Wayfinding Study: Find Books in Perkins Library

Recommendations

Our key findings suggest that currently the main obstacles preventing patrons from easily locating books are the lack of user education/signage about (1) how to read a call number (2) how to navigate winding stacks that do not follow the same pattern from floor to floor. Based on this, we have the following recommendations:

1. Create information sheets for Library of Congress call number system. The sheets could be put at the service desk, or be placed in holders around the stacks. The design of the sheets could use visual salient element to highlight the important information (e.g., the first one or two letters).

2. Add genres on library directories for books located on 3rd and 4th floor of Perkins & Bostock Libraries and Perkins LL2. Also a future study could investigate the necessity of adding call number information on the directions for books on other floors which only has genres / collection names on the directions.

3. Consider adding floor map also in the stairwell behind the door so patrons won’t need to enter the library main area to get location information.

4. If possible, consider adding stack flags with the corresponding call number range to both sides of the stack. This will not only help patrons get information about a specific stack from one point, but also help them have a sense of stack flow.

5. Update the book covers on the library website to match with the ones on the shelf.

6. Run a follow-up test in the Bostock Library separately, given that Bostock’s stack organization is different from the Perkins. In this test, it took a long time for patrons to travel to Bostock from Perkins’ Service Desk, so the testing scoped to the Perkins book stacks.

Background

This wayfinding study aims to understand how patrons are using current signage / directories existing in Perkins Library and in Bostock Library. The study was developed and conducted by Manhua, with the guidance of Emily Daly and Angela Zoss. On November 8th 2019, we began our lobby testing by working with a pilot participant, another practicum student working at AUX department. And on November 12th,

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2019, we proceeded the formal wayfinding test located next to the Library Service Desk on the first floor of Perkins Library. Manhua Wang moderated seven participants and accompanied them during the searching and took notes about their paths and comments. Each participant was given a voucher for a coffee or snack in exchange for their time. Later, the study was modified by Angela Zoss to include as an activity in the Graduate and Professional Students Advisory Board meeting on November 15th, 2019. The recommendations listed above also referred to the results from that meeting.

Questions we hope to answer through this study:
1. How do people find books in Perkins and Bostock Library without any assistance from staff? (What steps do they take? What strategies do they use?)
2. What are the points where patrons slow down or stop when they decide which direction to go?
3. What information are they looking for or referring to when searching for books? Do they use these signs to find books? How do they interpret them?
4. Does any part of the library cause confusion when they are finding the books?

Participants
Roles at Duke:
- 5 undergraduate students
- 2 graduate students

Had participants found books in Bostock or Perkins Before?
- Yes: 3
- No: 3
- Other: 1 (Only picked up books from open shelf on the first floor before)

[If Yes] What were their most recent experiences finding books?
- Perkins 1st floor: found a book on the open shelf.
- Perkins Lower Level 2 (LL2): it was hard to find the book but she eventually found it. She thought those stacks were moving so it was difficult to find what she was looking for.
- She memorized the floor levels she needed to go, and used the call number to find the book

Did participants have experience with call numbers before this study? What were their experiences?
- Yes: 5
  - 2 participants knew the three-letter system
  - 1 participant knew the letter code and used that to find books
  - 1 participant found books frequently and she was familiar with the call number system
  - 1 participant only had experience in high school
- No: 2
Key findings

1. How do people find books in Perkins and Bostock Library without any assistance from staff? (What steps do they take? What strategies do they use?)

Ways of getting location information
1 participant went straight to see the signage outside stairwell IS2 to find the location information about the book. He stated that he wouldn’t use a computer to find the location information but only the call numbers.

1 participant was familiar with the call number range of the given book. So she believed it was on the 4th floor Perkins and she was correct about this location information.

4 participants claimed they would first use a computer to find the location information of the book. We decided to have the moderator provide the location information under this circumstance rather than having students to look it up. By doing so, we were able to reduce the time required to complete the study. 2 participants also mentioned that if allowed he/she would ask a staff member to either tell them the location or guide them to the place. 1 participant also took a map with her after having the location information; but according to the moderator’s observation, this participant didn’t refer much to the map.

1 participant did not ask for location information but instead she decided to wander around the 1st floor Perkins.

Paths to find the book
All participants started from the testing table besides the Perkins Service Desk on 1st floor Perkins, and went back to the table after they located the book.


2 participants (pink and blue route in Figure 1.) who were assigned the book located on Perkins LL2 both took the stairwell IS2. After stepping out the stairwell, they both made a left turn to the area with a lot of moveable stacks. While crossing the first collection of stacks, they slowed down a little to check whether this area had “GN”. Then they move forward and were looking for “GN” among another collection of stacks along two sides of their walkway.

