

Usage of General-Access Computing Centers and Workstations (Autumn 2005 - Spring 2010)

UW Information Technology
Cara Lane, PhD, Research Manager

AUGUST 2010

INTRODUCTION

This report presents usage data from the past five academic years for two University of Washington (UW) general-access computing centers: Mary Gates Hall Computing Resource Center (MGH CRC) and the Learning Commons in the Odegaard Undergraduate Library (OUGL LC). In addition, it covers workstations (named "Access+") distributed throughout UW Libraries on the Seattle campus. All of these general-access centers and workstations are managed by UW Information Technology (UW-IT); this report does not include data about the use of departmental computing centers.

The report begins with a brief timeline of events for MGH CRC, OUGL LC, and Access+, outlining the cycles for equipment renewal, describing changes in hours or numbers of machines, and discussing any significant technical issues or outages that may have impacted usage. Next, it offers definitions of the data collected, presents usage data for the autumn 2005 through spring 2010 timeframe, and discusses key trends in the data.

TIMELINE OF EVENTS

Mary Gates Hall Computing Resource Center

During the time period covered by this report, MGH CRC was located in the main floor of Mary Gates Hall. This computing center closed operations at the end of Spring quarter 2010. The Access Technology Center (ATC), which provides hardware and software for students with disabilities, was located in the MGH CRC during the time period discussed in this report. However, this report does not include data on student use of the workstations associated with the ATC. When MGH CRC closed, the 11 workstations in the ATC were relocated to a new location in the same building. Between autumn 2005 and spring 2010 the machine count in MGH CRC, excluded workstations in the ATC, fluctuated between 185 and 161.

The Student Technology Fee Committee (STFC) funded the replacement of 179 workstations in MGH CRC in summer 2007. During that equipment renewal process, the number and quality of machines devoted to video-editing increased. A small reduction in machines occurred in during the 2008-2009 academic year when several machines

were relocated to OUGL LC to accommodate a new Collaboration Studio (a group workspace with a large screen) in MGH CRC.

In spring 2008, MGH CRC reduced its hours from 77 hours per week (Monday-Thursday, 8:00am to 11:00pm; Friday, 8:00am to 9:00pm; and Sunday, 7:00pm to 11:00pm) to 50 hours per week (Monday-Friday, 8:00am to 6:00pm), eliminating all evening and weekend access. This decision was made because the majority of users of MGH CRC in the evening were from the Center for Learning and Undergraduate Enrichment (CLUE), which introduced a new laptop service at this time. The number of other students who used MGH CRC during evening hours could be accommodated by OUGL LC or Access+ workstations. The closure of MGH CRC was announced during spring 2010.

Odegaard Undergraduate Library Learning Commons

OUGL LC is located on the second floor of the Odegaard Undergraduate Library. Between autumn 2005 and spring 2010, machine counts ranged between 329 and 364. STFC funded the replacement of the machines in this space during two cycles: In summer 2004 and summer 2005, 364 workstations were replaced. The second replacement cycle occurred in summer 2008 and summer 2009, when 356 workstations were replaced.

OUGL LC is open during the hours that the library is open, 24x5, with reduced hours on the weekends. In summer 2007 and all subsequent quarters the hours in this space were reduced slightly (OUGL opened at 11:00am on Saturdays instead of 9:00am).

Access+ Workstations

Access+ workstations are located in branch libraries throughout campus. Over the course of the past five academic years, machine counts have fluctuated considerably, ranging between 200 and 279. Between autumn 2005 and winter 2009 the number of machines gradually increased as Access+ workstations were added to new spaces (from 258 to 279 machines). STFC funded 70 machines to replace some existing workstations and expand Access+ to four branch libraries in summer 2005. In summer 2007, 19 workstations were funded to expand the service to the College of Ocean and Fishery Sciences and 197 workstations were replaced. During the 2008-2009 academic year several branch libraries closed due to budget constraints, dropping the number of machines to 200 in autumn 2008. Some additional machines were added to the remaining spaces in winter 2010 and spring 2010, bringing the total machine count for Access+ workstations to 226.

All Spaces

During autumn 2008 and winter 2009 a large number of the PCs in all spaces had motherboard problems that required extensive downtime to repair. Data reporting problems associated with this technical event resulted in lost and misattributed data during autumn 2008, winter 2009, and spring 2009, causing the data for the 2008-2009 academic year to be incomplete and unreliable. Data loss was most noticeable in MGH CRC and OUGL LC during autumn and winter quarters, but some loss occurred in all spaces throughout the year. Due to these issues, 2008-2009 data are not included in this report.

