LA TROBE UNIVERSITY LIBRARY

SEATING USAGE SURVEY 2004
Albury-Wodonga, Bendigo, Bundoora Campus Libraries

Objective of the Survey

To determine

1. How heavily each type of library study seating is used

2. Peak occupancy periods

The survey information will be used to monitor the adequacy of the overall balance of different seating types in the libraries and make adjustments as necessary. The survey is being undertaken as part of the 2004 library strategic priority "examine the physical environment across all campuses to identify areas for improvement".

Methodology

The method used was based on the "Facilities Use Rate" methodology, as described in Van House, N. *Measuring academic library performance (*ALA, p 82, 1990). This provides a simple to use method which is widely used by academic libraries in the United States. Both facilities use rate and seat occupancy rate are also included in the ISO Standard 11620 as key Library Performance Indicators.

Each count consists of recording the number of individual places in the relevant seating category that is occupied. Places are also considered to be occupied if personal belongings or papers (but no person) is present.

The survey was undertaken during the period Monday 13 – Friday 24 September.
The types of seating were broadly categorized, however, seating category types used in the survey varied between campuses according to the facilities available at each campus, and also what was seen as the most useful data to collect. A correlation between the naming of seat types is given in the following table:

Bendigo	Bundoora	Albury Wodonga
Casual seats		Casual seats
Single study carrels	Single study seating	Single study carrels
	Carrels (single study rooms)	
Group study tables	Group study seating	Group study tables
		Group study rooms
Computer study workstations (standing),	Computer workstations (including seating and standing)	Catalogue terminals
Computer workstations and AV/microform stations(seated)		Internet terminals
	AV computer workstations	
	Microform stations	Microform station
	AV viewing booths	AV (video) player

Occupancy counts of the different categories were undertaken every hour, on the half hour, between 9.30 and 4.30 each day. At Bundoora counts were hourly. At Bendigo and Albury-Wodonga, counts were every two hours. At Bendigo, the counts were made on the alternate hours during the second week.

Each count consisted of recording the number of occupied seats in each category. Places were considered occupied if personal belongings or papers (even if no person) were present. In addition to occupancy, queues at each facility were counted if present. An optional count was made of the number of laptops in use in the various areas.

A record of library staff time taken to undertake the survey was also kept.

Data Collection Methods

At the Bundoora Campus, Library Attendants collected the data under the supervision of the Attendant Team Leader. As most attendants had been involved in surveys before, it was considered that formal training sessions were not needed. Two attendants who were new to this type of work received informal training. The Attendant Team Leader provided a "help" sheet to each attendant collecting data.

At the Bendigo Campus, Lending Services staff were rostered to undertake the counts, under the supervision of one of the Library Officers in the section. At Albury-Wodonga library staff were also assigned to undertake counts on a rostered basis.

Student Seating Ratios 2004

	Albury-Wodonga	Bendigo	Bundoora
EFTSU (March 2004)	984.2	3350.6	13880
Seating	228	236	1135
Seating ratio	1:4	1:14	1:12

Time Taken for the Survey

This first survey will be the most time consuming as procedures needed to be discussed with staff undertaking the data collection at each campus, data collection forms had to be produced, and spreadsheets had to be developed to analyse the results. The counting itself was relatively fast. The total time for all campus surveys was approx 90 hours.

Action	Bendigo	Bundoora	Albury-Wodonga
	Time taken – hrs	Time taken – hrs	Time taken - hrs
Meeting time	2.5	3.5	
Initial count of seating types	0.5	2.0	
Development of forms	3.0	2.0	5.0 (also includes above tasks)
Collection of data	4.2	25.0	3.2
Development of spreadsheets	8.0	17.0	3.0
Analysis and writing	2.0	8.0	1.0
Total hours	**20.2**	**57.5**	**12.2**

Summary of Results

Individual campus results are detailed in the relevant sections below and, as expected, there is some variation across the campus libraries, according to the types and distribution of seating and the overall seating/EFTSU ratio. Some cross campus commonalities are evident from the survey results. Briefly these are

- The highest occupancy rates occur from Monday to Wednesday, and for two campuses over the span 11.30 am – 2.30 pm. Lowest occupancy rates occur on Friday.
- Computer workstations have the highest occupancy rates, in some cases more than 100%, as demonstrated by queues. This indicates, and is supported by the 2004 Library Survey results, that there is a shortage of this facility at each of the campuses, though the "degree" of shortage varies from campus to campus.
- Single study space has, in general, the lowest use rate.
- Group study facilities are often used in preference to single study space by a single user and his/her accompanying materials, and may be considered "full" by other potential users. Hence the usage figures for group study space may not reflect its overall popularity.
- Personal laptop use is becoming significant and the library needs to provide appropriate study space for this.

Of major importance will be the consequential actions that are taken as a result of the survey findings as a means of improving overall study space types and their distribution for library users. These vary with the campus library and are outlined in the individual campus reports.

Future Surveys

The survey was the first time a cross campus approach to this data collection activity has been taken. In terms of the conduct of future surveys the staff involved in this project suggest the following

1. Cross campus seating use surveys should be conducted every two years, with the next conducted in 2006 and in a busy period of 1st semester (for example, May). First semester is generally thought to have a higher library use, including seating use, so it will be the opportunity to test this in 2006. The survey should then be routinely conducted in approximately the same time period in future years.
2. Individual campus libraries may wish to conduct a seating usage survey in the alternate year to monitor any changes implemented. For example Bendigo will undertake a survey in 2005 to look at the impact of the increase in computer workstation number (and the decrease in single study seating).
3. The methodology used in this survey should continue to be used for future surveys.
4. Prior to the next survey it would be useful to come up with common cross campus terminology for the different seating types e.g. definition of the term "carrel", and common terminology for presentation of the results
5. The final reports of seating usage surveys that are undertaken should be published on the library web site in the area Library Surveys

