

Seating Sweeps: An Innovative Research Method to Learn About How Our Patrons Use the Library

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“Libraries are not ‘fields of dreams.’ To build a facility based on the perspectives only of librarians, without accommodating the users’ needs, is likely to result in Edsels, not Cadillacs.”¹

When determining what kinds of facilities and services to provide, librarians should examine what sections of the library their customers seem to prefer, what types of activities they engage in there, and what types of furniture they tend to use because a patron-oriented library takes this information into account. The question, however, is how can librarians gain this type of knowledge? This was the problem that faced the staff of Clark University’s Goddard Library, which serves a Carnegie Research University with a high level of research activity, when in 2004 they began preparing for an expansion of the thirty-five year old building. The librarians knew that they needed to understand how their clients were using the current facilities. This was because that kind of information would provide solid evidence for forecasting the short-term requirements of its patrons even if it might not be a perfect predictor of their needs in the distant future.

There are numerous procedures to assess the ways libraries assist their patrons. Some, such as the number of books circulated, the door count, and the number of students receiving bibliographic instruction, do not address the way customers use the various parts of the library. Others, such as surveys, are of question-

able validity due to concerns about whether the patrons’ “self reporting” accurately describes what they do or if what they say is biased.

An additional method for assessing how patrons use the library is a technique called seating sweeps, which has a librarian make systematic observations to chronicle how patrons use the building’s space and equipment. This can identify the areas in the library that the patrons use heavily and those that they employ infrequently, determine what activities occur in various parts of the library, and specify when this use takes place. Sweeps can provide this important information to library planners so that they can spend the renovation’s budget in ways that better address the needs of the library’s clients. This information is also valuable for a library staff to know so that they can better serve their patrons at all times. After all, making information available to its customers in the most efficient and convenient way possible is a library’s *raison d’être*.

Literature Review

The idea of gathering information by physically collecting it has been around for years. The best-selling book *In Search of Excellence* is a well known champion of this practice.² In it and the follow-up book *A Passion for Excellence*, the authors claimed that the management of numerous excellent companies utilized some form of Management By Walking Around (MBWA) to gather information.³

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Other disciplines have investigated how people use space. For example, geographers, such as Ellen Cromley, have written about investigating how people use specific geographic areas.⁴ In psychology, John Aiello has reviewed numerous studies about how humans behave within different types of spaces.⁵ Although these works enlighten one about the methods that other disciplines have used to research how certain areas are used, they do not investigate how patrons use specific parts of libraries.

Seating sweeps combine MBWA with unobtrusively observing how people use areas that are available to them. In the library profession, few published studies have utilized seating sweeps to learn about a library's customers. The first was conducted at the Toronto and Vancouver public libraries.⁶ As the one article points out, "The seating sweeps method points to the inherent value of observational studies: the opportunity to see what people really do within library space."⁷

Procedures

This study was conducted during the middle of the Fall Semester, 2004. One day of observations was conducted per week during October and the first three weeks of November, which left out the times of the semester when the library typically has relatively light (the beginning) and heavy (the end) use. The seven days of sweeps, once for each day of the week, removed the possibility of this study being based on a sample of one week of heavy or light use. The week that a certain day was swept was selected at random. The population from which these stratified samples were selected for the study was made up of all of the people who used the library during this semester. Because of the considerably longer hours of the Goddard Library compared to those of the Toronto and Vancouver public libraries, four, instead of three, observations were completed. To compare different days of the week, the sweeps were always started at 9:30 a.m., 2:00 p.m., 7:00 p.m., and 10:00 p.m. The first three times are similar to the times used in the Canadian study. The extra sweep was added at night because that is the time of day that the Goddard Library is open when the libraries in the other study were closed. It was also selected because this is the time that the librarians know the least about the library's usage, because it is lightly staffed during that period. Because the library was closed on Fridays at 10 p.m., Saturdays

at 9:30 a.m. and 10 p.m., and Sundays at 9:30 a.m., these sweeps were not conducted.

The method was comprised of observational sweeps through the library's public areas. The sweeper did an initial sweep as a pilot study to verify that the seating was as it appeared on the diagrams of the library and to become acclimated to the process. The floors were always observed in the same order and the method of walking through each area was done the same way. The checklist used at the Toronto and Vancouver libraries was slightly modified to better meet the needs of the current study (for a copy of the checklist, see Table 1). Each patron observed during a sweep was given a unique identification number (ID), which was based on the day and time of the sweep, the floor they were seen on, and the sequence in which they were seen. This information was then entered into *Statistical Package for the Social Sciences for Windows* version 11 (SPSS) for data analysis.