DATA DEFINITIONS

The following definitions were used to compile usage data.

- **Quarter:** First day of the quarter to the last day of the quarter, based on the academic calendar (including finals week).
- **Machine:** Each workstation that reports login data to the database during a quarter. Each machine is associated with a particular space. Machine counts are based on the numbers of machine reporting data from a particular space over during a quarter.
- **Space:** MGH CRC, OUGL LC, and Access+ workstations are the three spaces discussed in this report. Data from all machines located in a space were associated with that space. Even though Access+ systems were located in diverse locations on campus, they were counted as one space in this report.
- **Total Logins:** Count of all logins in a quarter.
- **Unique Users:** Count of unique UW NetIDs that logged in during the quarter, both across all spaces and for each space.
- **Hours Open:** Total hours a space was open during a typical week, divided by seven to get the average open hours per day. The average open hours per day were then multiplied by the number of days in each quarter to generate the average logins per hour open. Since Access+ workstations exist in multiple spaces with different hours, the average open hours per day was not calculated for these spaces.

USAGE DATA

Usage data for all spaces are reported in the figures at the end of this report. In the figures, autumn quarters are compared to autumn quarters, winter to winter, and spring to spring. This is because these quarters tend to be more similar to each other than to the quarters that come before or after them on the calendar—due in part to similarities in the number of days in the quarter, where holidays fall during the academic year, and patterns of student use throughout the year (such as Winter quarter typically having the lowest enrollment numbers and Spring quarter the most sunny days, both of which have some impact on usage data). Academic years align vertically on all figures.

- Figure 1: Total Unique Users
- Figure 2: Unique Users by Space
- Figure 3: Total Logins
- Figure 4: Total Logins by Space
- Figure 5: Average Logins per Hour Open
- Figure 6: Average Logins per Machine

DISCUSSION

All Spaces

Overall, the number of unique users has remained fairly consistent over the past five academic years (Figure 1) in the spaces managed by UW-IT. This report does not track usage of departmental computing centers. The overall number of users of MGH CRC, OUGL LC, and Access+ workstations held steady or increased slightly for all quarters between autumn 2005 and spring 2008. During the 2009-2010 year, there was some decline in overall users, but this decline was less substantial than could be anticipated from the decline in hours and machines that took place prior to that academic year. This suggests that even with less overall access, a similar number of students are using these computing centers and workstations.

A similar pattern appears in total login data (Figure 3). The data loss in 2008-2009 makes it impossible to fully track the effects of decreases in hours and machines. The 2009-2010 data reflect these decreases. Overall, these data show the number of student logins per machine and per hour open remaining fairly consistent, showing that students tend to use available machines at a fairly steady rate. At the same time, they suggest that decreases in hours or machines available in one location may not directly translate to increased use in other locations.

Mary Gates Hall Computing Resource Center

The number of unique users who used MGH CRC each quarter had minor fluctuations between autumn 2005 and winter 2008 (Figure 2). After the reduction in hours in spring 2008, the number of unique users showed a substantial decline. Since the 2008-2009 academic year data were unreliable, 2009-2010 is the first year where it is possible to track the full impact of the reduction in hours in terms of number of users. A similar pattern appeared in login data for this space over this time period, with a marked decline in logins following the reduction in hours (Figure 4); the number of logins per machine follows the same pattern (Figure 6).

However, the usage of MGH CRC during the hours it remained open was not significantly impacted by the reduction in evening hours (Figure 5). Considering that many of the evening users of the MGH CRC space were CLUE students who likely shifted from using MGH CRC in the evening to using the CLUE laptop service, this pattern is not surprising. The data for spring 2008 (the first quarter with reduced hours) also showed a spike in the number of logins per hour open, from 89 in spring 2007 to 120 in spring 2008. This suggests that users who had become accustomed to using MGH CRC during the previous quarter of that academic year continued to do so with the new schedule. Interestingly, the average use per hour open in autumn 2009 was consistent with use prior to the reduction in hours. There was some decrease in use per hour open during winter 2010 and spring 2010, but the lowest average recorded (81 in spring 2010) still fell within 8% of average logins per hour for the space (88) during the past five academic years (not factoring in data from 2008-2009).