Helen King
24 November 2004

Bendigo – Results

Survey Dates and Times
Week 1 (13-17 September) 10.30; 12.30; 2.30; 4.30

Week 2 (20 – 24 September) 9.30; 11.30; 1.30; 3.30

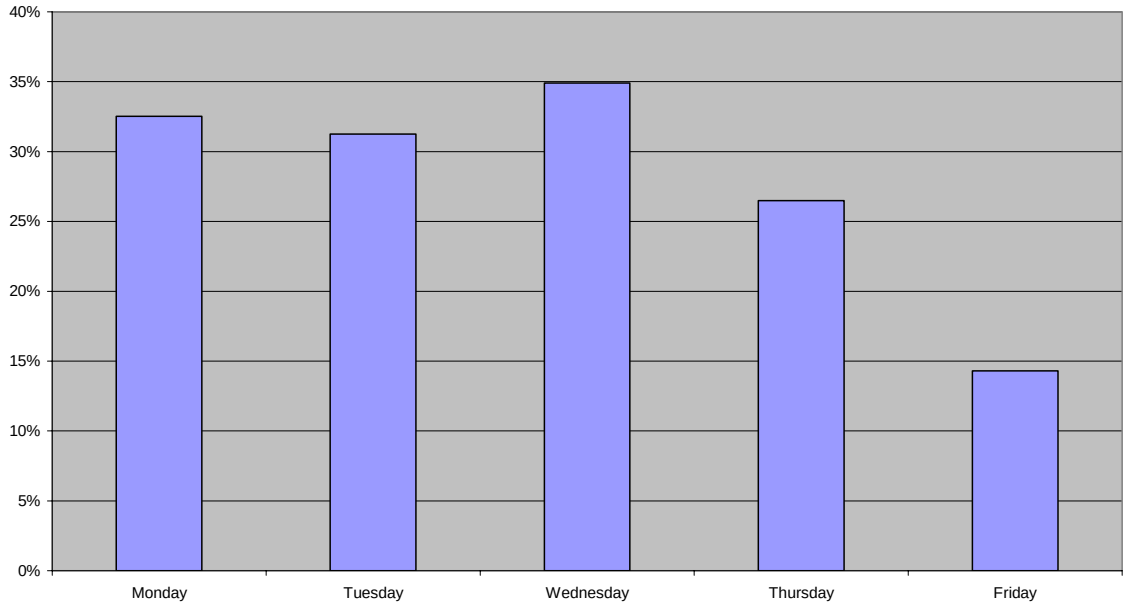
Number and Distribution of Seating Types
The overall number of seating spaces is 236 and the breakdown (all levels) is

Single study carrels and tables	89
Group study seating	76
Casual seating	24
Computer workstations (seated, incl. Training Room)	36
Computer workstations (standing)	11
Total	236

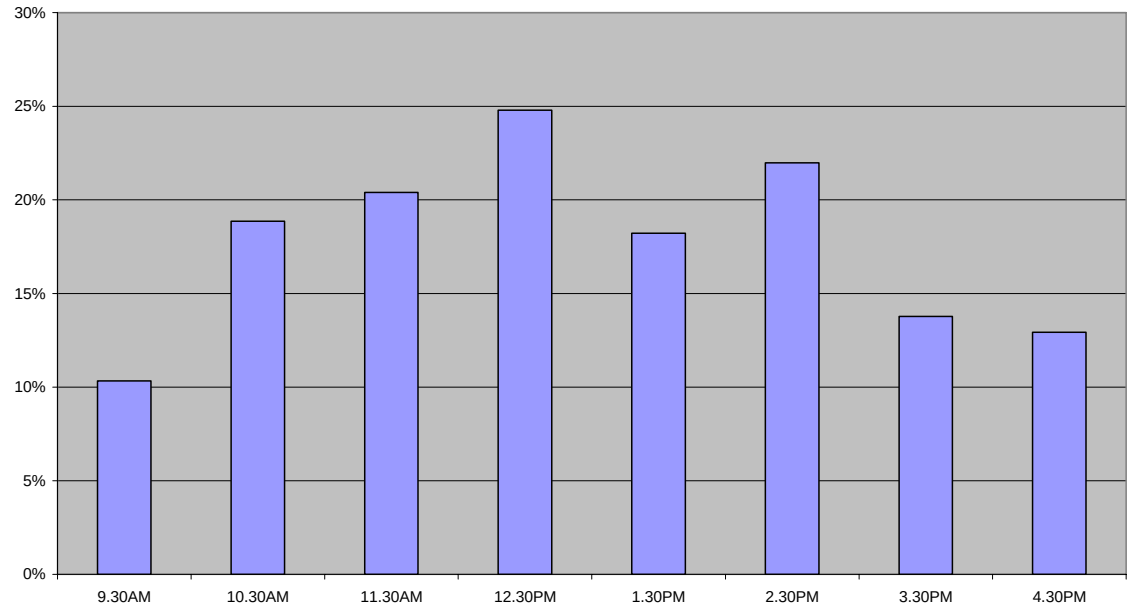
Summary of the results

- Average use is highest on Wednesdays
- Average use is highest at 12.30pm
- Computer workstations (seats) have the highest average use
    - Single 25%
    - Group 24%
    - Casual 12%
    - Computers (seats) 74%
    - Computers (standing) 46%
- The maximum use for each type of seating during the survey was
    - Single 52% (12.30pm Tuesday)
    - Group 49% (2.30pm Wednesday)
    - Casual 38% (11.30 Wednesday)
    - Computers (seats) 97% (12.30pm Monday)
    - Computers (standing) 109% (12.30pm Tuesday)

