

Qualitative and Quantitative Studies at Butler Library: Exploring Student Use of Library Spaces



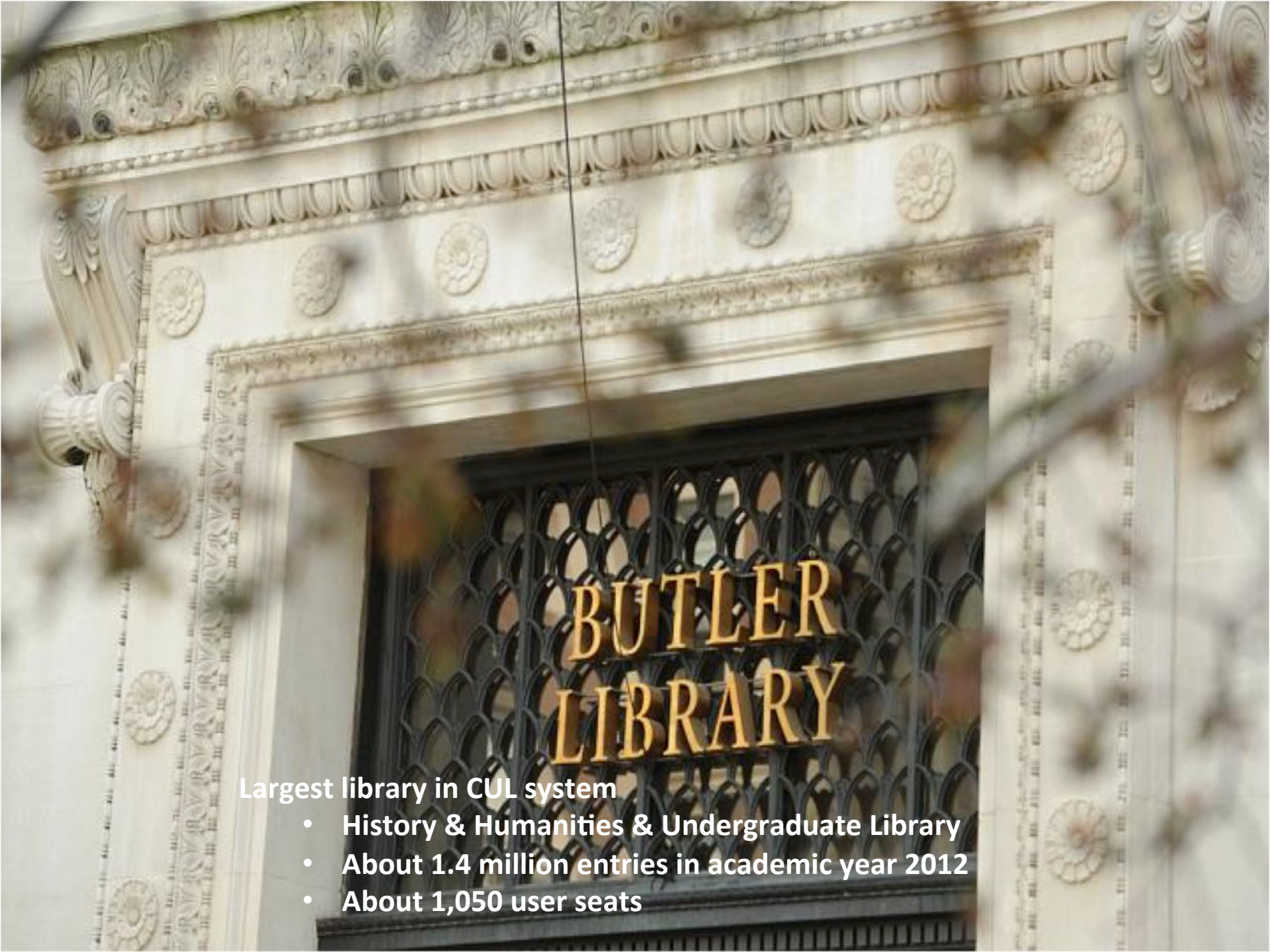
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2013 CLIR Participatory Design Seminar
June 6, 2013



Today's Talk

- Motivation
- Methodology
- Results
- How we used the results?