Diagrams were created that showed every seat in the library and seats were grouped with other similar seats so that they could be analyzed together. Each seat and group of seats was given an ID to differentiate them and these were also put into SPSS. As a result, these seat IDs could be matched with the characteristics of every patron that sat there.

One of the calculations that SPSS made was the percentage of the time that customers used the seats in a particular group. This was done by taking the number of seats in the group, multiplying it by the number of sweeps these locations were available for use (a few seats, like those in the archives, were not available for every sweep) and then dividing that product by the number of people who used those seats. The author then used these data to color code a copy of the diagrams of the seating in the library so that it would be very easy to see which areas the patrons used the most and the least. The author used five different colors to show seating areas with high usage, above average usage, below average usage, little usage, and no usage.

Limitations

Although librarians from other locations could learn more about their customers by using this method, because of the unique make up of Clark's student body and Goddard Library's design, there is no reason to believe that these findings are generalizable to other libraries. Furthermore, those areas of the library that could not be observed, such as the faculty study car-

TABLE 1
Checklist used at Toronto and Vancouver Libraries

Seating Sweep Information	Day:			Time:			Floor:		
Profile									
Male									
Female									
Age estimate: under 17									
Age estimate: 17-25									
Age estimate: over 25									
Possessions left unattended									
Possessions									
Books/magazines/newspapers									
Writing material									
Briefcase or portfolio									
Knapsack or carry-all bag									
Laptop computer									
Radio or walkman									
Food or drink									
Baby or young child									
Cell phone									
Calculator									
List other possessions on back of sheet									
Activities									
Reading									
Do they seem to be using books from any shelves that are in front of them? (Y, N, or /)									
Writing									
Physically searching									
Using laptop									
Using library computer									
Using other library technology (copier, microfilm reader, etc.)									
Using telephone									
Talking									
Group study									
Bibliographic instruction									
Eating									
Drinking									
Sleeping									
Listening to radio, etc.									
Just watching or sitting									
Reference staff interaction									
Circulation staff interaction									
Reserve staff interaction									
Other staff interaction									
Waiting for a computer									
List any others on back									

rels, could not be included in the study. In addition, if other times of the day or the semester had been selected to conduct the observations, it is possible that the results would have been different. In addition, no attempt was made to follow individual students to determine their usage patterns.

The seating sweep method of research has its own limitations. Although it provides very useful information concerning where patrons are and what they are doing, one can only infer from what ones sees why patrons use certain parts of the library or certain types of furniture more than others.

Findings

The sweeps recorded 871 women and 726 men in the library. There were fifty-three people who were judged to be older than most of Clark's student body. Of those believed to be college-aged, 56 percent were female and 44 percent male, which is very close to the 58 percent–42 percent breakdown of Clark students.

While there was no observed use of some of the groups of seats, the customers used other clusters heavily. Although the use of seats in the library averaged 8.1 percent of capacity, the floors varied greatly as to how much the customers used the seating. Another noticeable pattern was that some types of furniture had much more use than others. The average occupancy rate for the different kinds of seating varied from 29.8% to 0.2%.

Discussion

One very interesting finding was that the door count was not a good predictor of the head counts. The total number of patrons observed during the Friday sweeps was only 18 percent the size of the door count for that day. Conversely, the head count from the Sunday observations was 45 percent of the size of that day's door count. It is quite possible that the explanation for this dramatic difference is that the patrons stay longer on some days than on others. In fact, the sweeper remembers more students being in the same seat on consecutive sweeps on the Sunday and Wednesday observations than he remembers seeing on other days. If the one student that was observed in the same table during the last three Wednesday sweeps never left the library, which is quite possible since she had a backpack that could have held food along with other items, it would be the foremost example of how the head count can go up without a corresponding rise in

the door count. Thus, the door count might be a poor gauge of how heavily the library is being used.

There were a total of 188 people participating in study groups. Of the seventy-one groups that were observed on the sweeps, forty-seven were made up of two people, while the largest two study groups both had nine participants. In addition, the fact that 94% of the study groups were of four or fewer students was a very important factor when new group study rooms were designed for the renovation. Because before that the Goddard Library had only one group study room, it would seem that the lack of these cramped the ability of students to study together unless they used seating that was ill-suited to the task and disturbed other patrons.