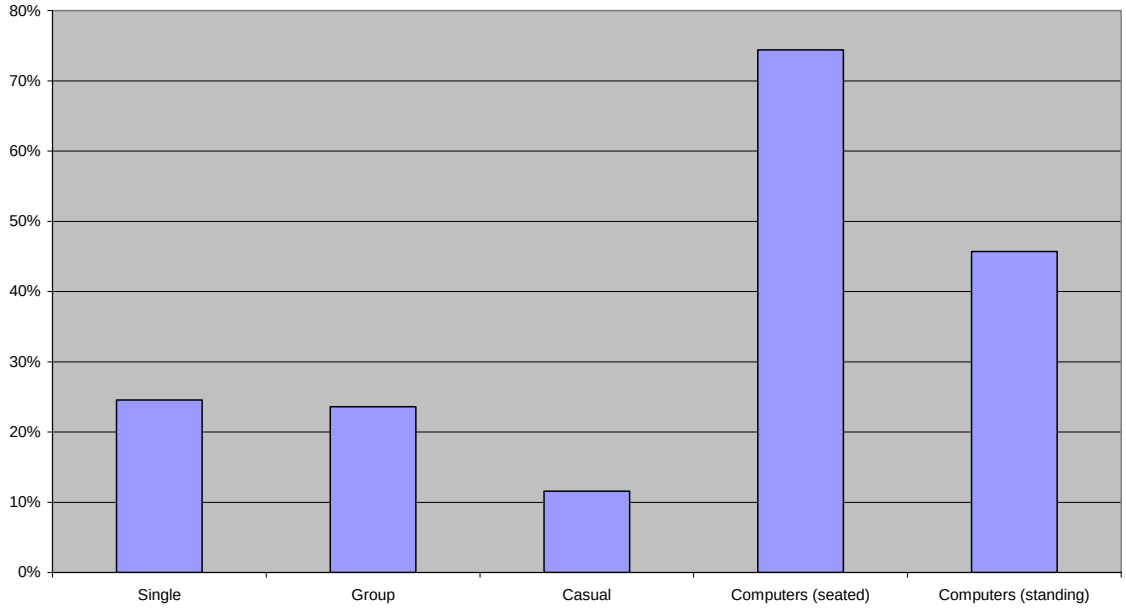
Average Use by Day



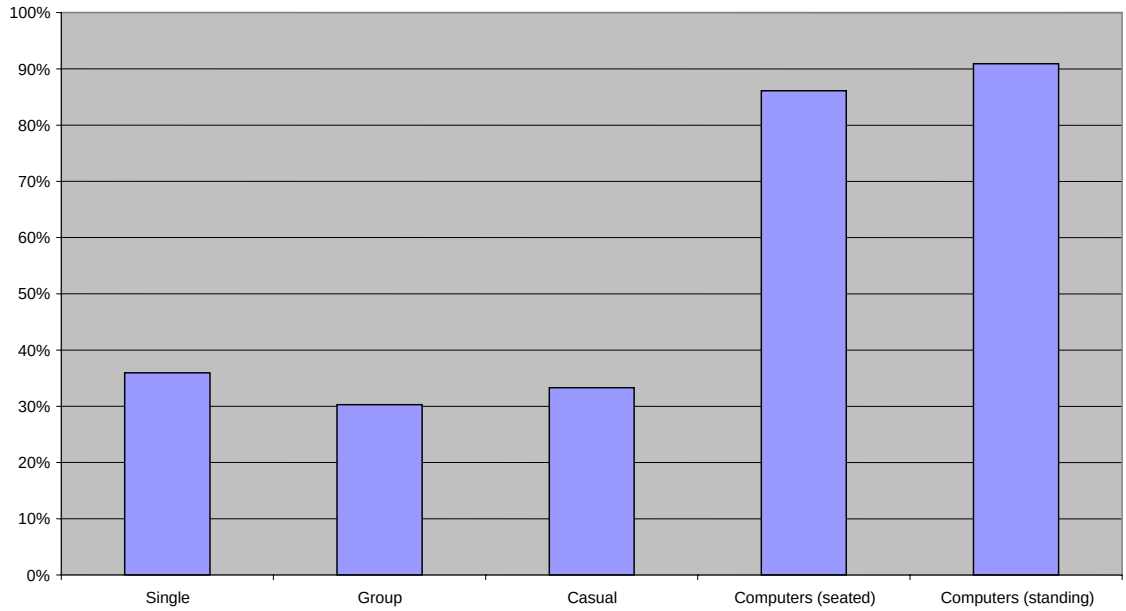
Average Use by Time

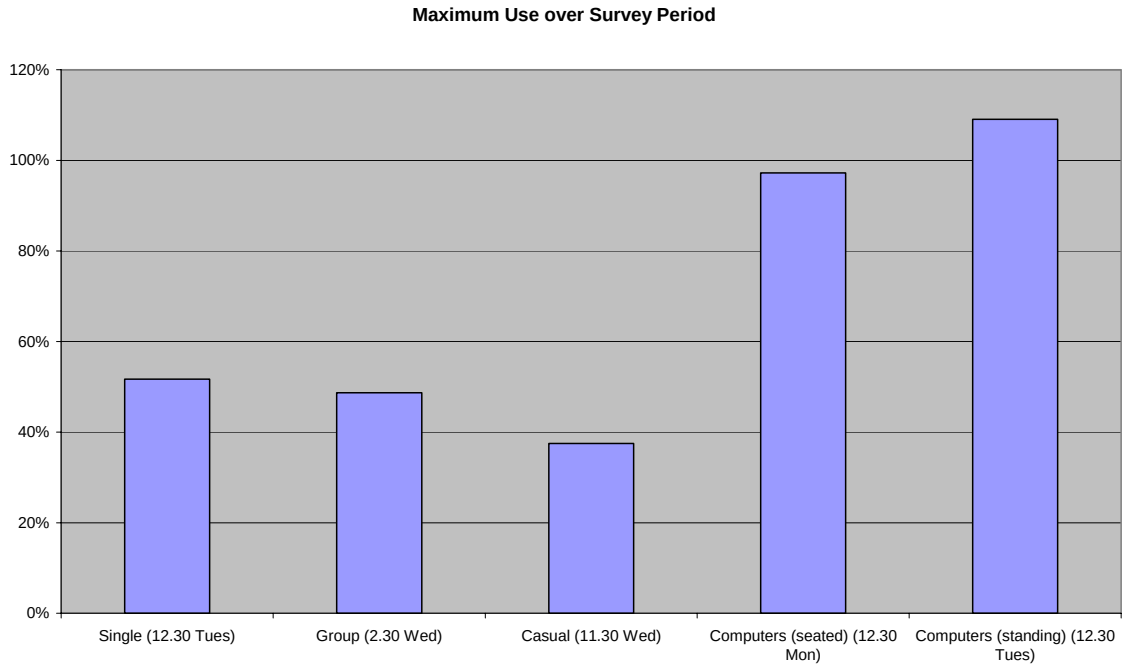


Average Use by Type



Average Use by Type (Peak Day and Time–Wed. 12.30pm)





Responses to the Results

Although the overall seating to student EFTSU ratio is very high at 1: 15, there are some opportunities for improving the current balance and distribution. The computer workstations (seats) show the highest average use over the time that the library is open, well ahead of any other area. Peak use is almost 100%. Demand for this type of study space and its shortage is also clearly demonstrated in the 2004 Library Survey results, both the response to the variable "number of computer workstations is adequate" and the comments provided on the survey forms. Based on the survey results, this situation has worsened since the 2002 Library Survey.

No queues were recorded over the survey period, but this is more likely to be a consequence of absence of suitable space to queue. The use of laptops is rapidly increasing, with the mezzanine floor the most popular. This was designated as laptop space and provided with power points and suitable tables some years ago, however takeup is quite recent. At the busiest time, four laptops were being used in this area.

The occupancy of single study spaces was low. Even at the busiest time it was only 52%. The occupancy rate of group study space (tables) is worth noting. Even in the busiest time it was less than 50%. However, as noted in the Albury-Wodonga report, group study areas may be considered 'full" by others even if only one person is using the facility. The trend for users to prefer tables for single study rather than small study carrels meshes with observations that this extra space is needed to spread the range of material types comfortably, even if only one person is using them.

As a response to the seating usage survey, the library will convert an area of the mezzanine floor, which currently provides single study spaces, to computer workstation space. It is likely however there will be a net loss of overall study spaces, as the space required for individual computer workstations is greater than for single study carrels. Nevertheless, as only 52% of single study space is used, even at the peak period, this appears a more useful configuration for clients, within the current space constraints of the library.

Helen King

Albury-Wodonga - Results

The seating survey was undertaken in the two week period, September 13th to September 24th, 2004 and conducted four times a day, Monday to Friday, at 10.30am, 12.30pm, 2.30pm and 4.30pm. The numbers of seats occupied, or deemed to be occupied, was counted at each session and recorded by seating type

Average occupancy
The results indicated that the most frequented form of seating was the Internet terminals (60%), followed by the casual seating (29%) and then the group study tables (10%). Single study carrels were the least used, with an average use rate over the period of 3% occupancy.

Types of seating	No. available	Average Use	Average Rate	%
Casual Chairs	6	1.73	0.29	**29**
Video Player	1	0.08	0.08	**8**
Reader/Printer	1	0.13	0.13	**13**
Group Study Rooms	26	2.73	0.10	**10**
Catalogue terminals	7	1.03	0.15	**15**
Internet terminals	23	13.80	0.60	**60**
Group study tables	40	7.08	0.18	**18**
Single carrels	124	4.00	0.03	**3**
Totals:	228	30.55	0.13	**13**

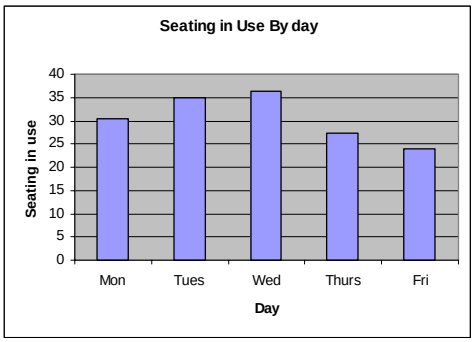
Most Frequent use
Wednesday at 10.30am was the time when most seating was occupied. This differs from the time identified as the busiest by staff and desk statistics, which is the 11.00am – 1.00pm period.

