

Space Use Study: Brampton Library, Calgary Public Library and Markham Public Library

Prepared for the Canadian Urban Libraries Council (CULC)

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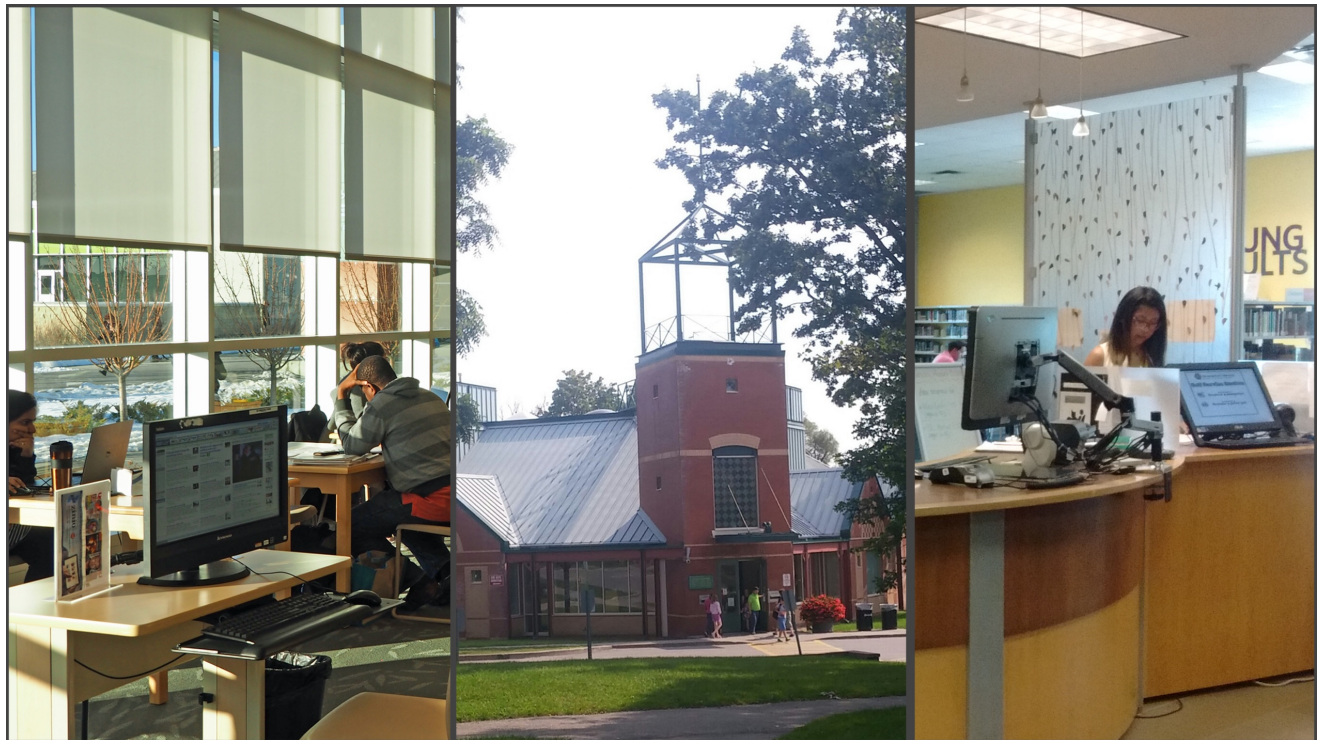


Figure 1: Calgary, Markham and Brampton Libraries

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Executive Summary

“

*I feel like
I'm in a
good place
when I'm at
the library.*

-Patron Survey Response

”

This study was commissioned by the Canadian Urban Libraries Council (CULC) in early 2015 as one of a series of three research studies. This study examines how library space is used in three Canadian urban library systems: Brampton Library, Calgary Public Library, and Markham Public Library. The study, carried out in late 2016, posed two research questions:

1. How are people using the different spaces in the library?
2. When they are in the library, what are they doing there?

In total, nine branches were studied: three in Brampton, five in Calgary, and one in Markham.

Key Findings

Detailed findings for the observation survey and the patron survey are provided in the “Findings” section of this report. A summary of key findings is provided here.

Libraries are welcoming places

Libraries continue to be welcoming places. The majority of patrons feel welcome when they visit the library (96%) and find the library staff helpful (91%). The majority of patrons (69%) find the library furniture to be comfortable. 1% reported the need for more and improved furniture.

Patron expectations are being met

The majority of patrons find the library useful: 90% report accomplishing what they intended to when visiting the library, and 85% report being able to find what they were looking for. Most patrons are accomplishing this without help from staff (60%), while many interacted with staff (35%) during their visit.

Libraries are social places

Patrons are interacting with staff, and with other patrons, throughout the day: 40% in the evening, 31% in the afternoon, and 24% in the morning. When patrons are talking in groups, they are both socializing and studying.

Managing noise-level expectations is challenging

There is often conflict between patrons who expect the library to be quiet, and patrons who are using the library to socialize, engage with their children, and participate in programs. While 14% of patrons described the library as quiet and peaceful, 13% reported the library as too noisy. Loud and quiet activities are taking place throughout the day, and with very little difference in these activities between genders.

Traditional library activities are still popular

Libraries continue to be places where people seek quiet activities, including browsing the collection, reading, writing and studying: 25% of patrons reported that they use the library to study. Patrons continue to depend on the library as a place to borrow books; 36% of patrons reported borrowing a book as the primary reason for visiting the library. 3% of patrons indicated the need for more study space.

BYO device is the new normal

Handheld devices and laptop computers are common possessions patrons bring with them to the library: 72% of adults and 21% of teens have a handheld device with them at the library. 56% of adults and 33% of teens have a laptop with them at the library.

Acknowledgements

Brightsail Research wishes to acknowledge the generous and enthusiastic participation of the three library systems who co-conducted this research project:

- Rebecca Jones, Alison Clarke, and the staff of Brampton Library;
- Lisa Hardy, Jacqueline Puff, and the staff of Calgary Public Library;
- Shaun McDonough, Andrea Cecchetto, and the staff of Markham Public Library.

Without their contributions of the people listed above – which included fine-tuning the methodology, contributing to instrument design, deploying the surveys and collecting the data – this project would not have been possible.

Heartfelt thanks also go out to Rebecca Raven, CEO of Brampton Library, Bill Ptacek, CEO of Calgary Public Library, and Catherine Biss, CEO of Markham Public Library, for supporting this study and the staff whose hard work made it a success.

Public libraries operate to serve their communities. To understand what people are doing in each library, understanding the local neighbourhoods that the library serves is necessary. Thank you to Environics Analytics for providing access to the neighbourhood profile data used to inform this report.

Background and Context

The Canadian Urban Libraries Council (CULC) is a membership-supported organization made up of Canadian CULC is committed to the strengthening of vibrant urban communities through building the capacity of Canada's urban libraries.

In 2015, CULC members participated in a brainstorming session to discuss recent library impact research studies, and to discover what topics to explore in further research. At the end of the session, the members identified three priority areas:

1. Determining how library space is used;
2. The impact of the library in addressing community unemployment;
3. Exploring best practices in employee happiness and engagement.

CULC member libraries volunteered to participate in the research project that would provide the most benefit to their community. Each of the three studies and their findings are described in individual reports.

This document describes the approach, methodology and findings for the research project exploring how library spaces are used across three urban library systems: Brampton Library, Calgary Public Library and Markham Public Library.

Introduction

The 21st century library is changing in many ways, one of which is how visitors are using, and expect to use, library spaces. Traditionally, the public library has been a place dedicated primarily to housing books and other print materials that were made available, for free, to its community. Even as technology introduced digital resources, the library continued to focus significantly on circulated materials, both physical and digital.

In recent years, the library has evolved to shift its focus to explore new approaches to designing space, with people, not shelves, in mind. A body of literature, both academic and professional, is being established on the topic of space use. This research study draws on this body of literature, and contributes to it. The results of this space use study among three urban library systems in Canada will benefit CULC member libraries, as well as libraries serving populations of various sizes around the world.

Purpose of the Study

The purpose of the study is to examine how library space is used across three Canadian urban library systems. Up until the end of the 20th century, a significant percentage of space in public libraries has traditionally been devoted to storing books, with areas designed for reading and quiet study. While anecdotally we know that public library space is being used differently today, conducting applied research, using instruments to gather data about space usage, will provide evidence to inform us about what's actually happening in these spaces.

Three library systems participated in this study: Brampton Library, Calgary Public Library and Markham Public Library.

Research Question

For this study, we posed two research questions:

How are people using the different spaces in the library?

When they are in the library, what are they doing there?

Research Team

The research project was a collaborative effort among representatives from each of the three library systems and the principal investigator:

- Kimberly Silk, Principal, Brightsail Research (Principal Investigator)
- Rebecca Jones, Service Delivery Director, Brampton Library
- Alison Clarke, Service Delivery, Brampton Library;
- Lisa Hardy, Facilities Design Lead, Calgary Public Library;
- Jacqueline Puff, Research & Planning Assistant, Calgary Public Library;
- Shaun McDonough, Research Analyst, Markham Public Library;
- Andrea Cecchetto, Manager, Learning and Growth, Markham Public Library;

Together, the research team established and fine-tuned the methodology, designed the survey instruments, determined which branches to deploy the surveys, established the deployment schedule, and collected the data. When the data collection phase was complete, the team determined which findings to include in this report.

Study Methodology

The methodology for this research study includes the following components:

Literature Review

An environmental scan of scholarly and professional literature was done to serve two purposes:

1. Previous space use studies were reviewed to explore different methodologies and instruments for how to document library use patterns, which informed the methodology for this study.
2. Existing research about how library space is used in public and academic libraries were reviewed to understand the current trends. These trends will also be compared to the results from this study.

Summaries of the literature reviewed for this study are compiled in Appendix A: Annotated Bibliography.

Instrument Design

The research team chose to adopt a similar methodology to that first developed for public libraries by Given and Leckie (Given & Leckie, 2003). Using a similar methodology enables more effective comparisons to be made among similar studies conducted in Norway and Edmonton. Two data collection instruments were designed for this study: a patron survey, and a space observation survey. The library systems then needed to define which branches to choose for deploying the surveys, how often to deploy the survey and for what duration, and what spaces to include in the observations.

Space Observation Survey

The purpose of the space observation survey is to observe and record what patrons are doing in the library, without interrupting the patron's activity. The

space observation survey was created using a Google Form and deployed by library staff who observed patron activity and recorded responses. Data were collected using electronic and paper forms. In both cases, the data were exported to Excel for analysis. The full patron survey is provided in Appendix C: Space Observation Survey Form.

Patron Survey

The purpose of the patron survey is to ask patrons directly about their goals and objectives in visiting the library. The patron survey was created using a Google Form and deployed by library staff approaching patrons to ask them to answer the survey questions. Staff asked the patrons the questions, and then recorded the responses, either using the Google Form or on paper. In both cases, the data were exported to Excel for analysis. The full patron survey is provided in Appendix B: Patron Survey Form.

Deployment Scope

Brampton Library, Calgary Public Library and Markham Public Library are all multi-branch urban library systems. Each library determined how many branches,



Figure 2 - Brampton Library, Gore Meadows Service Area

and which branches, would participate in the patron and space observation surveys.

Brampton Library, located north-west of Toronto, Ontario, serves a population of 593,638 through 6 branches. Three branches were selected to participate in the study:

- Four Corners
- Gore Meadows
- South Fletcher's

Calgary Public Library, located in Calgary, Alberta, serves a population of 1,235,171 through 18 branches. Five locations were selected to participate in the study.

- Fish Creek
- Forest Lawn
- Louise Riley
- Saddletowne
- Southwood



Figure 3 - Calgary Library - Louise Riley Reading Room

Markham Public Library, located north-east of Toronto, Ontario, serves a population of 337,800 through 7 branches. One branch was selected to participate in the study.

- Unionville

In total, 9 branches across 3 library systems participated in the patron and space observation surveys.



Figure 4 - Markham Library - Unionville Branch

Defining Common Spaces

The participating libraries defined a set of nine defined spaces, common across all three library systems, to deploy the patron survey and the space observation survey. The nine defined spaces are:

- Library Entrance
- Main Info Desk/Service Point
- Circulation Desk
- Quiet Study Area
- General Seating
- Displayed / Merchandised Collections
- Shelved Collections / Stacks
- Program Area
- Children's Area

Deployment Schedule

Library activity is highly variable; any given branch will have more or less activity depending upon the time of day, day of the week, and time of year. The libraries collaborated to determine what days and times of day the surveys would be deployed. The surveys were deployed in three cycles. The deployment schedule used is as follows:

Cycle 1: Monday October 31 to Sunday November 6, 2016

Tuesday – 10:30 AM

Wednesday – 3:00 PM

Friday – 4:00 PM

Saturday – 11:00 AM

Sunday – 2:00 PM

Sunday – 4:00 PM

Cycle 2: Monday November 14 to Sunday November 20, 2016

Tuesday – 10:30 AM

Wednesday – 3:00 PM

Friday – 4:00 PM

Saturday – 11:00 AM

Sunday – 2:00 PM

- Sunday – 4:00 PM

Cycle 3: Monday November 28 to Sunday December 4, 2016

- Tuesday – 10:30 AM

- Wednesday – 3:00 PM

- Friday – 4:00 PM

- Saturday – 11:00 AM
- Sunday – 2:00 PM
- Sunday – 4:00 PM

Data Collection and Management

Staff at each of the participating libraries collected the data, at each branch, according to the deployment schedule. At the completion of each cycle, the Principal Investigator exported and downloaded the data into Excel spreadsheets, and created backup copies. Backup copies of these are stored on the Principal Investigator's secure DropBox and iCloud accounts. An additional backup is stored on an external hard drive maintained by Brightsail.

Data Analysis

Together, the patron survey and space observation survey conducted for the three library systems generated a significant amount of data. As participants in this study, all three systems have copies of the full data set, which they will use for further detailed analysis.

For the purposes of this report, the research team focused on the findings listed below.

Space Observation Survey

The following observations were made and recorded across all three library systems.

- Louder activities across all library spaces
- Quieter activities across all library spaces
- Louder activities by time of day
- Quieter activities by time of day
- Louder activities by gender

- Quieter activities by gender
- Patron Possessions by space type
 - Library Entrance
 - Main Information Desk
 - Circulation Desk
 - Quiet Study Area
 - General Seating Area
 - Displayed / Merchandized Collections Area
 - Shelved Collections / Stacks
 - Program Area
 - Children's Area
- Patron Possessions by age group

Patron Survey

Patrons were asked the following nine questions, and responses were recorded by library staff across all three library systems.

1. Why did you come to the library today?
2. Do you feel welcome when you come to the library?
3. Do you find the library staff helpful?
4. Did you accomplish what you intended to, by coming here today?
5. Were you able to find what you were looking for?
6. Did you interact with staff, or were you able to help yourself?
7. How do you feel about the library furniture?
8. How do you feel about the general atmosphere of the library?
9. How do you feel about the layout of the library?
10. How do you feel about the free Wi-Fi?

City Profiles

Public libraries exist to serve their communities. To understand what people are doing in each library, and the intentions behind those activities, it is necessary to understand the local neighbourhoods that the library serves.

Brampton

The City of Brampton is located in the north-west corner of the Greater Toronto Area (GTA). In 2016, it's population was estimated at over 593,638 residents, and is the 9th largest city in Canada, the 4th largest city in Ontario, and the 3rd largest city in the GTA. Brampton has grown rapidly in recent years, and has an average annual growth rate of 6.60%.

The median age of Brampton residents is 34.7 years, younger than the ten most-populated cities in Canada. Immigration is a major influence in the growth and diversity of Brampton's population: in 2011, 51% of Brampton's population were born outside of Canada. Over the past 50 years, over 235,000 people have immigrated to Brampton, the majority (53%) from India, as well as from the Philippines (7%) and Pakistan (6%). Brampton's residents represent more than 209 distinct ethnic backgrounds and speak more than 89 different languages.

Source: Brampton Community Profile, Brampton Economic Development

Calgary

The City of Calgary is located in southern Alberta, and is the third largest municipality in Canada. With a population of 1.4 million in 2016, and experienced above-average growth between 2012 and 2016.

The median age of Calgary residents is 36.7 years, and is diverse as well with over 28% of its population classified as visible minorities. In 2017, Calgary received over 23,000 new citizens, with more than 90% of those people coming from outside of Canada: almost 25% have arrived from the Philippines, and over 15% from India.

Source: Calgary Economic Development, Economic Indicators and Demographics; Statistics Canada.

Markham

The City of Markham is located in the north-east corner of the Greater Toronto Area (GTA). In 2016, it's population was 353,000 residents, and is projected to grow to over 535,000 by 2041.

The median age of Markham residents is 41.1. A significant portion of Markham's population is made up of people whose ethnic origins are Asian (61%) – including East and Southeast Asian, South Asian and Middle Eastern -- and European (25%). The mother tongue for the majority (40%) of residents is English, with 32% reporting Chinese as their mother tongue, and 11.6% reporting their mother tongue as South Asian.

Source: Markham Economic Profile, 2017; Markham Demographics 2011 Quick Facts; Statistics Canada.

Findings

Literature Review

An environmental scan of scholarly and professional literature was done to serve two purposes:

1. To learn what methodologies and instruments have been used in previous space studies. These previous studies informed the methodology for this study.
2. To learn about the findings from previous space studies to understand current trends.

Summaries of the literature reviewed for this study are compiled in Appendix A: Annotated Bibliography.

