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Comparing library wayfinding among novices and experts

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Comparing library wayfinding among novices and experts

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Abstract

Purpose – The purpose of this paper is to investigate similar and different wayfinding strategies used by novice and expert patrons at an academic library.

Design/methodology/approach – The study employed a usability study approach. In total, 12 people, places, or things were identified as important for students to be able to locate within an academic library. Students from one of three groups (high school, freshmen, and seniors) were randomly assigned a scenario requiring them to find the indicated person, place, or thing. Student researchers video recorded participants and took field notes during the wayfinding activity and conducted an interview about participant's experience following the exercise.

Findings – Total and average time needed to locate the person, place, or thing indicated in the scenario were determined for each group. In addition, wayfinding tools (signs, maps, help desks, technology, and experience) used by participants were identified.

Originality/value – The research compares novice and expert wayfinding strategies. It is unique in its use of student researchers as part of a sociology class project, to collect and analyze the data.

Keywords Ethnography, Usability study, Pathways, Wayfinding, Library UX, Navigation

Paper type Research paper

Libraries are often thought of as enduring, unchanging entities, much like a solid piece of granite. However, with the consistent change in available resources, services, and access methods, libraries are more like a shifting labyrinth. Older libraries often have additions or major renovations that alter the initial design and traffic flow within the library. Budget cutbacks during construction can reduce the size or limit the planned changes to the library. Restructuring service delivery often shifts the location of services and the personnel associated with those services. While these changes to the library are undertaken to meet the changing needs of libraries and of patrons, the physical changes can be confusing those seeking to use the library resources.

Wayfinding refers to the methods and tools used to assist any patron to quickly and easily find the resources or services needed. Wayfinding tools are the means to meet Ranganathan's (1931) third and fourth laws of library science, namely, to help patrons find their book (or needed service) and to save the time of the reader. Proper wayfinding

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tools and methods simplify the location of resources and services and result in a satisfying, stress-reducing library experience for patrons. Without accurate wayfinding, patrons experience difficulty and frustration in finding what they need. In some libraries, especially those with renovations, wayfinding ranges from tricky to intimidating. To assist in wayfinding efforts, several studies have examined wayfinding patterns and methods.

Literature review

Some wayfinding efforts have developed navigation models to better understand wayfinding activities. Geometric navigation models seek to integrate accurate location and distance information. Symbolic models use a more abstract approach by providing recognizable information and relationships between entities. Most systems are hybrids that use components of both geometric and symbolic models to assist in wayfinding (Afyouni *et al.*, 2012). Each system provides cues or prompts that help patrons along their specific pathway. Providing cues with left-right directions has proven quite effective in terms of speed and accuracy. Route descriptions do not need to be extremely accurate and precise, but did need to provide directions from one pathway marker to the next (Hund and Gill, 2014; Hund and Padgitt, 2010; Lorenz *et al.*, 2013).

Hund and Padgitt (2010) emphasize that cardinal descriptors were particularly effective as patrons practice their wayfinding abilities while generalizing locations and temporal limits. Focussing on wayfinding factors such as overall speed, environmental obstacles, and processing speed, they reported that the worst user-rated wayfinding descriptions were, in fact, faster than more precise and intricate descriptions. This finding suggests a "good enough" strategy that gets wayfinders to the next description point. Frankenstein *et al.* (2012) support this finding as they determined that patrons prefer a longer line of sight in wayfinding activities that helps them to find the next landmark. In addition to increased line of sight, wayfinders also used landmarks and background knowledge to facilitate wayfinding activities. The size of the space and wayfinding materials, such as "You Are Here" maps with reasonable layouts, and interactions with others help to build wayfinding assistance.

In addition to these wayfinding strategies, Kato and Takeuchi (2003) determined that wayfinders often depend on others for directions to compensate for their own poor sense of direction, timid attitudes in a new environment, and poor strategy choice. Obtaining directions from others produced a point-to-point pathway that helped wayfinders locate what they were looking for.

Biczók *et al.* (2014) used logic networks to help identify the best pathways to specific people and services. In this case logical connections correlated strongly with spatial proximity. These relationships helped to identify hotspots and bottlenecks between locations in different buildings. Once identified, hotspots can be altered to make them more efficient or to remove barriers that cause the bottleneck. Others have sought to use technology and predictive models to facilitate wayfinding (Chang and Wang, 2010; Serrão *et al.*, 2012).

Still others have sought to develop methods that would help all wayfinders, regardless of situation. Algorithms were developed for both inside and outside wayfinding with the intent of providing a set of rules wayfinders could use to avoid getting lost and to choose preferred routes. However, these efforts have met with only moderate success (Vanclooster *et al.*, 2014; Yang and Worboys, 2015). Others used geographic information systems that enabled wayfinders to visually locate landmarks with technology. While this effort improved wayfinders' independence, areas with insufficient or obscured landmarks proved problematic; additional landmarks or prompts were needed to assist

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wayfinders (Serrão *et al.*, 2012). When wayfinding cues included video and picture prompts, Chang and Wang (2010) reported increase of 25-28 percent success.