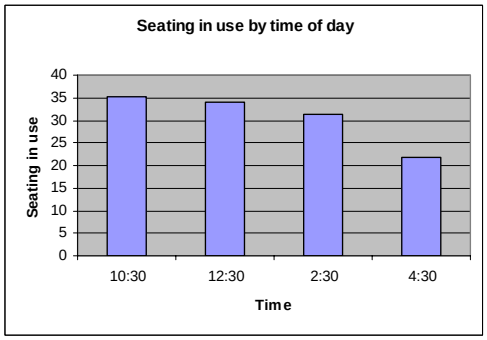
During that day and time, a similar pattern of use was observed, with 87% of Internet terminals occupied, 33% of available casual chairs occupied and only 4% of single study carrels occupied.

Usage on the busiest day (Wednesday 10.30am)

Wednesday		**Time: 10.30**		
Types of seating	**No. available**	**in use**	**use rate**	**%**
Casual Chairs	6	2	0.33	33
Video Player	1	0	0.00	0
Reader/Printer	1	0	0.00	0
Group Study Rooms	26	0	0.00	0
Catalogue terminals	7	0	0.00	0
Internet terminals	23	20	0.87	87
Group study tables	40	11	0.28	28
Single carrels	124	5	0.04	4
Totals:	228	38		

Identifying the busiest period





Heaviest use of seating type

Types of seating	No. available	Use	in use	%
Casual Chairs	6	5	0.83	83
Video Player	1	1	1.00	100
Reader/Printer	1	1	1.00	100
Group Study Rooms	26	12	0.46	46
Catalogue terminals	7	3	0.43	43
Internet terminals	23	20	0.87	87
Group study tables	40	16	0.40	40
Single carrels	124	12	0.10	10
Totals:	228	70	0.31	31

This table records the single heaviest use of each seating type that was recorded over the two week period.

Analysis
With the most popular form of seating type, Internet terminals, revealing an 87% occupancy rate at the peak time over this two week period, seating in the David Mann Library is currently meeting need.

Group study tables and rooms are also a popular form of seating, although a raw count of persons seated may be misleading. Groups study rooms and group study tables are considered 'full' by other students, once there is even one student using that facility. The Groups Study Rooms, for example, may have only recorded use by 4 students (out of a possible 24 seats) yet that could occupy each of the 4 study rooms.

The use of single study carrels across all days and time slots was very low. This would indicate that, as the need for additional space in the Library grows, removing single carrels would have the least impact on student use.

Recommendations
No action is necessary at the moment as seating appears to meet the current needs of our students.

Linda Sheridan
Campus Librarian
Albury-Wodonga

Bundoora – Results

Survey Dates and Times

Week 1 (13-17 September) 09:30, 10:30; 11:30, 12.30; 13:30, 14:30, 15:30

Week 2 (20 – 24 September) 09:30, 10:30; 11:30, 12.30; 13:30, 14:30, 15:30

Number and Distribution of Seating Types

The overall number of seating spaces is 1,135 and the breakdown is

Level 1	Single study seating	192
	Carrels	2
	Computer workstations	9
	Microform	4
	Total	**207**
Level 2	Group study seating	128
	Computer workstations	108
	AV viewing booth	38
	AV viewing rooms (6)*	
	AV computer workstations	28
	Microform	7
	Total	**309**
Level 3	Single study seating	551
	Carrels	37
	Group study rooms (2)*	
	Computer workstations	31
	Total	**619**

All Levels	Single study seating	743
	Group study seating	128
	Carrels	39
	Computer workstations	148
	AV computer Workstations	28
	AV viewing booth	38
	(16)/listening (22)	
	Microform	11
	Total	**1135**

*These rooms are counted as “used” or “not used” irrespective of the number of occupants.

Student EFTSU

The table below illustrates the changes in the ratio of seats to student EFTSU
The drop in number of seats available in 2004 was due to 24 single seats being removed from level one at the end of 2003.

	2004	**2003**
Available Seating	1135	1159
Student EFTSUs	13880	14180
Ratio of seats to students	1:12	1:12

Statistical Analysis

Statistics were collected on a daily basis on weekdays over two consecutive weeks. Seven sets of data were taken on each day at hourly intervals starting at 09:30am and finishing at 15.30pm. The data collected indicated occupied single study seats, group study seats, AV computer workstations, AV viewing booths, carrels, computer workstations [including people waiting to use computers] and number of laptop computers. The data collected for group study rooms and AV viewing rooms were defined only as U=used or NU = not used.

From this data and the number of each seating type available [excepting laptops] the rate and percentage use were calculated for each seating type for each level for each time slot on each day.

To obtain daily averages, the hourly usages were summed and the average taken to obtain the average usage for each day for each seating type and each level. The average total occupancy use for each day was also calculated. Following this the average of the two Mondays was calculated for each seating type *per* level and so on for the following successive days of the week. This gave an average use of each seating type, for each level and total library occupancy, for each day from which it became possible to compare the relative usage between days over a week. This showed that Monday and Tuesday, in general, were the busiest days and usage dropped for the rest of the week with lowest average being on Friday
For example:

Monday, Level 1, computer seating

time slot	available seats	seats in use	usage rate	% usage
9:30	50	30	0.6	60
10:30	50	25	0.5	50
11:30	50	21	0.42	42
Average use for day		25.3	0.5	50.7

This example, when repeated for each day, indicates the relative usage by day, level 1, computer seating

The trends over the period of a day were obtained by summing each individual time slot over the ten days of the study for each seating type and each level to obtain an average usage for each time slot. This illustrated that for most seating types there was a sharp rise in usage culminating in a maximum around the middle of the day followed by a slight tapering off towards the end of the day.
For example:

Monday, Level 1, computer seating

time slot	Mon	Tues	Wed	available seats	average use	usage rate	% usage
9:30	30	20	19	50	23.0	0.5	46.0
10:30	25	32	35	50	30.7	0.6	61.3
11:30	21	48	43	50	37.3	0.7	74.7

This example, when repeated for each time slot, indicates the relative usage by hour, level 1, computer seating

To obtain daily averages for group study rooms and AV viewing rooms the following calculations were applied. Each Use (U) or non-Use (NU) was counted as one occupancy for each time slot, day and level for both weeks. The daily totals were added and divided by the number of time slots (7) to give daily averages. This calculation gave the relative percentage use by day for these rooms.

For laptop use, the sum of the usages for all time slots in one day was divided by the number of time slots (7) to calculate the average use for each day. The result for the average weekday was calculated by adding the average from the same day of each week and dividing by two. Similarly, the counts for time slot were summed and divided by the number of days (10) to obtain the average use in each time slot

Survey Results

Individual peak point maxima are listed in Appendix one.

1. Data sorted by weekday

A) The busiest day of the week is Monday with a daily average occupancy of 44.5% followed by Tuesday, Wednesday, and Thursday with Friday finishing at 24.8%. This confirms what has been experienced in the past with Friday usually being the quietest day in the library.