Methodology Review

The seating sweep observation method applied in the space study of Vancouver and Toronto Public Libraries (Leckie & Hopkins, 2002) and described by Given and Leckie (Given & Leckie, 2003) has been adopted in other studies. The literature review indicates that this observational method was successfully applied in Norway (S. Aabø & Audunson, 2002; Høivik, 2008) and Edmonton, Alberta (MacDonald & Haug, 2012). Using consistent methodologies across a number of studies results in producing consistent data that can be compared across studies. For this reason, the research team chose to adopt the seating sweeps methodology – in particular, using the same observation components as used in the Edmonton Public Library study (MacDonald & Haug, 2012).

Review of Previous Studies

After reviewing a significant number of library space studies, in both public and academic libraries, two strong trends emerged:

1. Libraries serve their communities as social hubs, sometimes referred to as “third places”.
2. Patrons want both quiet and collaborative spaces, and how young people use study space has changed.

Trend: Libraries as Social Community Hubs

“Third places” is a term coined by urban sociologist Ray Oldenburg, who wrote about the importance of informal gathering places, which he says are essential to community and public life (Oldenburg, 1989). Oldenburg describes third places as places where people spend time between home (‘first’ place) and work (‘second’ place), and are locations where people exchange ideas, socialize, and build relationships. These third places are central to local democracy and community vitality.

The study in 2012 by Aabø & Audunson (Aabø & Audunson, 2012) focused on how people used the library in terms of what life sphere their activities aligned with – private, work or community. The study found that the library as a complex place that can arguably occupy all three spheres of life, depending on the intended use of the space by the patron. The library is a first place (private sphere) when it becomes an extension of the home, for example where a brother can help a sister with her homework or an individual can relax and read independently. The library is a second place (work sphere) when it is used to conduct business or further one’s education. Lastly, the library becomes a third place (community sphere) when it brings people in the community together and promotes serendipitous run-ins. The authors conclude that library spaces need to be designed to accommodate the need for quiet reading and study, for conducting business and furthering knowledge, and to bring the community together.

Niegaard (Niegaard, 2011) discusses how two Danish libraries, in Aarhus and Hjørring, have undergone

massive redevelopments to redesign their space to create the feel of a third place where users have the opportunity to learn, experience, meet people, work independently and in groups, borrow materials or read quietly.

Similarly, a study by Abbasi et al (Abbasi, Elkadi, Horn, & Owen, 2012) describes how the Deakin University Library was redesigned to transform the library from a “book warehouse” to a “people place”. Bilandzic’s study (Bilandzic & Foth, 2013) confirms the same, describing that people enjoy library space for the social atmosphere and the serendipitous encounters that can occur in shared spaces.

The Libraries 2016 study (Horrigan, 2016) from Pew Research confirms the trends identified in the literature:

57% of Americans said that “libraries should definitely offer more comfortable places for reading, working and relaxing”;

A majority (69%) of Americans feel that libraries contribute “a lot” to providing their communities with a safe place for people to hang out or spend time;

Approximately half (49%) of Americans surveyed think that libraries contribute “a lot” to their communities in terms of sparking “creativity among young people”;

38% say libraries contribute “a lot” to “promoting a sense of community among different groups within their local areas”.

Trend: Patrons Want Quiet & Collaborative Spaces

The library, once considered the go-to place for quiet work or study, is still a popular choice; what’s changed is the way people, especially teens and young adults, choose to work and study. These patrons participate in the dissemination of knowledge and information through social learning experiences, not in isolation, and not just through books or online resources.

The study by Bailin (Bailin, 2011) of an academic library in Australia shows that many students use studying at the library as a way to socialize with friends, more so than meeting them for coffee or a meal. However, it was discovered that although group meeting spaces and noisy areas of the library are desired, so too are the quiet independent study spaces. Students reported that quiet areas to study were harder to find, and in many quiet areas these rules were not followed.

The article by Bryant (Bryant, Matthews, & Walton, 2009) is a case study of an academic library at the University of Loughborough in the UK, which describes how social space is becoming an important part of academic study. Students use the collaborative spaces to work together and help each other. Another interesting observation was that students working independently chose to sit at the large group-study tables, as opposed to using individual study carrels. This new way of studying is confirmed in the article by Unden (Unden, 2015) which describes the “Teen Library” at the central branch of San Antonio’s Public Library. It provides places to do homework, hang out, work in groups, and participate in performance.

Indergaard’s blog post (Indergaard, 2017) about the study done in Norway reports that visitors using the library as a social space was higher, and the length of visit longer, than in a comparable study conducted in 2007. There were also increases in the number of visitors using the space for reading and studying, and increases in people using the library to socialize as opposed to using library services.

Space Observation Survey Findings

The following findings reflect the observed conditions across all three library systems: Brampton, Calgary and Markham.

Louder Activities Across All Library Spaces

The most common loud activities observed, across all spaces in all three library systems, were as follows:

- 32% - patrons talking to staff
- 29% - patrons talking to one or more people in a group, socializing
- 11% - patrons talking in person to one or more people in a group, studying or collaborating
- 10% - patrons participating in a program
- 6% - patrons interacting with children
- 5% - patrons talking on a device
- 4% - patrons participating in a tutoring session
- 3% - noise from electronics.

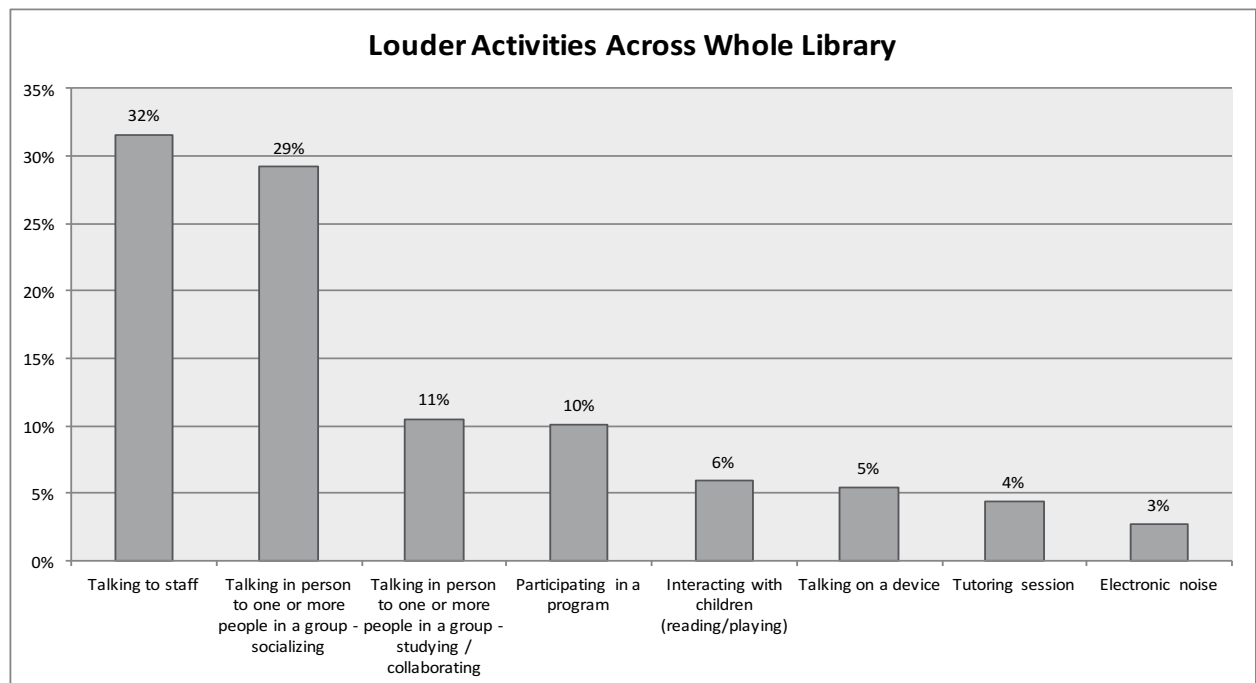


Figure 5 - Louder Activities Across All Library Spaces

Quieter Activities Across All Library Spaces

The most common quiet activities observed, across all spaces in all three library systems, were as follows:

- 28% - Patrons browsing the collection
- 20% - Patrons reading
- 14% - Patrons using their own device
- 13% - Patrons using the library's device
- 8% - Patrons texting or quietly using handheld device
- 7% - Post-secondary school students studying or writing
- 5% - Secondary school students studying or writing
- 5% - Mature students studying or writing.

Note that together, 17% of patrons were studying or writing.

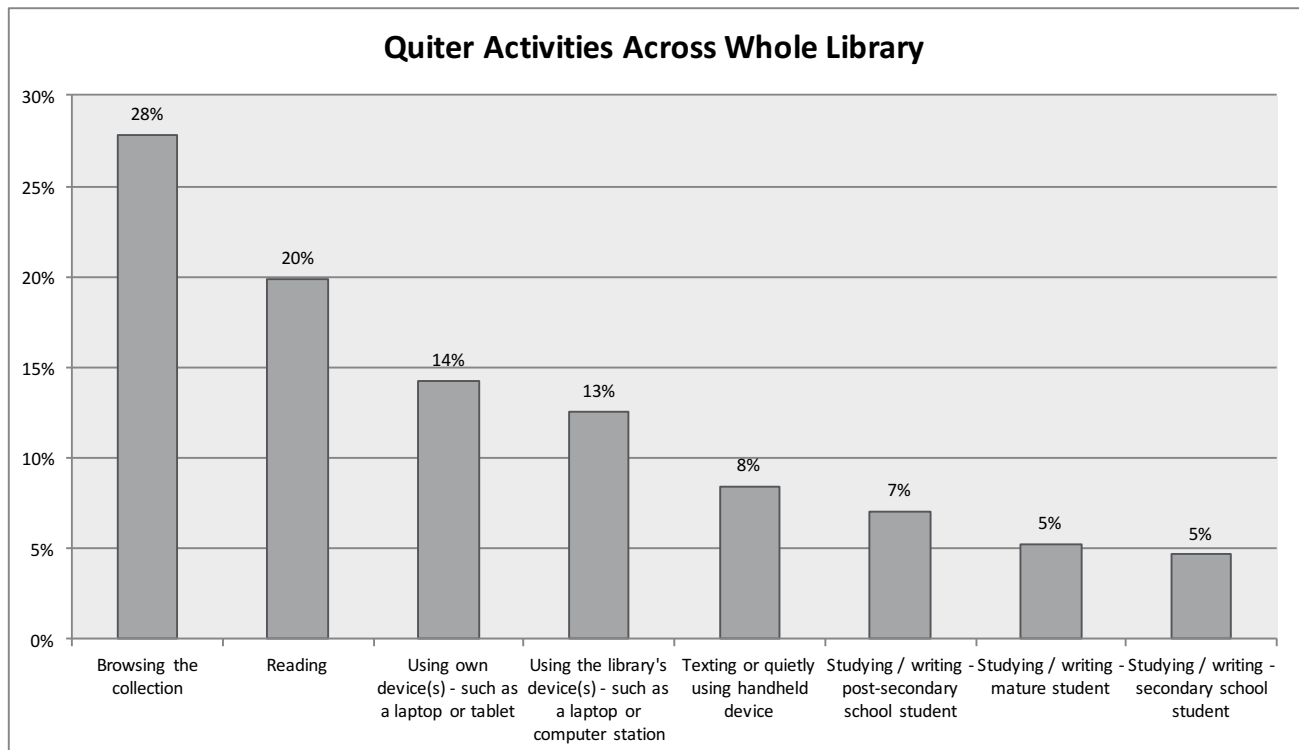


Figure 6 - Quieter activities across all library spaces

Louder Activities by Time of Day

Generally, evening is the most common time of day for louder activities:

- 40% - Patrons talking in a group
- 40% - Patrons participating in a program
- 20% - Patrons talking to staff

Patrons interact with staff throughout the day:

- 31% - Patrons talking to staff in the morning
- 32% - Patrons talking to staff in the afternoon
- 20% - Patrons talking to staff in the evening

Patrons also talk and socialize in groups throughout the day:

- 24% - morning
- 31% - afternoon
- 40% - evening

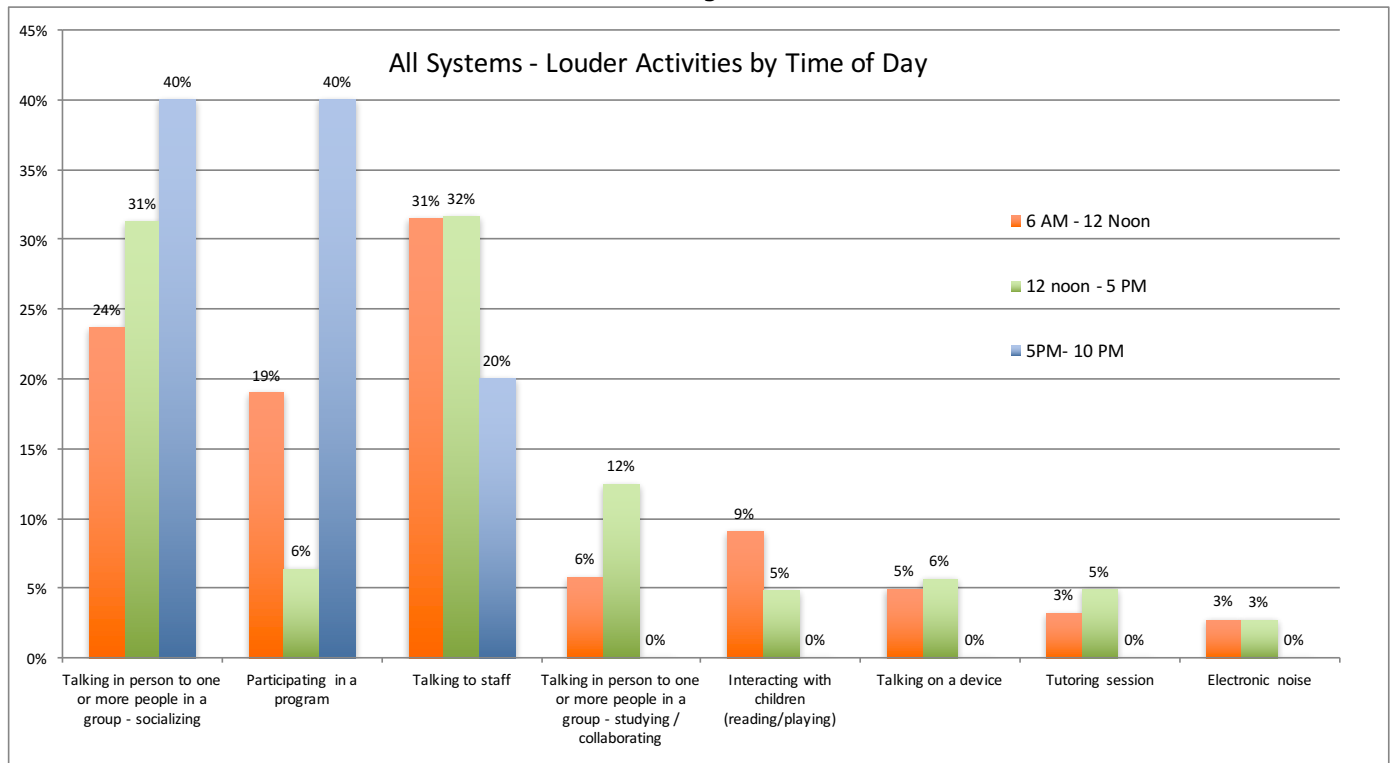


Figure 7 - Louder Activities by Time of Day

Quieter Activities by Time of Day

The most common quieter activity at the library occurs in the evening, when 60% of patrons are using library devices, such as a laptop or computer station.

Browsing the collection is a popular activity that occurs throughout the day:

- 32% - morning
- 27% - afternoon
- 20% - evening

Reading at the library continues to be popular throughout the day:

- 20% - morning
- 20% - afternoon
- 10% - evening

Other activities, such as students studying, writing and patrons quietly using their handheld devices, tend to occur during the day, but not in the evening.

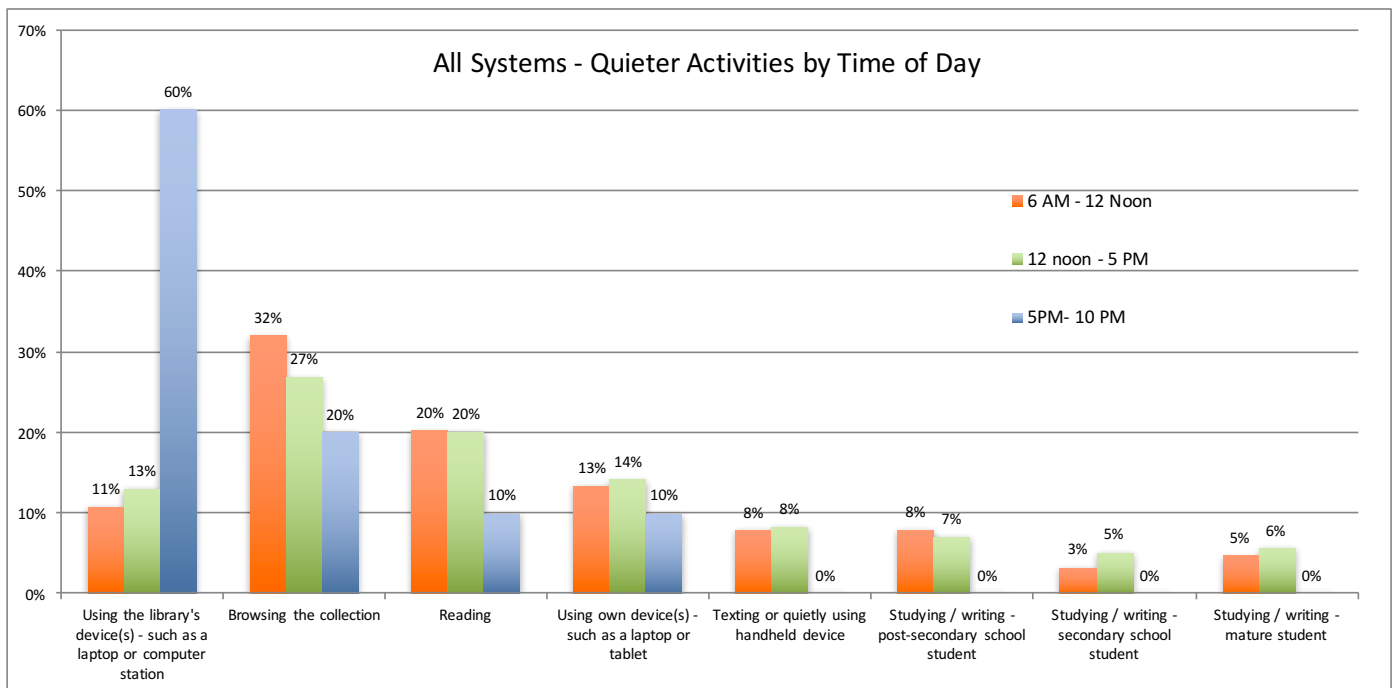


Figure 8 - Quieter Activities by Time of Day

Louder Activities by Gender as % of Total Patrons

Overall, the most common louder activity for both genders is talking to staff and talking to one or more people in a group, socializing; for both activities, females do these activities slightly more often than males:

- Talking to staff: 18% females, 13% males
- Talking while socializing in groups: 17% females, 12% males.