BUTLER LIBRARY

Largest library in CUL system

- **History & Humanities & Undergraduate Library**
- **About 1.4 million entries in academic year 2012**
- **About 1,050 user seats**

Card Swipe Access Data

Library Visits By School And Month To Butler Library In 2012 Academic Year

	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Total
Undergraduate Schools													
Columbia College	40,116	52,423	39,861	43,575	19,417	48,460	40,539	57,456	26,189	3,502	3,520	4,027	379,085
Engineering & Applied Science	8,738	10,789	7,771	9,601	3,576	9,384	8,185	11,052	6,426	873	805	1,064	78,264
General Studies	13,594	15,549	12,545	10,935	8,001	15,139	12,731	15,129	7,225	3,944	3,767	2,764	121,323
Graduate & Professional Schools													
Architecture, Planning & Preservation	996	921	1,017	936	594	982	693	1,034	586	531	676	425	9,391
Arts	2,841	2,670	2,335	1,596	1,549	2,381	1,962	2,050	1,140	929	1,003	951	21,407
Arts & Sciences	20,131	21,560	19,466	15,144	11,626	17,946	17,511	20,051	10,586	6,658	6,166	7,354	174,199
Business	822	918	634	762	387	765	615	947	344	264	220	420	7,098
Engineering & Applied Science	8,798	11,566	9,678	9,490	3,893	7,645	6,251	6,482	3,608	846	1,189	1,885	71,331
International & Public Affairs	1,744	2,446	1,679	1,718	788	1,876	1,618	2,180	1,036	516	620	739	16,960
Journalism	689	725	613	464	514	722	599	562	350	202	235	490	6,165
Law	1,533	1,683	2,229	2,710	926	1,364	1,395	3,719	1,418	787	1,148	849	19,761
Social Work	1,115	1,054	822	786	392	611	539	918	404	413	311	453	7,818
Medical Center Graduate Schools													
Dental Medicine	282	392	427	347	273	186	219	256	171	152	62	130	2,897
Medicine	843	918	626	486	623	875	490	598	312	327	404	266	6,768
Nursing	184	265	170	177	132	228	154	138	87	276	254	106	2,171
Public Health	480	704	621	603	218	450	572	746	318	186	154	97	5,149
Continuing Education & Special Programs													
Continuing Education	7,997	8,737	7,285	5,294	4,128	7,337	6,143	7,032	3,649	4,772	10,696	3,648	76,718
Global Programs	216	239	201	139	148	398	335	351	216	38	7	28	2,316
BLANK													
BLANK	37,308	39,487	35,281	32,499	24,878	36,712	35,907	39,667	26,449	24,372	24,862	24,179	381,601
Total	148,427	173,046	143,261	137,262	82,063	153,461	136,458	170,368	90,514	49,588	56,099	49,875	1,390,422

