



The CARE (Center for Academic Resources in Engineering) Program at Illinois

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Abstract

The Grainger Engineering Library Information Center, in conjunction with the College of Engineering (COE) at the University of Illinois at Urbana-Champaign, has established, within the Library, the CARE (Center for Academic Resources in Engineering) program. CARE is designed to enhance the student academic experience in a variety of ways and to better integrate the Grainger Engineering Library into the day-to-day lives of engineering students. The overarching goal is to provide enhanced student academic services, increase engineering student retention rates, provide peer mentoring and focused instructional assistance, provide increased contact with teaching assistants (TA), give students advanced collaborative resources and facilities, and better integrate the Grainger Engineering Library services with student needs. The Grainger Library has repurposed 3,966 feet of classroom and group study space, and 14,550 square feet of open study space to establish CARE. The space includes 14 group study rooms, 2 instructional classrooms, 2 storage rooms, and 1 office utilized by the CARE Program Coordinator -- who is funded by the COE. CARE was initially funded by a combination of Library Student/IT Fee money, COE Student Fee funds, and COE foundation moneys. These funds were used for high-end engineering workstation equipment, projection equipment, furniture, digital signage, glass and whiteboard equipment, collaboration furniture, and computing equipment.

The total seating capacity for the CARE area in the Grainger Library is 472 with an additional 154 seats available for overflow. CARE provides academic learning support that primarily targets the needs of first- and second-year students enrolled in the COE. CARE offers peer mentoring and tutoring, study and instructional programs (including information literacy instruction), health and wellness programs, and collaborative and formal study group activities. CARE also offers course exam reviews, TA and faculty office hours, and periodic workshops in a variety of support areas. The CARE space and programs have been available to students since the beginning of the Fall semester, 2011. CARE employs more than 40 students as tutors and peer advisors that offer their tutoring/advising services for over 30 different subjects, from noon to midnight Sunday through Friday. A number of techniques are being used to assess the efficacy of the CARE program. Since the Fall semester of 2011, a preliminary study of data obtained from visual head counts of students on the fourth floor shows usage of the library space repurposed for CARE has increased 12.22% between Fall 2011 and Fall 2012, and 5.04% between Fall 2012 and Fall 2013. Likewise, wireless computing use, gate counts, and engineering workstation usage in the building is being monitored and all show significant increases. Some preliminary data on increases in freshmen retention rates is also reported.



Figure 1: CARE provides tutoring and peer advising services for over 30 different subjects in repurposed library space on the fourth floor of the Grainger Engineering Library.

Literature review

There is fairly rich and diverse literature on the relationship between library usage and student academic performance, including student retention. Focusing on the current literature, Stone and Ramsden¹ reported that there was a statistically significant correlation across a number of UK universities between library activity data and student attainment but also pointed out that this did not indicate a causal relationship. Soria² examined factors associated with the importance of libraries and research among undergraduates at nine large public research universities. Haddow³ emphasized the importance of student integration in the academic institution, including library use as an example, in student retention and proposed a research design for further testing. Soria, Fransen, and Nackerud⁴ discussed the impact of library usage on student retention at the University of Minnesota Science and Engineering Library. Haddow and Joseph⁵ reported that library use is associated with retention and importantly, library use in the early weeks of a student's first semester is associated with retention. A study by Teske, DiCarlo, and Cahoy⁶ correlated library statistics with retention and graduation rates from a large sample of doctoral, Masters', and bachelors' degree granting institutions. These studies typically attempt to define the library elements in terms of circulation usage, collection expenditures, and other traditional measures and do not typically look at electronic content usage and access mechanisms. They also don't focus on "library as a place" which is the main emphasis in the CARE program.

In addition, a number of institutions have reported on projects to convert or remodel library facilities into learning spaces and active learning centers. Walton and Matthews⁷ examined the role of the university library in the university's informal learning spaces. Bilandzik and Forth⁸ discussed strategies for applying smart space technologies in libraries to produce environments for coworking and informal social learning. Lin, Chen, and Chang⁹ looked at a conceptual framework of space design principles in the almost all-digital academic library, focusing on collaborative principles. More specifically, Doan and Kirkwood¹⁰ reported on a conceptual and physical renovation of the Purdue University Business Library; McNamara¹¹ described refurbished learning spaces in the Hancock Science Library at the Australian National University; Bryant, Matthews, and Walton¹² reported on a case study from Loughborough University to evaluate the use of a large open learning/social space in the Library; Soderdahl¹³ described a renovated active learning classroom at the University of Iowa; Fransen¹⁴ described a project to create learning areas in the Science and Engineering Library at the University of Minnesota.

Overview

The Center for Academic Resources in Engineering (CARE) is an academic learning center that targets the needs of first- and second-year students enrolled in the College of Engineering at the University of Illinois at Urbana-Champaign. The center uses most of the fourth floor of Grainger Engineering Library Information Center (specifically the center area and west wing of that level) and provides individual and group study space, with co-located programs such as peer mentoring, tutoring, study groups, course exam reviews, teaching assistant (TA) and faculty office hours, and periodic workshops. The Grainger Library has repurposed 3,966 feet of classroom and group study space and 14,550 square feet of open study space to establish CARE. The CARE space and programs have been available to students since the beginning of the Fall semester, 2011. CARE employs more than 40 students as tutors and peer advisors that offer their tutoring/advising services for over 30 different subjects, 7 days a week.

Objectives

CARE is designed to enhance the student academic experience in a variety of ways and to better integrate the Grainger Engineering Library into the day-to-day lives of engineering students. The overarching goal is to increase engineering student retention rates by providing enhanced student services, including peer mentoring, increased contact with TAs, focused instructional assistance, advanced collaborative resources and facilities, and better integration with a variety of Grainger Engineering Library services. To this end, a study of security gate counts, visual head counts, wireless network, and computer use was performed to identify any measureable impact on library usage and services since CARE was established in the Fall semester of 2011.

How library space was repurposed, altered and the associated costs

To provide space in the building for CARE to offer services, the Grainger Engineering Library repurposed 14 group study rooms (2126 square feet total, each room seating up to 8), 2 large instructional rooms (1431 square feet total, each room seating up to 44), 2 storage rooms (289 square feet total), and 1 office utilized by the CARE Program Coordinator (120 square feet). There are four group study rooms with special collaboration equipment.

CARE was established with an initial infusion of funds for computing equipment, projection equipment, furniture, digital signage, and collaboration equipment. The project was funded with: \$65K from the campus Student Library/IT Fee for collaborative equipment, projector and screen equipment, and furniture; \$31K from the campus Student Library/IT Fee for digital signage; \$60K from the College of Engineering Student Fee for engineering workstations and approximately \$125K of foundation money from the College of Engineering.

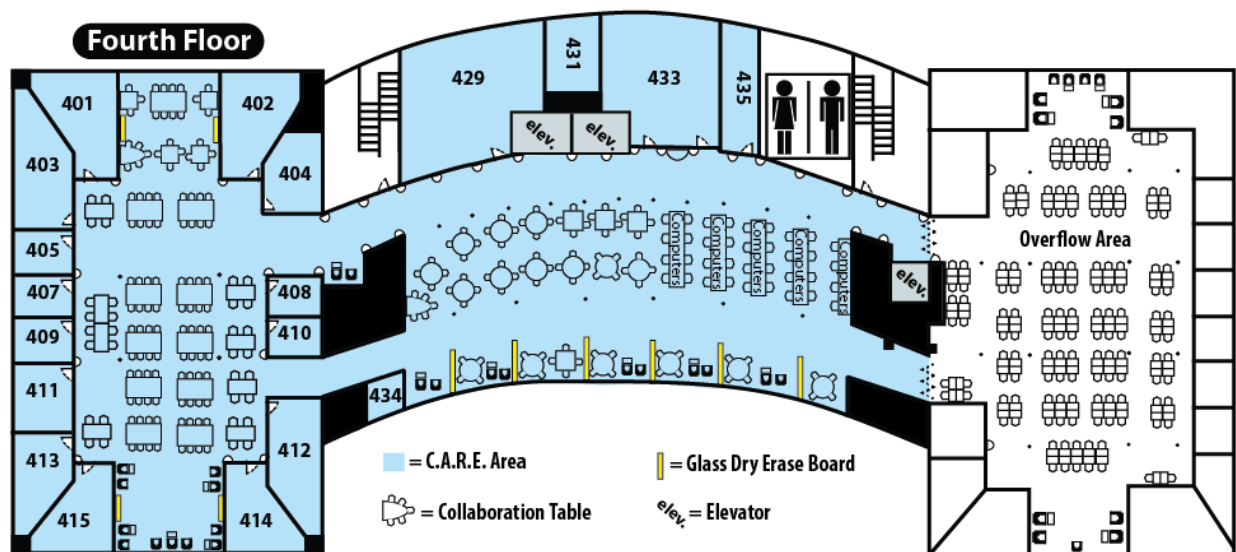


Figure 2: The area highlighted in blue is library space that was repurposed for CARE.

Engineering students utilizing CARE services also have access to the 14,550 square feet of open study space on the fourth floor, which includes 43 open tables (equipped with power pods), 4 glass boards, 6 double sided frosted glass partitions, and 136 individual study carrels located on the east wing (equipped with power outlets and light fixtures). The total seating capacity for the CARE area of the fourth floor is 472 with an additional 154 seats available on the east wing for overflow.



Figures 3-4: Engineering students have access to 14,550 square feet of open study space in the CARE area, equipped with glass partition writing surfaces, a collaboration table, and featuring a computer lab accessible only to College of Engineering students.

This repurposed space is used by CARE to provide tutoring services and host a variety of workshops each semester for academic, professional, and personal development. This space is also used by departments within the College of Engineering for regularly scheduled office hours.



Figures 5-6: The CARE area includes the west end of the fourth floor of the library, where students have access to 14 group study rooms and 2 large instructional rooms, equipped with projectors and white boards.

CARE Services and Equipment

Since it was established, CARE has offered a multitude of programs, workshops, and tutoring services to students in the College of Engineering, having offered over 1910 tutoring sessions, 2452 hours of tutoring/peer advising, and 84 exam review sessions. CARE provides tutoring for over 30 courses, covering foundation math and science courses and entry level engineering courses. These courses include a variety of engineering-related subjects such as Aerospace Engineering, Chemistry, Computer Science, Electrical and Computer Engineering, General Engineering, Math, Mechanical Engineering, Nuclear, Plasma, and Radiological Engineering, and Theoretical and Applied Mechanics.