For next two most common louder activities, females slightly outpace males:

- Talking while studying in groups: 6% females, 5% males
- Participating in a program: 5% females, 4% males.

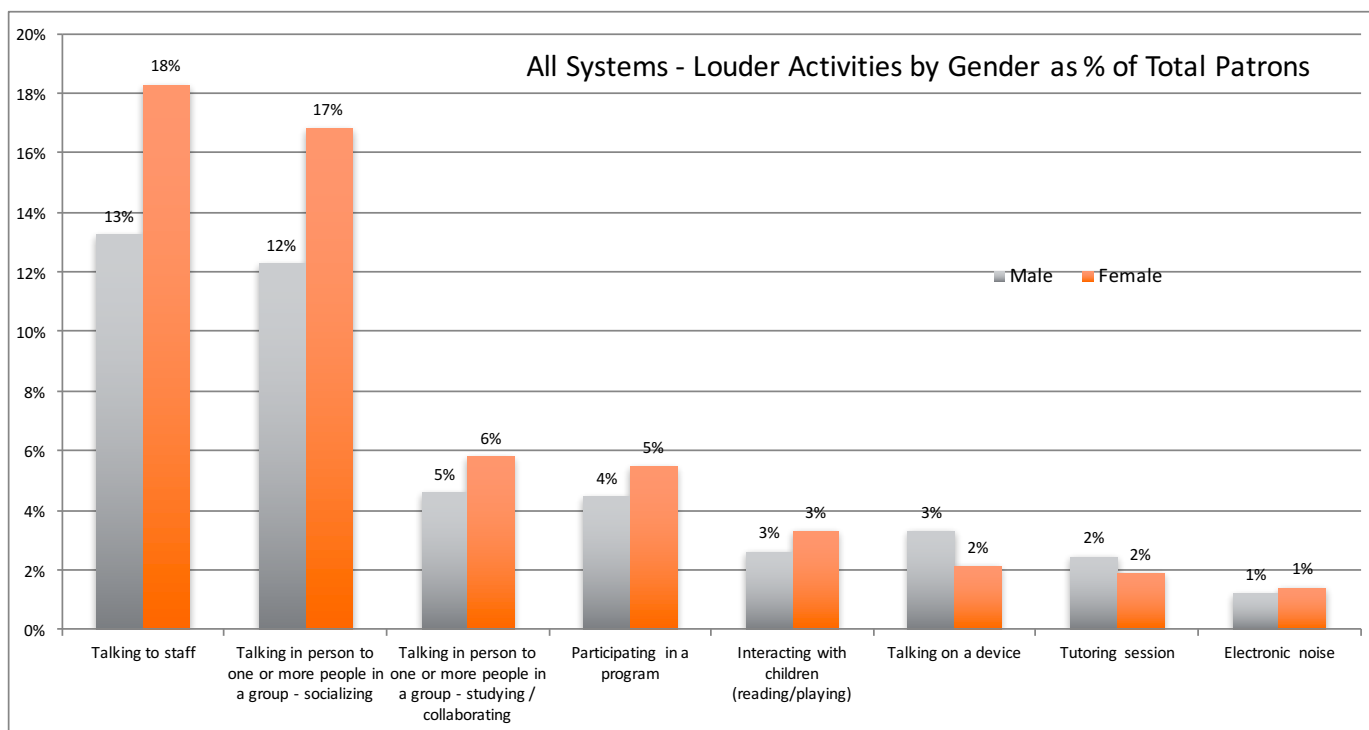


Figure 9 - Louder Activities by Gender as a Percentage of Total Patrons

Quieter Activities by Gender as % of Total Patrons

The most common quiet activity occurring in the library are when patrons, both male and female, are browsing the collection:

- 16% female, and 11% male.

The next three most common activities are:

- Reading - 10% for both males and females
- Using the library's devices, such as a laptop or computer station - 8% males, 5% females
- Using their own devices, such as a laptop or tablet - 8% males, 7% females.

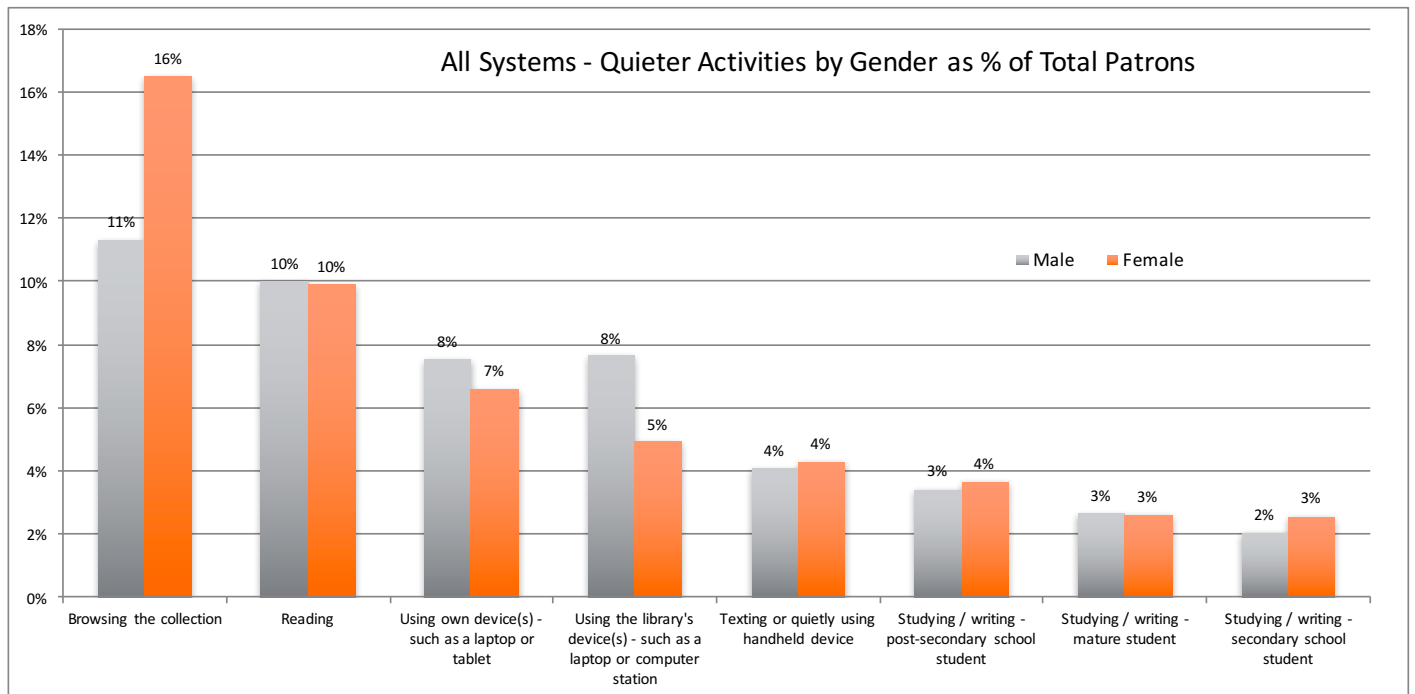


Figure 10 - Quieter Activities - Percentage of male or female (of the total participants) that participates in that quiet activity

Patron Possessions by Space Type

Popular Possessions

Across all spaces, the most popular items patrons have with them are **backpacks, handheld devices, and bags.**

Baby strollers were common in the program area, children's area, at the library entrance, and at the circulation desk.

This portion of the observation study recorded the various kinds of possessions that patrons had with them, that were visible to the observers, in nine defined areas, while visiting the library. These findings reflect the observed conditions across all three library systems. (Note that the bar colour represents each space type.)

Library Entrance

A significant number (33%) of patrons observed at the library entrance were carrying a backpack (23%) or a bag (10%), and 15% of patrons were carrying a handheld device. Other possessions included patrons who had a baby stroller (4%), headphones (4%), a wheelchair or mobility device (2%) or a walking aid (1%).

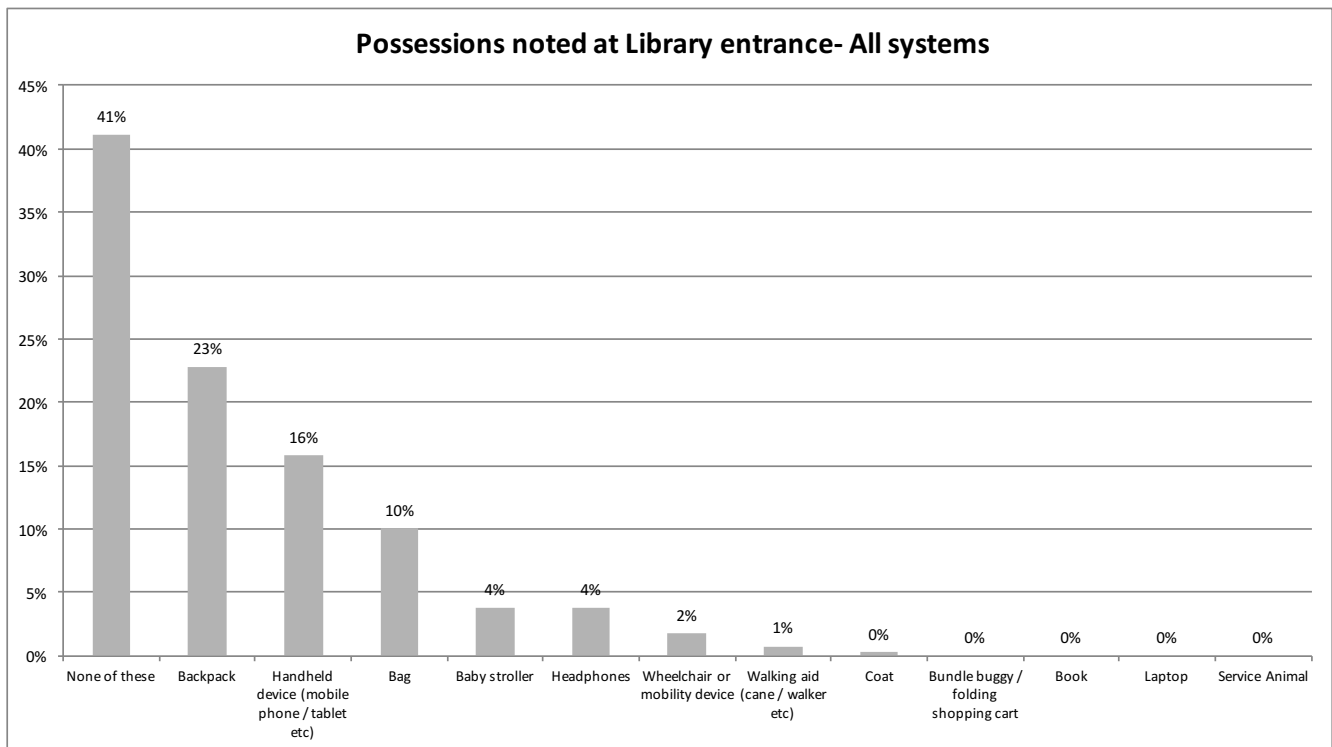


Figure 11 - Possessions Noted at Library Entrance

Main Information Desk

Note:

Not all branches observed for this study have main information desks and/or circulation desks; all branches do have a desk where staff are available to provide service to patrons.

The most common possession patrons had at the main information desk was a stroller (27%). Other common possessions were a backpack (8%) and a service animal (6%). The least common possessions observed at the main information desk were headphones (2%), a walking aid (2%), a wheelchair or mobility device (2%), a book (1%), or a laptop (1%).

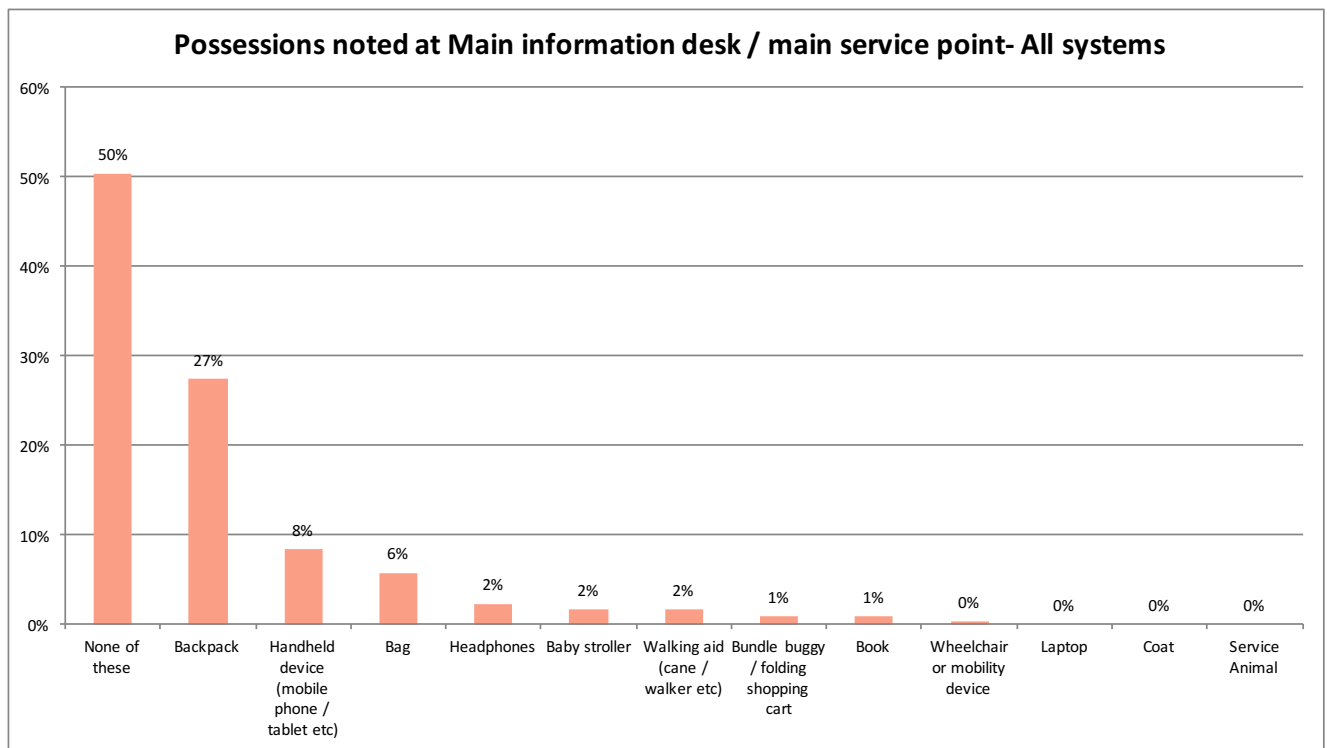


Figure 12 - Possessions Noted at Main Information Desk

Circulation Desk

A significant number (48%) of patrons were carrying a backpack (24%) or a bag (24%), and 5% of patrons were carrying a handheld device. Other possessions included patrons who had a baby stroller (4%), headphones (2%), a wheelchair or mobility device (1%), a walking aid (1%), a bundle buggy (1%), a book (1%) and a service animal (1%). Many (38%) patrons observed at the circulation desk did not appear to have any of the defined possessions with them.