Odegaard Undergraduate Library Learning Commons

The number of unique users of OUGL LC had minor fluctuations during the past five academic years, but no consistent patterns emerged (Figure 2). The number of logins recorded in OUGL LC peaked during the 2006-2007 academic year and have declined since then (Figure 4). The lowest logins recorded for a quarter (148,756 in spring 2010) were 12% off the average logins for the space (169,774) during the past five academic years (not factoring in data from 2008-2009). The average logins per hour open data show a similar pattern (Figure 5), as do the data for average logins per machine (Figure 6). This decline became more visible with the 2009-2010 data than it has been in

the past, since the 2007-2008 were similar to the 2005-2006 data (with an increase in use occurring in 2006-2007) and the 2008-2009 data were unreliable.

Access+ Workstations

The number of unique users of Access+ was highest during the 2007-2008 academic year (Figure 2). The data from 2009-2010 show a decline from that high, but it is too soon (given the problematic 2008-2009 data) to know if this is a trend. The logins for 2009-2010 are also lower than for previous years (Figure 4). However, since the data for average logins per machine show an increase in the average logins per machine for 2009-2010 academic year compared to 2007-2008 (Figure 6), the decline in logins and users for Access+ workstations can be attributed to the decrease in the number of machines available.

CONCLUSION

While there has been some decline in overall use of general-access computing centers and workstations over the course of the past five years, in nearly all cases much of this decrease is directly attributable to reductions in hours that computing centers were open or reductions in the number of machines available. While some students may have shifted from using MGH CRC, OUGL LC, and/or Access+ to using departmental labs as these changes were made (or vice versa), the usage data available, which does not include departmental labs, cannot track such shifts if they occurred. Overall, the data do show that the general-access computing centers and workstations managed by UW-IT continue to be highly used by students.

