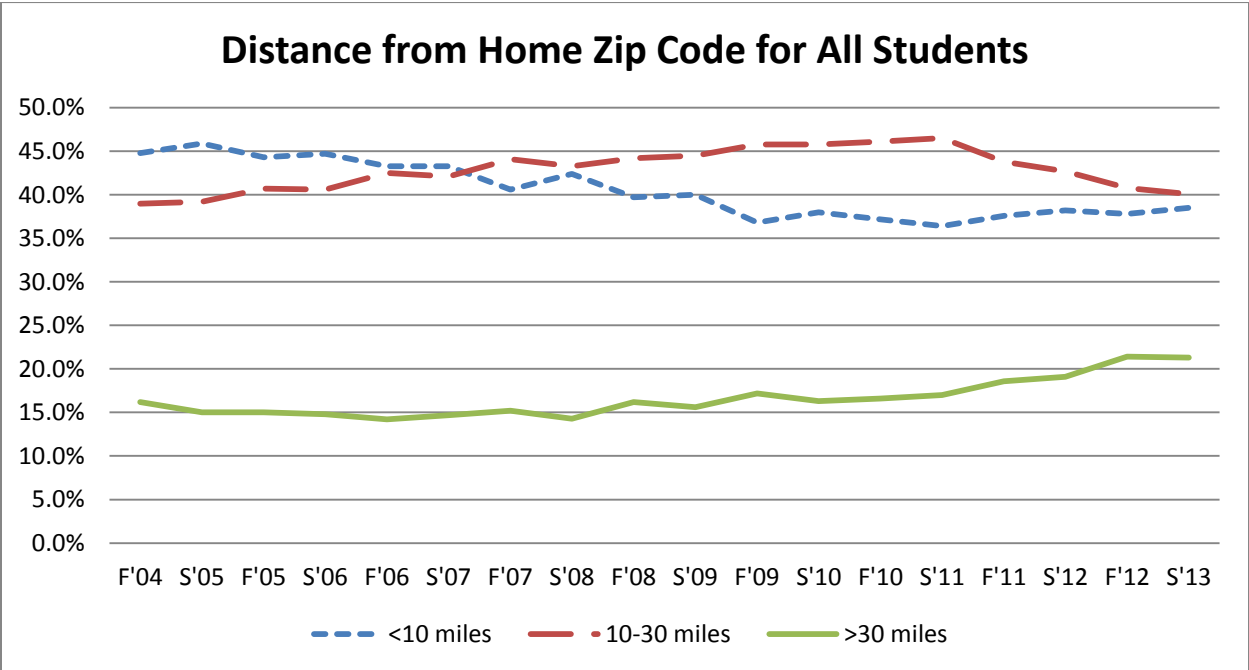


Figure 7. Distance radii of home zip codes from 14075 (Hilbert) between fall 2004 and spring 2013 for all students.

NSSE

The National Survey of Student Engagement (NSSE) is an annual survey of first-year and senior college students at four-year institutions measuring students' self-reported participation in educational activities that prior research has associated with high levels of learning and development. The survey is administered by the Indiana University Center for Postsecondary Research in cooperation with the Indiana Center for Survey Research. Student responses to individual items are used to generate five benchmarks of effective educational practice: Level of Academic Challenge (AC), Active and Collaborative Learning (ACL), Student-Faculty Interaction (SFI), Enriching Educational Experiences (EEE), and Supportive Campus Environment (SCE).

Hilbert College has participated annually in the NSSE beginning in the spring of 2009 through the spring of 2012 as part of a Title III grant to aid in bolstering student success. The first administration of the survey was conducted locally with a paper version distributed non-randomly to classes with large numbers of first-year students or seniors. Since then Hilbert has used the web+ mode which draws a random sample from the population of freshmen and seniors who are then invited to participate by email at their student email addresses beginning relatively early in the spring semester. Follow-up invitations continue throughout the semester including a final mailed paper version to non-responders. Of the 437 first-years and seniors who have participated in the NSSE since 2009, 141 (32.3%) have identified themselves as residential students.

Overall, the responses of residential and commuter students aggregated across the 2009 through 2012 surveys can be described as similar. However, there are some differences which are worth noting. For the NSSE benchmarks of effective educational practices, residential students have a significantly higher mean score (48.9) on the Active and Collaborative Learning (ACL) benchmark compared to commuter students (45.0) $t(434) = 2.23, p < .05$. Examination of the particular items which comprise the ACL index score revealed that residential students were significantly more likely than commuter students to say that they often or frequently: "Made a class presentation;" "Worked with classmates OUTSIDE OF CLASS to prepare class assignments;" and "Participated in a community-based project as part of a regular course." Residential students were significantly less likely to report that they often or frequently "Asked questions in class or contributed to class discussions."