Figure 1. Perkins LL2 Wayfinding Path
b. 1st floor Perkins (call number: P37 .F5 2004 c.1)

2 participants who were assigned a book located on the 1st floor of Perkins took different directions when they started (see Figure 2.). However, they both slowed down when they encountered the first and second stacks.

One participant (pink route in Figure 2.) also stopped around the stack of “PN”. The moderator believes she was stopping to decide which way to go.

Another participant looked back and forth and looked at several stacks. He mentioned he was looking for the letter “P” but there were a lot of “PN, PL”. He then noticed a plastic holder with the call number range on a stack and found the book.

c. 4th floor Perkins (call number: PR4148.R4 R67 2016)

2 participants who were assigned a book located on the 4th floor of Perkins took different elevators from the starting point to get to the fourth floor (see Figure 3.). One participant took the elevator located near the connection from Perkins to Bostock and went straight into the book collection of Perkins after she got out from the elevator. Another participant took the elevator close to the starting point to the fourth floor and hesitated a little upon leaving the elevator.

One participant (pink route) was pretty familiar with this level, so she only slowed down a little when reading the call numbers of books on the shelf.

The other one (blue route) slowed down each time he encountered a new set of stacks to decide whether to go into the stack or to continue moving to another call number range.
d. 3rd floor Bostock (call number: HD5827 .A3)
Only one participant did not find the book she was looking for (her assigned book was in Bostock Library). She didn’t ask for location information but instead wandered on the first floor of Perkins (See Figure 4, below). When she arrived at the stack with reference book, she started to look at the call numbers and she assumed that “HD” would between some places at that shelf. This indicated that she understood the call number but was in the wrong location of the building and perhaps did not realize that many more books are shelved on upper floors of the library.

From the routes data, it can be seen that most patrons will go straight from the starting point towards the direction facing the Bostock library, to either find the book or take the elevator. Several places where they slowed down or stopped were summarized in the next section.
2. What are the points where patrons slow down or stop when they decide which direction to go?
Through the observation, several bump points were identified:

a. **At the starting or the ending edge of the stack sets**
   3 participants slowed down or even stopped at the point where the stack sets start to confirm the call number range of the books on that shelf.

   2 participants slowed down at the end of stack. Upon observation, they may have been making decisions on which direction to take. On 1st floor Perkins, the participants chose either to turn back or go to another stack. On the 4th floor Perkins, when participants walked through a set of stacks and confronted another stack, they stopped to decide whether to start searching to the left or to the right.

b. **After stepping out of the elevator / stairwell**
   On 4th floor Perkins, 1 participant hesitated after he stepped out from the elevator but he soon took a right turn.

c. **Reading the call number range on the stack and call number of books on the shelf**
   All participants slowed down in front of the stack or shelf where their book was located to confirm the call number range.

3. What information are they looking for or referring to when searching for books? Do they use these signs to find books? How do they interpret them?
All participants claimed that they referred to the given call numbers to find the assigned book.

2 participants only used the call numbers and no other wayfinding aids, and they were confused by the call numbers. One of these participants didn’t find the book. Another one found the book after the moderator provided a hint about the way of interpreting the call number, and he thought the hint helpful. This suggests that understanding call number after identifying a book’s general location is important.

3 participants mentioned they used the signage on the stacks / shelves as well.

1 participant also took a printed floor map from the test table, which helped her know which level she was on. This participant mentioned that she was not familiar with the call number system but it was straightforward. And once she figured it out, it was easy to find the book.

1 participant also used the directories beside the stairwells and in elevators and thought they were helpful as they showed where the books were.
To summarize, the location information – which library and which floor – and the correct interpretation of call numbers are essential for participants to successfully locate books. Once they had these two pieces of information, most participants could find the books they were looking for.

4. Does any part of the library cause confusion when they are finding the books?
3 participants mentioned their confusion about the call number system, especially for books starting with more than one letter. For example, with PN, PE, participants had difficulties in understanding the difference between “P” and “PN, “PE”, etc. Participants consider the second letter as the supplementary information for the first letter, instead of taking both letters as a whole code.

3 participants raised an issue regarding the order of stacks and the order of books within the stacks. 1 participant mentioned that the order of the stack was not intuitive – the numbering was cutoff at some point, and she had to start over but didn’t know where to start. For the books on the shelves, 1 participant noted that it is necessary to know the flow and organization of the letters.
Appendix A: Wayfinding Test Script

Hi, do you have a few minutes to help me today with a wayfinding study? We’re with the Duke library system and would like your help and opinion on how you find books with the existing library services. If you have a few minutes we’d love for you to find a book and walk us through how you find it. We also have a voucher for free coffee or snack.