The Center for Writing Studies, Counseling Center, Engineering Career Services (ECS), Grainger Engineering Library, and McKinley Health Center are just a few of the campus units that have worked with CARE to provide over 80 workshops. These workshops are offered each semester and cover such topics as study skills, effective planning, balancing school and family, stress management, resume reviews, and library instruction. CARE provides support to engineering students from the beginning of their enrollment by assisting with registration, providing tours, and hosting workshops to help with selecting a major and/or minor. CARE staff also schedule students and TAs into the four group study rooms with special collaboration monitors, the two classrooms, and the large presentation area in the fourth floor west gallery. A total of 4,633 reservations were made for CARE groups into these seven areas between August 2012 and December 2013.

Collaboration Tables

Engineering students desiring to work in a group on content available online or otherwise available electronically, have access to two collaboration tables. Each collaboration table features a large 32" HD monitor and seats up to five. One to five students are able to plug into the monitor to share the screen to collaborate on group projects.

High Definition Monitors

Four large 55" flat screen monitors equipped with a VGA and/or HDMI cables that students can plug into their mobile devices to work collaboratively with a group are available to students. These monitors are located in four of the group study rooms in the CARE area.



Figure 7: CARE tutors have offered over 1910 tutoring sessions since it was established.



Figure 8: One of two collaboration tables available in the CARE space.

Group Writing Surfaces

Students have access to 6 double-sided frosted glass partitions located in the center of the fourth floor in the CARE

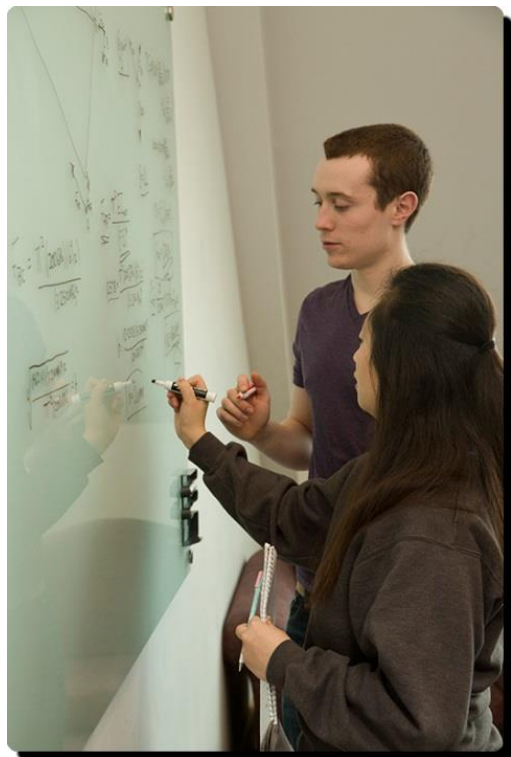


Figure 10: One of four glass writing boards located in the CARE area.

performed to identify trends in computer usage. From September 27th, 2012 to May 10th, 2013, there were 6036 individual users that logged into 73,182 logged sessions (a session is defined as the instance when a student logs in and out) in the CARE EWS lab. In total, engineering students logged more than 103,043 hours utilizing CARE computers, which is approximately 11.76 years. These numbers illustrate the popularity of computing at CARE for engineering students.



Figure 9: A large 55" flat screen monitor available to engineering students in 4 of the CARE group study rooms.

area. Using dry erase markers that are provided, students are able to work in large groups. Students also have access to four glass boards located in the west Group Study Area in the CARE space.

CARE Computers

Engineering students have access to 42 high-end Engineering Workstations, or EWS (requiring a special College of Engineering login) in the CARE area. An analysis of logged session data during the 2012-13 academic year for CARE EWS computers was

With an average session length of 1 hour and 24 minutes, we see in Figure 11 that most sessions were less than 2 hours in length. Engineering students logged an average of 17 hours and 4 minutes per user for the 2012-13 academic year.

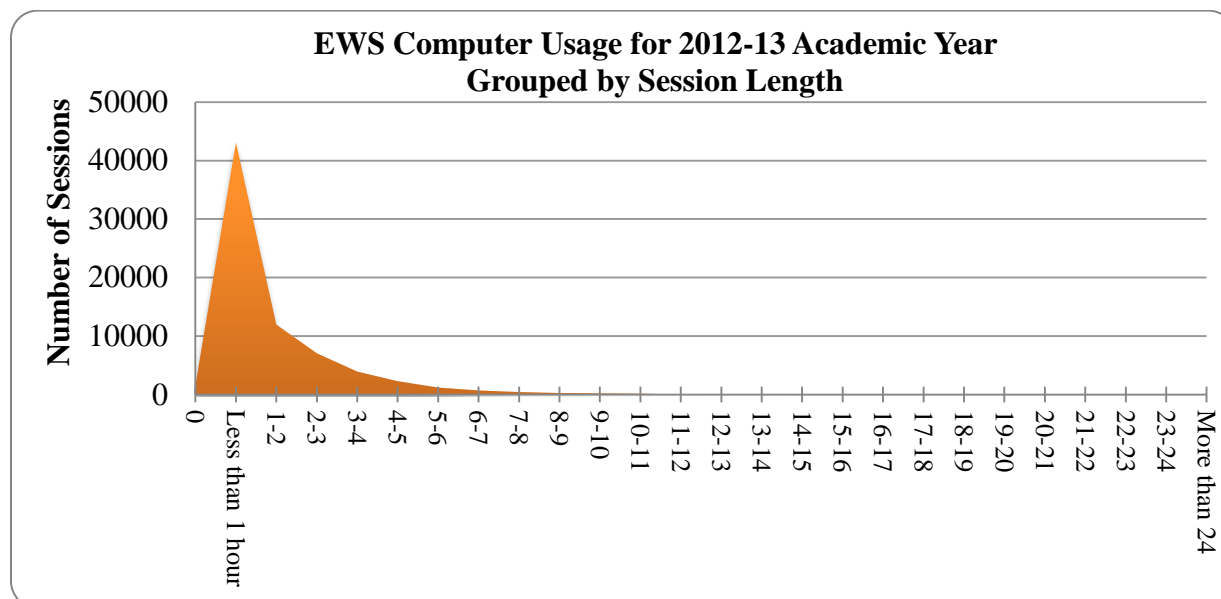


Figure 11: User sessions grouped by length.

An analysis of CARE EWS computer usage data by dividing total usage for the entire 2012-13 academic year by day of the week (96,542 total logged hours, this does not include sessions less than a minute or greater than 24 as they may skew this data) reveals that total logged hours increases starting Sunday and remains relatively consistent until Friday when total logged hours decreases (see **Figure 11.1**). By grouping usage data by the day of the week a user initiated a session, we see that the total number of logged sessions per day of the week remains relatively consistent with the total hours logged per day of the week (see **Figure 11.2**). This tells us engineering students are consistently using the CARE EWS lab throughout the week.

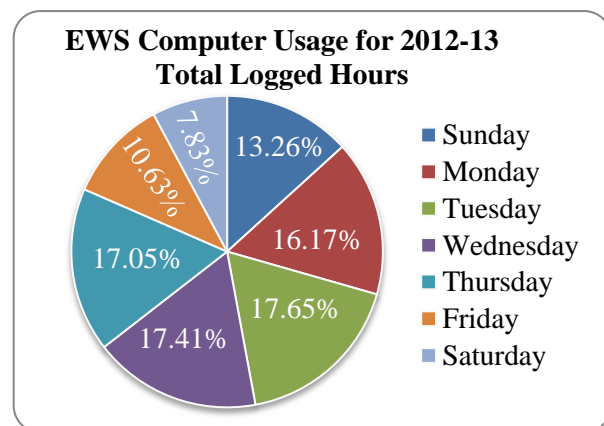


Figure 11.1: Total logged hours for 2012-13 academic year, grouped by day of the week.

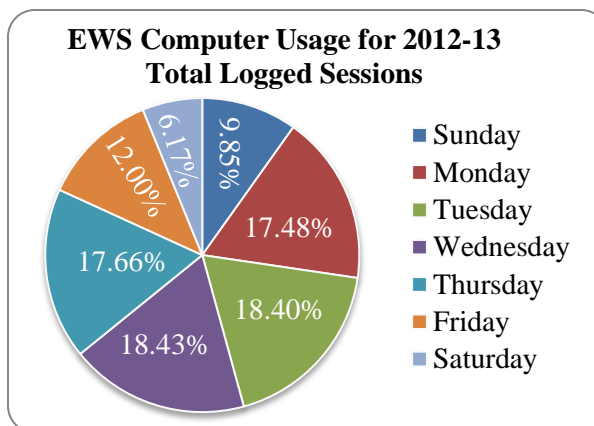


Figure 11.2: Total logged sessions for 2012-13 academic year, grouped by day of the week a user initiated a session.

Data on the average session length, grouped by day of the week, reveals that Saturday and Sunday experience the highest average session lengths of the entire week (see **Figure 11.3**). Although total amount of logged hours and amount of sessions for the EWS computers in the CARE area are less on the weekends, individual users are typically signed on for longer sessions on Saturday and Sunday (96,542 total logged hours, this does not include sessions less than a minute or greater than 24 as they may skew this data). This is most likely due to students not having courses to attend on the weekends, providing them with more time to spend on computer-related activities and course work.