As was stated in the limitations section, the findings may have been different if the observations had been conducted at different times. A good example of this is what occurred on three of the 7:00 p.m. week-day sweeps. Not only did the sweeps begin at that time, but it was also the meeting time for what may have been, given the preponderance of Clark baseball team jackets and caps in one small area of the library, a team study hall. If the sweeps had instead begun at 6:30, then these patrons would not have been counted and, as a result, the totals for a couple of the areas of seats would have been quite different. Because the sweep was made at 7:00 p.m., one section on the fifth floor had its total usage increased by more than 200 percent (sixteen instead of five) because these students all studied in the same area. These changes clearly make a significant difference when these areas of seats are compared to others. It should be noted that these gatherings were not classified on the checklists as occurrences of "group study" because every indication was that this was a group of students studying individually, not individuals studying as a group.

When sweeping, one often has to quickly make decisions and jot information down. One particularly difficult decision to make quickly during the sweeps was whether a student was reading or writing. The sweeper often came upon students with a pen in hand and paper and an open book in front of them. One would wonder whether they had momentarily stopped writing and just happened to have a book open or they had been reading and had a pen and paper in case they want to jot something down. This study considered this situation to be reading unless the customer was actively writing. It would seem that

the best solution to this problem would be to combine both reading and writing into a category called “studying.” The combined category of “studying” would have accounted for 44.3 percent of the activities of those observed.

If most of a library’s customers have knapsacks or some other type of large carryall, serious consideration should be given to discontinuing the collection of data concerning the possessions of the patrons. This is because the tracking of possessions significantly expands the amount of time needed to do a sweep while, if many packs are present in the library, producing results of questionable validity. This is because the data only include the items that the customers had taken out of their backpacks. Another example of the questionable results for patron possessions that sweeps could create is that it is possible that 100 percent of the patrons had a cell phone with them instead of the 7.9 percent that were recorded. This is because of how easily one can carry a cell phone in a place the sweeper can not see it. Consequently, this study recommends that possessions not be recorded unless there is a reason to track a particular type, such as recording laptops as part of a study of computer use in the library.

Another way to have sweeps take up less time would be to record in what group of seats each client sat, instead of the precise seat. This would save some time, but it would not only be at the cost of investigating how particular seats are used, but also keep one from changing seat groupings after doing sweeps. For example, it was only after doing a number of sweeps that it was noticed that one type of seating was really made up of two subtypes, which received two very different amounts of use. It was only because the original data had been collected on a seat-by-seat basis that the study was able to retrospectively break this group of seats into two.

Doing one day of sweeps each week on the same day of the week for a whole semester would give one some basis for comparing library usage through the term. Given the findings of the current study, Tuesdays might be as typical a day as there is for Goddard Library. However, if one would want to study Goddard Library on fairly busy days, Monday would be a good choice, not only based on this study, but also from semesters of data of door counts. To see how the other days of the week compare, during one week that one would expect to have fairly typical use the staff could do sweeps every day of the week. One could also

use historical door counts to predict when the current semester’s busiest day would be and do sweeps that day. After doing these sweeps and the weekly observations, one could mix in other information, such as the door count and circulation data, to determine how typical that week truly was. After all their data are analyzed, one should have a very good idea of how the library was used that semester.

The author consulted with one of Clark University’s experts in Geographic Information Systems (GIS) about the possibility of using some sort of GIS software to help organize the data, but was told that, for a project of this limited scope, it would not be worth the effort. However, if a library staff is planning to do many sweeps, they may want to consider customizing some GIS software to better integrate the maps of the seating in the library with the data collected and, thus, make the data analysis easier.

After this study was conducted, the University Librarian was so impressed by the conclusions that she asked that the findings be presented to the architects. During a meeting with them, they took copious notes, asked for an unabridged copy of the findings, and said that this information would be “very helpful” and “exceedingly useful” for their work as their planning process progressed. They then incorporated many of the findings into the library’s design and furniture selection so these would better fulfill their customers’ needs and desires. For example, it led to the removal of some seating that the patrons used less than 5 percent of capacity so that additional shelving could be added. It also convinced the architects to change their preconceived ideas about the design of group study rooms. They were going to add a few, large group study rooms, but the study’s findings convinced them that more, smaller ones were needed.

The renovation certainly was a success. The library’s door count more than doubled and it became the main destination on campus. Furthermore, the construction was recognized by *American Libraries*’ 2009 “Library Design & Construction Showcase.” The library staff have even had professors admit that they were wrong to have opposed the library renovation.