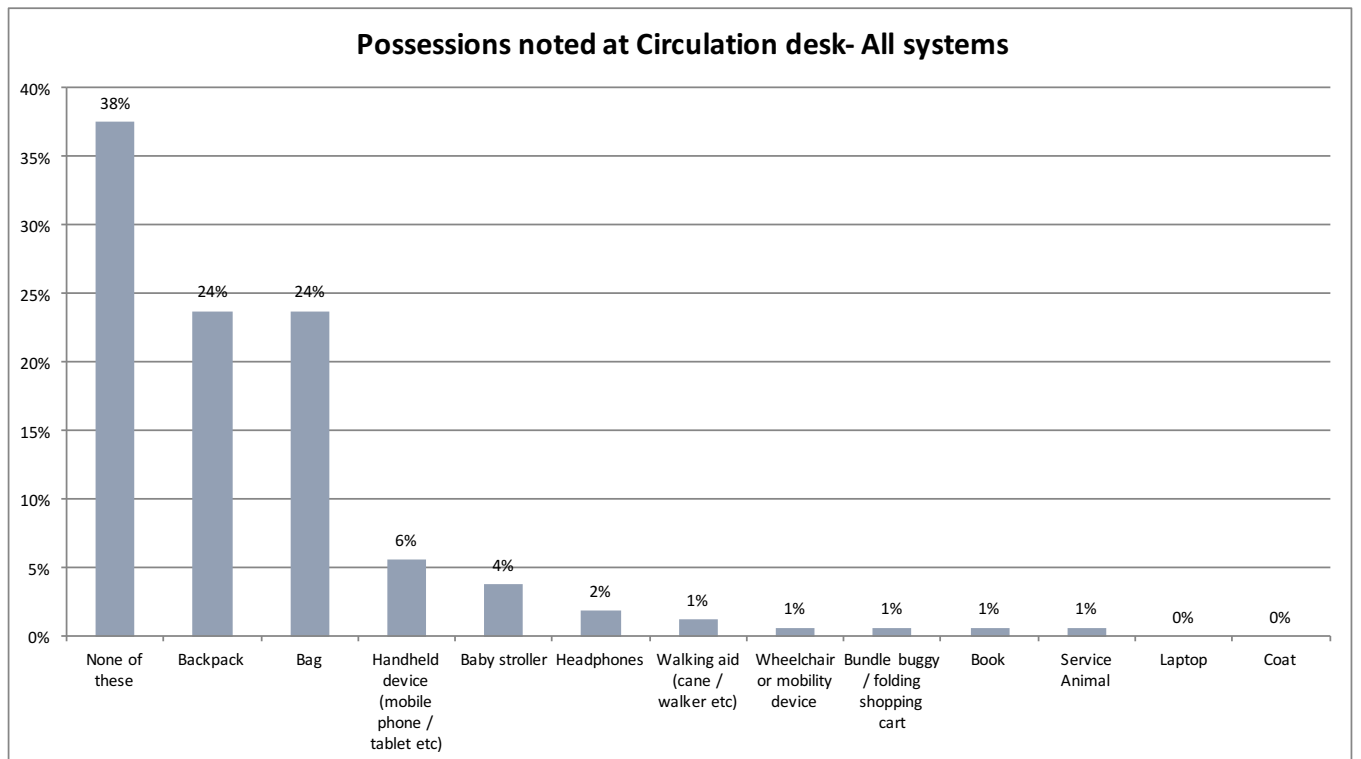


Figure 13 - Possessions Noted at Circulation Desk

Quiet Study Area

The majority (41%) of patrons observed in the quiet study area had either a backpack (30%) or a bag (11%) with them. A significant number of patrons had a handheld device (24%) and headphones (18%). The least common possessions were laptops (2%) and books (1%).

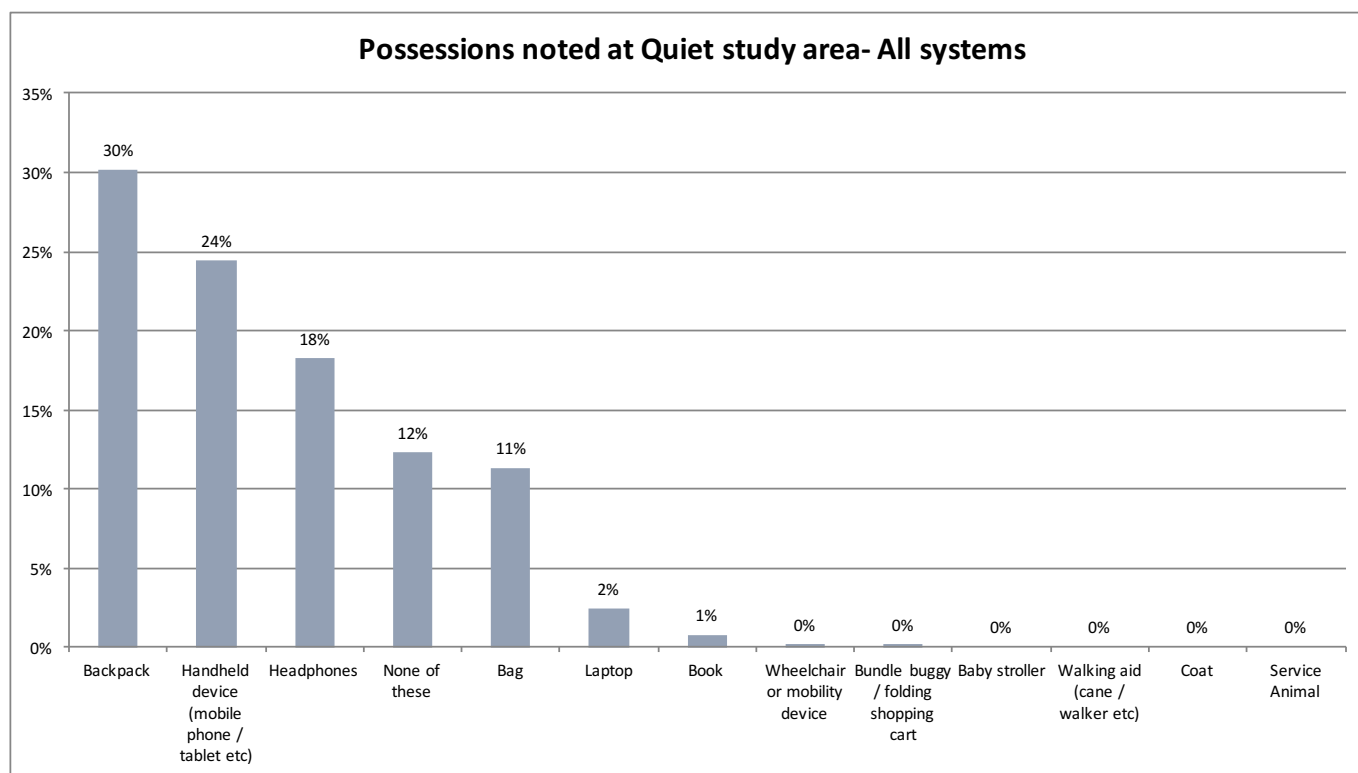


Figure 14 - Possessions Noted at Quiet Study Area

General Seating Area

The most common possession observed in the general seating area was a handheld device (27%). A significant number (33%) of patrons were carrying a backpack (24%) or a bag (9%), and 11% of patrons were carrying headphones. Other possessions included patrons who had a wheelchair or mobility device (1%) or a walking aid (1%).

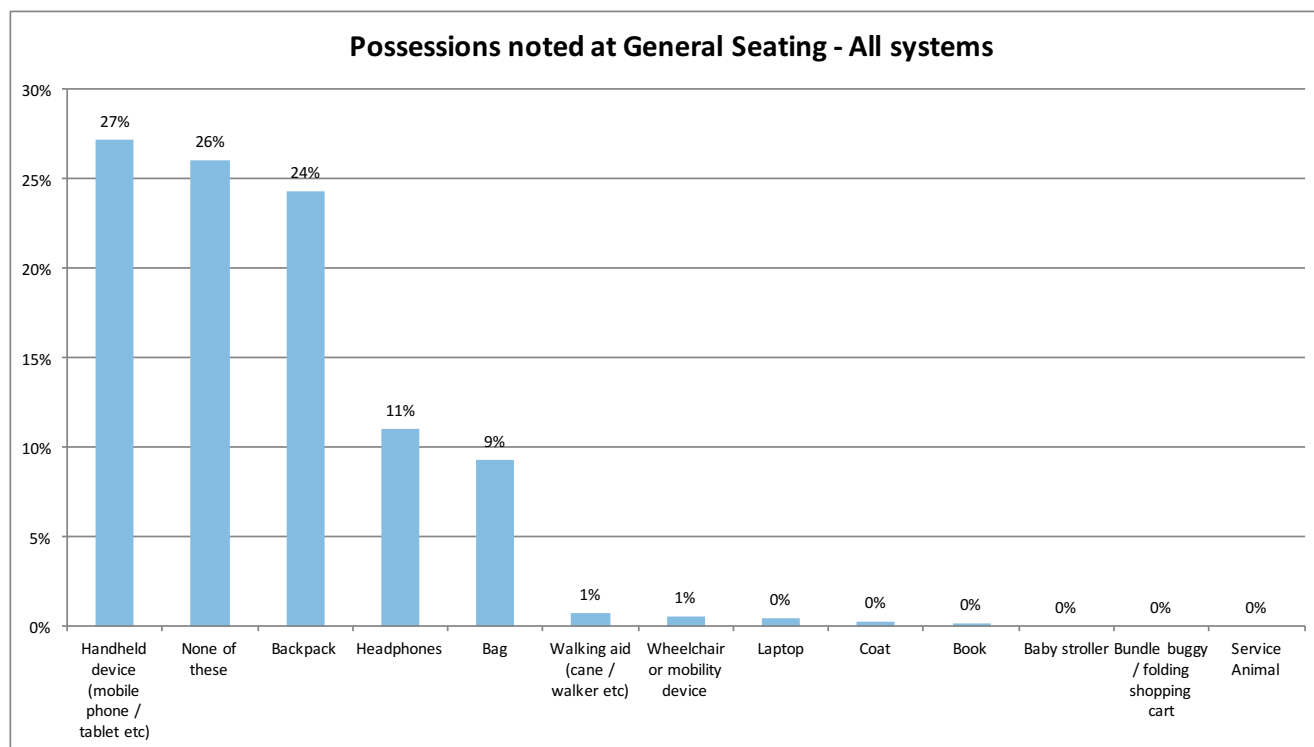


Figure 15 - Possessions Noted at General Seating

Displayed / Merchandized Collections Area

The majority (36%) of patrons observed at the merchandized collections area had either a backpack (30%) or a bag (6%) with them. Some patrons had a handheld device with them (10%). Other possessions included headphones (3%), a walking cane (3%), a wheelchair or mobility device (3%), or a stroller (1%).

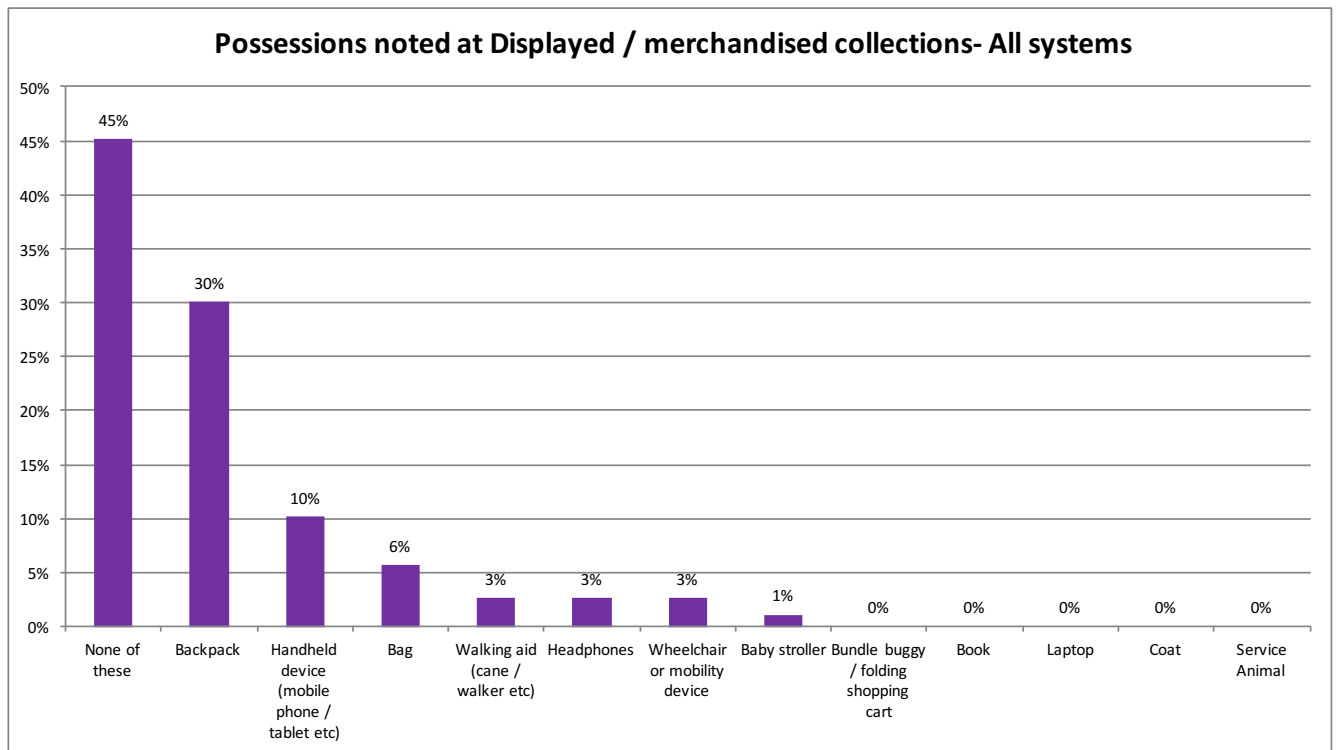


Figure 16 - Possessions Noted at Displayed / Merchandised Collections

Shelved Collections / Stacks

Many (30%) patrons observed in the stacks had either a backpack (21%) or a bag (9%) with them. The next most common possession observed was a handheld device (9%). Other possessions included headphones (2%), strollers (2%), walking canes (1%), wheelchair or mobility devices (1%), or bundle buggies (1%).

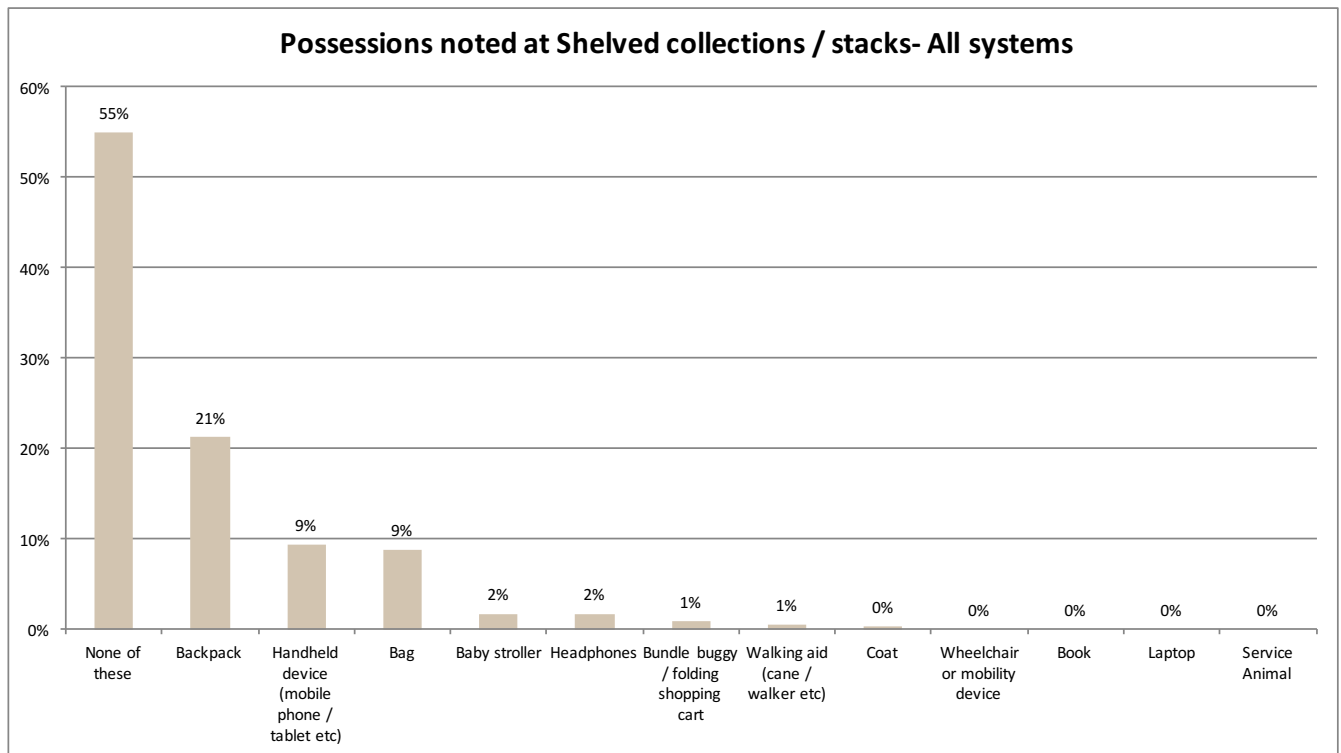


Figure 17 - Possessions Noted at Shelved Collections / Stacks

Program Area

Many (23%) patrons observed in the program area had either a backpack (15%) or a bag (8%) with them. Other possessions included strollers (9%), handheld devices (5%), and headphones (2%).