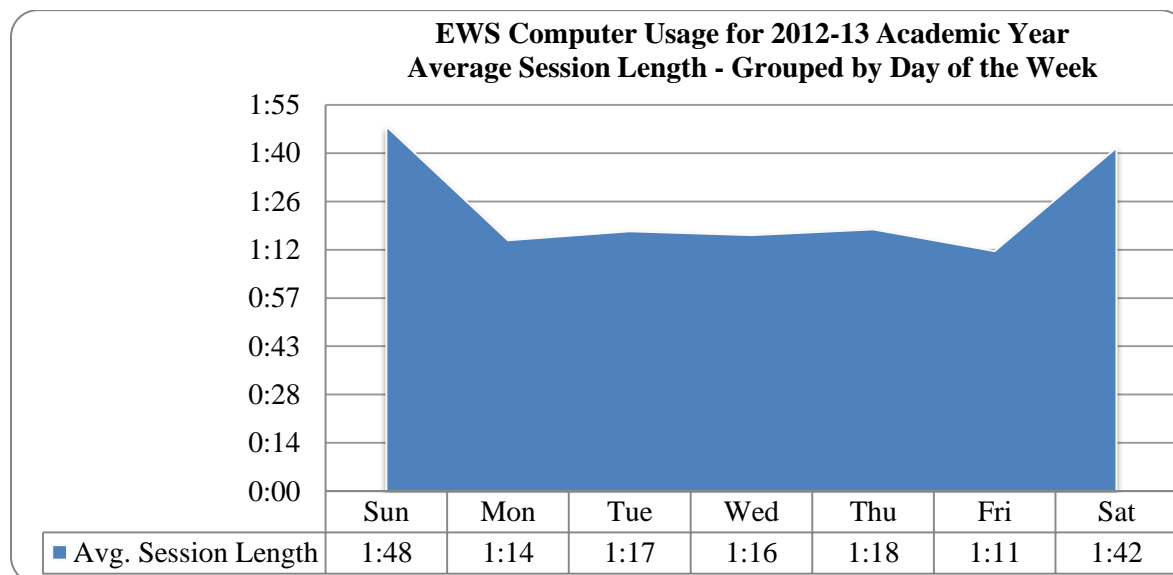


Figure 11.3: Average session length, grouped by day of the week.

Impact of CARE on Wireless Networking

Engineering students wanting to access wireless internet have access to more than 10 wireless access points located on the fourth floor in the CARE area. These 10 access points are part of a larger wireless access network (WAN) that provides wireless coverage for all five levels of the Grainger Engineering Library. An analysis was performed on the use of wireless networking in the library to identify any measureable impact on the number of users logged onto the library WAN since CARE was established in the Fall semester of 2011. The data analyzed is for the entire library WAN and focuses on the number of concurrent wireless users (number of users logged on at the same time) logged on at 9 PM. Data was recorded for 1 AM, 9 AM, 1 PM, and 9 PM. Of the recorded times, CARE services have consistently been available at 9 PM. We have grouped data by fall and spring semesters as overall library usage is lower in spring semesters. For recorded data available for weeks 1 through 16 (of a 16 week academic semester), we see that between Spring 2012 and Spring 2013, there was an increase of 22.16% in the number of concurrent wireless users, and between Fall 2012 and Fall 2013, there was an increase of 14.28% in the number of concurrent wireless users (see **Figure 12**). There is only data available for weeks 12 to 13 and 15 to 16 of the Fall semester of 2011.

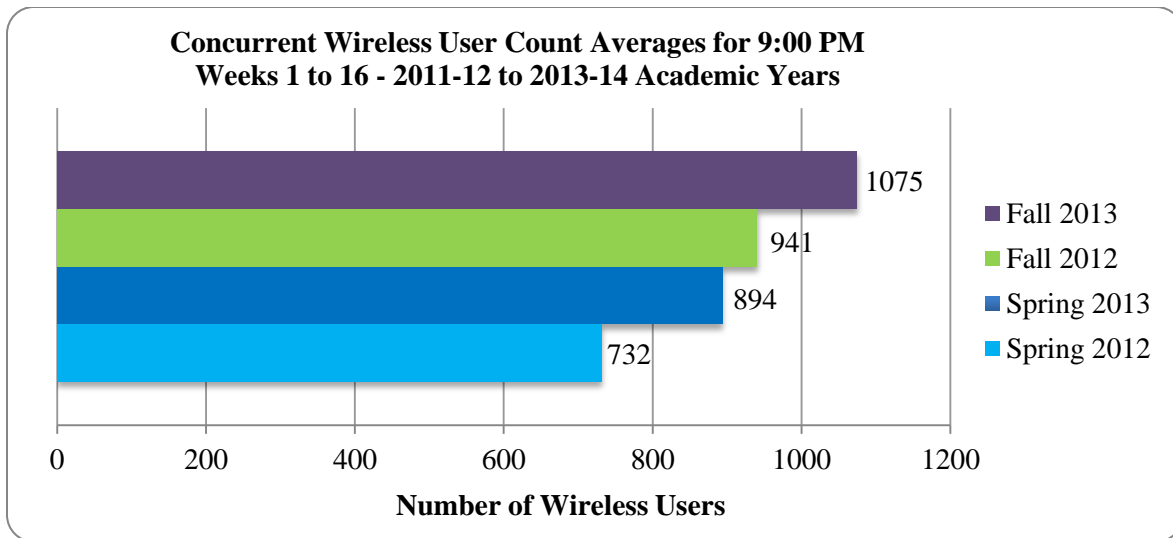


Figure 12: Concurrent wireless user count average for 9:00 pm, grouped by semester.

To compare historical data with that of the most recent semester, Fall of 2013, we have focused on data for previous fall semesters. In Figure 12.1, we see that usage between each week of the 16 week academic semester has increased, except for a slight drop in Week 1, which may be attributed to the University Library limiting operational hours for the first week of fall semesters, starting with the Fall semester of 2012. Again, there is only data available for weeks 12 to 13 and 15 to 16 of the Fall semester of 2011.

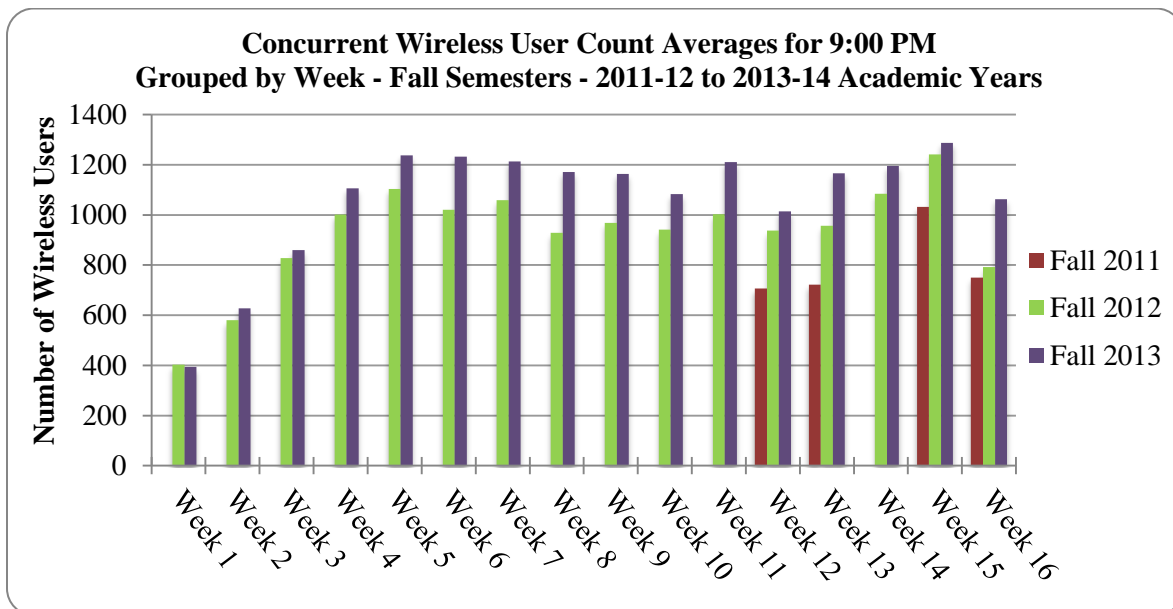


Figure 12.1: Concurrent wireless user count averages for 9:00 pm, grouped by each week of a 16 week academic semester.

The data is again shown in Figure 12.2, showing the difference between fall semesters as a percentage for each week of a 16 week academic year.

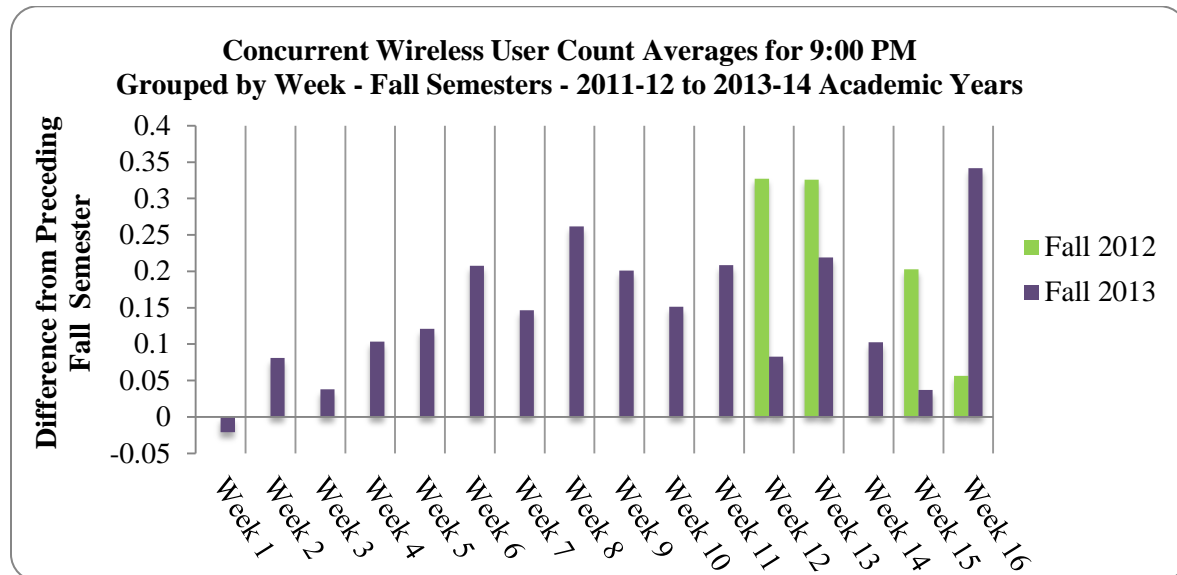


Figure 12.2: Concurrent wireless user count averages for 9:00 pm, grouped by each week of a 16 week academic fall semester. Difference from preceding semester is shown a percentage.

Grouping concurrent wireless user count average data by day of the week, for weeks 1 to 16 of a 16 week academic semester, by semester, shows that usage has increased by each day of the week (see **Figure 12.3**). Only data for Sunday through Thursday was available.