FIGURE 1: TOTAL UNIQUE USERS

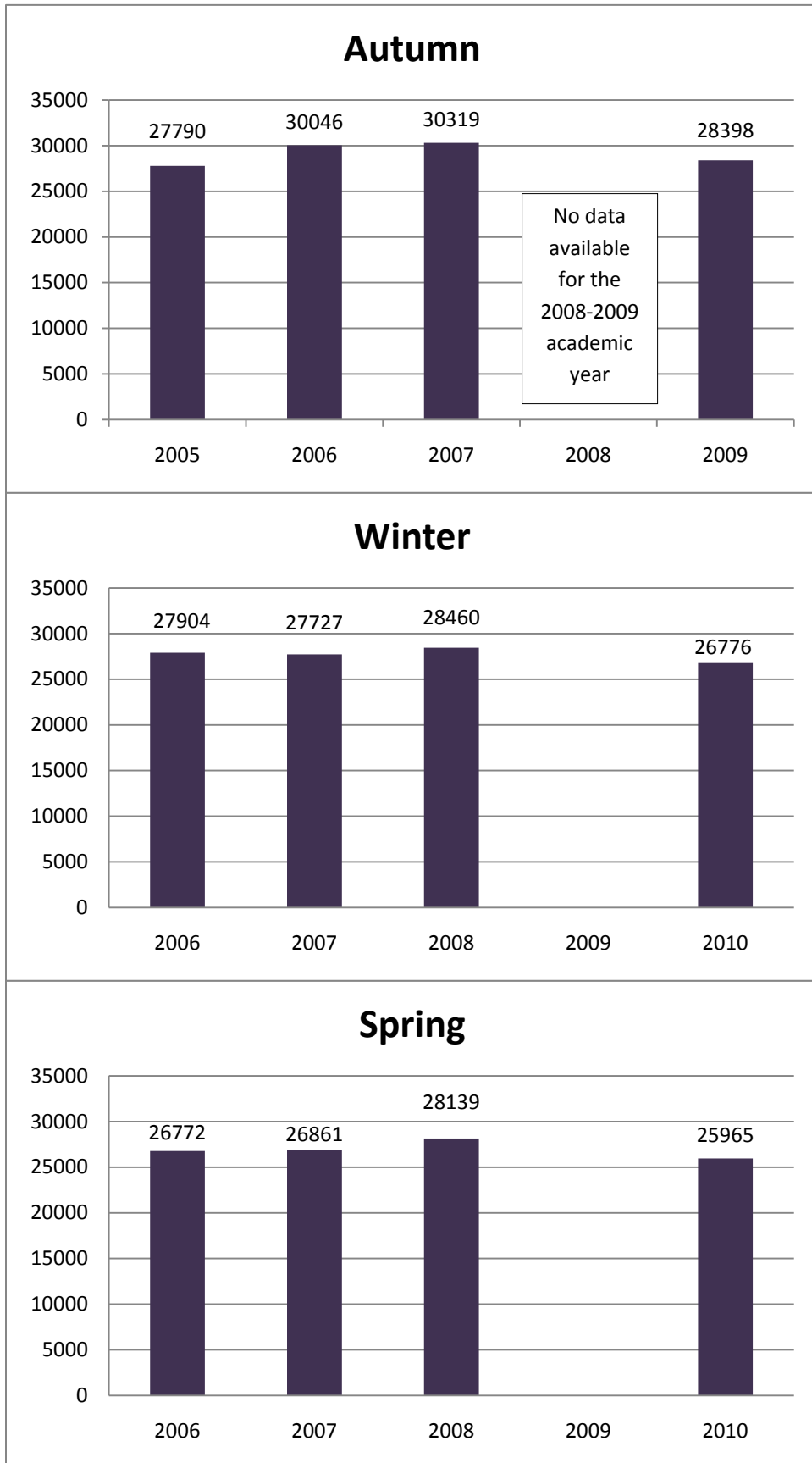


FIGURE 2: UNIQUE USERS BY SPACE