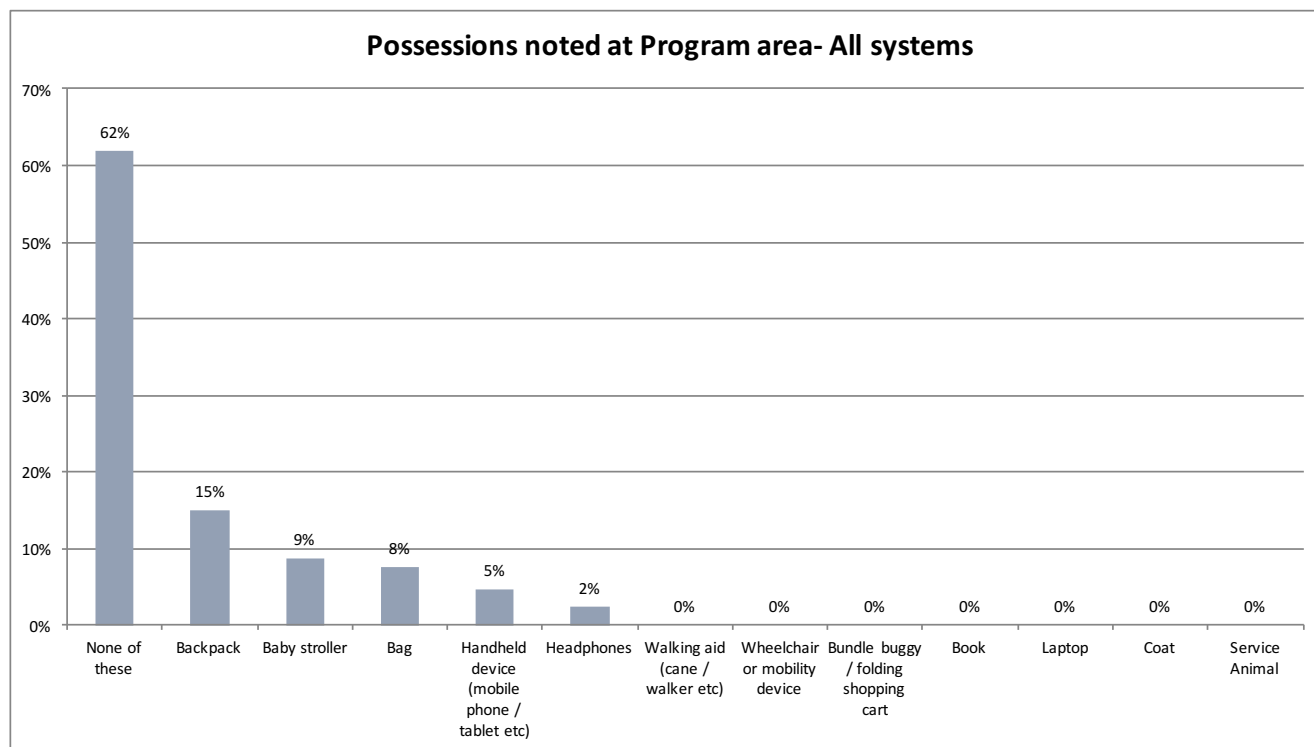


Figure 18 - Possessions Noted at Program Area

Children's Area

The most common possessions observed in the children's area were backpacks (11%) or bags (4%), handheld devices (10%) and strollers (9%). Other possessions included headphones (2%) and wheelchair or mobility devices (1%).

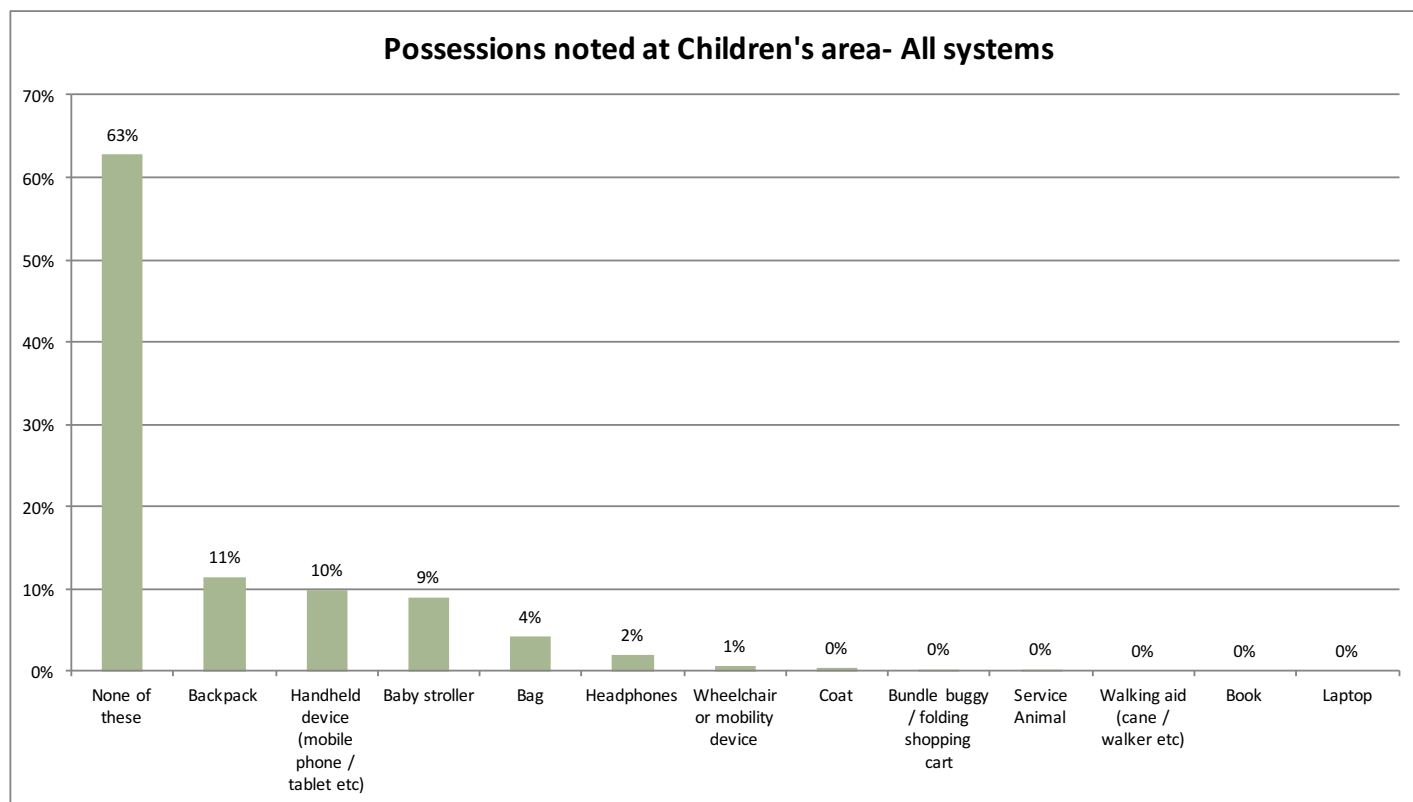


Figure 19 - Possessions Noted at Children's Area

Patron Possessions by Age Group

Library staff observed patrons of all ages to identify what possessions they had with them while they were in the library.

- Across all age groups, the most common possessions were coats, books, bags and backpacks.
- Handheld devices were popular among teens and adults; headphones were common among all age groups.
- Baby strollers were common among preschool children.
- Walking and mobility aids were common among adults and senior adults.
- Laptop computers were common among teens and adults, and to a lesser extent, seniors.

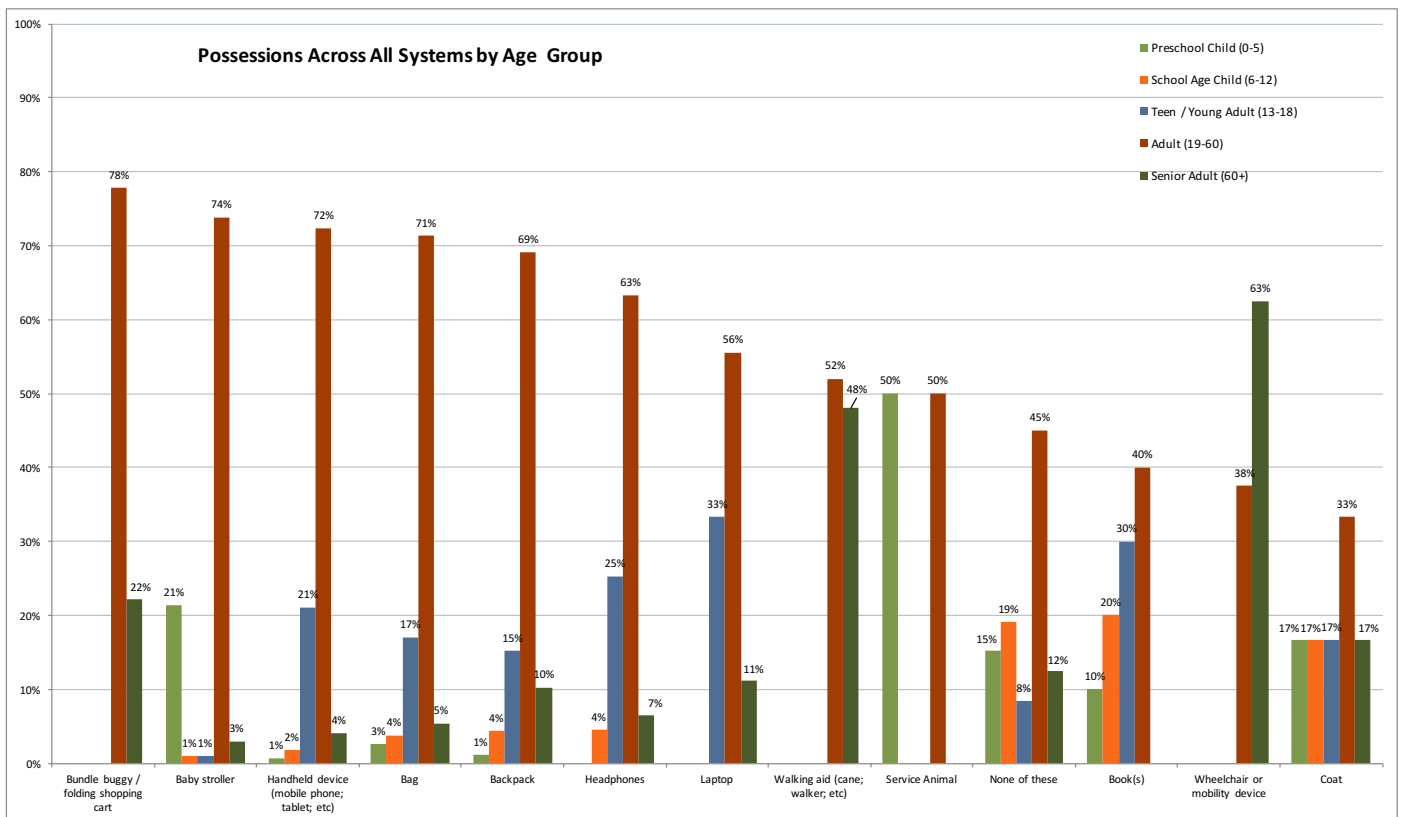


Figure 20 - Possessions by Age Group.

Note: Percentages indicate how many of the items were in the possession of each age group. For example, 78% of the Bundle buggies were in possession of Adults, age 19-60.

Patron Survey Findings

The purpose of the patron survey is to ask patrons directly about their goals and objectives in visiting the library. The following findings reflect the survey responses collected across all three library systems: Brampton, Calgary and Markham.

Purpose for Visiting the Library

The top two reasons people visit the library are:

- 36% - to borrow a book
- 25% - to study

The next most popular reasons were to meet classmates (9%), use a computer or the Internet (8%) or conduct research (6%).

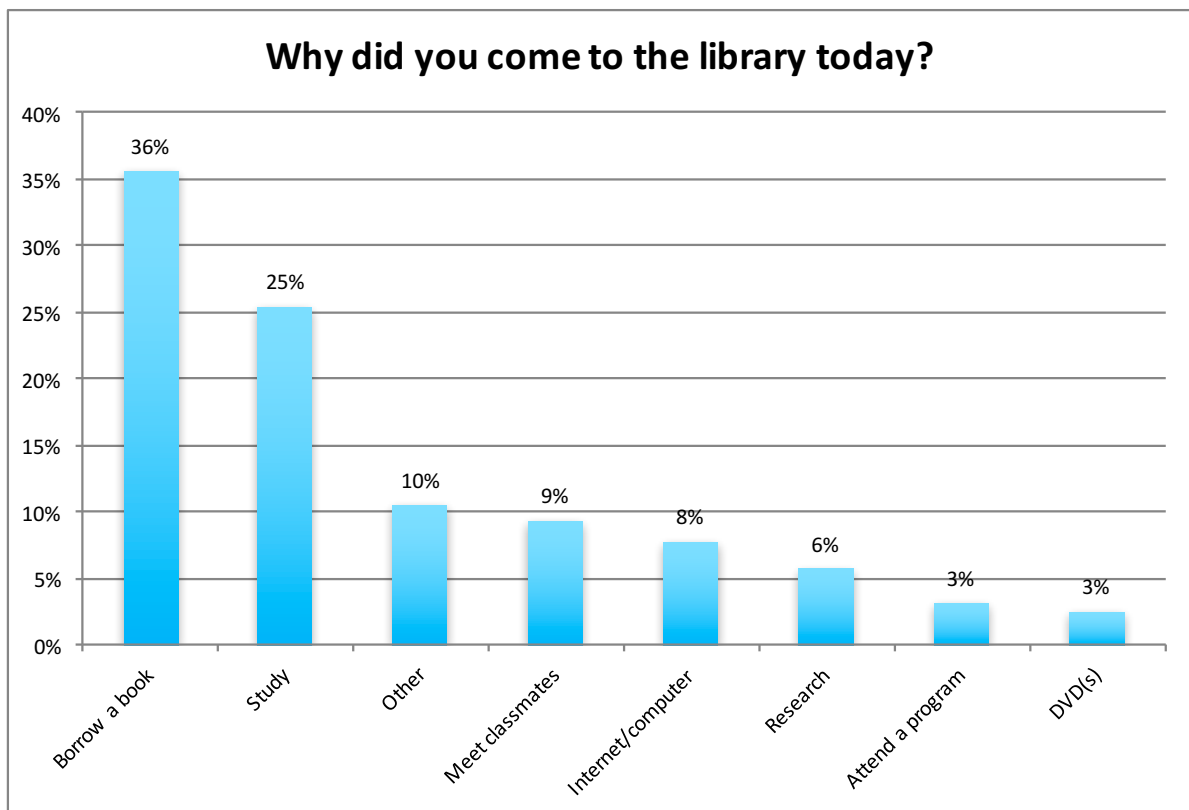


Figure 21 - Why did you come to the library today?

Perception of Library and Visit

Patrons were then asked a series of questions as to whether they felt welcomed in the library, if they perceived the library staff to be helpful, and whether they were able to find what they needed and accomplished their intention for visiting the library. For all four questions, the majority of patrons responded positively.

Some patrons answered “undetermined” (10%) in response to whether they were able to find what they were looking for; for example, some visited to use the space, the printer or the Wi-Fi, several visited to meet their friends, and some did not have a specific reason for visiting.

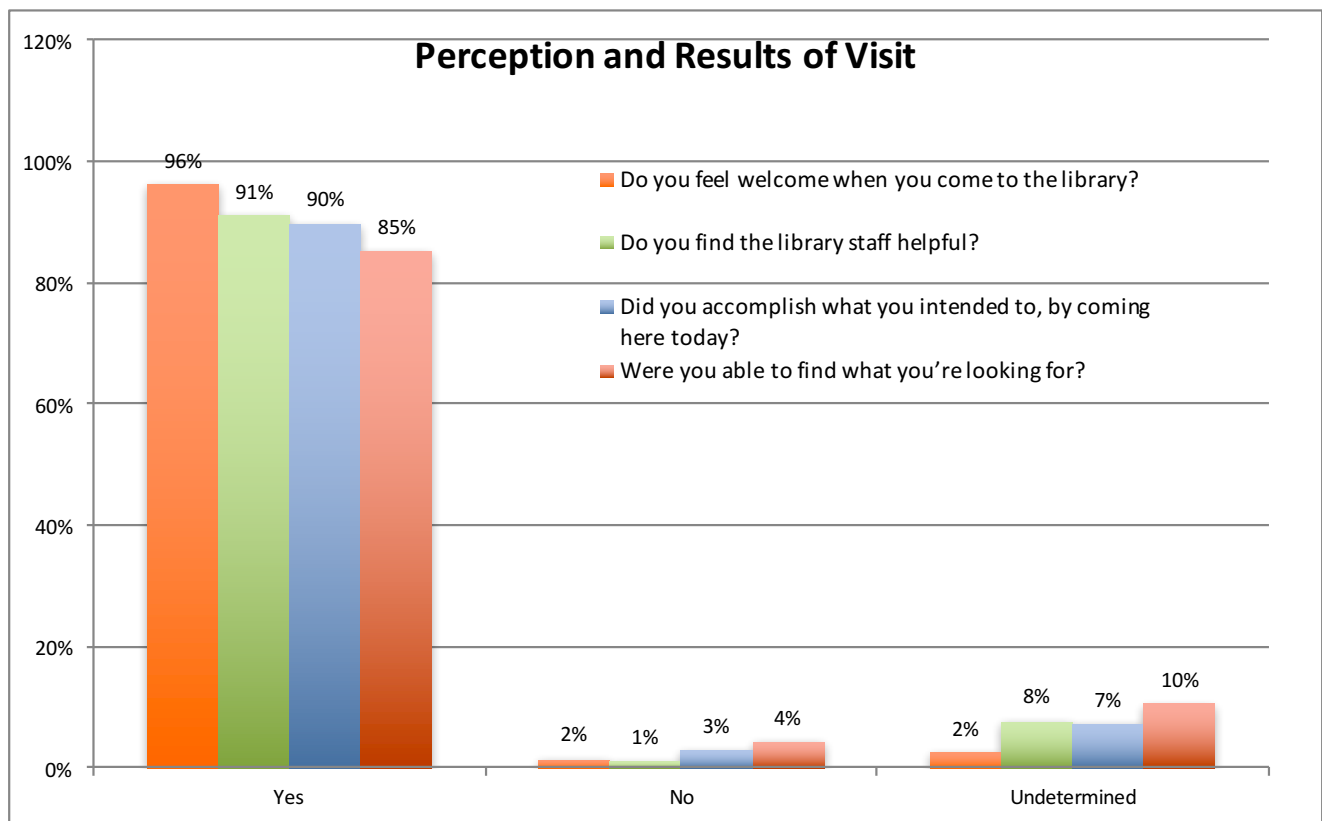


Figure 22 - Perceptions and Results of Visit (4 questions)

Patrons Interacting with Staff

When asked whether they had interacted with staff, or whether they'd helped themselves, the majority of patrons (60%) indicated that they'd helped themselves, and 35% responded that they'd interacted with staff.