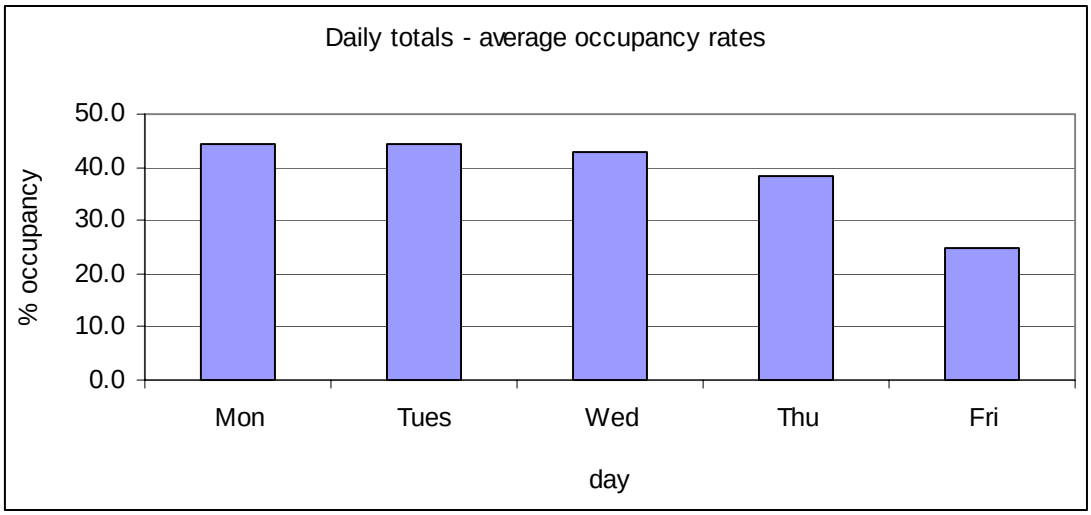
The daily totals/average occupancy rates are shown in Table 1 and Graph 1

Table 1 Daily totals - average occupancy rates

	Mon	Tues	Wed	Thu	Fri
average use all types	505	502	485	436	282
% average use all types	44.5	44.2	42.8	38.4	24.8

Total number of available occupancy positions are 1135

Graph 1 Daily totals - average occupancy rates



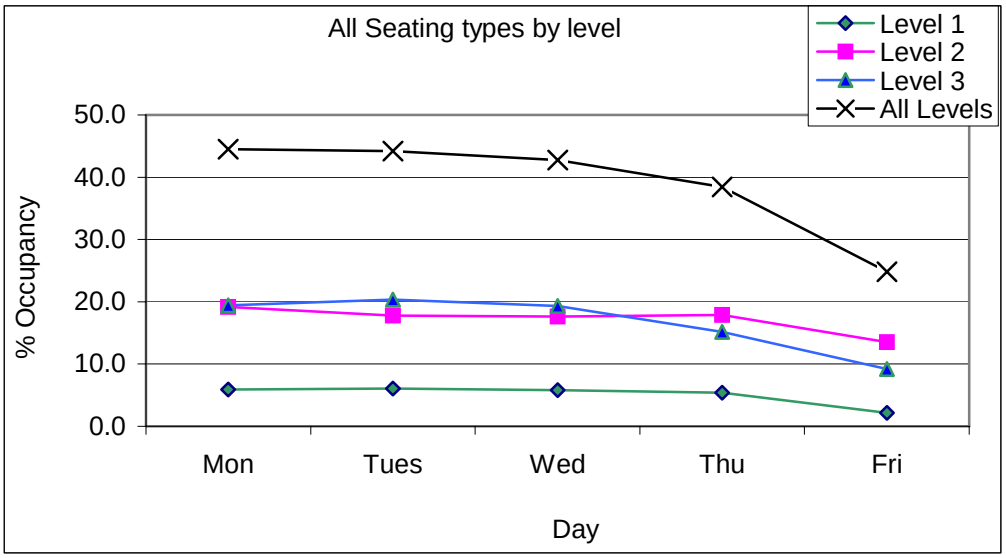
The peak occupancy rate of 50.3% was on a Monday.

B) Busiest day sorted according to levels: Table 2 and Graph 2 show that Monday and Tuesday are the busiest days for each level with a steady drop off in numbers from Wednesday to Friday.

Table 2 Daily totals - average occupancy rates showing all levels

		Monday	Tuesday	Wednesday	Thursday	Friday
Level 1	average use all types	67	69	66	61	24
%	% average use all types	5.9	6.0	5.8	5.4	2.1
Level 2	average use all types	217	202	200	203	153
%	% average use all types	19.1	17.8	17.6	17.9	13.5
Level 3	average use all types	221	231	219	172	104
%	% average use all types	19.4	20.4	19.3	15.2	9.2
total	average use all types	505	502	485	436	282
total %	% average use all types	44.5	44.2	42.8	38.4	24.8

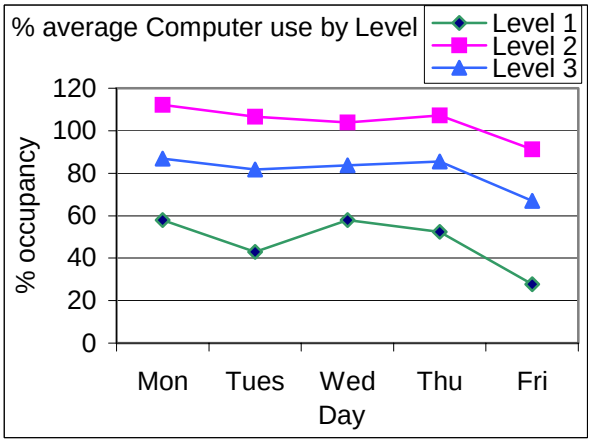
Graph 2 Daily totals - average occupancy rates showing all levels



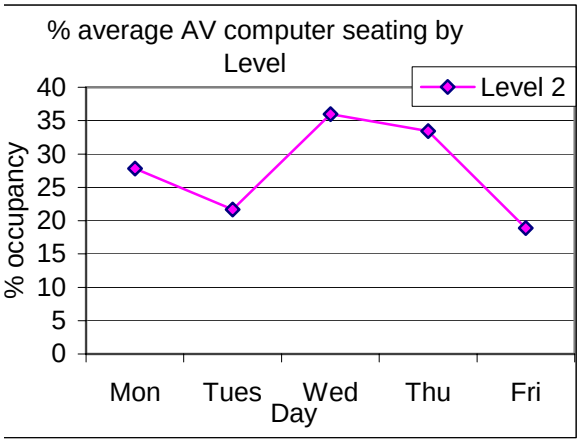
C) Daily average usage according to type of occupancy: Graph 3 shows that the computer use on Level 2 has queues on all days except Friday. The computer use on Level 3 is fairly high while the trend for Level 1 is about 50% usage. The comparative trends are consistent with other data, in that Level 1 seems to attract fewer Patrons and that custom appears to fall off on Fridays, usually Friday afternoons.

Graph 4 which shows the average daily AV computer use does not appear to indicate any particular pattern.