Recommendations

After conducting these sweeps, the author can make recommendations on how to do them. One is that sweepers should do at least one sweep as a pilot study. A practice run allows the sweeper a chance to get ac-

climated to doing observations in that particular setting. In addition, the results of the pilot study and the objectives of your research should guide decision making on matters such as whether or not to keep track of the customers' possessions or recording the exact seats that the patrons are using.

When using a seating diagram to display how much use various seating areas received, use different colors to show how heavily an area is utilized. The floor diagrams for this study showed five different levels of usage. The important part, however, is not how many levels one has, but that there is a different designation for each level of use. This is because the different colors are exceedingly effective at allowing one to very quickly recognize which areas the patrons use heavily and which they use lightly.

It is important to have a clear definition of each of the items on the checklist to ensure consistency. This takes on additional importance if more than one person is sweeping. For example, if future sweeps keep "briefcase or portfolio" and "knapsack or carry-all bag" as separate categories, the sweepers must have a firm idea before the observations begin of how to differentiate the two. Likewise, walking the different parts of the building in the same way is also important so that the results are comparable.

Another recommendation would be for future research to investigate more fully some of the findings of this study. For example, are door counts as poor an indicator of how heavily a library is being used on a particular day as this study indicates?

Sweeps are an excellent way to gather information to answer questions about when and where patrons decide to use the library and what they do when they are there. However, sweeps only provide general information about the demographics of the customers and no solid information about why they do what they do. Because knowing this kind of information could be important to better serving patrons, one might want to use multiple research methods. For example, Leckie and Hopkins used interviews and surveys to help determine why the customers did what they had been observed doing during the seating sweeps.⁸ The selection of the other methods to be used should be based upon the objectives of the study. For example, focus groups might be useful for quickly generating ideas on how to make a library more attractive. For most purposes, however, it would seem that surveys or individual interviews, which tend to be subjective,

would work better in conjunction with sweeps, which are objective. This is because these methods can be conducted in such a way that one can learn why the customers are acting in the way that the sweeps are recording. For instance, it is clear that most tables received above average use, while patrons used many carrels less frequently than average. One might surmise that it is because the tables afford one more space, but it could also be because they tend to have better lighting or they more easily allow for group study. One must in some way ask customers if one wants to determine why they behave in a particular way or one would be forced to make educated guesses as to their motivations.

The most important recommendation is for librarians to conduct sweeps. Although slightly time consuming, it is an inexpensive and fairly easy way to gather useful information that cannot be collected by other means. For example, Clark University's librarians and the architect's working on the expansion certainly found the results of this study to be useful and enlightening. In addition, it is hard to imagine that the results of a survey, focus group, or set of interviews of library patrons would discover that having customers sleeping would be almost as prevalent as having patrons physically searching in the stacks (1.1 percent versus 1.6 percent).

Conclusion

The use of systematic observations, called seating sweeps, to evaluate the manner in which a library's space and facilities are employed, deserves to be further examined. The value of doing these surveys comes from the use made of the information collected and their effect on the library staff. If the information is used to adjust the seating and desks to be more customer friendly, is considered when purchasing additional furniture, becomes influential when renovations or expansion plans are being developed, or leads to using the building's space more effectively, then the time spent doing the evaluations is well worthwhile. The sweeps information can also alert librarians to the habits of their patrons, which could be used to provide insights that can help improve many aspects of an organization's operations.

Seating sweeps provide a method of assessing a library's layout and operation that has a relatively low cost in time and money. In addition, it is simpler than many methodologies with a checklist that is simple

to put into service and that is easily adjusted to meet the needs of the particular institution. A library that is aware of its customers' preferences has an opportunity to constantly improve its facilities and service orientation in order to have more satisfied patrons.

Notes

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3. Thomas J. Peters and Nancy K. Austin, *A Passion for Excellence* (New York: Random House, 1985), 8–19.
4. Ellen K. Cromley, "Mapping Spatial Data," in *Mapping Social Networks, Spatial Data, and Hidden Populations*, ed. Jean J. Schensul et al. (Walnut Creek, CA: Altamira Press, 1999), 51–123.
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6. Lisa M. Given and Gloria J. Leckie, "'Sweeping' the Library: Mapping the Social Activity Space of the Public Library," *Library & Information Science Research* 25 (Winter 2003): 365–385; and Gloria J. Leckie and Jeffrey Hopkins, "The Public Place of Central Libraries: Findings from Toronto and Vancouver," *Library Quarterly* 72 (July 2002): 326–372.
7. Given and Leckie, "'Sweeping' the Library," 383.
8. Leckie and Hopkins, "The Public Place."