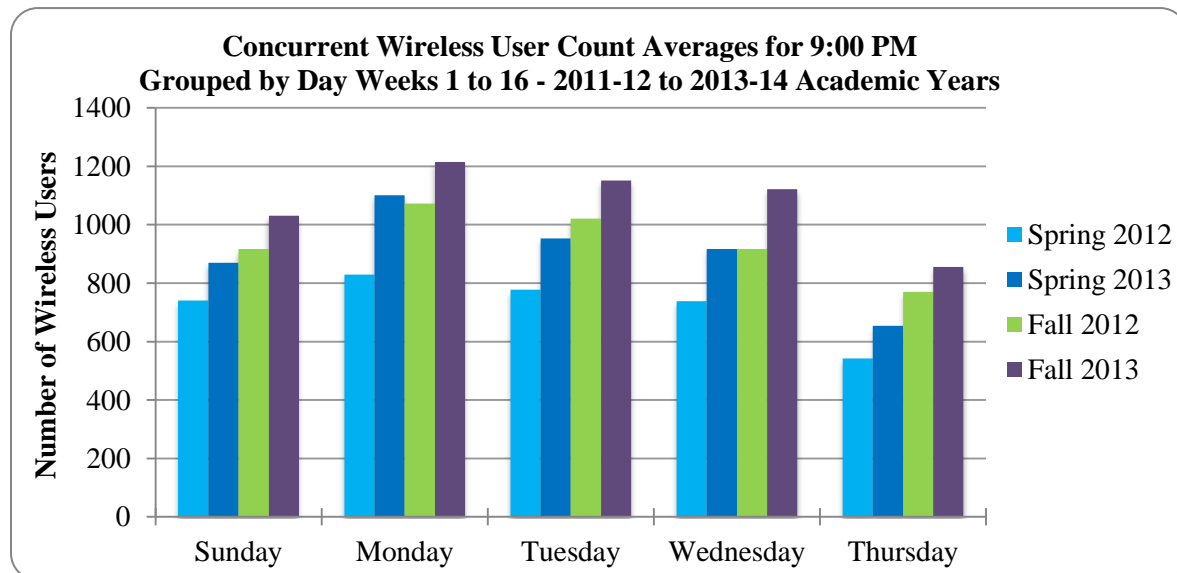


Figure 12.3: Concurrent wireless user count averages for 9:00 pm, grouped by day of the week, by academic semester.

The data is again shown in Figure 12.4, showing the difference between fall semesters as a percentage for each day of the week.

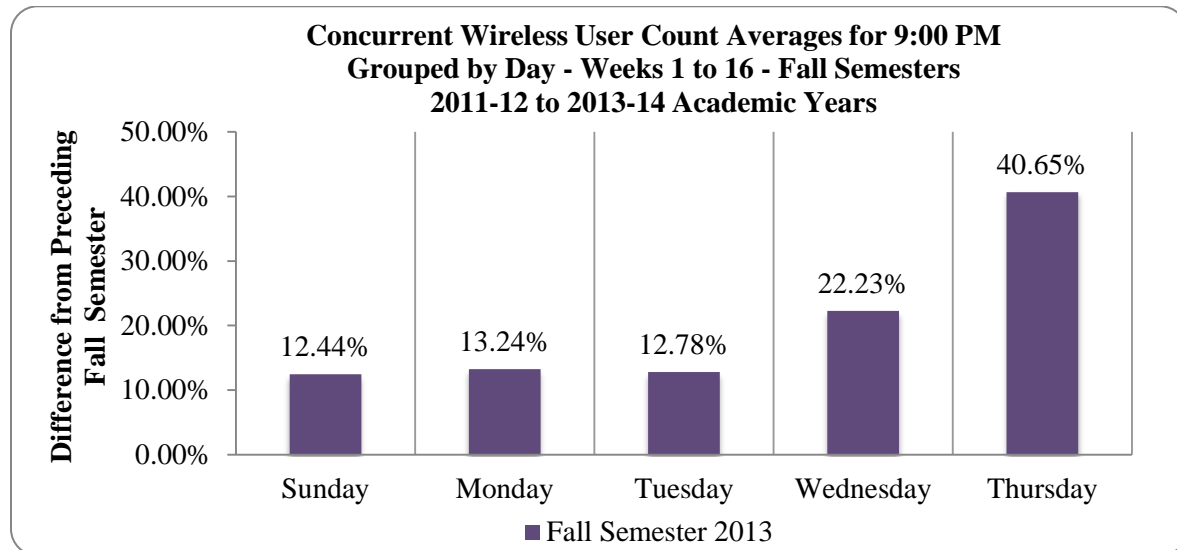


Figure 12.4: Concurrent wireless user count averages for 9:00 pm, grouped by day of the week for fall semester. Difference from preceding semester is shown as a percentage.

To perform an analysis on data for the concurrent wireless user count that is available for the Fall semester of 2011, (when CARE was established), we compared data for Weeks 12-13 and 14-15 (of a 16 week academic semester), for 9:00 PM for the last several semesters. This data reveals that between Spring 2012 and Spring 2013, there was an increase of 26.07% in the number of concurrent wireless users (see **Figure 13**). This data further reveals that between Fall 2011 and Fall 2012, there was an increase of 23.59%, and between Fall 2012 and Fall 2013, there was an increase of 14.83% (see **Figure 13**).

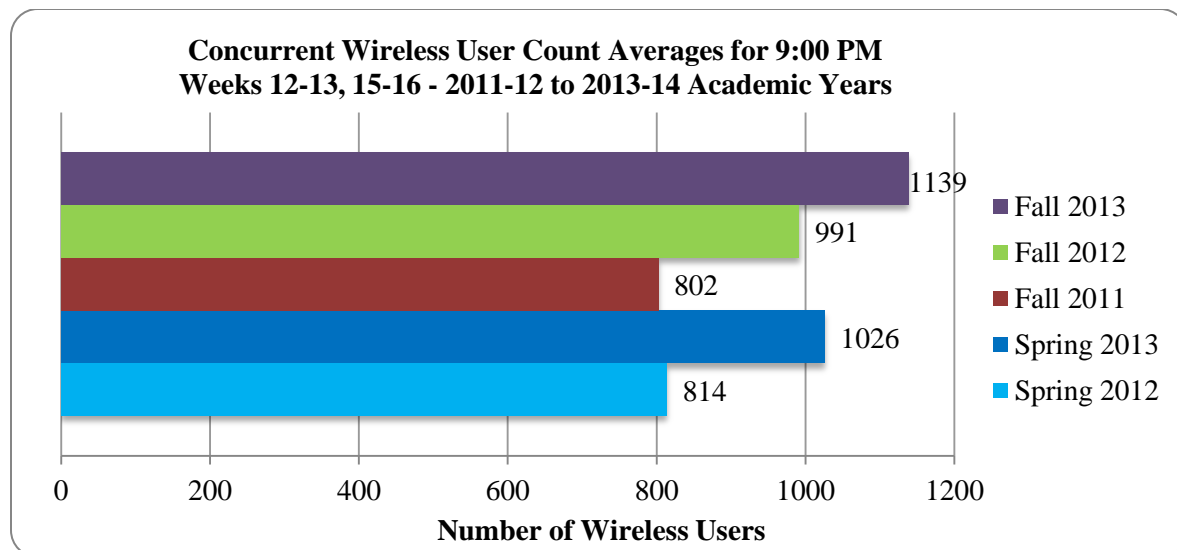


Figure 13: Concurrent wireless user count averages for 9:00 pm, for weeks 12-13, 15-16, grouped by semester.

Grouping concurrent wireless user count average data by day of the week, for weeks 12-13 and 15-16 of a 16 week academic semester, by semester, shows that usage has increased by each day of the week (see **Figure 13.1**). Only data for Sunday through Thursday was available.

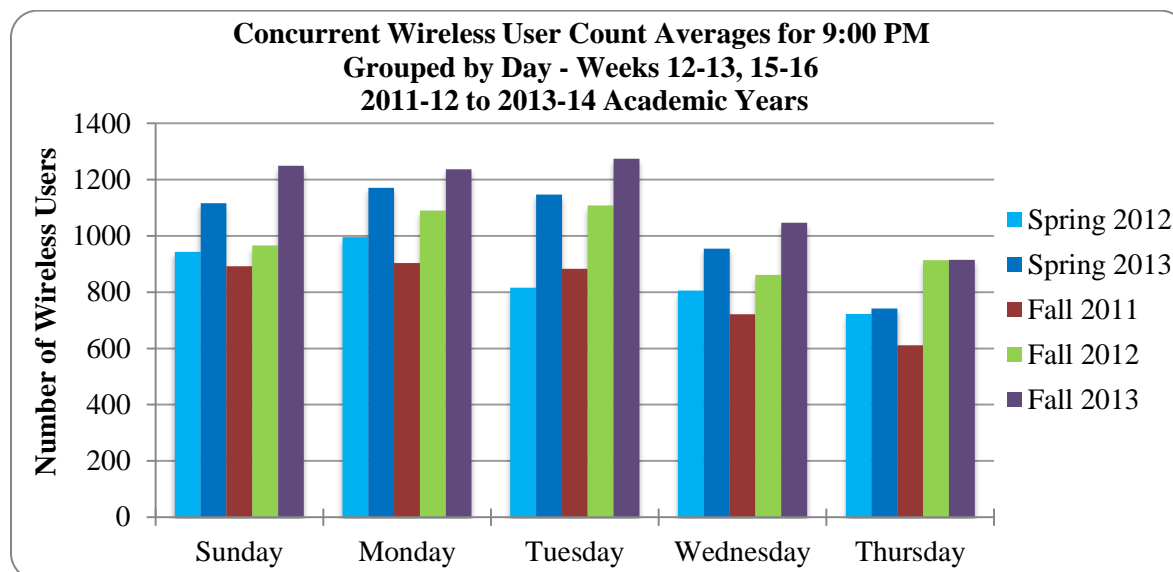


Figure 13.1: Concurrent wireless user count averages for 9:00 pm, for weeks 12-13, 15-16, grouped by day of the week, by academic semester.

The data is again shown in Figure 13.2, showing the difference between fall semesters as a percentage for each day of the week, for weeks 12-13, 15-16.