Graph 3 %average computer use



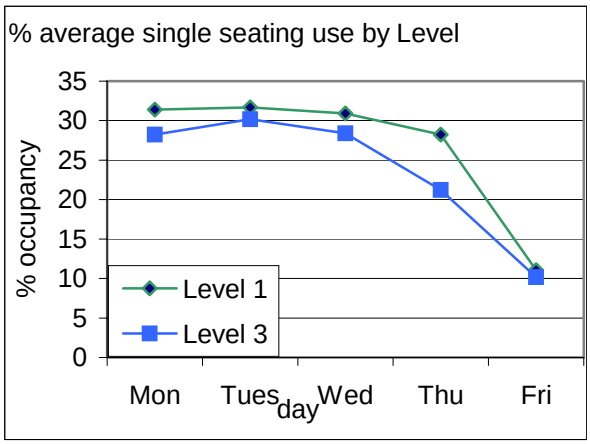
Graph 4 % average AV computer use



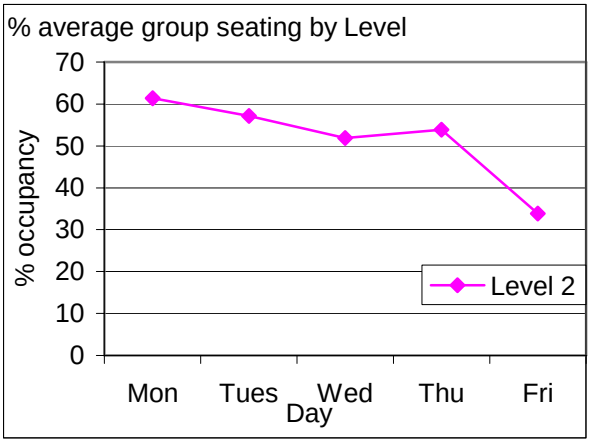
The peak computer use of 122.6% was on a Monday and the peak AV computer use of 36.0% was on a Wednesday.

The average single seating use shown in Graph 5 reflects the general pattern obtained by the total seat data, namely a relatively high percentage use at the start of the week tapering off rapidly at the end of the week. Whereas the group seating available on Level 2, shown in Graph 6, indicates approximately double the seating occupancy of the single seating.

Graph 5 %average single seating



Graph 6 % average group seating

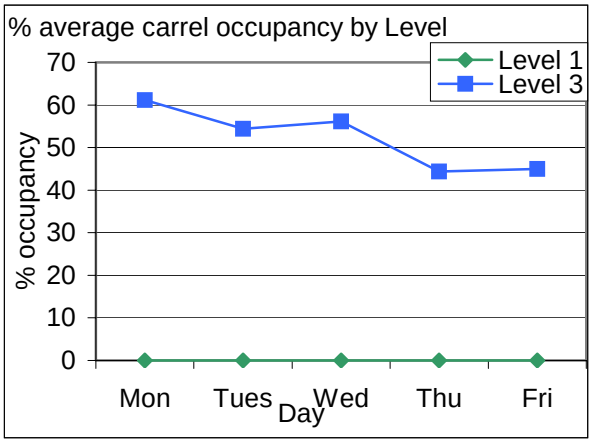


The peak single seating rate of 53.8% was on Tuesday and the peak group seating rate of 93.8% was on a Monday.

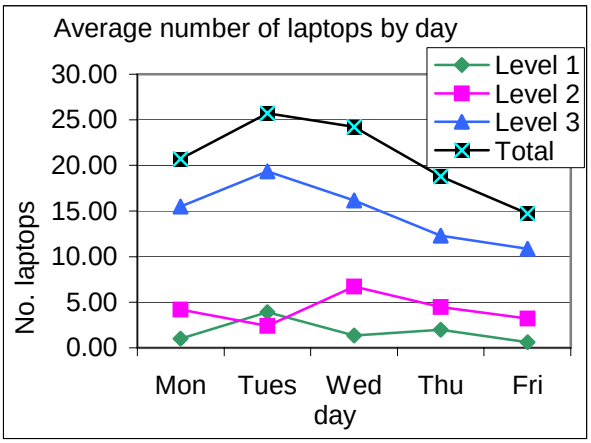
Carrels, in general, appear to be in demand to a similar extent as is group seating with the exception of those carrels on Level 1 which appear to show no usage at all. Because of their larger dimension, these carrels are reserved for patrons with disabilities.

Since the laptop computers brought into the library are the personal possessions of the patrons, there is no absolute reference point for the number of laptops possible. The number of laptops illustrated in Graph 8 was derived by calculating the number of laptops in use in any given hour on that day. This was done to facilitate the forecasting of potential needs by laptop users.

Graph 7 % average carrel occupancy



Graph 8 Average number of laptops



The peak carrel occupancy of 84.6% was on a Wednesday.

Table 3 Group Study Rooms average occupancy rate

	M	T	W	Th	F	
week 1	6	5	5	6	6	
week 2	2	6	5	7	3	
Total	8	11	10	13	9	
Average	4	5.5	5	6.5	4.5	overall average
% average use	57%	79%	71%	93%	64%	73%

maximum number of counting periods = 7

Daily average occupancy rate = 73%

Table 4 Group viewing rooms average occupancy rate

	M	T	W	Th	F	
week 1	8	14	10	3	6	
week 2	7	5	9	6	5	
Total	15	19	19	9	11	
average	7.5	9.5	9.5	4.5	5.5	overall average
% average use	54%	68%	68%	32%	39%	52%

maximum number of counting periods = 7

Daily average occupancy rate = 52%

2. Data sorted by time of day

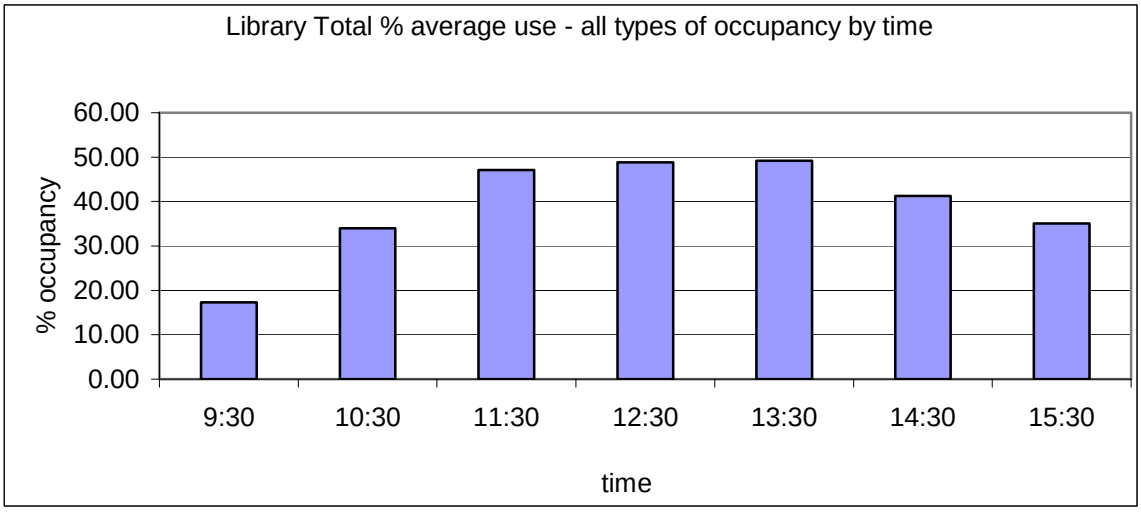
A) Total occupancy sorted by time of day. The busiest time of day is 13.30 with an average use of 49.2% with minimal difference to that of 12.30 pm at 48.8%

The average use for time of day is shown in Table 1 and Graph 1

Table 1 Average use for time of day

Time of counts	9:30	10:30	11:30	12:30	13:30	14:30	15”30
Average use	196.5	385.4	534.2	553.9	558.5	468.1	397.7
% average use	17.31	33.96	47.07	48.80	49.21	41.24	35.04

Graph 1 Average use for time of day



The peak occupancy rate of 54.2% was at 13:30.