Source: Lenel Access System

Prepared by: Columbia University Libraries Assessment Program

Card Swipe Access Data

Highlighted Map Of Entry Counts By Hour And Day For Fall 2011 Semester

Hour	September							October							November							December							Total	%
	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat		
1	72	166	183	212	176	114	58	214	436	338	303	280	152	170	112	245	332	321	220	84	61	211	332	295	273	346	296	168	6,170	1%
2	57	74	57	81	85	74	49	152	269	141	166	186	93	130	59	130	187	181	146	60	35	161	197	156	179	244	187	129	3,665	1%
3	26	38	38	53	41	48	23	65	115	97	91	108	58	52	31	85	96	94	77	37	25	106	155	123	130	168	98	60	2,138	0%
4	10	29	24	16	28	9	16	46	71	52	78	61	38	29	25	47	64	75	46	18	3	55	112	67	93	102	67	29	1,310	0%
5	10	40	45	53	48	49	5	28	120	90	82	74	55	29	13	72	85	102	61	38	6	32	112	94	93	108	89	21	1,654	0%
6	11	50	56	76	68	44	10	18	145	80	86	97	63	20	5	98	102	132	75	59	11	41	140	141	115	121	88	32	1,984	0%
7	31	164	183	200	200	169	28	52	309	186	179	224	163	70	51	264	297	311	201	121	43	74	279	251	238	271	195	67	4,821	1%
8	103	674	773	822	867	677	93	209	1,088	651	662	791	513	216	144	760	863	986	583	431	94	295	748	687	661	743	677	243	16,054	3%
9	274	1,067	1,252	1,243	1,396	1,324	260	601	1,610	953	892	1,181	1,150	525	393	1,204	1,468	1,580	903	866	317	737	1,053	1,035	1,036	1,452	1,171	555	27,498	5%
10	510	1,431	1,862	1,805	1,923	1,600	473	1,046	2,271	1,389	1,238	1,635	1,162	830	657	1,510	1,909	1,971	1,154	942	461	968	1,279	1,166	1,209	1,584	1,227	791	36,003	6%
11	707	1,154	1,633	1,453	1,695	1,592	835	1,429	1,847	1,097	1,040	1,367	1,167	1,152	867	1,270	1,691	1,621	952	961	815	1,050	1,118	1,053	1,197	1,486	1,203	945	34,397	6%
12	1,341	1,847	2,188	2,245	2,276	1,905	960	1,888	2,747	1,719	1,947	1,852	1,576	1,377	1,177	1,840	2,351	2,232	1,464	1,081	868	1,330	1,559	1,455	1,375	1,828	1,508	1,144	47,135	8%
13	1,561	1,788	2,091	2,268	2,285	2,280	1,216	2,267	2,864	1,622	2,138	1,994	1,650	1,651	1,291	1,967	2,453	2,394	1,491	1,380	1,093	1,447	1,532	1,534	1,530	1,899	1,838	1,337	50,865	8%
14	1,602	1,848	2,319	2,311	2,669	2,204	1,232	2,235	2,885	1,764	2,135	2,064	1,804	1,792	1,500	2,024	2,621	2,512	1,466	1,308	1,115	1,397	1,612	1,538	1,600	1,960	1,791	1,372	52,728	9%
15	1,496	1,634	1,849	1,899	1,997	2,026	1,185	2,179	2,503	1,418	1,770	1,621	1,558	1,487	1,392	1,772	2,088	1,985	1,086	1,203	1,134	1,304	1,421	1,375	1,444	1,567	1,580	1,230	45,203	8%
16	1,197	1,828	1,966	2,134	2,010	1,753	1,077	1,984	2,755	1,567	2,064	1,773	1,425	1,282	1,293	2,005	2,234	2,177	1,241	1,020	1,020	1,225	1,494	1,314	1,307	1,658	1,415	1,062	45,280	8%
17	1,110	1,508	1,644	1,728	1,633	1,189	857	1,727	2,515	1,364	1,655	1,513	1,222	1,169	1,149	1,582	2,016	1,539	988	768	889	998	1,299	1,102	999	1,297	1,026	948	37,454	6%
18	1,029	1,141	1,309	1,255	1,144	1,015	748	1,895	2,038	1,340	1,473	1,072	1,010	1,441	1,165	1,406	1,944	1,467	735	699	946	1,085	1,181	1,025	953	1,114	1,015	1,136	33,819	6%
19	1,145	1,383	1,593	1,532	1,095	868	701	2,167	2,455	1,528	1,770	1,135	1,026	1,460	1,218	1,666	2,021	1,647	759	602	887	1,317	1,315	1,113	1,203	1,230	987	1,130	36,953	6%
20	1,143	1,448	1,671	1,601	991	712	581	1,941	2,381	1,512	1,847	1,050	889	1,389	1,224	1,646	1,942	1,528	668	492	766	1,118	1,202	1,112	989	1,060	922	1,040	34,867	6%
21	947	1,288	1,444	1,314	700	547	436	1,783	2,340	1,282	1,444	864	720	1,086	1,032	1,404	1,709	1,387	576	443	553	950	954	923	896	898	759	859	29,538	5%
22	802	1,017	1,162	1,081	569	417	347	1,637	1,706	1,131	1,192	733	564	820	885	1,043	1,405	1,169	463	318	451	867	949	820	696	787	650	717	24,398	4%
23	476	665	711	626	346	222	228	1,099	1,158	739	808	480	403	478	602	766	917	735	311	161	283	622	669	612	576	1,528	470	538	17,230	3%
24	139	301	335	379	394	188	90	373	729	640	460	547	312	298	177	411	640	632	381	181	93	360	562	446	459	535	504	266	10,832	2%
Total	15,799	22,583	26,388	26,387	24,736	21,026	11,508	27,035	37,337	22,700	25,546	22,702	18,773	18,953	16,462	25,217	31,455	28,838	16,047	13,273	11,969	17,750	21,274	19,437	19,251	23,981	19,750	15,819	601,996	