Thank you for volunteering to participate in the study. My name is [name] and I will be walking you through our task today taking notes. I will mostly be reading from a script to ensure each testing session is as consistent as possible.

We’re redesigning the signage in the library and would like to learn how people are currently finding books using the existing signage in the building. Your response will help us better revise the current signage in the library.

We only have a few general questions to ask and 1 book that you need to find, it should only take around 10 minutes. There are no right or wrong directions or paths to find the book today because we are gaining information and see how our current signage works. This is more about the process in which you find the book. Feel free to provide opinions and feedback; it won’t hurt our feelings.

Do you have any questions so far?

We have just a few questions to begin with.

[Ask Pre-Test Questionnaire]

Okay, now here you’re going to find a book located either in Bostock or Perkins Library (and you’re going to find it out when I hand you the name). You could use any resources in the library, like the directions, maps, computers, but you cannot ask the library staff or other people to help you at this point. If you have really no clue about where to start, please ask me for a hint; but you only have one hint available. During your searching, I will accompany you and take notes. [if possible] During your process, it would be great if you could tell me what you are thinking, and it will help me better understand your thought process.

Do you have any questions so far?

[Hand student the paper with the book’s title, author, and call number]

Okay, first please tell me what will you do to find the location information about this book?

[If the participant mentions looking up on the library website, pull up the prepared webpage with the book information]

[Take notes about the path and other comments on the printout map]
Research Design

This wayfinding study aims to understand how patrons are using current signage / directions existing in Perkins Library and in Bostock Library. We will have voluntary participants find any of the books listed in Table 1 provided below. Considering the previous findings\(^1\) on the time students used to find a book is about 4 - 6 minutes, we will have one student to find one book(s) for each test. The pilot test showed that the actual moving time was about 6 minutes, but it took time to identify the location information before going to locate the book. Aiming to have at least 8 students, each wayfinding task (each book) will be undertaken by 2 students.

Prior to the task, students will be asked to fill out a questionnaire (See Appendix A) related to their previous experience in finding books in Perkins Library and Bostock Library. Then for the assigned book to be found, students need to start from the entrance of the Perkins Library and use the map / signage in the library to find the location of the book. Students may ask for one hint if they feel really frustrated or confused. During the search, students will be asked to think aloud or not, depending on the noise level required for each stack area. The moderator will ask several questions related to participants’ behavior after the test if think-aloud protocol isn’t used. After they finish the task (either find the book or give up), students will be asked to fill a post-test questionnaire about their experience and strategy used if any. Participants will get a voucher for a cup of coffee or snack up to $5.

Table 1. List of Books

<table>
<thead>
<tr>
<th>Book’s Name</th>
<th>Author</th>
<th>Call Number</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eating culture: an anthropological guide to food</td>
<td>Gillian Crowther</td>
<td>GN407 .C76 2018</td>
<td>Perkins LL2</td>
</tr>
<tr>
<td>Psycholinguistics: the key concepts</td>
<td>John Field</td>
<td>P37 .F5 2004 c.1</td>
<td>Perkins 1</td>
</tr>
<tr>
<td>The religion of empire: political theology in</td>
<td>G.A. Rosso</td>
<td>PR4148.R4 R67 2016</td>
<td>Perkins 4</td>
</tr>
<tr>
<td>Blake's prophetic symbolism</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rōdōryoku chōsa nenpō</td>
<td>Shōwa Dōkyoku</td>
<td>HD5827 .A3</td>
<td>Bostock 2</td>
</tr>
</tbody>
</table>

Note: each book’s information exclude location will be on a separate piece of paper to hand to participants.

\(^1\) Baker, M. C., Bakkalbasi, N., Call, E. N., & Kamsler, B. C. (2015). Burke Library wayfinding study report. DOI: https://doi.org/10.7916/D8KH0MG6
Appendix B: Pre-Test Questions

1. Which of the following describes you best?
   a. Undergraduate student
   b. Graduate student
   c. Doctoral candidate
   d. Faculty
   e. Staff
   f. Other: ____________

2. Have you ever found a book in Perkins or Bostock libraries before?
   a. Yes
   b. No

3. [If Yes] Could you tell us about your latest experience of finding a book in Perkins or Bostock libraries? Which library did you go to and what general processes did you use?

4. How much experience do you have with call numbers?
Appendix C: Post-Test Questions

1. What was your overall experience locating this book in Perkins or Bostock Libraries? What information did you use to find the book (directions, floor map, call number)?

2. What was easiest or most helpful when you were locating this book?

3. What was most challenging or confusing during the searching?

4. Is there anything that you would like to say about your experience today that you haven’t had a chance to tell us yet? Or any other comments or suggestions?