As shown in Figure 22, 91% of patrons indicated that they found the staff helpful.

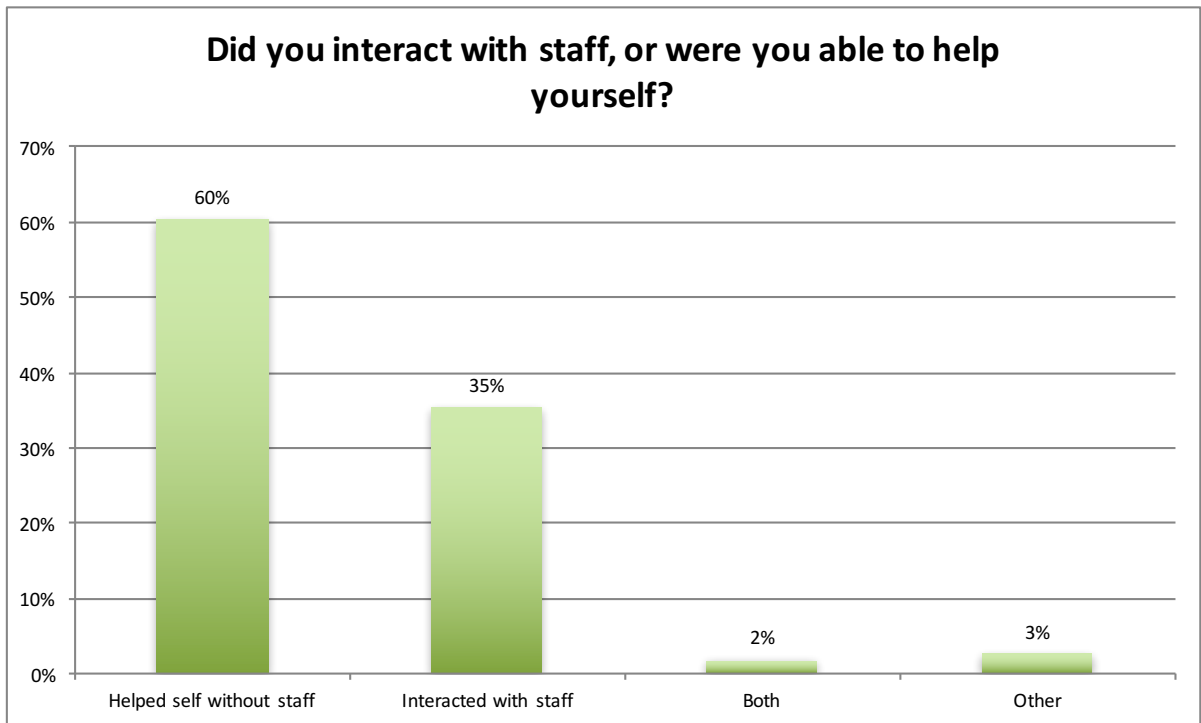


Figure 23 - Did you interact with staff, or were you able to help yourself?

Perceptions of the Library's Furniture

When asked their perception of the library furniture, the majority of patrons (69%) indicated that they furniture was comfortable, and the library offered a good variety of types of furniture.

Of the 22% of responses in the "other" category, popular responses included:

- more electrical outlets and study tables
- the furniture is old and needs upgrading
- some patrons didn't use the furniture at all, since they visited the library to pick up holds and then left.

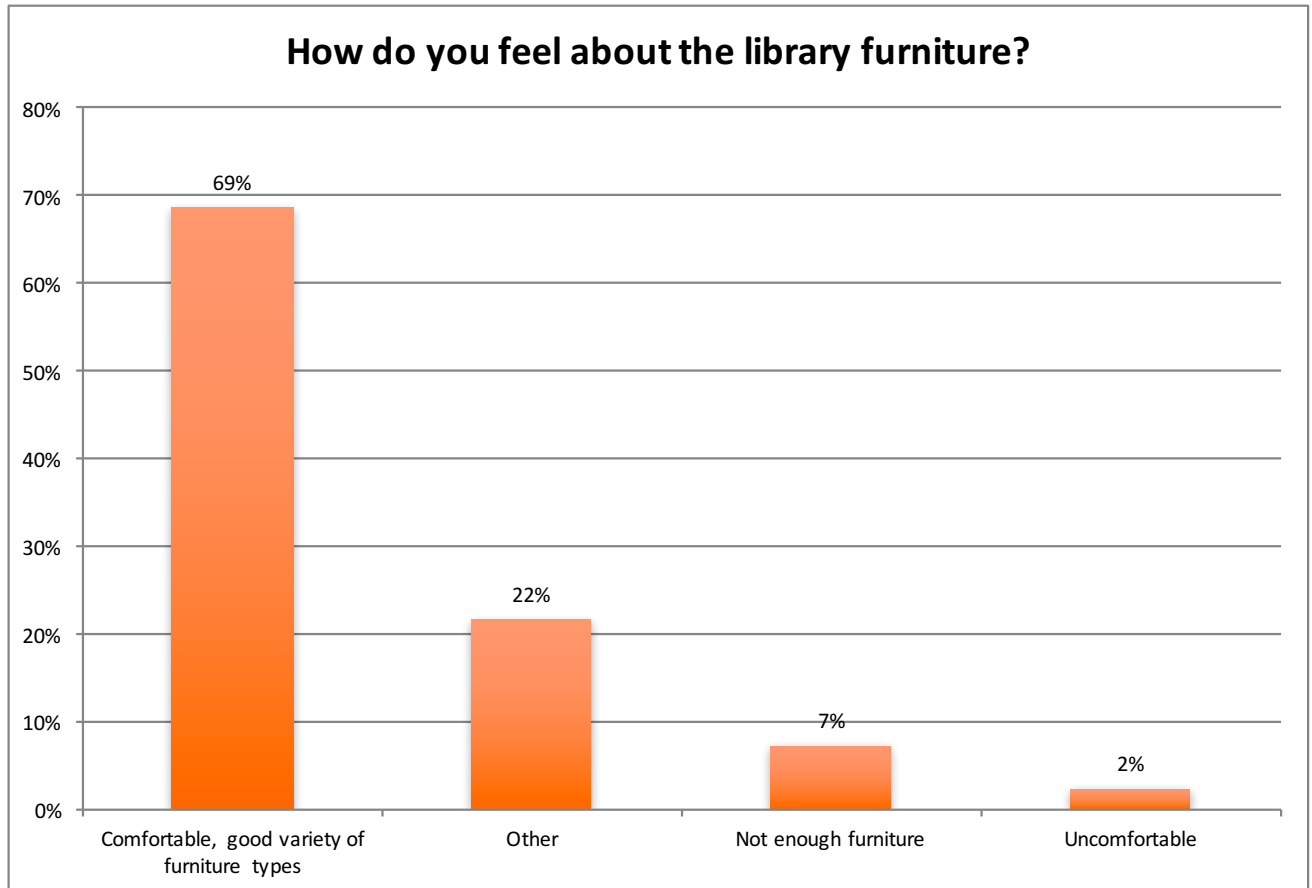


Figure 24 - How do you feel about the library furniture?

Perceptions of the Library's Atmosphere

Patrons were asked, "How do you feel about the general atmosphere of the library?", as an open-ended question. Library staff recorded the 753 patron responses across the three library systems. Most patrons offered more than a single response; each response from a single patron was coded, to capture their feedback; as a result, there are more responses than patrons who responded, therefore the sum of responses will add up to more than 100%.

Many responses shared a common sentiment, and were coded to fall into the following categories describing how they felt about the general atmosphere of the library:

General positive	79%
Quiet/ peaceful	14%
Too noisy	13%
Friendly/welcoming	11%
No answer	3%
Increase study space (group and solo)	3%
Space / layout issues	1%
Need more/better furniture	1%
Need more books / collection requests	1%
Staff issues	1%
Need more/better computers	1%
Temperature issues	1%
Safe	1%
Need increased hours	< 1%
Cleanliness issues	< 1%
Need more electrical outlets	< 1%
Program requests	< 1%

The majority (79%) of responses to the question were positive, and 11% described the atmosphere, including the staff, as friendly and welcoming. A few (1%) described it as “safe”.

Interestingly, there was an almost equal number of responses that indicated the atmosphere as “quiet”, “peaceful” and “calm” (14%), compared to responses that indicated that the atmosphere was too noisy (13%).

Patron comments were frequently related to noise levels. The data show that people are coming to the library with different expectations: many come assuming it will be a quiet place where they can read and study, as indicated by these comments:

"Most of the time it is quiet, which is how it should be in my opinion"

"Feels like a daycare. Loud talking, screaming, yelling."

"It doesn't feel like a library. It feels more like a zoo since it's very loud and inconsiderate for people coming here to study."

"On [the] weekend, [it's] hard to find quiet study place, because lots of people come here for fun not for quiet study"

"I absolutely cherish the few times there is old-fashioned "library silence"."

People are also coming to the library with the expectation that it is a social place, as indicated by these comments:

"[It's a] good place to do homework with friends"

"Great, you can talk in library"

"It's really fun and everyone is really nice."

Several responses indicated that the noise issues were due to poor space planning, and that the issues would be addressed by separating noisy spaces from spaces designed for quiet activities.

Very few (3%) patrons declined to answer the question.

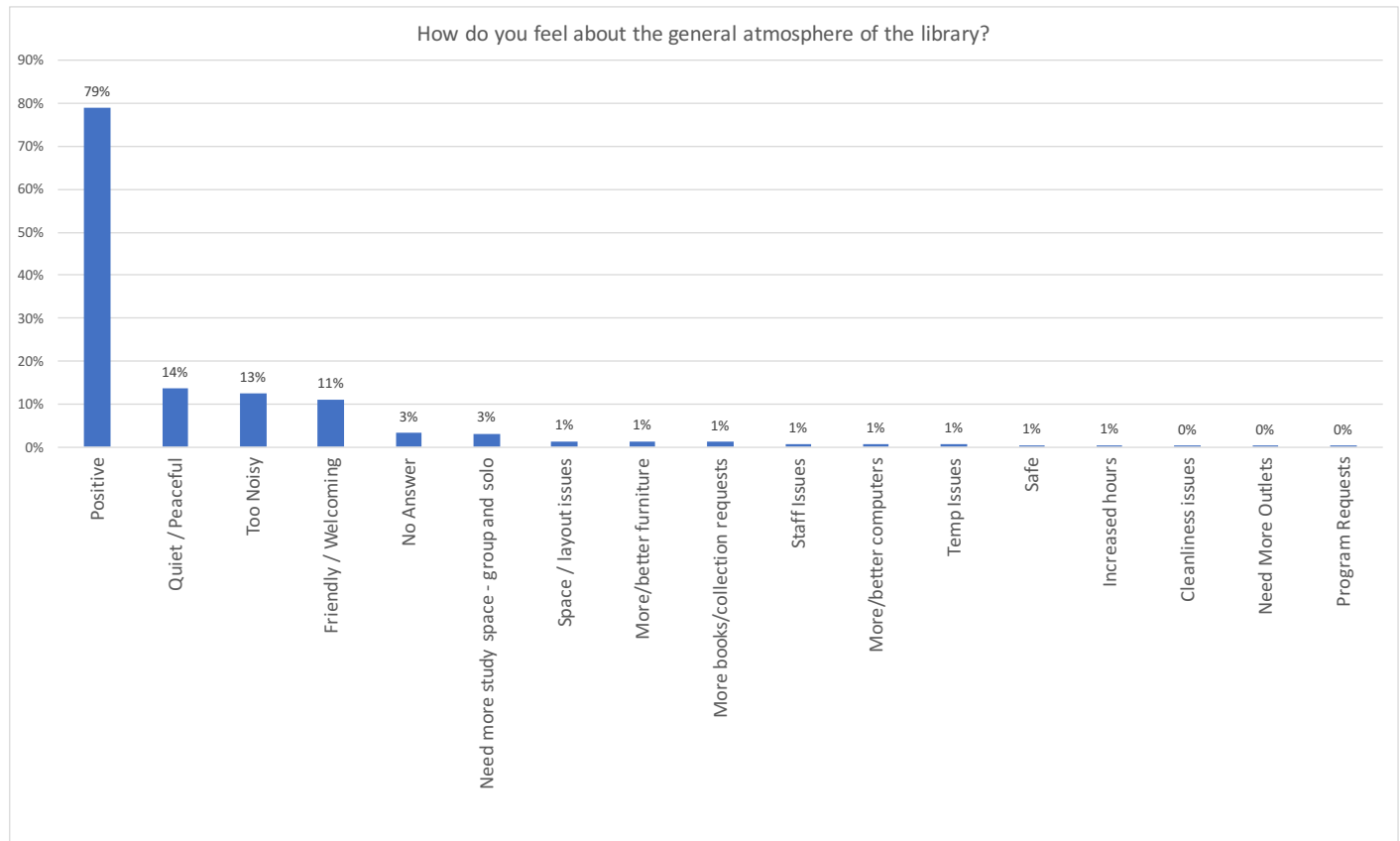


Figure 25 - How do you feel about the general atmosphere of the library?

Perceptions of the Library's Layout

When asked how they feel about the layout of the library, the majority of patrons (60%) responded that they perceived the library to be easy to navigate. While 13% found the library to be open with lots of space, 3% found it crowded. Of the 23% of responses in the "other" category, popular responses included the desire for more electrical outlets and study tables, suggestions regarding room temperatures, and noise complaints.

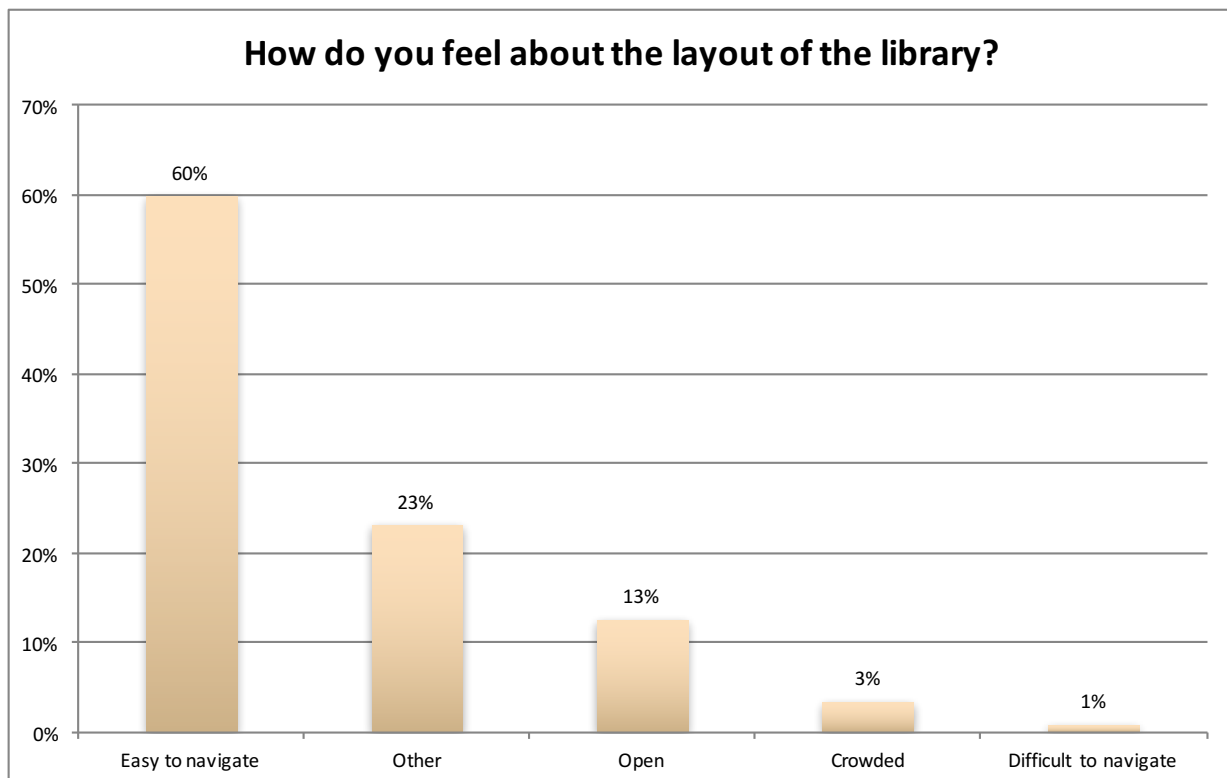


Figure 26 - How do you feel about the layout of the library?

Perceptions of the Free Wi-Fi

When asked how they feel about the free Wi-Fi, patrons responded as follows:

- 32% of patrons responded that it was fast enough, while 9% said it was not fast enough
- 10% responded that it was easy to connect, while 4% responded that it was difficult to connect.
- 8% of patrons reported they do not use the Wi-Fi
- 1% of patrons did not know the library offered free Wi-Fi.