Legend:

1 - 500 Min 3

501 - 1000 Max 2,885

1001 - 1500 Mean 925

1501 - 2000 Median 949

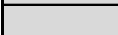
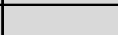
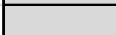
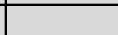
> 2000 St. Dev. 699,289

Data Source: LeneL entry data from the CU Libraries Monthly Access Report 081212 Excel Workbook



- Gain insight into student's use of spaces and study habits.
- Future plans for turning the Card Catalog room into the Digital Humanities Center.
- Gather data that stirs emotion and moves us into action.
- Validity check for interpretations arrived at from descriptive analysis of swipe access data.

Library Observation Study Methodology

Room 209	Date:		Time:	
West wall (stained glass panel)				
				
Soft seating area				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				

- A: Engaged in academic work
- AL: Using own device for academic work
- AC: Using library computer
- AG: Doing academic work as a group
- R: Socializing/resting
- RG: Socializing/resting as a group
- X: Not engaged
- C: Camping



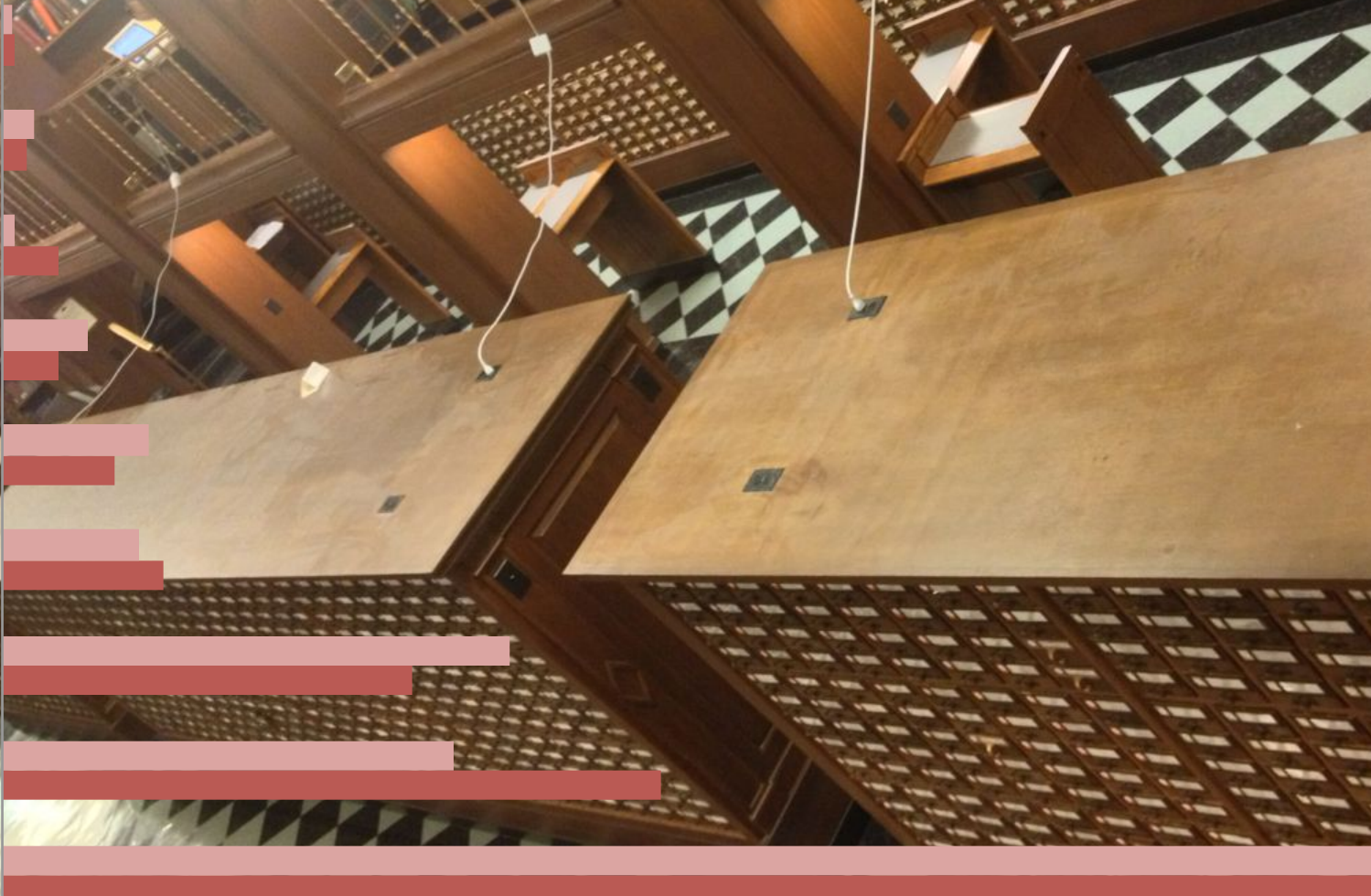
	Room 209 Undergrad Library Reading Room	Room 301 Reference Reading Room	Room 310 Quiet Study/Card Catalog Room	Room 503 Graduate Reading Room	Total
Dec. '12	1,336	1,468	780	n/a	3,584
Apr. '13	1,171	1,345	748	119	3,383