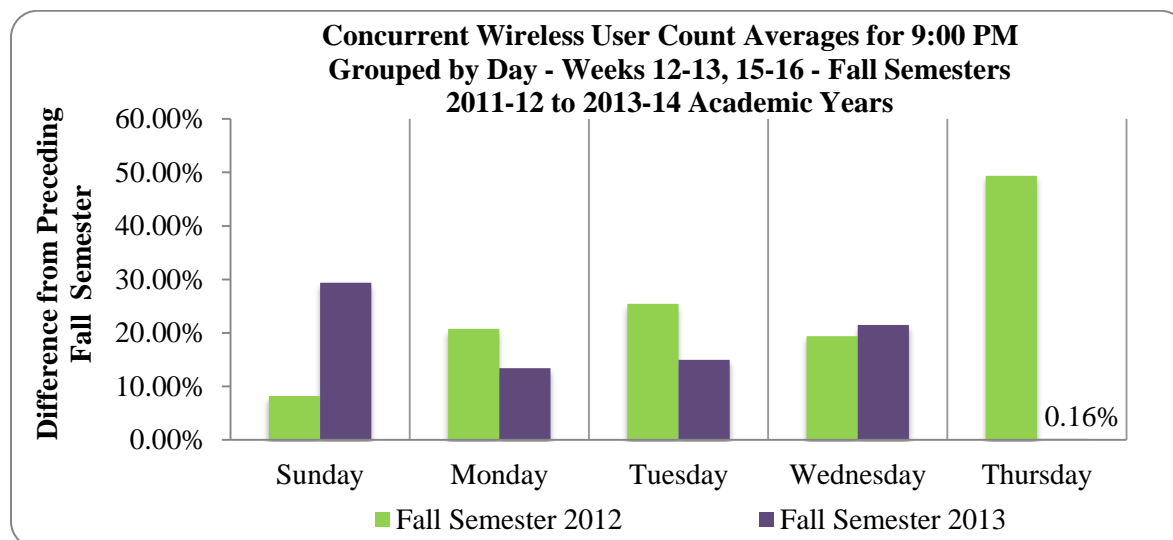


Figure 13.2: Concurrent wireless user count averages for 9:00 pm, for weeks 12-13, 15-16, grouped by day of the week for fall semester. Difference from preceding semester is shown as a percentage.

To put the usage of wireless networking at the Grainger Engineering Library in perspective, we have looked at wireless network usage of the four major campus library locations. An analysis of

data for the concurrent wireless user count averages at 9 PM, for weeks 1 to 16 of Fall 2013 (see **Figure 14**) and Spring 2013 (see **Figure 14.1**) reveals that of the four major library locations on campus at the University of Illinois at Urbana-Champaign, Grainger experienced the highest usage of wireless internet. This again illustrates the popularity of computing (desktops and mobile devices) at Grainger at 9 PM, a time that CARE has consistently offered their services.

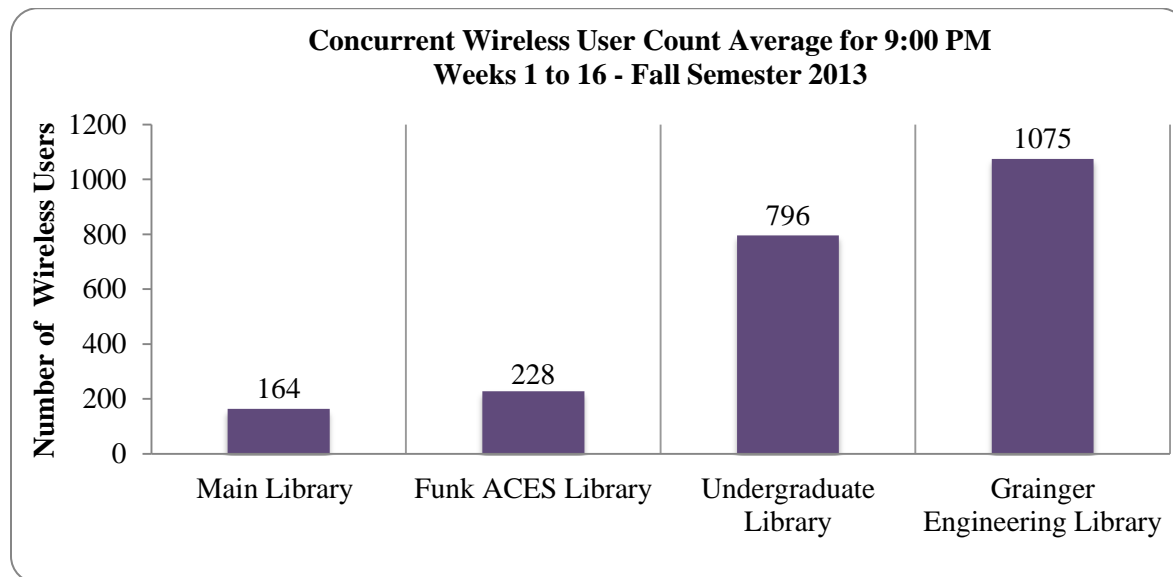


Figure 14: Concurrent wireless user count average for fall semester for the four major library locations.

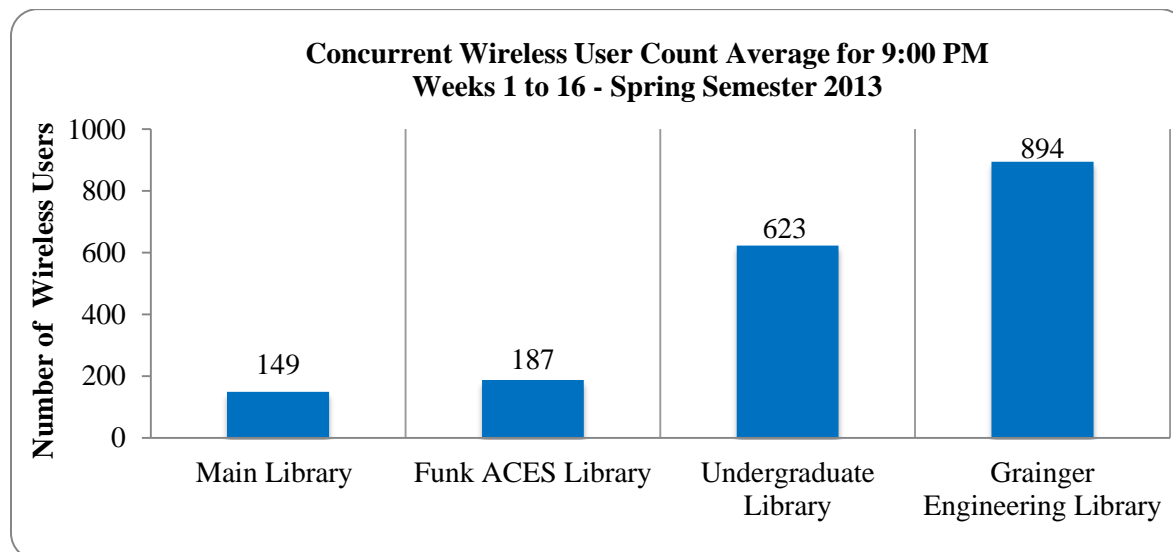


Figure 14.1: Concurrent wireless user count average for spring semester for the four major library locations.

Impact of CARE on Library Building Use

Grainger Engineering Library staff track patron visits by recording security gate counts and performing visual head counts. The first method, security gate counts, tracks the number of passes through one of three security gates located at the library entrances. An analysis of security gate count data recorded between the academic years of 2009-10 and 2012-13 was performed to identify any trends in patron visits to the Grainger Engineering Library over the last four academic years. From this data we see there has been an overall increase in total patron visits between the academic years of 2009-10 and 2012-13 (see **Figure 15**).

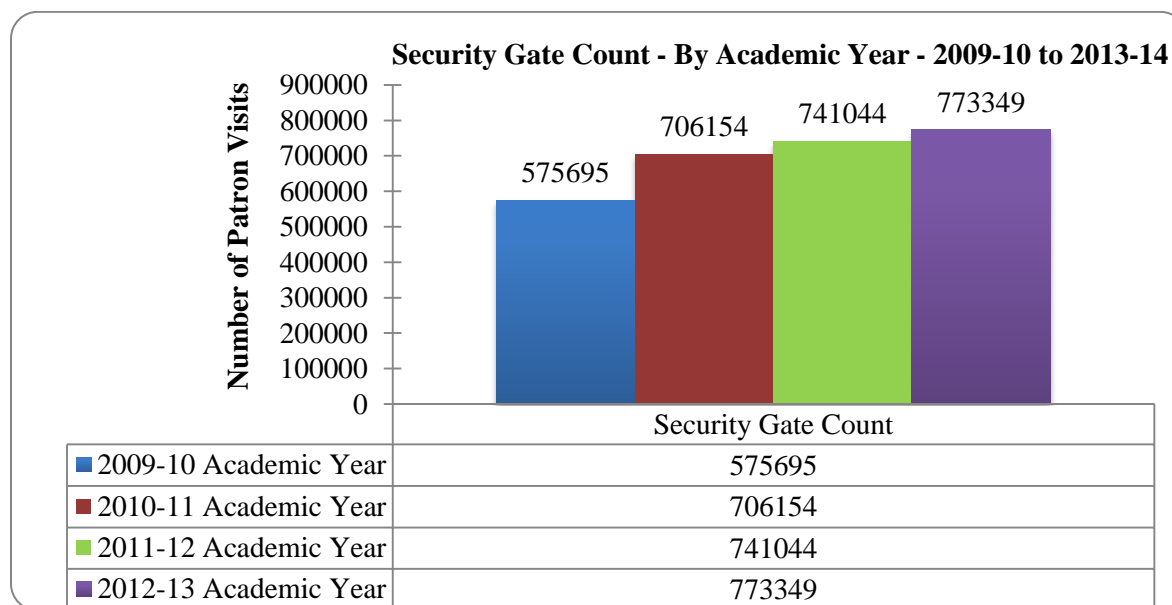


Figure 15: Security gate count data, grouped by academic year.

A closer look at this data shows that patron visits have increased each year for the last three years, though the rate of growth has slowed down slightly after a sharp increase of 22.66% between the academic years of 2009-10 and 2010-11 (see **Figure 15.1**). This spike in patron visits may be due to the 14.33% increase in the number of first-time, degree-seeking freshman who entered the College of Engineering during the Fall semester of 2010, the year before CARE was established (see **Table 1**). Although engineering students are not the only patrons visiting the Grainger Engineering Library, they make up a significant portion of the patron base utilizing the building and the services provided by the library and CARE. The subsequent increases in patron visits (see **Figure 15.1**) each academic year, are so far, out pacing the increases in the number of students enrolling in the College of Engineering (see **Table 1**).