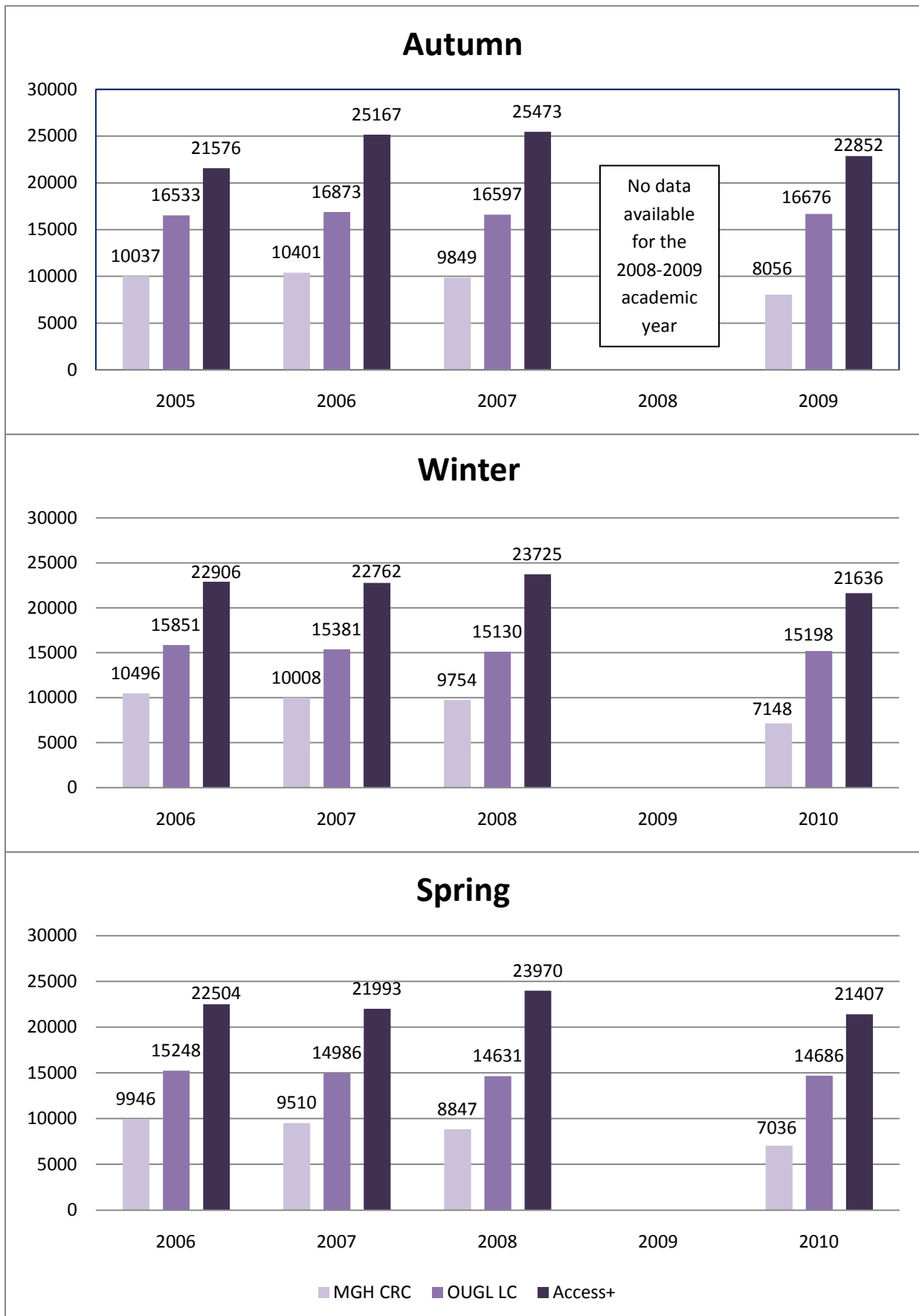


FIGURE 3: TOTAL LOGINS

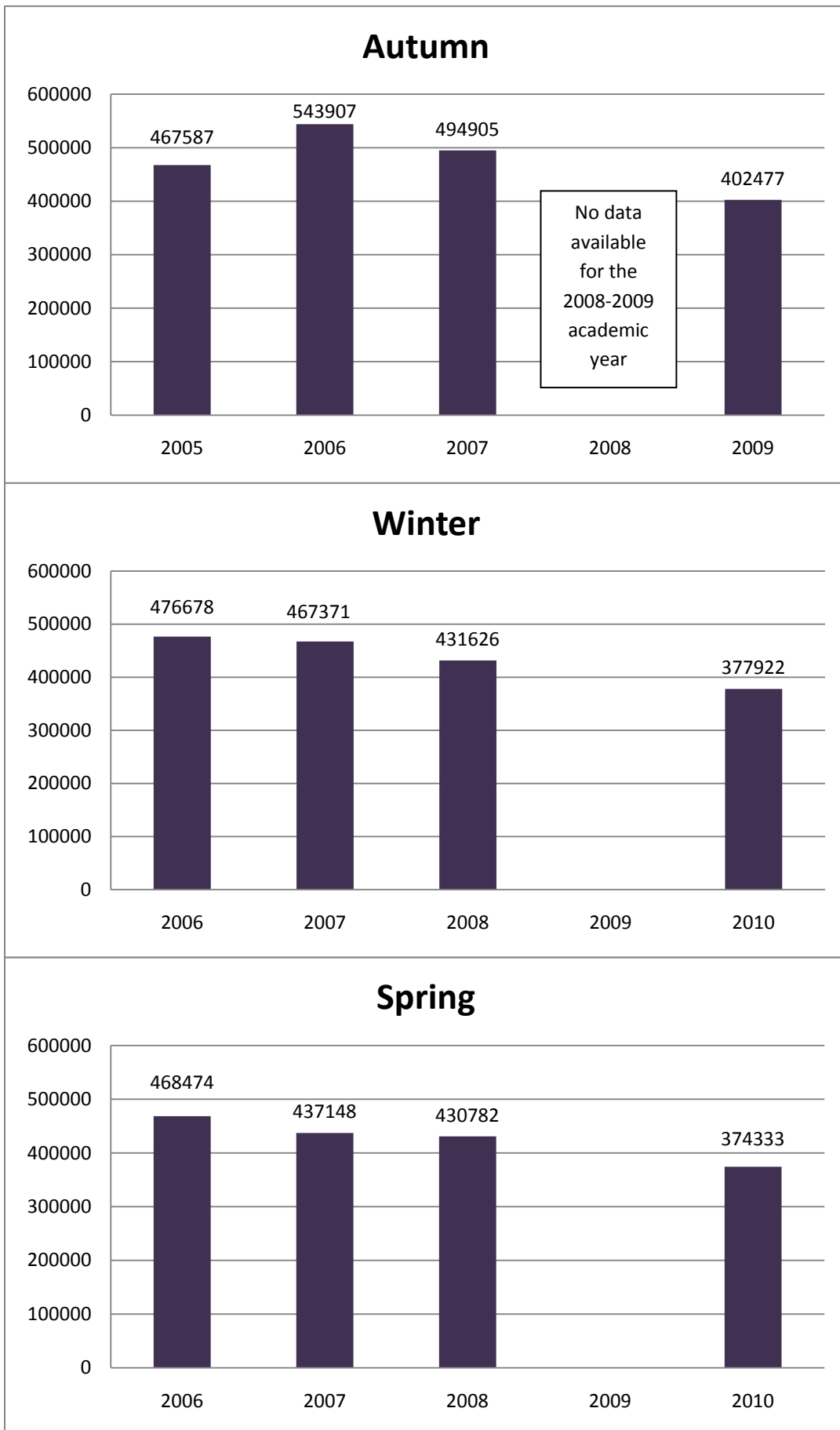