Table 1. Tests of Mean Score Differences between Residential and Commuter Students for Items from the Active and Collaborative Learning Benchmark

NSSE Active and Collaborative learning Benchmark Items	Residential Mean	Commuter Mean	t	df	Significance (2-tailed)
Asked questions in class or contributed to class discussions	2.94	3.12	-2.187	434	.029
Made a class presentation	3.06	2.87	2.251	433	.025
Worked with other students on projects DURING CLASS	2.59	2.53	.675	434	NS
Worked with classmates OUTSIDE OF CLASS to prepare class assignments	2.57	2.18	4.200	434	.000
Tutored or taught other students (paid or voluntary)	1.55	1.44	1.327	421	.185
Participated in a community-based project (e.g., service learning) as part of a regular course	1.80	1.59	2.229	418	.026
Discussed ideas from your readings or classes with faculty members outside of class	2.07	2.02	.495	423	.621

Resident seniors also have a significantly higher mean score on the Student-Faculty Interaction benchmark compared to senior commuters ($t(31.3) = 2.15, p < .05$) although there is no significant difference on this benchmark for first-year residents and commuters.

Examination of other individual items from the NSSE shows a number of expected resident-commuter differences. Resident students have significantly higher mean scores on items measuring the frequency of attendance at music/art/theater events and participation in physical fitness activities. Residential students spend more hours per week than commuter students working for pay on-campus, participating in co-curricular activities and relaxing or socializing. Commuter students report spending significantly more hours per week working for pay off-campus, providing care for dependents and, of course, commuting to class.

Residential students are significantly more likely to be a student athlete than are commuters.

Residential seniors are significantly more likely than senior commuters to say they have worked with faculty members on activities other than coursework although there is no residential-commuter difference for first-year students on this item.

Discussion with the Director for Residence Life indicated that a number of changes were implemented in the 2011-12 academic year designed to enhance the quality and quantity of programming for first-year residential students along with a revised judicial system which has resulted in a reduction of conduct cases. Since the administration of the NSSE occurred for 2 years prior to these changes and 2 years after it was possible to look at a number of NSSE items that might be at least indirectly affected. From the NSSE data there was a total of 34 first-year residential student respondents from the 2009 and 2010 administrations and 78 from the 2011 and 2012 administrations. Mean scores on a number of individual NSSE items were compared for these two groups.

Students who participated in the NSSE in 2011 and 2012 had significantly higher mean scores compared to 2009 and 2010 respondents on an item that asked them to rate the extent to which the institution emphasized spending significant time on academic work and on attending campus events and activities. While not quite reaching statistical significance, the 2011-12 respondents also had a higher mean score on an item asking the extent to which the institution encouraged contact among students of different economic, social and ethnic backgrounds. There was no difference in the number of hours per week spent participating in extracurricular activities. The quality of relationships with other students was rated significantly higher by the 2009-2010 respondents compared to those from the 2011-2012 administrations of the NSSE.

Thriving Quotient

The Thriving Quotient (TQ) is a relatively new instrument that was developed to measure the academic, social and psychological aspects of a student's college experience that are most predictive of academic success, institutional fit, satisfaction with college, and ultimately graduation. Thriving is defined as *"getting the most out of your college experience, so that you are intellectually, socially, and psychologically engaged and enjoying the college experience."* During the final weeks of the spring 2013 term Hilbert's undergraduate students were invited to participate in the Thriving Quotient survey. Invitations were emailed to 919 enrolled students with two additional follow-up emails sent over a two week period as necessary. At the close of the survey period a total of 330 students had completed the survey for a response rate of 36%. Of those who completed the survey, 101 (31%) indicated that they resided on-campus.

As of the date of this report, the scaled scores and comparisons with other participating institutions were not yet available for the TQ. Therefore the analyses that follow are based only on comparisons of mean responses of items on the survey between residential and commuter students at Hilbert.

There was no statistical difference in the extent to which residential and commuter students rated themselves as thriving at Hilbert College.

Similar to the results from the NSSE described above, on the TQ, residential students reported being much more likely to participate in student organizations, campus events and activities, be involved in leadership of student organizations, participate in ethnic organizations, and interact with faculty outside of the classroom.

On the other hand, commuter students were significantly more likely than residential students to agree with the following statements:

- I feel proud of the college I have chosen to attend.
- It's hard to make friends on this campus.
- Given my current goals, this institution is a good fit for me.
- I really enjoy being a student here.

Commuters also expressed greater satisfaction with their overall experiences on the campus, and with the amount and quality of contact they had with faculty.

There were no significant differences in mean scores on items asking about the quality of interactions with other students, satisfaction with living situations, or satisfaction with academics and grades. Commuters and residents expressed almost equal intent to graduate from Hilbert.