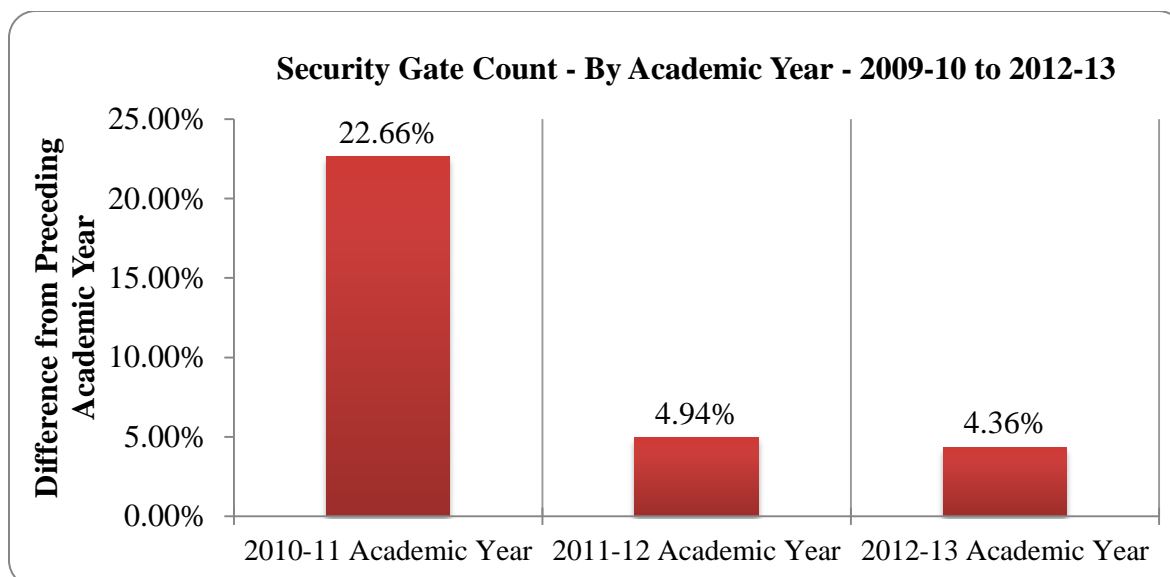


Figure 15.1: Security gate count data. Difference from preceding year is shown as a percentage.

Security gate count data for the 2013-14 academic year is currently incomplete as only data for the Fall semester of 2013 has been recorded so far. To compare historical data with that of the most recent semester, Fall of 2013, we have performed an analysis on security gate count data for previous fall semesters. From this data we see there has been an overall increase in total patron visits between the Fall semesters of 2009 and 2013 (see **Figure 15.2**). A closer look reveals that for data recorded between the Fall semester of 2011 (when CARE was established) and the Fall semester of 2013, there was an increase of 17.04% in patron visits (see **Figure 15.2**).

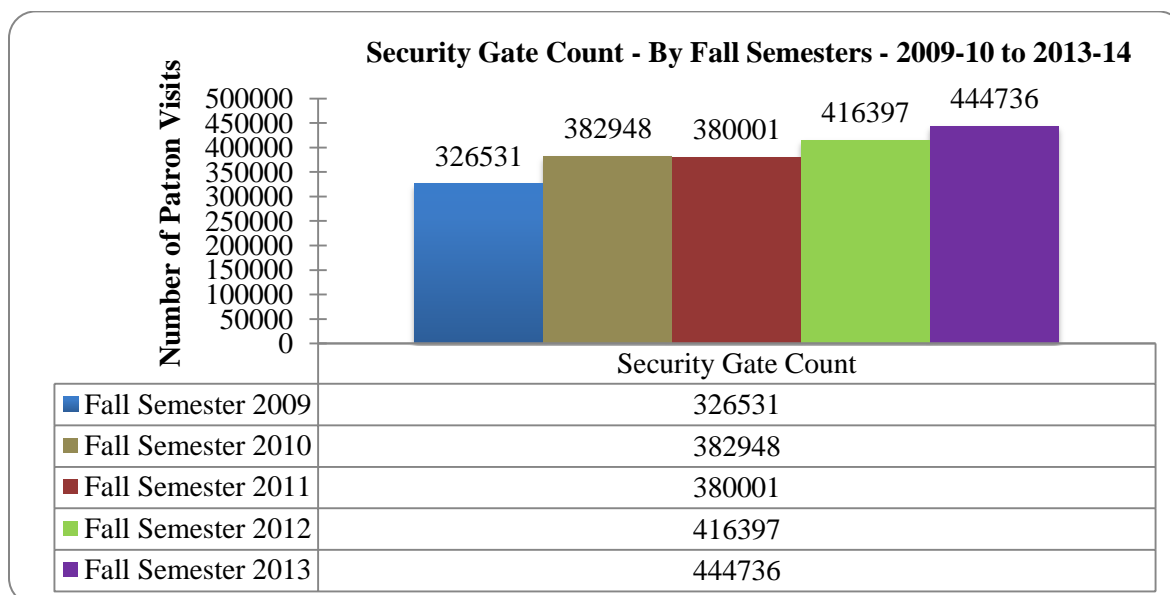


Figure 15.2: Security gate count data, grouped by fall semesters.

The second method used to track patron visits is visual head counts performed four times a day at 1 AM, 9 AM, 1 PM, and 9 PM, to record the number of patrons in the building, by floor. For

this analysis we have focused on data for the 9 PM count (as CARE has consistently offered programs during that time) for fall semesters (to compare it to current data available for Fall 2013). Data recorded weeks 6 to 16 (of a 16 week academic year, there was no recorded data for weeks 1-5 of Fall 2011) in visual head counts of students on the fourth floor, shows that overall usage of the library space repurposed for CARE, has increased 12.22% between Fall 2011 and Fall 2012 and 5.04% between Fall 2012 and Fall 2013 (see **Figure 16**).

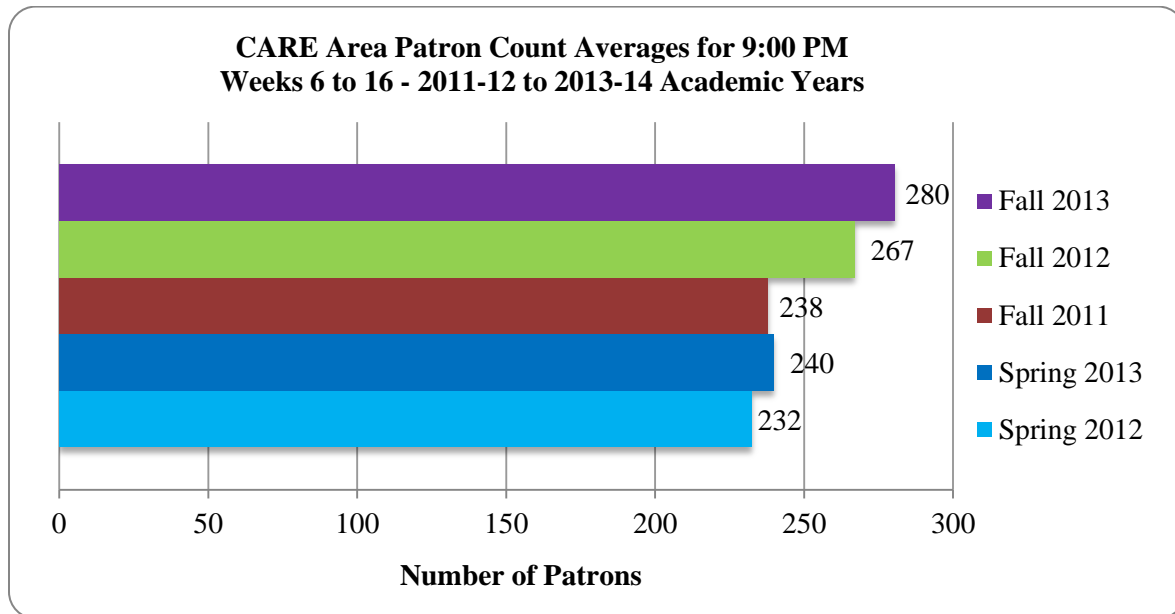


Figure 16: CARE area patron count averages for 9:00 pm, for 2011-12 to 2013-14 academic years.

When we group patron head count data by day of the week for weeks 6 to 16 (of a 16 week academic year, there is no data available for weeks 1 to 5 of Fall 2011) we see that total usage has increased each day of the week, except for a drop on Friday (see **Figure 16.1**)

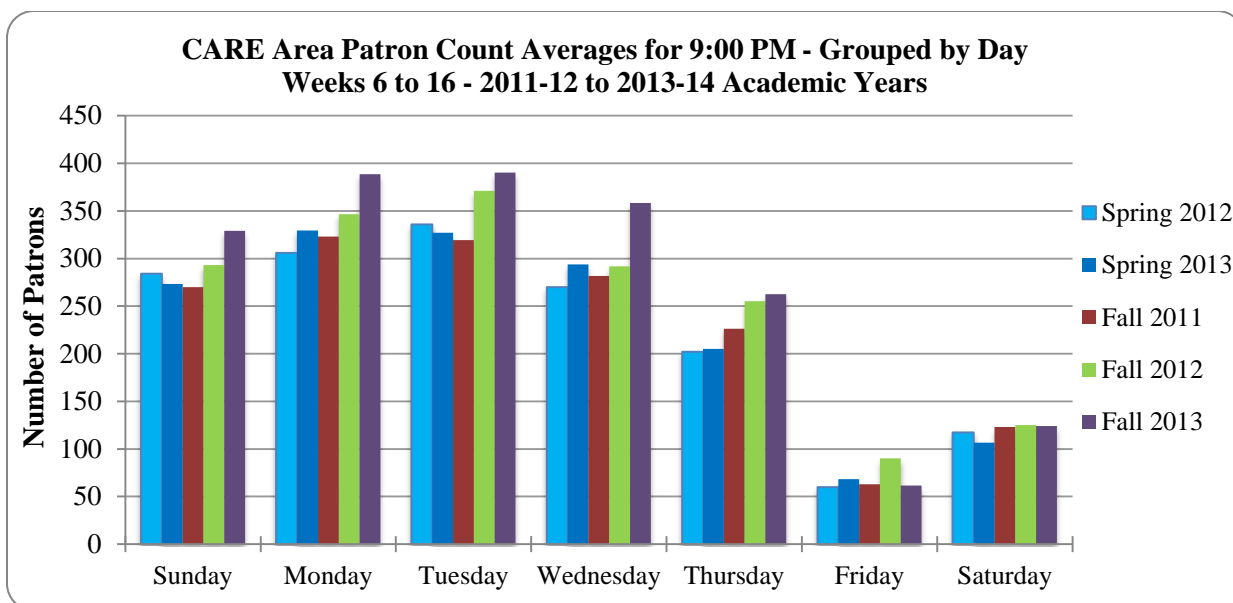


Figure 16.1: CARE area patron count averages for 9:00 pm, grouped by day of the week.