FIGURE 4: TOTAL LOGINS BY SPACE

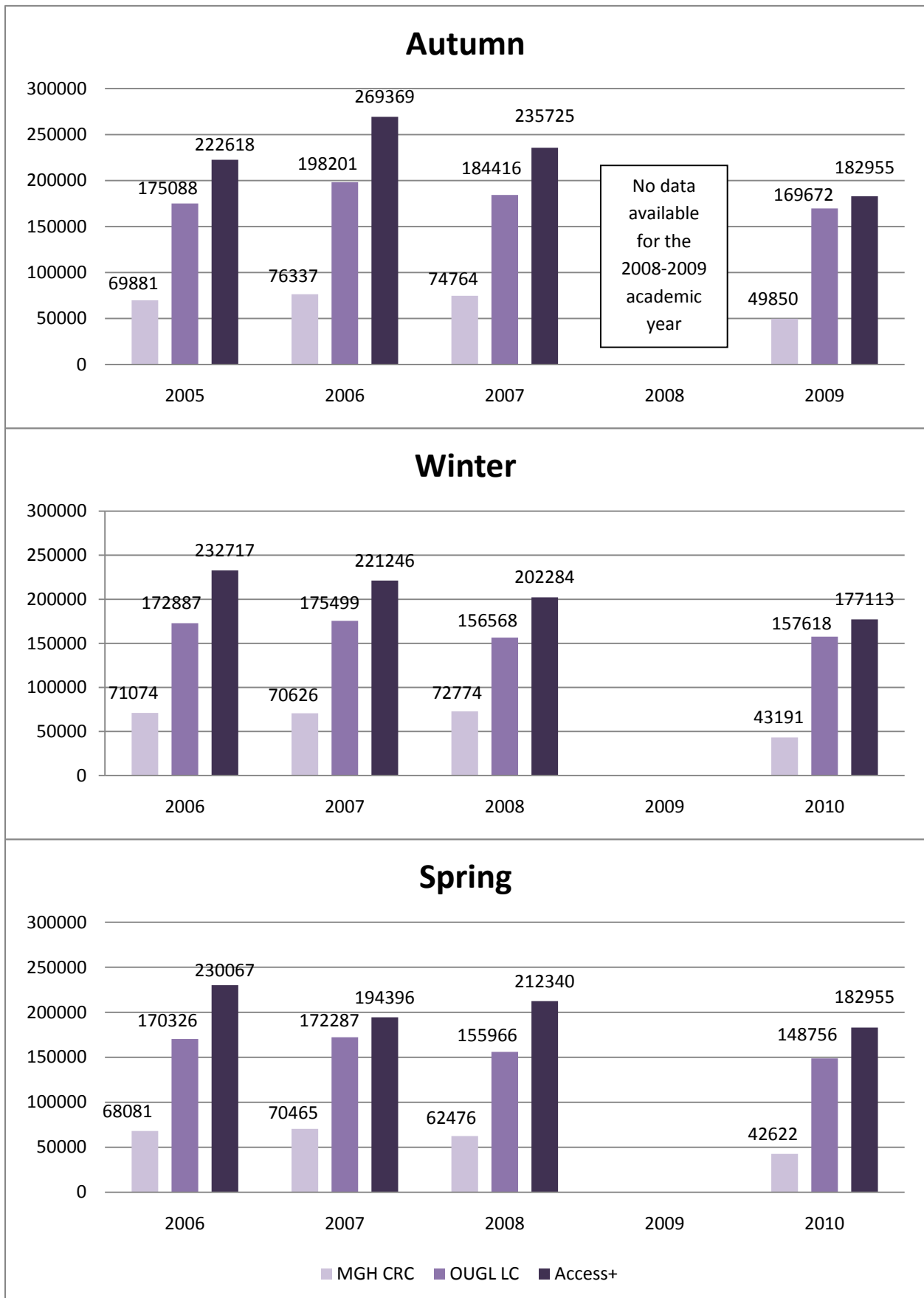


FIGURE 5: AVERAGE