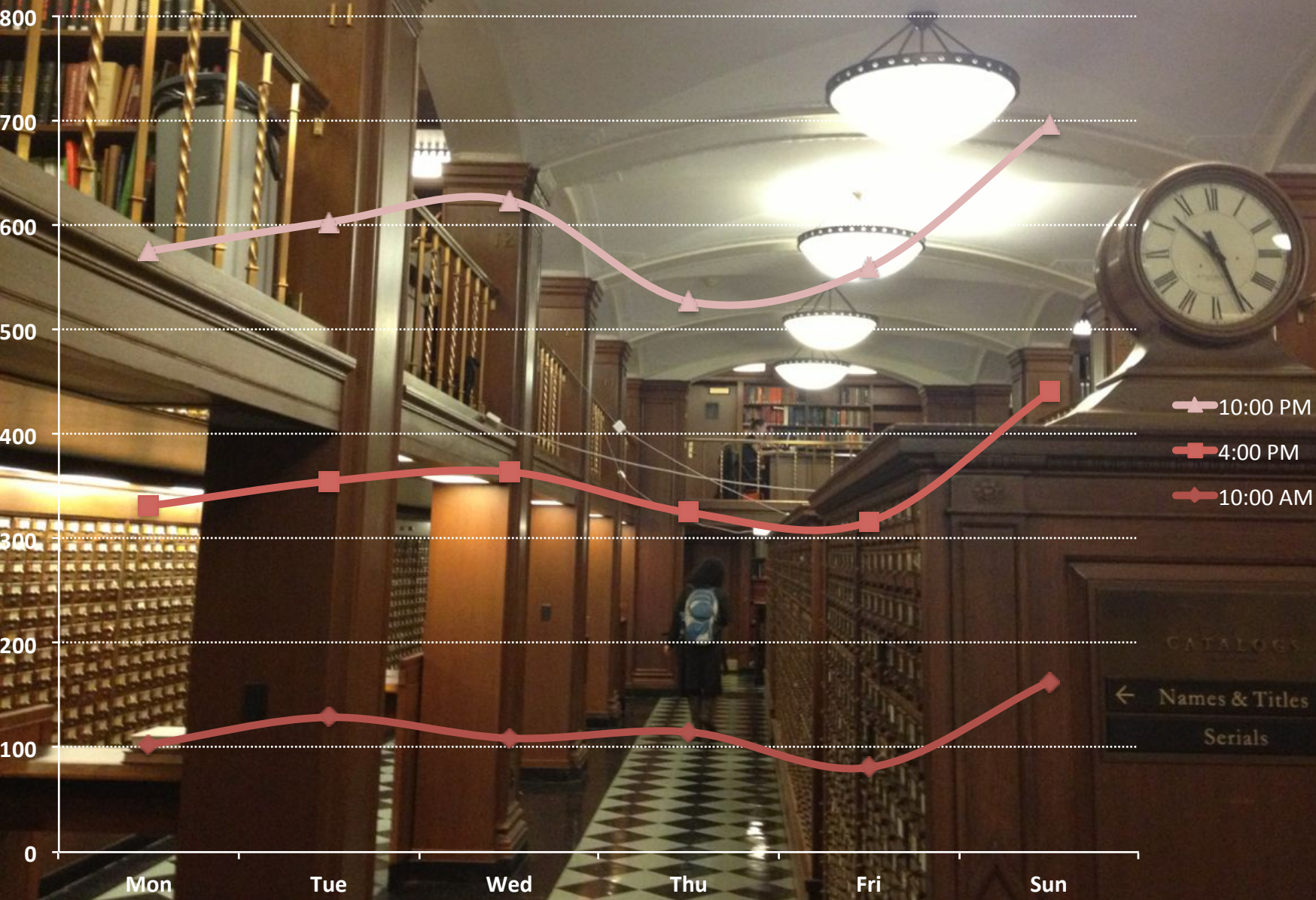


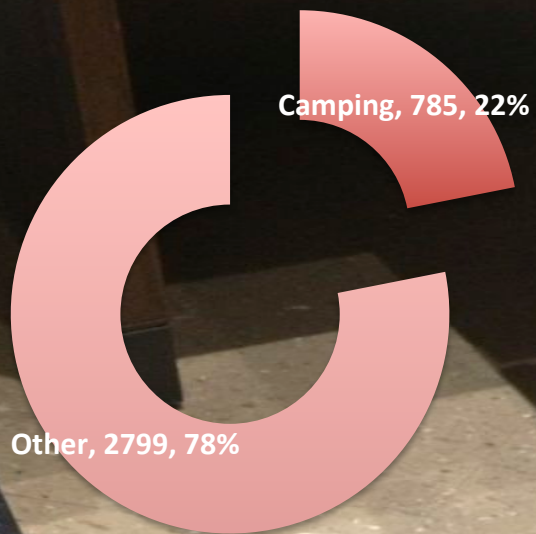
Z
RG
AG
X
R
AC
A
C
AL

April
December

0 200 400 600 800 1000 1200 1400 1600 1800