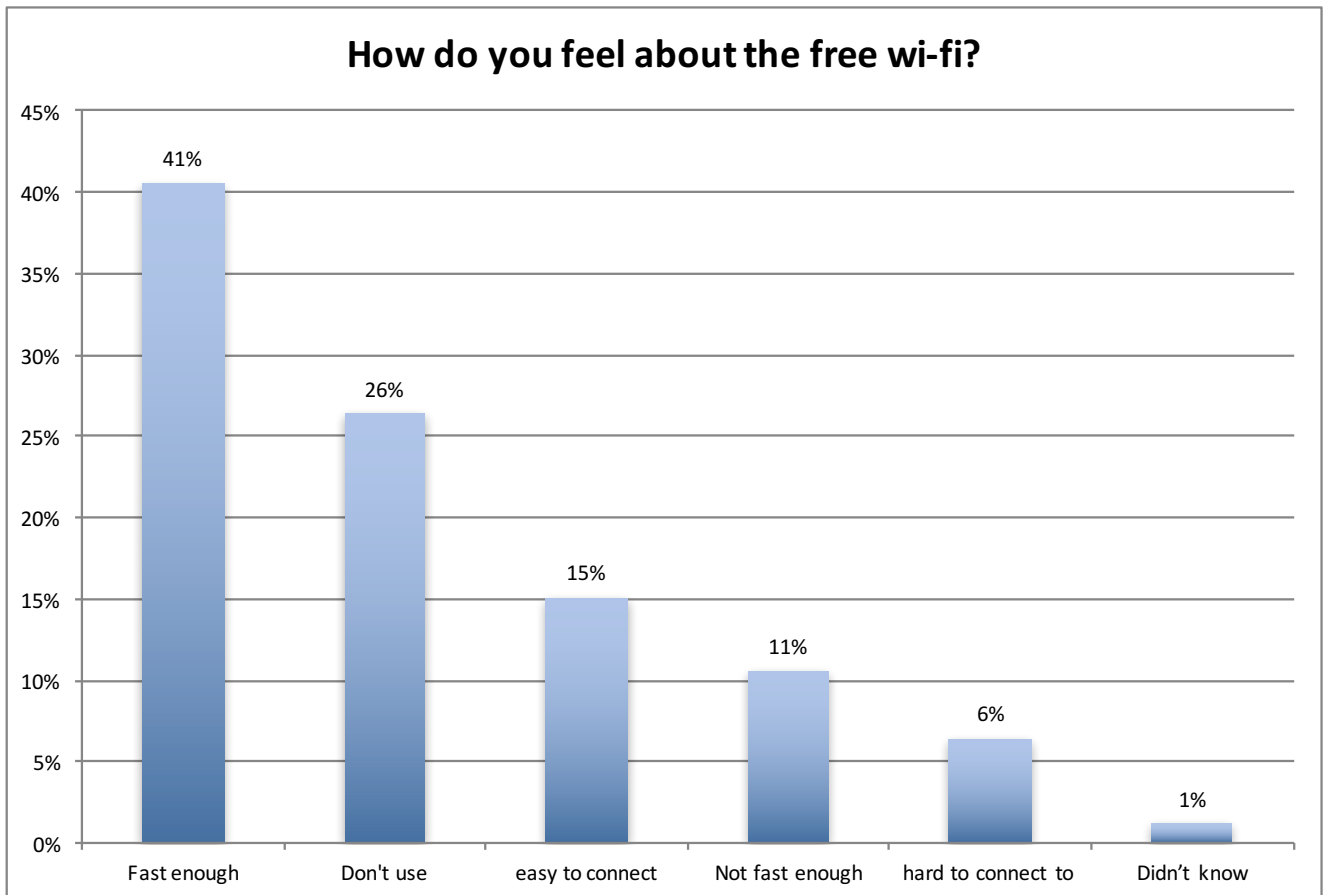


Figure 27 - How do you feel about the free Wi-Fi?

Concluding Remarks

This benefit of this space use study is that it adds to the existing and growing body of research describing how the way library space is used, and is changing. In particular, due to the use of a common methodology, this study contributes to the longitudinal data being collected, which can be used to compare and contrast how change has occurred over time. For example, the results of this study can be compared against the findings from the study conducted by the Edmonton Public Library, and other studies using the same methodology.

It is important to acknowledge that conducting a structured observation study is time consuming for staff, for those co-conducting the research, and for those who are carrying out the observations and surveys. The return on this investment is a detailed description of what's happening in the library, at the space and branch levels, which is difficult to document in any other way.

Ideally, research informs library practice, and provides data-driven evidence to help anticipate and meet patron expectations. Patrons are using library space for group and individual study, and in groups for socializing, which can create friction in terms of noise levels. Many patrons expect the library to be a quiet place, which may not always be the case. Extra space may be required to accommodate all kinds of mobility devices, including strollers, canes, walkers and scooters. How space is designed and lit, how furniture is arranged, and how spaces for different activities are placed, all impact a patron's impression of their library. Using the results of this study will contribute to creating welcoming, safe, and inclusive spaces where patrons experience their library in a positive way.

About Brightsail

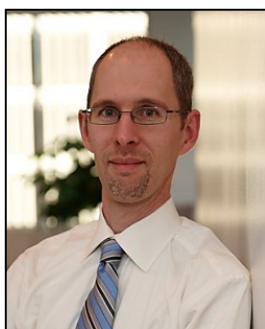
Brightsail is a boutique advisory firm that provides custom research, evaluation and consulting services. Established in 2003 by Kimberly Silk, Brightsail has worked with public and private sector organizations – including libraries, museums, universities, colleges, schools, and government agencies – for over a decade.



Kimberly Silk, MLS
Principal Consultant

Kimberly Silk is a librarian with a background in academic and data librarianship, and a passion for conducting research to evaluate how cultural institutions impact their communities.

As Principal Consultant of Brightsail Research, she works with organizations across Canada to develop methodologies to demonstrate value and impact.



Jeffrey Veffer, MBA
Data Scientist

Jeffrey Veffer has worked with large for-profit organizations as well as small not for profits using data to refine strategic and marketing plans.

Appendix A:

Annotated Bibliography

Aabø, S. & Audunson, R. (2012). Use of Library space and the library as place. *Library & Information Science Research*, 34, 138-149.

This article highlights an observational study of three library branches in Oslo to determine how people use the library, in addition to borrowing books and other forms of media. Data were collected through patron observation and patron interviews. The interviews asked users for what purpose they were currently using the library, how often they used the library, and to which life sphere (private, work or community) they connected these activities. The findings show the library as a complex place that can arguably occupy all three spheres of life, depending on the intended use of the space by the patron. The library is a first place (private sphere) when it becomes an extension of the home, for example where a brother can help a sister with her homework or an individual can relax and read independently. The library is a second place (work sphere) when it is used to conduct business or further one's education. Lastly, the library becomes a third place (community sphere) when it brings people in the community together and promotes serendipitous run-ins. Further, within the community sphere, the library can constitute both a high intensity or low intensity meeting place, or facilitate the flow between the two. Therefore, the use of library space as many forms of place highlight the importance for efficient spatial design to accommodate the varying uses of its patrons.

Abbasi, N., H. Elkadi, A. Horn and S. Owen (2012a). Transforming Academic Library Spaces: an evaluation study of Deakin University Library at the Melbourne

Burwood Campus using TEALS. Discovery: ALIA Biennial 2012 Conference, Sydney, Australia, ALIA.

This article outlines an evaluation of the redesign and redevelopment of the academic library of the Melbourne Burwood Campus. The refurbishment of the campus library was aimed to create a more student-centered work environment for both individual and group study. Four goals were developed to create this. The first was to transform the library from a “book warehouse” to a “people place” by creating spaces where students felt comfortable to use them how they chose. The second was to create a welcoming and inviting entry space. The third was to improve way-finding by making the space easier to navigate. The final goal was to find creative ways to define and recreate spaces on a limited budget. TEALS (Tool for the Evaluation of Academic Library Space) was used to evaluate the refurbished library spaces. TEALS evaluates these spaces based on ten criteria: positive image and identity; welcoming and inviting entry; flexibility and adaptability; variety of spaces that cater to different users and uses; social and people-centers; sense of place and inspiration; environmental comfort and sustainability; access, safety and security; and integration of technology. The evaluation gathered data from three sources: an observational study, one focus group with library staff and four with students, and through an online survey. The findings for each of these criteria helps to inform what has been done, what works, and what still needs to be considered. Students had positive impressions of the new entrance, which was open and bright; they also liked the creation of informal work spaces with comfortable seating. However, they found that zoning, in terms of quiet and not quite study spaces, needed to be improved as well as physical accessibility; also, individual computer carrels needed to be expanded to accommodate groups. An interesting finding was that students found individual study carrels functional but

outdated. A new, more open and inviting space for quiet study is in demand among students.

Alverson, B. (2015, October). "Hatch" Library Maker Space in a Mall Draws DIYers, Students, and Entrepreneurs. *School Library Journal*. Retrieved from http://www.slj.com/2015/10/technology/hatch-library-maker-space-in-a-mall-attracts-diyers-students-and-entrepreneurs/#_

This article discusses the creation of a maker space by the Watertown (Massachusetts) Free Public Library. This maker space is a collaborative space that encourages social learning through access to space, technology and tools. Hatch, as the space is called, includes a 3-D printer, which has allowed people to learn and experiment with this new technology and has inspired one volunteer to start a startup company creating medical devices. Hatch is where he develops the prototypes using the 3-D printer. One user of Hatch states that these maker spaces are an excellent way to keep libraries current. Just as libraries used to provide access to knowledge and broke down barriers to knowledge prior to access online, these spaces provide access to physical tools, space, technology and other forms of knowledge that are not as easily accessible.

Bailin, K. (2011). Changes in Academic Library Space. *Australian Academic and Research Libraries*, 42(4), 342-359.

This article discusses a study done to evaluate the refurbishment of the library at the University of New South Wales (UNSW). In order to adjust to the rapidly digitizing academic sphere, the UNSW had to redesign its space, services and facilities to meet the demand of its students and encourage use of the library. According to previous literature, key design concepts were: a good layout, configurable study areas, one service desk

centre in an information commons, extended hours, a café, and a connection to the campus community. Data on student's perception of the refurbished library space were gathered through structured interviews of 72 students. Overall, the findings showed students were happy with the new library. Collaborative study is an important element in the design of an academic library; therefore, the refurbishment included the creation of open spaces with comfortable seating, group meeting rooms, and multimedia spaces that are all intended for group work. Many students said they used studying at the library as a way to socialize with friends, more so than meeting them for coffee or a meal. However, it was discovered that although group meeting spaces and noisy areas of the library are desired, so too are the quiet independent study spaces. Students found that quiet areas to study were harder to find, and in many quiet areas these rules were not followed. It is crucial to separate the noisy and quiet designated areas in these academic libraries. The author suggests this could be achieved by creating independent study rooms, and dedicated floors for noisy and quiet activity.

Bilandzic, M. & Foth, M. (2013). Libraries as co-working spaces. *Library Hi Tech*, 31(2), 254-273.

This article aims to identify various design strategies used in libraries to enhance their social learning and collaborative spaces. Data were collected over five months of ethnographic study of a space called "The Edge", which is a bookless library space at the State Library of Queensland in Brisbane, Australia. The Edge is dedicated to enhancing collaboration, co-working and social learning. Based on the observations, the article presents the personas of five potential users of the space. An explanation of these personas includes how each may view and use the space, any issues they may have with the space and how to address these issues. The first persona, Doesn't Care Claire, illustrates the users who came in with no intent to use the space

collaboratively or for social learning but to access the space and technologies available – for example, computers, Wi-Fi, software programs, and so on. This category included the elderly who came in regularly to use the space to read; they expected a quiet atmosphere and would complain about the noise coming from nearby groups who were collaborating. The second persona, What-Can-I-Do-Here Sophia, represents the people who stumble across The Edge as they are walking down the street. These people, which represent about 50% of visitors daily, are confused by the lack of books in the space and don't understand, at first glance, what the space can be used for; they eventually leave. The third persona, Learning-freak Fred, sees the massive potential in a collaborative and social learning space like The Edge and is eager to network, engage and collaborate with others in the space. The problem for these people is the social barrier put up between strangers, making it difficult to walk up to someone in the space and engage them in a conversation. The fourth persona, I-Wanna-Share-It Garrett, represents users who are smart and eager to both learn and share knowledge on almost any topic. Users like Garrett were frequenters of the many workshops and classes held at The Edge. However, these people were not as frequent on a regular basis outside of these social learning experiences. The final persona, Co-Working Chris, represents users who come to the space to do their own work. Users like Chris like the space for the social atmosphere and the serendipitous encounters that can occur in shared spaces. The problem for these users is that these encounters only happen in certain spaces and at certain times, for example while in line for coffee or during workshops. These five personas fall into three main use groups: to access computers, Wi-Fi, software and other technology; as a co-working space either individually or with groups; or for social learning experiences through scheduled workshops. The biggest barrier to the space seemed to be the lack of knowledge of other users' skills and expertise, and anxiety about

randomly approaching strangers. The authors suggest that addressing these barriers to social interactions, possibly through technology or a maker space, could be a way to improve the nature of social interaction at “The Edge” and spaces like it.

Bryant, J., Matthews, G. & Walton, G. (2009). Academic libraries and social and learning space: A case study of Loughborough University, UK. *Journal of Librarianship and Information Science*, 41(1), 7-18.

This article details a case study done in an academic library at Loughborough University, England, that examined the use of a large open learning/social space in the library. The study used ethnographic methodologies to examine the behavioural and space-use patterns of both students and faculty for over 40 hours. Analysis of the field notes determined that use fell into eight themes: collaborative study, individual study, intrusions and interruptions, open as a social space, open as a public/private space, technology, diversity, and library staff/library materials. Major findings showed that students – particularly undergrads – were the dominant users of the space, both for group study and for socializing. It became evident that for this generation, study and socializing are connected. Faculty, mature students and higher degree students noticeably used this space less. This open space was also used as an individual study space, chosen over the independent study carrels in quieter spaces. This study helps to show how social space is becoming an important part of academic study, especially for undergraduate students who seem to link together study and social time. Additionally, open spaces for quiet, independent study were also preferred over study carrels or private spaces. More open spacing both for noisy, “social” studying and independent study is desired in academic library settings.

Given, L. M., & Archibald, H. (2015). Visual traffic sweeps (VTS): A research method for mapping user activities in the library space. *Library & Information Science Research*, 37(2), 100–108. <https://doi.org/10.1016/j.lisr.2015.02.005>

Given and Archibald discuss how library buildings are most often designed with architectural guidelines in mind, instead of local patron needs. They encourage the use of visual research methods, which are used by space designers, and describes how to use visual traffic sweeps (VTS) with traditional methods of observation to assess patrons' needs in the library. VTS is different from observing patron activities in that it tracks the patrons' movements in the library, and records how they are using objects such as furniture, and how they interact with other people in the space. This methodology involves combining systematic seating sweeps with geographical information systems (GIS) technology, so that results can be visualized. This approach is most effective when combined with interviews and questionnaires. The authors go into detail as how to collect seating sweep data (patron demographics, possessions and activities) with a mobile device, clean the data, and then import it into GIS software. Findings from the study show that the most common activities, in order of popularity, were reading, talking, group discussion, and laptop use. Results were communicated by layering seating sweep results on top of the library floorplan, providing a visualization where the different activities occurred.

Given, L. M., & Leckie, G. J. (2003). "Sweeping" the library: Mapping the social activity space of the public library. *Library & Information Science Research*, 25(4), 365–385. [https://doi.org/10.1016/S0740-8188\(03\)00049-5](https://doi.org/10.1016/S0740-8188(03)00049-5)

Given and Leckie discuss how they borrowed ethnographic techniques from geographers to develop a

methodology to map how patrons use library spaces. The study was conducted in two large urban libraries: the central branch of the Vancouver Public Library, and the Toronto Reference Library. The primary research questions are: 1) How does the central library function as public space? 2) How is it different from, or similar to, other types of public space? 3) Who are the users of the central library, and what do they use the central library for? 4) What are users' perceptions of the important and appropriate roles for the central library? And 5) How have information technologies affected the uses and perceptions of the central library? The study used four instruments to gather patron data: 1) an extensive, 30-question written patron survey, 2) face-to-face patron interviews, 3) in-depth interviews with library staff, and 4) an unobtrusive patron-observation survey, also known as "seating sweeps". The sweeps were done three times a day, over an approximate 2-week period, observing 60 activities. Findings from the study show that at both libraries, there was a higher percentage of men than women visiting the library, and that most library patrons were younger than 60 years. Across age groups and sex, the busiest time of day was the mid-afternoon, and Saturday was among the least busy days of the week. The most popular areas, in order of popularity, were study carrels and work tables, computer workstations, and indoor street areas. Possessions the patrons had with them, in order of popularity, were books, carrying cases, and food and drink. Activities patrons were engaged in, in order of popularity, were reading, writing, talking to other patrons, and using a computer.

Høivik, T. (2008). Count the traffic. In *Managing libraries in a changing environment – legal, technical and organisational aspects*. Quebec, Canada: IFLA. Retrieved from <https://archive.ifla.org/IV/ifla74/papers/107-Hoivik-en.pdf>

Two Norwegian public libraries applied a retail-style methodology to gather data about patron behavior for evaluation, strategic planning and advocacy. The methodology, named TTT from the Norwegian expression Tverrgående TrafikkTelling (transversal traffic counting), is similar to the “seating sweeps” method described by Lisa Given and Gloria Leckie in their 2003 study . The TTT method is based on having library staff observe library activities – in predefined zones, at regular intervals and across a number of days – and then collect these observations using a standard form. To protect library member privacy, only activities are recorded, not information about the member. Høivik lists fifteen categories of observations, arguing that while they are somewhat arbitrary, committing to a standard set of observations will produce comparable data when the methodology is used in multiple libraries. Findings from the study in Drammen, the seventh largest city in Norway with a population of 55,000, show that computer use (including mobile devices) was higher than expected; the frequency of group activities involving children and students was higher than expected; and, the number of purely social activities were higher than expected.