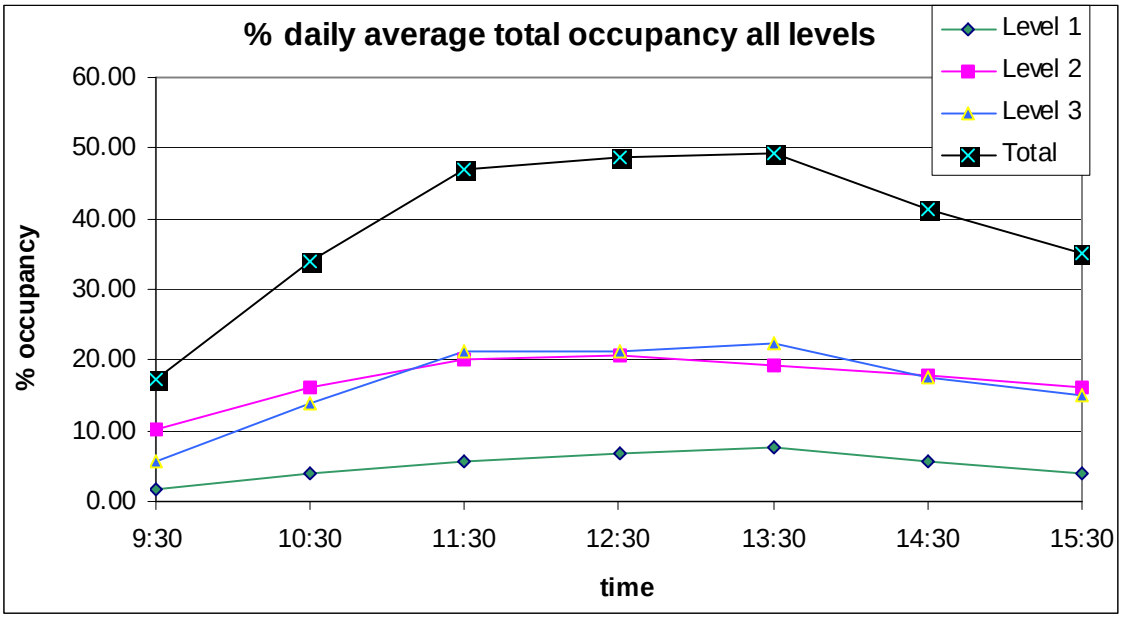
It can be seem from the following table and graph that there is a similar pattern of occupancy for all levels in that there appears to be a relatively slow take-up of available spaces from the start of the day, peaking at the 2 to 3 hours around noon, followed by a relatively slow tapering off towards the end of the day. Data for individual occupancy types will be shown on the following pages.

B) Total occupancy sorted by time of day and by level. Table 2 and graph 2 show the total occupancy rates for each level. These show a consistent occupancy pattern of a relatively low occupancy start with a peak around noon and tapering off towards the end of the day

Table 2 Daily average total occupancy all Levels

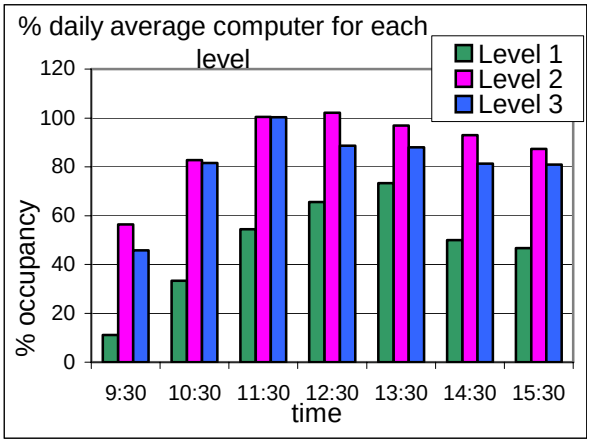
		Time of Counts						
	Level	9:30	10:30	11:30	12:30	13:30	14:30	15"30
Average use	1	19.1	43.8	65.5	77.5	86.6	65.4	44.5
% average use	1	1.7%	3.9%	5.8%	6.8%	7.6%	5.8%	3.9%
Average use	2	114.5	184.6	228.8	234.2	217.6	203.5	182
% average use	2	10.1%	16.3%	20.2%	20.6%	19.2%	17.9%	16.0%
Average use	3	62.9	157	239.9	242.2	254.3	199.2	171.2
% average use	3	5.5%	13.8%	21.1%	21.3%	22.4%	17.6%	15.1%
Average use	Total	196.5	385.4	534.2	553.9	558.5	468.1	397.7
% average use	Total	17.3%	34.0%	47.1%	48.8%	49.2%	41.2%	35.0%

Graph 2 % Daily average total occupancy all Levels

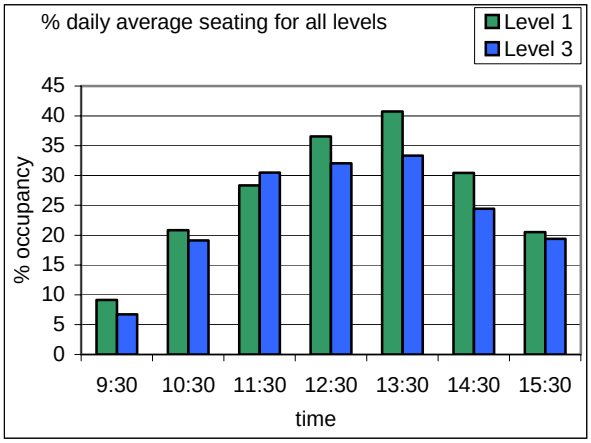


C) Average usage according to type of occupancy and time of day. The trends for occupancy at computers (this data includes queuing) and single seating illustrated in graphs 3 and 4 show the same trend of a relatively low occupancy start with a peak around noon and tapering off towards the end of the day. The computer usage shown in Graph 3 once again highlights the heavy usage of this facility with the emphasis on levels 2 and 3. The significantly lower usage of computers on level 1 can be explained by the fact that there are no printing facilities on this level.

