Evidence Based Library and Information Practice

Evidence Summary

Identifying the Most Popular Entry Routes into a Public Library Using GIS Can Be a Tool to Increase Ease of Navigation and Identify Placement of Marketing Materials

A Review of:
Mandel, L. H. (2010). Toward an understanding of library patron wayfinding: Observing patrons' entry routes in a public library. *Library & Information Science Research, 32*, 116-130.

Reviewed by:
Genevieve C. Gore
Library Coordinator, RUIS McGill
Life Sciences Library, McGill University
Montreal, Quebec, Canada
Email: genevieve.gore@mcgill.ca

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Abstract

Objective – To evaluate and measure how patrons physically navigate entry routes within a public library and determine whether GIS is a useful instrument for this purpose.

Design – Unobtrusive, covert observational study.

Setting – Medium-sized public library in the United States.

Subjects – 1,415 patrons were observed as they entered the library.

Methods – Routes used by patron cases were selected as the unit of analysis. Patron cases were either individuals entering the building alone or groups entering the building together. Patrons were observed from a stationary and unobtrusive location. ArcMap (GIS software) was used to develop the floor plan instrument on which entry routes were recorded and then later analyzed. The paths analyzed were limited to what was considered the "entry area." Data were collected during three separate one-hour periods for six consecutive days in the fall of 2008. The researcher chose three purposive one-hour time samples with the intention of distributing them across the library's opening hours.

Main results – The 1,415 patron cases used 195 unique routes that were recorded from the two entrances of the facility, with the east (right) entrance accounting for 83.3% of the cases (n=1178). Two entry routes were consistently the most popular overall and across each of the sample days. The next-most-

popular entry routes did not remain constant across the total observed cases and each day's observed cases or across the sample days. Over 75% of all observed patrons used 22 of the 195 entry routes: 7 routes were used by 30 or more cases each (n=836, 59.1% of all cases), 4 by 20 to 29 cases each (n=95, 6.7% of all cases), and 11 by 10 to 19 cases each (n=159, 11.2% of all cases). The route to the circulation desk was the most popular entry route for patrons. The other most popular route passed toward the rear of the library, but the observer could not record the final destination(s) of that route due to the restricted viewable area.

Conclusion – The study helped the researcher to establish what areas would be ideal locations for the placement of marketing materials and a book display. Knowledge of popular entry routes can also be useful in identifying routes that could be enlarged to ease patron navigation. GIS was shown to be a useful mapping instrument for recording and analyzing routes taken.

Commentary

This study looks at public library use in terms of how patrons navigate entry routes. According to the author, little research is available on how patrons of public libraries use existing facilities, as user-oriented studies have tended to focus on patron satisfaction with public library services rather than patron use of facilities. Based on the author's literature review, this study presents a new approach to research on public library use.

The decision to use GIS software was well justified and innovative: the author contributed a novel approach to mapping wayfinding behaviour in public libraries, which could be adapted by any library interested in this worthwhile area of research.

The observational design provided a non-disruptive method of recording patrons' use of entry routes. As pointed out by the author, the design was not ethically ideal given patrons' lack of knowledge of being observed. The study was not, however, designed to elicit additional information from patrons and did maintain anonymity. As a result, it was not possible to know, for example, how many of their routes led to successful or efficient outcomes (i.e., patrons easily reaching their intended destination).

The design did allow the researcher to establish empirical knowledge of frequently used routes, thereby providing useful insight into how the layout could be improved to increase the navigability of the most frequently used routes as well as insight into well-frequented locations for the placement of marketing materials. Based on the nature of the study design, however, the author chose not to use statistical tests of significance. Therefore, it was not possible to establish statistically significant differences in route popularity.

The results with regard to the popularity rankings of the routes themselves were somewhat limited by the fact that the observer was only viewing wayfinding in the entry area, and the units of analysis were not, due to the nature of the study, necessarily indicative of single routes: One route may have actually been several combined, due to the possible variations beyond the field of visibility.

Under "Directions for future research," the author makes some interesting suggestions for future wayfinding studies, such as involving patrons in surveys, interviews, and focus groups, designing experiments around possible interventions, and using "public participatory GIS" to increase patron involvement and input into our understanding of wayfinding behaviour.

In conclusion, this study provided a highly transferable methodological model for the use of GIS in mapping wayfinding behaviour, while also addressing an important and useful area for further study and consideration.