From this same data, we see sharp increases in patron visits on Sunday, Monday and Wednesday that has compensated for drops in other days, showing a shift in which days of the week students are coming into the CARE space; however, overall usage is still increasing. A closer look at this data shows that the days of the week where we experience the biggest drops in the growth rate of patron visits for the Fall semester of 2013, were also the days of the week when we experienced spikes in patron visits during the preceding Fall semester of 2012 (see **Figure 16.2**). This may indicate that library patrons are adjusting which days of the week they utilize the CARE area, based on the amount of available space and level of activity they experienced in the preceding semester.

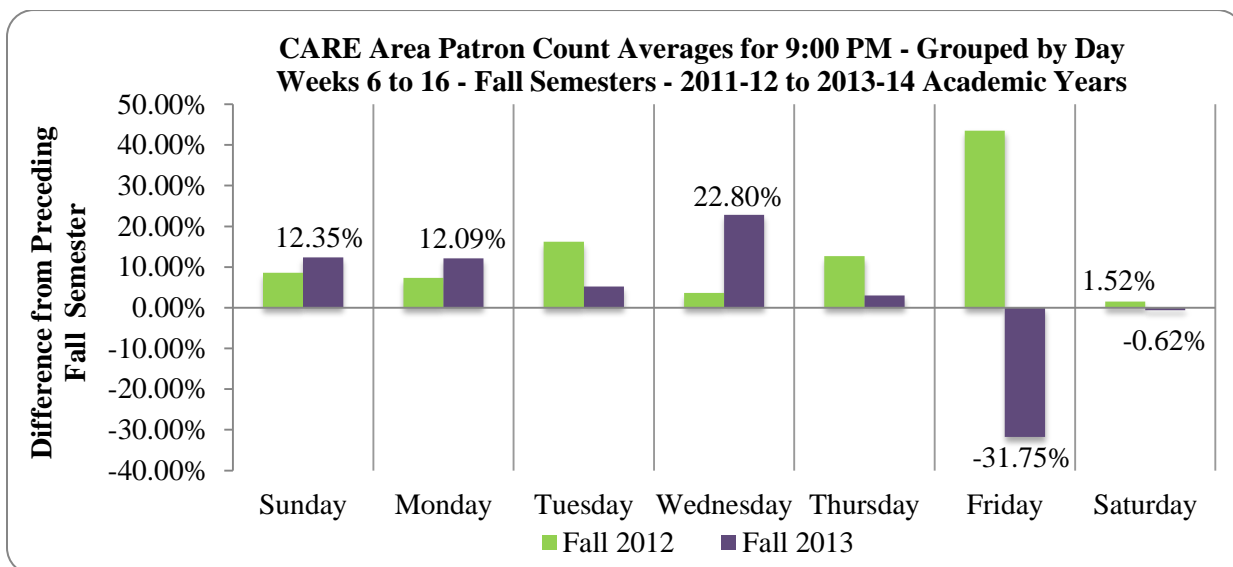


Figure 16.2: CARE area patron count averages for 9:00 pm, grouped by day of the week. Difference from preceding semester is shown as a percentage.

An analysis was performed of patron count average data that is available for weeks 1 to 16 (of a 16 week academic year) for the last several semesters. This analysis does not include the Fall semester of 2011 (when CARE was established) as we do not have data recorded for weeks 1-5 of that semester. For this analysis we have again focused on data for the 9 PM count (as CARE has consistently offered programs during that time) for fall semesters (to compare it to current data available for Fall 2013). Data recorded for weeks 1 to 16 of visual head counts of students on the fourth floor, shows that overall usage of the library space repurposed for CARE has increased 6.93% between Fall 2012 and Fall 2013 (see **Figure 17**).

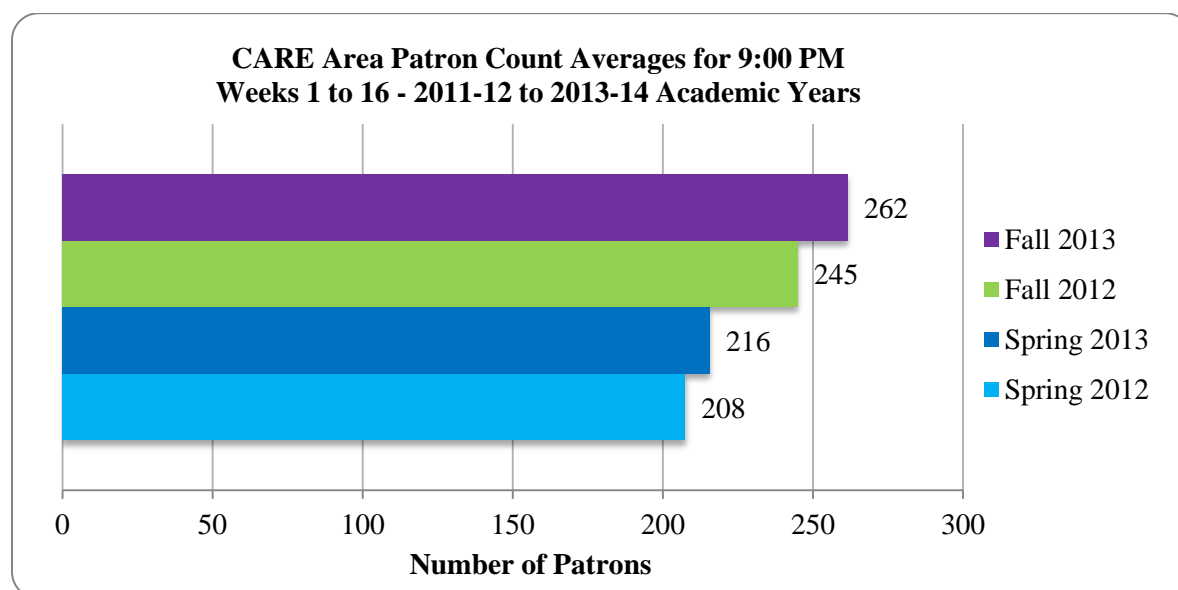


Figure 17: CARE area patron count averages for 9:00 pm, grouped by semester.

When we group patron head count data by day of the week, for weeks 1 to 16 (of a 16 week academic year) we see that total usage has increased each day of the week, although we again see a drop on Friday (see **Figures 17.1 and 17.2**).

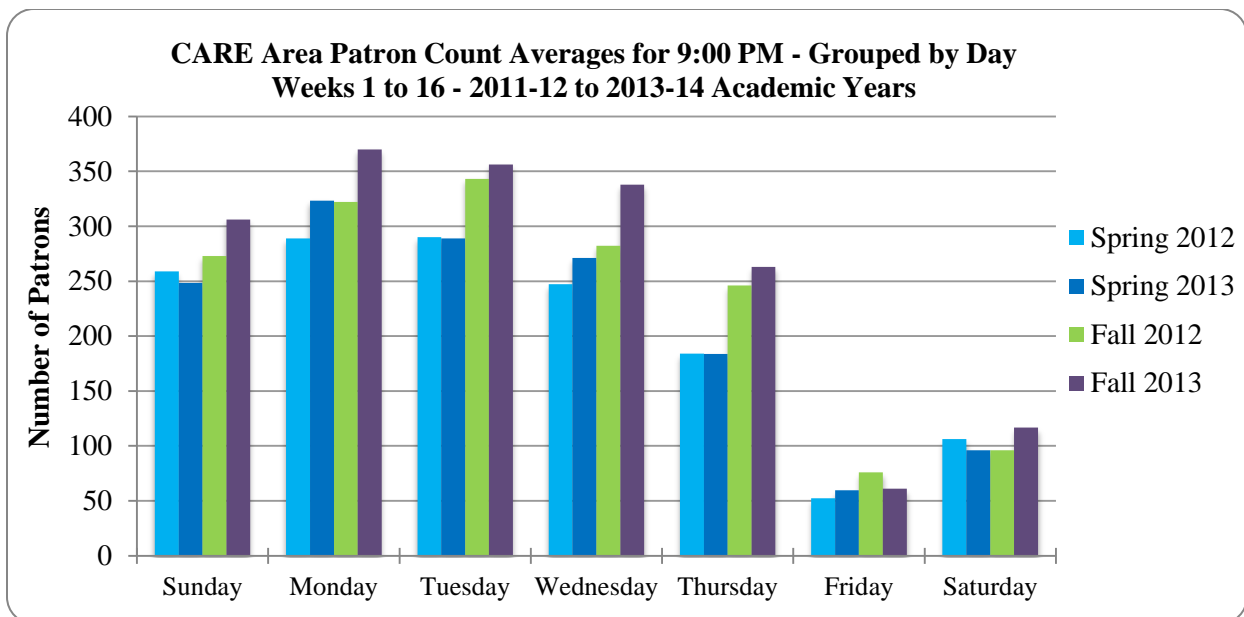


Figure 17.1: CARE area patron count averages for 9:00 pm, grouped by day of the week.