Graph 3 % average computer use



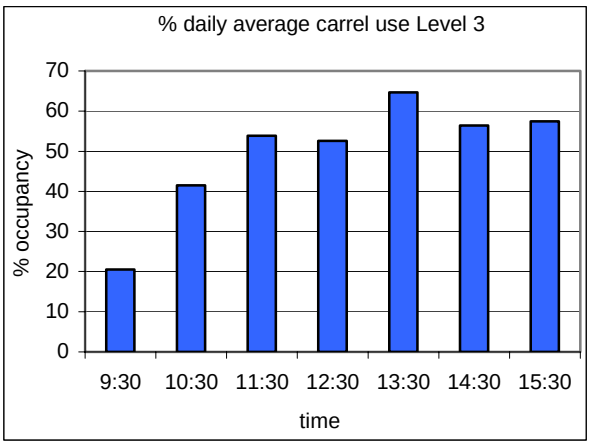
Graph 4 % average single seats



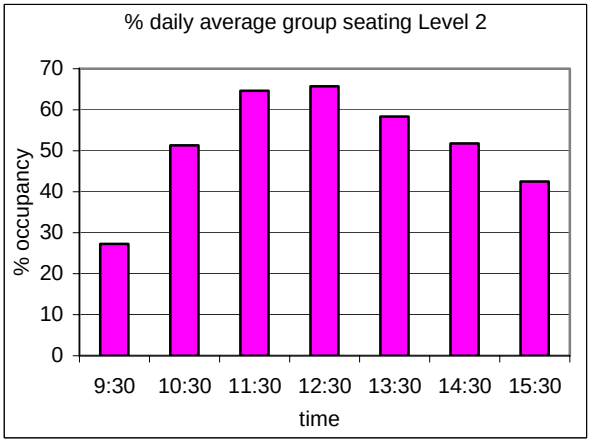
The peak computer use of 126.4% was at 13:30 and the peak single seating rate of 53.8% was at 11:30

Although the group seating usage shown in graph 6 has a similar occupancy pattern of a relatively low occupancy start with a peak around noon and tapering off towards the end of the day, it should be noted that the occupancy rate is up to double that of the single seating and is similar to that shown in graph 5, carrel use on level 3 (note that the only other carrels on level one were not used at all during the time frame of this study). The carrel use shown in graph 6 also tends to be steady for the latter part of the day, if not actually rising slightly.

Graph 5 % average carrel use



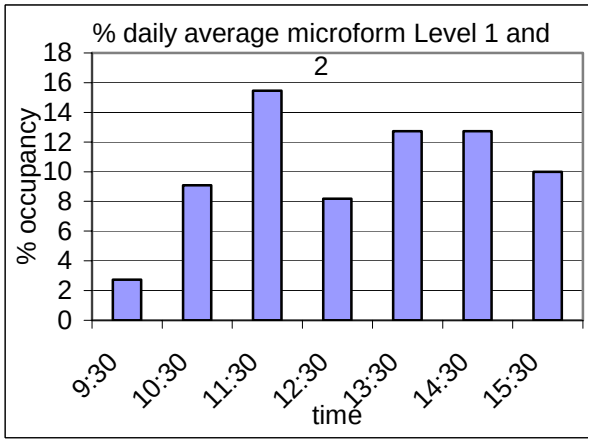
Graph 6 % average group seating use



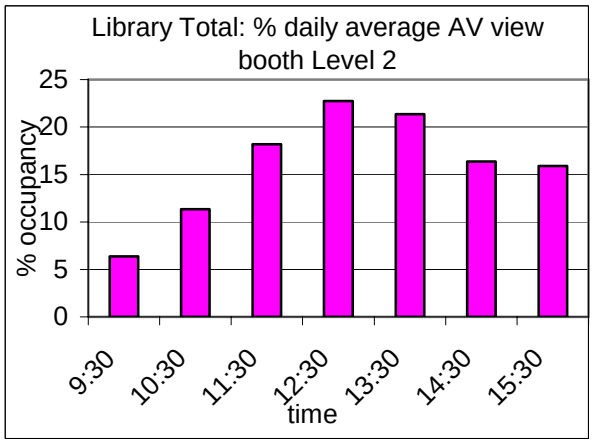
The peak carrel use of 84.6% was at 13:30 and the group seating and the peak group seating of 93.8% was at 12:30.

The pattern of usage for microform and AV viewing booths appears to be steady and consistent.

Graph 7 % average microform use

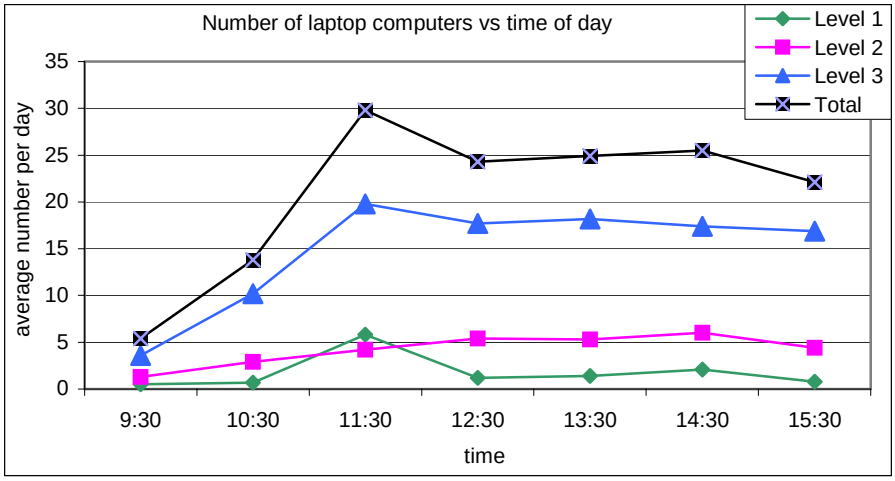


Graph 8 % average AV view booth use



The number of laptops in use shown in graph 9 has a similar pattern of a relatively low occupancy start with a peak around noon and tapering off towards the end of the day.

Graph 9 Number of laptop computers in use



Recommendations:

- Increase the computer workstations on level 1 and level 3 with some organised to seat pairs or groups of students.

- Determine the cause behind the lower computer usage on level one with a view to increasing the patronage of this area. In the short term, if this matter can be addressed easily, the pressure on computer usage for the other levels should be lessened.

- The tendency for secondary education systems to promote group work and study together with evidence from previous seating surveys suggests that single seating is less likely to be in demand. Study spaces which are flexible both in arrangement of seating and number and type of seating provisions should be investigated,

- Changes in technology and the affordability of the technology suggest that there is likely to be trend towards an increase in the number of portable computing e.g. laptop computers. This study shows that most of the computers are in continuous use with queues waiting. This is evident in both the time of day and daily data where the average occupancy rates have risen to above 100% (this figure includes people waiting in queues). Until portable computing becomes more general, the Library should consider increasing the number of computer workstations.

- It should be considered that more laptop areas be set up which provide for the requirements of laptop users and which are consistent with the wireless intra-network signal strength areas. This could also lessen the pressure on the library computers.

- That carrels (as defined at Bundoora) have an occupancy rate up to 50% more than single seating can be explained by patrons requirement for privacy, security and, possibly in some cases, dual occupancy. The number in use appear to be sufficient for current needs, however, this group will need to be monitored carefully to pre-empt possible increases in demand. In particular, experience has demonstrated that here may be a higher demand for study carrels than this study shows. Further study on occupancy rates needs to be done, possibly based on carrel key bookings.

Future Analysis:

Following the analysis of the data in this study, it appears that a more detailed analysis of zone occupancy should be undertaken so as to be able to make more informed decisions on the above recommendations.

Lea Beranek
Acting Resource Delivery Services Librarian and
Audiovisual Collection Development Librarian.

November 2004