Horrigan, J. B. (2016). *Libraries 2016*. Washington, DC: Pew Research Center. Retrieved from <http://www.pewinternet.org/2016/09/09/libraries-2016/>

The Pew Research Center is a non-partisan organization that conducts public opinion polling, demographic research, content analysis and other data-driven social science research. Pew has conducted research on American libraries since 2005; the Libraries 2016 report is part of this body of work.

Indergaard, L. H. (2017, July 3). Who are they and what do they do? Retrieved July 17, 2017, from

<https://blogs.ifla.org/public-libraries/2017/07/03/who-are-they-and-what-do-they-do/>

In November 2015, the six largest public libraries in Norway conducted observation studies to learn more about their users. For this study, the main libraries, branch libraries were included in the study, including two branches that were observed during unstaffed hours. The observation method had library staff follow library users during their visit, recording what the user was doing, which zones they visited, and how long they spent during their visit. A similar study conducted in 2007 provided data for comparison. Findings from the 2015 study show that visitors between the ages of 19 and 30 accounted for 29% of visitors, and those between the ages of 19 and 45 accounted for 54% of visitors; there were slightly more visitors who were women (58%) in comparison to men (42%); visitors using the library as a social space was higher than in 2007, and the length of visit was longer. In comparison to the 2007 study, there were increases in the number of visitors using the space for reading and studying, increases in program participation, increases in people using the library to socialize as opposed to using library services, and more visitors demonstrated the ability to use library services without staff assistance. Circulation rates remained stable.

Leckie, G. & Hopkins, J. (2002). The Public Place of Central Libraries: Findings from Toronto and Vancouver. *The Library Quarterly: Information, Community, Policy*, 72(3), 326-372.

This article presents findings from an examination of Canada's two busiest libraries: The Toronto Reference Library and the Vancouver Public Library Central Branch. The study used both surveys and patron interviews to understand how people use the library space, their perception of its form and function, and what they view as acceptable and unacceptable behavior in the spaces.

Additionally, “sweeps” of each library were done, which consisted of walk-throughs to observe the actions and behaviours of users. The main and most relevant finding was that the library is a popular public space that people frequent, and that there are two types of visitors: first, those that view it as an extension of their living room, where they read, work or study quietly, and second, those who come in looking for something specific and leave once they find it. This finding helped to conclude that the public library is a space for quiet, independent study and not recreational or collaborative activity.

MacDonald, V., & Haug, C. (2012). Edmonton Public Library Seating Sweeps Report. Edmonton, AB: Edmonton Public Library. Retrieved from https://www2.epl.ca/public-files/reports/seating_sweeps_public_report.pdf?_ga=2.99514903.861280485.1502637912-319771238.1502637912

In 2011 and 2012, Edmonton Public Library applied the “seating sweeps” methodology described in earlier space use studies (Given & Archibald, 2015; Given & Leckie, 2003; Leckie & Hopkins, 2002). Data were gathered from sixteen branches over a series of three rounds of observation. The intent of the seating sweeps was to answer the following questions:

1. What are customers doing in EPL’s spaces?
2. How would customers like to be using EPL’s spaces?
3. What are current and future trends in library spaces and customer activities?
4. How could EPL’s spaces best meet the needs of EPL’s customers?

Data collected included demographic components, activities, and use of the physical space.

Findings show that there were slightly more males (53.9%) than females (46.1%) using the space. Adults

(35.2%) made up for the largest group of patrons, followed by young adults (24.2%). School-aged children and teens were at 12.1% and 10.7% respectively. Older adults (8.9%) and young children (8.8%) made up the smallest groups.

The most common activities observed were talking to others (24%); using a computer workstation (15.8%) and browsing (14.6%) were the next two most common activities.

The total number of patrons using computer technology as 30.4%, only 5.1% were using a laptop; the rest were using computer workstations.

The sweeps also gathered data on what possessions the patrons had with them when at the library. The most common possession were bags (33.2%) followed by books (23%). Other possessions that were less common were documents (6.5%), writing material (6.1%), drinks (5.4%) and handheld devices (5.3%).

Niegaard, H. (2011). Library Space and Digital Challenges. *Library Trends*, 60(1), 174-189.

The article discusses the changes facing the traditional library to keep up with the rapidly growing digital environment. It highlights a Danish survey that found library users are no longer visiting the library to access books, but as a place for inspiration and work. Libraries today need to rework their space to accommodate what the article calls the "experience economy," where people are learning through creativity and collaboration. The article discusses interactive spaces and activity zones as ways to design library spaces to accommodate the experience economy, but also ensure that traditional library spaces are available for those who desire them. Interactive spaces are spaces melded with technology to provide experiential learning. For example, the Aarhus Library in Denmark has an Interactive Children's Library with a touch sensitive floor that allows children

to search through its catalogue by walking along the floor. The creation of activity zones in a library can establish a natural flow through their space and provide a space for every type of desired use: for instance, noisier, more active spaces, such as the interactive spaces, cultural exhibits, and cafes, should be located closer to the entrance of the library. Another zone may offer library services, a smaller collection of books and computer access, while a third space may provide an open area with comfortable seating for quiet, independent work and reading. The article includes examples of two Danish libraries, in Aarhus and Hjørring, that have undergone massive redevelopments to redesign their space to create the feel of a third place where users have the opportunity to learn, experience, meet people, work independently and in groups, borrow materials or read quietly.

Puckett Rodgers, E. (2015, September). The New Placemakers (2015 Library Trends). Library Journal. Retrieved
<http://lj.libraryjournal.com/2015/09/buildings/library-buildings/the-new-placemakers-new-landmark-libraries-2015/>

This article outlines nine trends from 2015 that are changing the concept of the role of the public library in today's society. First, libraries are their communities. Libraries today are shifting attention from their collections to their people and creating people-centered programming. For example, after Hurricane Katrina, the Main Library at Goodwood in East Baton Rouge, LA was redesigned to centre around their new Career Centre, English-language learning programs and adult new reader collections. Second, libraries are establishing productive partnerships with city or civic institutions to create collaborative community spaces which improve both library and city space. For example, the c3 Civic High school (a 4-year public high school) is located within the San Diego Central Library. Third, libraries are

becoming placemakers, which are establishing a sense of community and creating multi-use spaces. The East Branch of the Milwaukee Public Library is a mixed-use space that incorporates the library, 99 apartments and retail space. Fourth, libraries are creative catalysts by providing maker spaces that offer advanced technology, like 3-D printers, and other tools creating spaces for creativity and innovation in their communities. Fifth, libraries are aspirational and accessible, where the design of the building celebrates the community and inspires creativity, collaboration and knowledge sharing. Sixth, libraries breathe and grow with the use of flexible space. For example, the Cedar Rapids Public Library has open space that allows for new and innovative uses of the library. Seventh, libraries are transparent and light-filled, with walls no longer filled with books but floor to ceiling windows that let light flow through the library and provide the illusion of a more open and connected space. Eighth, libraries are connected to the environment with rooftop gardens and parks and green space on site, and are used for both environmental and program uses. Finally, libraries are boundless as they shift to a people-centred focus and become community-catalysts.

Seal, R. (2015). Library spaces in the 21st century. *Library Management*, 36(8/9), 558 – 569.

This article highlights the reality facing academic libraries today: students today require fast access to technology and information, as well as a welcoming place to do work independently or socially in a group. This article outlines the evolution of the academic library from a place where knowledge was disseminated through physical books to a space people are now calling the “third place”, a space where students and faculty can meet up, collaborate, share knowledge and information, socialize and engage with technology. Socializing and learning have melded together and students today are now demanding spaces where they can chat with their friends, while simultaneously

studying. However, students still desire that space where they can work independently and access knowledge and information fast and reliably. This article discusses the case of the information commons at Loyola University Chicago, which is a stand-alone building connected to the main library through a corridor. The information commons area has very few books, but provides computers to enable access the thousands of e-journals and books available, as well as a video conference room, digital media creation and editing software, multipurpose meeting space and group study rooms. The design of the information commons was created around the "four Cs": connectivity, collaboration, creation of knowledge, and community. Available technologies such as Mac desktops, wireless access, 50 circulating laptops, iPads and Android tablets facilitate seamless use of the library's online information system, while group student rooms, digital classrooms, open study areas and comfortable seating satisfy the need for academic engagement and collaboration among the students.

Uden, R. (2015, November). New Teen Spaces from Coast to Coast. *School Library Journal*. Retrieved from http://www.slj.com/2015/11/teens-ya/new-teen-spaces-from-coast-to-coast/#_.

This article highlights public libraries across the United States that have created new teen spaces by collaborating with the teens themselves. Through interviews and focus groups, library staff came to understand the teens' needs and wants, and then develop a space for them to use. Overall, these requirements included a place to: do homework, hang out, work in groups and participate in performance and maker spaces. The teens wanted to socialize and learn at the same time. The San Antonio Public Library has created a teen space which contains a lab/maker space that can evolve to accommodate change when needed; in addition, there is a studio for audio and video production, a gaming space, a seating area and a

computer lab. In the San Francisco Public Library, a space for teens called the Mix was created with their Teen Advisory Board. The Mix includes a video lab, sound recording studio, flexible seating, a performance area and an interactive multi-touch wall. All these spaces are designed to inspire creativity, learning and socializing.

Wortman, B. (2012). What Are They Doing and What Do They Want: The Library Spaces Customer Survey at Edmonton Public Library. *Partnership: The Canadian Journal of Library and Information Practice and Research*, 7(2).

Edmonton Public Library (EPL) conducted a survey of its customers in 2012 to discover how they used the library space and what they desired from the space. Four research questions were developed: (1) What customers are doing in EPL's spaces, (2) How customers would like to be using EPL's spaces, (3) What the current and future trends in library spaces and customer activities are, and (4) How EPL's spaces could best meet the needs of EPL's customers. The customer survey was used to answer the first two research questions. Both print and online questionnaires were made available to patrons, and 1517 responses were received. Survey questions included which EPL branch they frequented, how often they visit the library, how long their visits typically last, what activities they came to the library for (a list of options was provided and they were asked to select all that applied), which three activities were the most important, whether they came to the library alone or with others, and whether it was important to provide space at the library for groups. Findings indicated a conflict between the need for a traditional "quiet" library space and the collaborative and social spaces that continue to emerge in libraries as they become a third space in communities. The data show that there is a wide variety in terms of how visitors want to use the library, and what they want out of the library space. The

results indicate that both quiet and collaborative spaces need to be maintained; a possible solution is to design different zoning strategies to accommodate both the quiet and social spaces that are desired.

Appendix B: Patron Survey Form

The patron survey form begins on the following page.

CULC Space Use - Patron Survey Form

The Canadian Urban Libraries Council (CULC), along with Brampton Public Library, Calgary Public Library and Markham Public Library, is conducting research on how patrons are using different spaces in the library. As part of this research project, we are conducting an observation survey and a patron survey to learn what people are doing when they are in the library.

Methodology:

Each library system is conducting an observation survey and a patron survey in several branches over a 5-week period. Library staff will be observing library spaces to record how people are using the spaces; staff will also be approaching patrons to ask them to answer a few questions about their visit to the library that day.

Each participating library will use the same set of questions.

Instructions for Library Staff:

For each observation and patron interview:

- enter today's date
- enter the current time
- choose the library branch you are surveying
- all questions are mandatory
- use the other and comment options to provide more description whenever possible.

Don't forget to click SUBMIT to save and submit the survey response.

*** Required**

1. Enter today's date: *

Example: December 15, 2012

2. Enter the current time: *

Example: 8:30 AM

3. Select the library and branch for this entry: *

Mark only one oval.

- ☐ Brampton - Four Corners
- ☐ Brampton - Gore Meadows
- ☐ Brampton - South Fletcher's
- ☐ Calgary - Fish Creek
- ☐ Calgary - Forest Lawn
- ☐ Calgary - Riley
- ☐ Calgary - Saddletowne
- ☐ Calgary - Southwood
- ☐ Markham - Unionville

Patron Survey

The patron survey will add further context to the data collected by the observational survey. This survey is designed to be asked by a staff member, to a patron, as they are leaving the library.

Staff will approach patrons, as they are engaged in an activity in the library, or as they are leaving the building, to ask if they would mind talking for a few minutes to answer a series of questions about why they visited the library today.

The staff member uses a mobile device (iPad, Tablet, Chromebook, etc) to fill out a Google form. All questions are mandatory. Fields will be provided to allow staff to add more detail when the patron provides information outside of the survey answer structure.

4. Why did you come to the library today? *

Check all that apply.

- ☐ Borrow a book
- ☐ Read quietly
- ☐ Attend a program
- ☐ Meet classmates
- ☐ Study
- ☐ Other: _____

5. Do you feel welcome when you come to the library? *

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ Other: _____

6. Do you find the library staff helpful? *

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ Other: _____

7. Did you accomplish what you intended to, by coming here today? *

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ Other: _____

8. Did you interact with staff, or were you able to help yourself? *

Mark only one oval.

- ☐ Interacted with staff
- ☐ Helped self without staff
- ☐ Other: _____

9. Were you able to find what you're looking for? **Mark only one oval.*

- ☐ Yes
- ☐ No
- ☐ Other: _____

10. How do you feel about the library furniture? **Check all that apply.*

- ☐ Comfortable, good variety of furniture types
- ☐ Uncomfortable
- ☐ Not enough furniture
- ☐ Other: _____

11. How do you feel about the general atmosphere of the library? *

12. How do you feel about the layout of the library? **Check all that apply.*

- ☐ Easy to navigate
- ☐ Difficult to navigate
- ☐ Open
- ☐ Crowded
- ☐ Other: _____

13. How do you feel about the free wi-fi? **Check all that apply.*

- ☐ Fast enough
- ☐ Not fast enough
- ☐ Hard to connect to
- ☐ Easy to connect to
- ☐ Other: _____

Thank You.

Appendix C:

Space Observation Survey Form

The space observation survey form begins on the following page.

CULC Space Use - Observation Form

The Canadian Urban Libraries Council (CULC), along with Brampton Public Library, Calgary Public Library and Markham Public Library, is conducting research on how patrons are using different spaces in the library. As part of this research project, we are conducting an observation survey and a patron survey to learn what people are doing when they are in the library.

Methodology:

Each library system is conducting an observation survey and a patron survey in several branches over a 5-week period. Library staff will be observing library spaces to record how people are using the spaces; staff will also be approaching patrons to ask them to answer a few questions about their visit to the library that day.

Each participating library will use the same set of questions.

Instructions for Library Staff:

For each observation:

- enter today's date
- enter the current time
- choose the library branch you are surveying
- all questions are mandatory
- use the other and comment options to provide more description whenever possible.

Don't forget to click SUBMIT to save and submit the survey response.

*** Required**

1. Enter today's date: *

Example: December 15, 2012

2. Enter the current time: *

Example: 8:30 AM

3. Select the library and branch for this entry: *

Mark only one oval.

- ☐ Brampton - Four Corners
- ☐ Brampton - Gore Meadows
- ☐ Brampton - South Fletcher's
- ☐ Calgary - Fish Creek
- ☐ Calgary - Forest Lawn
- ☐ Calgary - Riley
- ☐ Calgary - Saddletowne
- ☐ Calgary - Southwood
- ☐ Markham - Unionville

Skip to question 4.

Space Observation Survey

The Observational Study will use the seating sweeps approach described in Given & Leckie 2003, where staff walk through the different areas of the library branch and observe what patrons are doing. The staff member uses an iPad, Chromebook or similar device to fill out a Google form to report on where patrons are and what they are doing.

4. Indicate the space being observed (choose 1) *

Mark only one oval.

- ☐ Library entrance
- ☐ Main information desk / main service point
- ☐ Circulation desk
- ☐ Quiet study area
- ☐ General seating
- ☐ Displayed / merchandised collections
- ☐ Shelved collections / stacks
- ☐ Program area
- ☐ Children's area

5. Patron Age *

Mark only one oval.

- ☐ Preschool Child (0-5)
- ☐ School Age Child (6-12)
- ☐ Teen / Young Adult (13-18)
- ☐ Adult (19-60)
- ☐ Senior Adult (60+)

6. Patron Gender *

Mark only one oval.

- ☐ Male
- ☐ Female
- ☐ Unknown

7. Quiet Activities - choose all that apply **Check all that apply.*

- ☐ Browsing the collection
- ☐ Reading
- ☐ Studying / writing - secondary school student
- ☐ Studying / writing - post-secondary school student
- ☐ Studying / writing - mature student
- ☐ Using own device(s) - such as a laptop or tablet
- ☐ Texting or quietly using handheld device
- ☐ Using the library's device(s) - such as a laptop or computer station
- ☐ None of these

8. Louder Activities - choose all that apply **Check all that apply.*

- ☐ Talking on a device
- ☐ Electronic noise
- ☐ Talking to staff
- ☐ Talking in person to one or more people in a group - socializing
- ☐ Talking in person to one or more people in a group - studying / collaborating
- ☐ Tutoring session
- ☐ Participating in a program
- ☐ Interacting with children (reading, playing)
- ☐ None of these

9. Additional Activities - choose all that apply **Check all that apply.*

- ☐ Preschool child alone (no adult present or supervising)
- ☐ Eating and/or drinking
- ☐ Sleeping
- ☐ Just sitting
- ☐ None of these

10. Additional Activities - Add further details here

11. Furniture - Add further details here (i.e., has it moved?)

12. Possessions - choose all that apply **Check all that apply.*

- ☐ Baby stroller
- ☐ Wheelchair or mobility device
- ☐ Service animal
- ☐ Bundle buggy / folding shopping cart
- ☐ Walking aid (cane, walker, etc)
- ☐ Handheld device (mobile phone, tablet, etc)
- ☐ Headphones
- ☐ Backpack, bag, briefcase
- ☐ None of these
- ☐ Other: _____

13. Additional Possessions - Add further details here

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