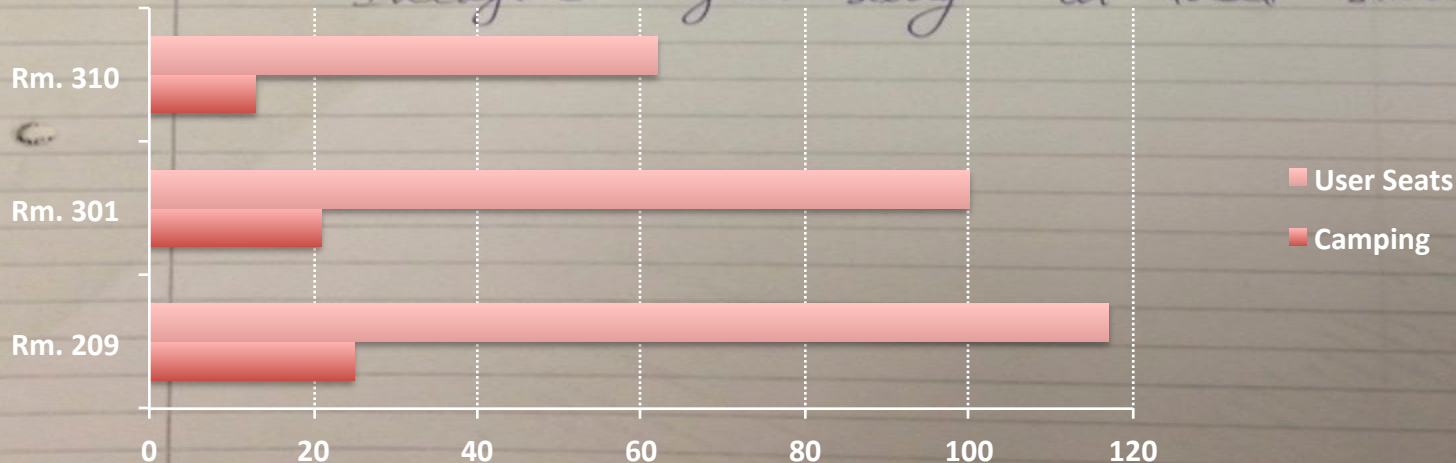


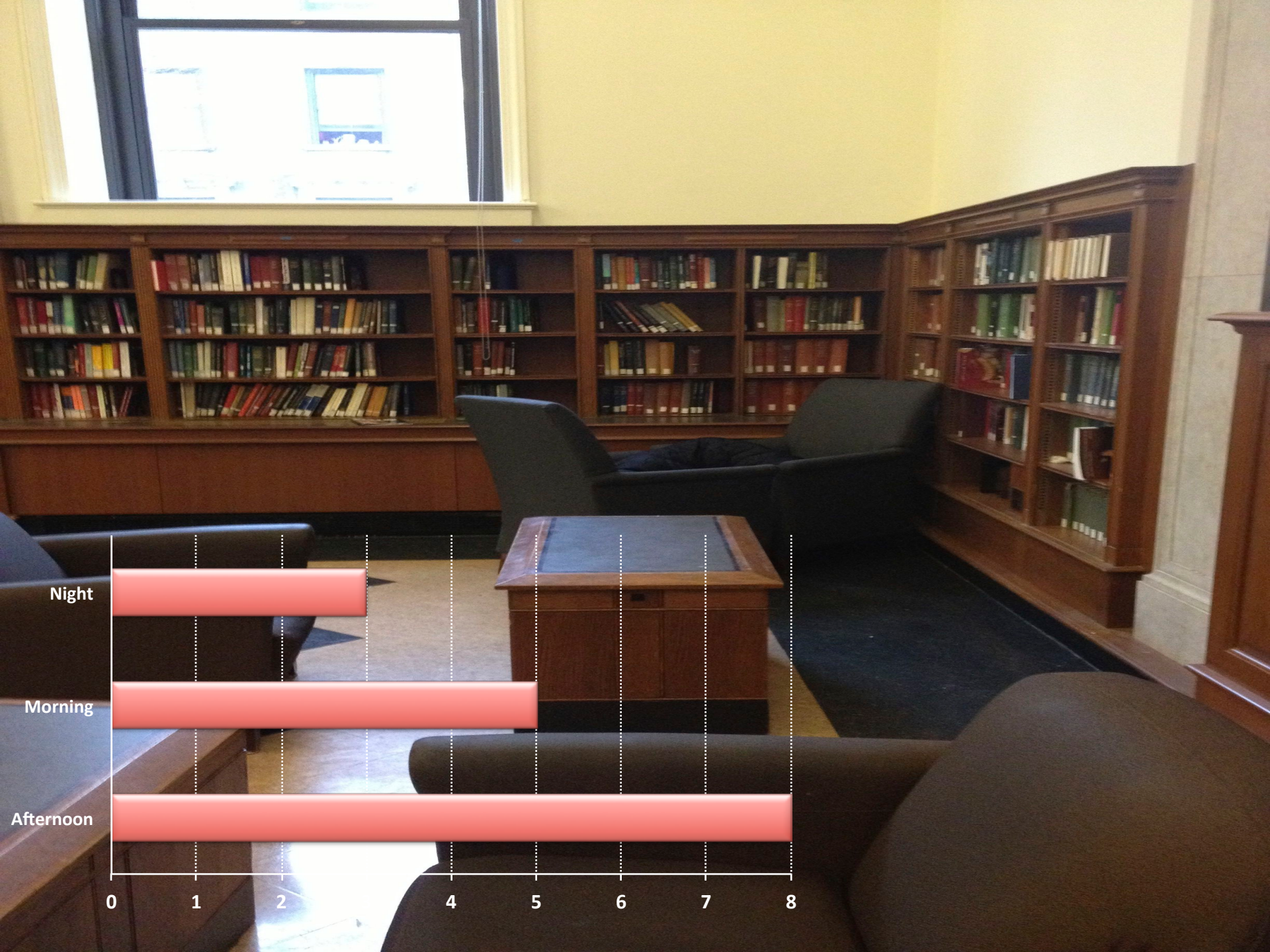


Snapshot of camping on December 9th at 4 pm.

People were actually sitting on the floor today, because they could not find a place to sit and study, and this table has been ~~like~~ mauled since last 11 hours, cuz your stuff was lying here.

Imagine you being in that situation!!