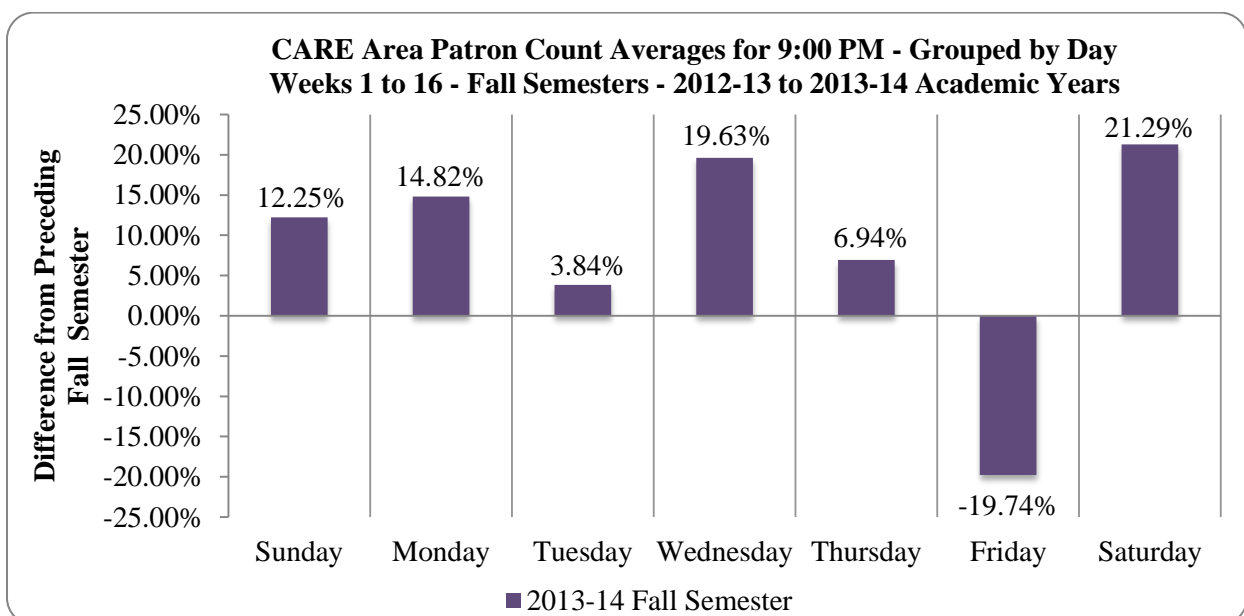


Figure 17.2: CARE area patron count averages for 9:00 pm, grouped by day of the week. Difference from preceding semester is shown as a percentage.

When we group available data for patron head counts by each week of a 16 week academic semester, for the last three fall semesters (again, there is no data available for weeks 1 to 5 of Fall 2011), we see increases in usage for each week of Fall 2013, except for drops in patron visits in weeks 6, 11, 12 and 15 (see **Figure 18**).

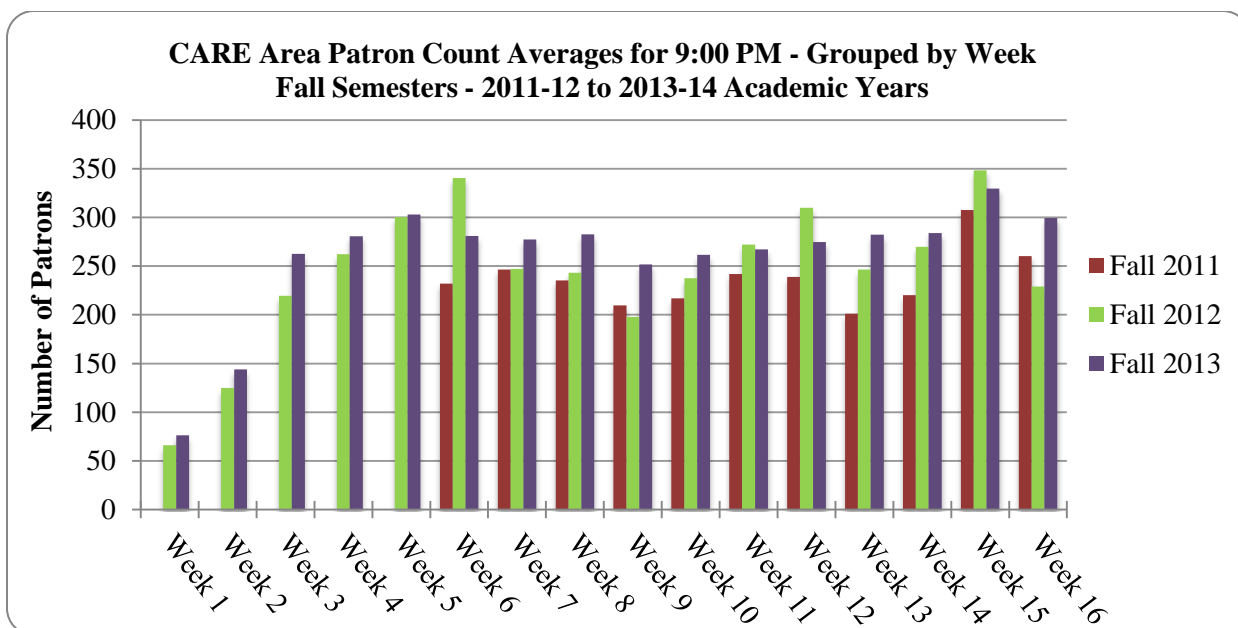


Figure 18: CARE area patron count averages for 9:00 pm, grouped by each week of academic fall semesters.

Again, we see that each week of the academic semester, where we experience the biggest drops in patron visits for the Fall semester of 2013, were also the weeks when we experienced spikes in patron visits during the preceding Fall semester of 2012 (see **Figure 18.1**). This may again be due to library patrons adjusting which weeks they utilize the CARE area, based on the amount of available space and level of activity they experienced in the preceding semester.

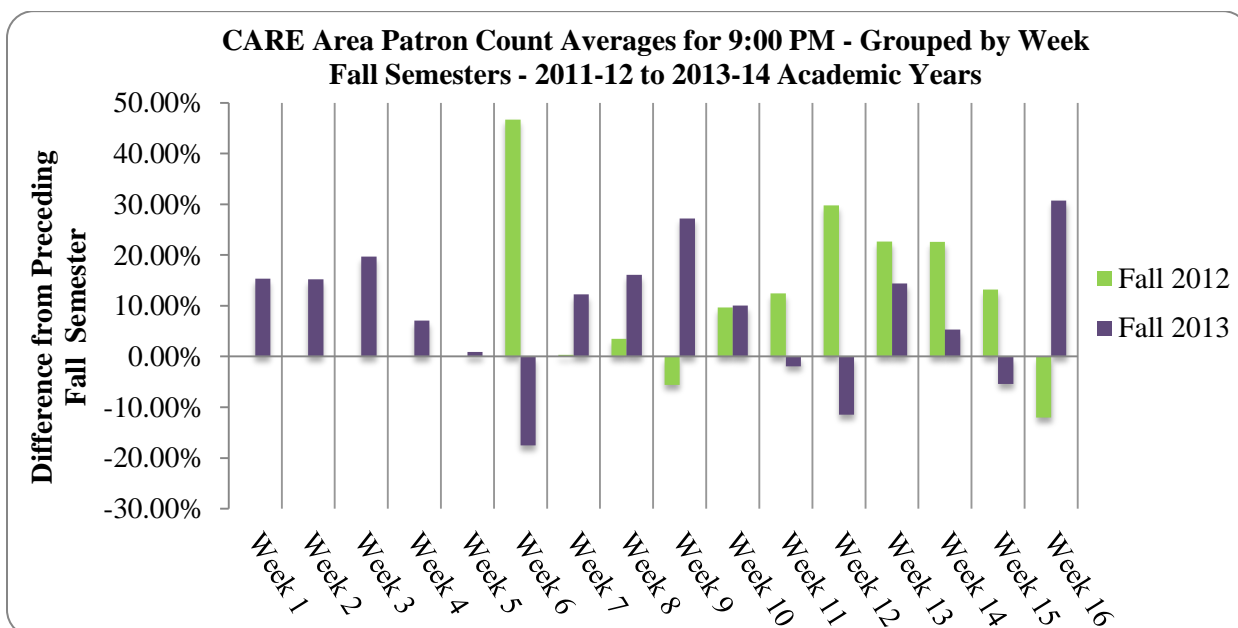


Figure 18.1: CARE area patron count averages for 9:00 pm, grouped by each week of academic fall semesters. Difference from preceding semester is shown as a percentage.

Student retention and conclusion

It is clear that the CARE program is contributing to an increasing level of foot traffic, workstation usage, and wireless computing usage. While it is too early to measure the success of CARE in terms of increased retention rates, the preliminary figures are very encouraging. The table below shows student retention figures for each freshman engineering class from 2002 to 2012 (see **Table 1**). Note the dramatic increase in the size of the freshman engineering cohort at Illinois over the last 10 years. This increase is at a time when the general student enrollment in other colleges has either stayed constant or declined. Illinois has some 43,000 students enrolled on the Urbana-Champaign campus.

Table 1: Cumulative graduation rates and continuation rates for the College of Engineering.

Cumulative Graduation Rates and Continuation Rates												
Cohort Year (Fall)	Total Head Count	Increase from Previous Cohort Year	Cont. to 2nd Year	Cont. to 3rd Year	Cont. to 4th Year	Grad. within 4 years	Cont. to 5th Year	Grad. Within 5 years	Cont. to 6th Year	Grad. Within 6 years	Cont. to 7th Year	Grad. Within 7 years
2002	1264		84%	69%	62%	43%	18%	61%	1%	63%	0%	63%
2003	1418	12.18%	84%	72%	63%	47%	15%	63%	0%	65%	0%	65%
2004	1429	0.78%	83%	70%	63%	44%	17%	63%	1%	65%	0%	65%
2005	1435	0.42%	83%	68%	61%	45%	15%	60%	1%	62%	0%	63%
2006	1415	-1.39%	86%	72%	65%	45%	18%	63%	2%	65%	0%	66%
2007	1500	6.01%	86%	74%	67%	49%	17%	64%	1%	67%		
2008	1550	3.33%	87%	75%	67%	52%	14%	65%				
2009	1556	0.39%	87%	74%	66%	53%						
2010	1779	14.33%	87%	77%								
2011	1786	0.39%	91%									
2012	1788	0.11%										

In 2010, the year before CARE was established, the College of Engineering saw an increase of 14.33% in the cohort of first-time, degree-seeking freshman who entered in the fall semester. From that cohort, 87% continued on to their 2nd year (when CARE was established, in the Fall semester of 2011). This was the same amount retained in the two previous cohort years. From the 2010 cohort, 77% continued on to their 3rd year, which was an increase from 74% from the 2009 cohort that continued on to their 3rd year.

For the 2011 cohort, 91% continued on to their 2nd year, which was an increase from the previous three cohort years which saw 87% continuing to their 2nd year. Clearly this increase in the retention rate is not solely due to CARE programs but anecdotal evidence points to the success of CARE in improving the numerous aspects of the student experience for engineering students at the University of Illinois at Urbana-Champaign.

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