LOGINS PER HOUR OPEN

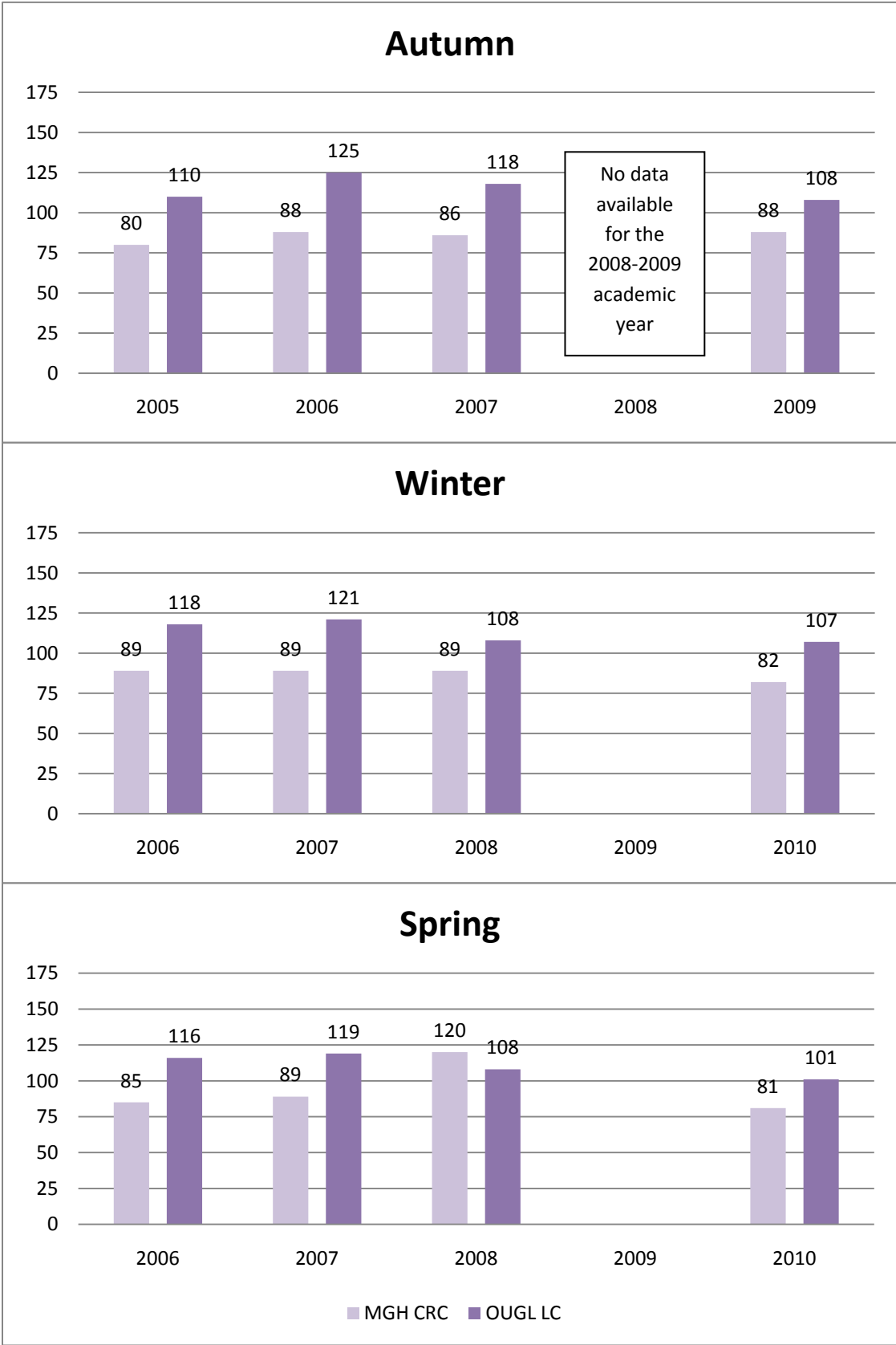


FIGURE 6: AVERAGE LOGINS PER MACHINE