Night

Morning

Afternoon

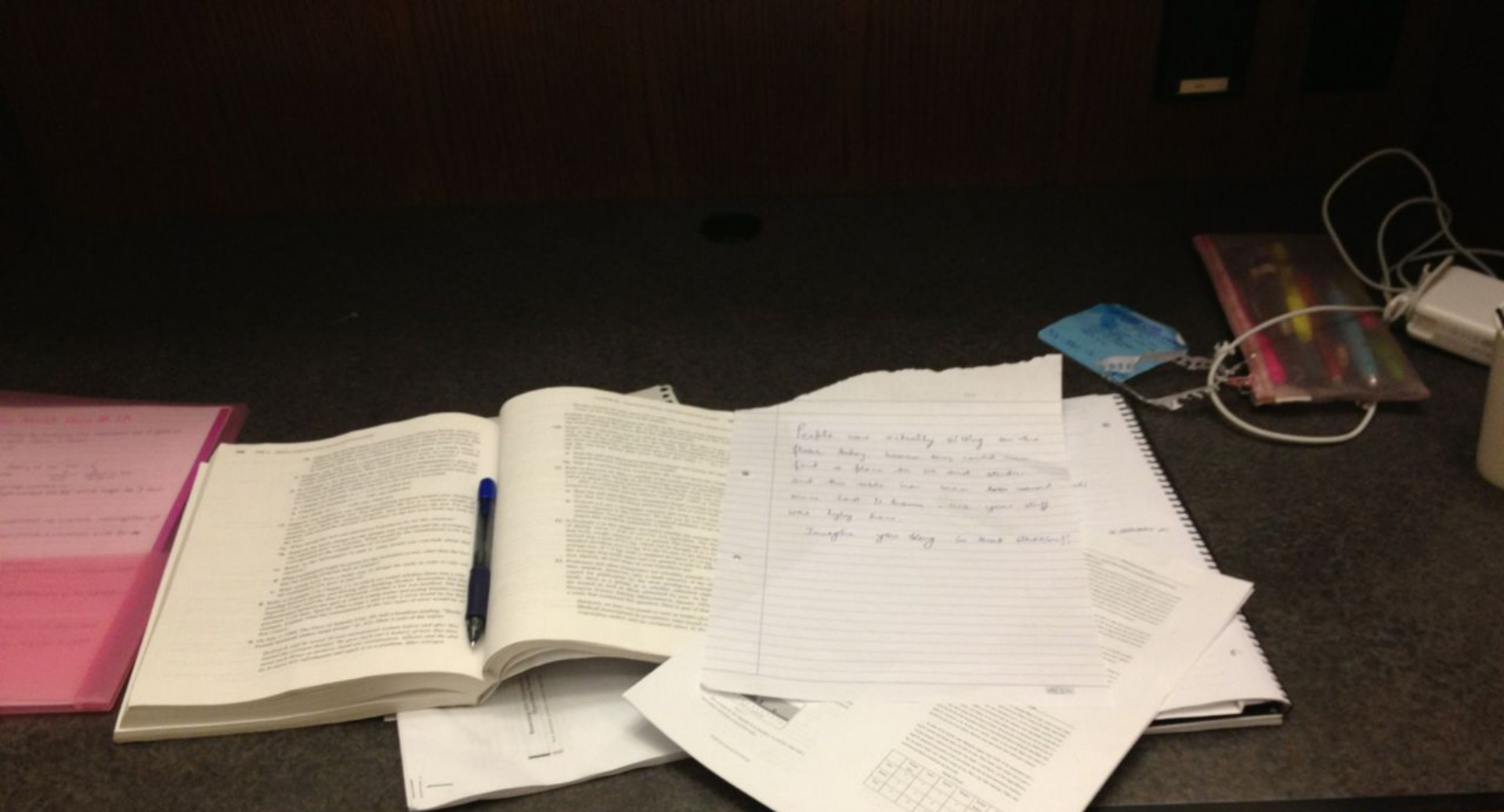
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Post-observation meeting and recommendations



**Routinized inspection and reporting of non-functioning table electrical outlets.
Upgrade wireless connectivity in Butler spaces to address the use of multiple devices.**



Develop and launch a marketing campaign to address camping and trash problem.



Work more closely with Facilities to improve cleaning routine.



Continue the observation study



Thank you!