Tatarka *et al.* (2006) conducted a usability study requiring freshmen students to find three books without any assistance from library reference. The experience encouraged patrons to speak out loud as they used wayfinding strategies. Researchers were also able to ask patrons what and why they were doing during each attempt to find a specified book. Participants were provided with a monetary incentive and were followed by library employees who took field notes and offered encouragement as needed. This effort illustrated where library fail points were in the organization of materials and wayfinding tools (signage, etc.). Using freshmen limited the amount of experience patrons had within the library. One key limitation to this study was that researcher field notes were found to be inadequate when referencing the patron's experience.

Following changes to the library, Larsen and Tatarka (2008) conducted a follow-up evaluation of patron wayfinding efforts. The researchers used a similar protocol but altered recruiting to ensure participants had ten or fewer visits to the library. Wayfinding efforts were better recorded with two researchers (a facilitator and a recorder), using a checklist of potential problems and a floor map. The follow-up study indicated improved wayfinding abilities of patrons, but also highlighted continuing wayfinding issues. These included confusing library terminology and signage as well as non-visible maps. Other than these efforts, there is little evidence of library wayfinding studies that emphasize the different strategies expert and novice wayfinders use to identify the best pathways to resources.

With these findings in mind, this study sought to answer the question, "What are key differences in the strategies used by the novice and expert groups?".

Library description

The Harold B. Lee Library (HBLL) serves the campus of Brigham Young University. The university has approximately 33,000 undergraduate and graduate students and is situated near the center of campus. It houses over six million volumes in an area of approximately 665,000 square feet. The library has seating for 4,600 patrons and serves more than 10,000 patrons each day.

There have been two additions to the library. The first, completed in 1977, mirrored the original building and more than doubled the size of the original library. The second addition, completed in 2000 and increasing the size of the library by a third, was entirely underground, except for the entrance. The entrance to the library is on the third floor with two or three floors above and below, depending on addition.

Method

Participants included 30 female and 13 male ranging from 18 to 25 years of age. Depending on their educational status, they were placed in one of three groups – high school students, university seniors, and university freshmen. All participants were recruited via lists of students provided to the HBLL for assessment purposes or through personal contacts of the research team. Students who completed the wayfinding activities were entered in a drawing for one of three $50 gift cards (one card for each group).

Library Administration Office personnel identified 12 wayfinding tasks (locate people, products, or services) that were deemed important for students to know. Scenarios were written for these tasks (see Appendix 1). Each scenario began at the entrance of the HBLL and ended when a person, a service, or a product was located.

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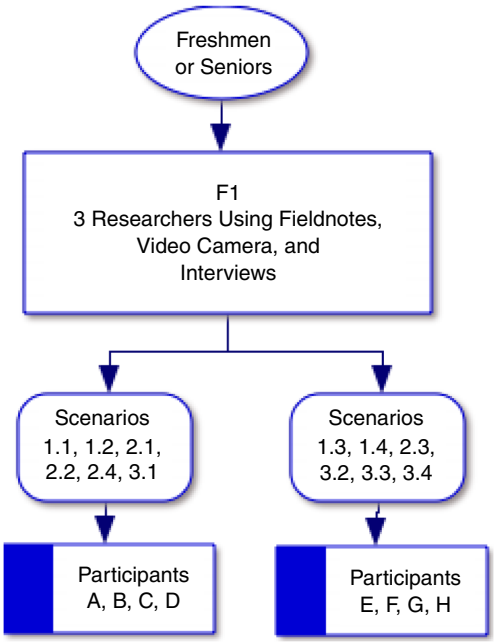
Pilot tests determined the average time needed to complete each scenario. Wayfinding tasks were placed in one of two groups of six scenarios so that expected travel times were uniform and manageable for university students participating in the study. High school students were only asked to complete three of these six scenarios.

Each scenario was written on a 3×5-inch card. Participants were randomly given one card at a time to complete. Participants had to ten minutes per scenario or a total of 40 minutes to complete all scenarios. If a participant reached the 40-minute time limit, he or she was not allowed to complete any further scenarios. A participant could stop any wayfinding activity at any time. A research summary is found in Figures 1 and 2, respectively.

Student researchers followed and video recorded each participant as he or she completed each scenario. Participants were encouraged to think out loud as they completed each task to provide further insight into why they were taking a particular pathway or what they were doing. Student researchers also took field notes using a semi structured guide that allowed for common data collection and open-ended field notes. Student researchers also interviewed and audio recorded each participant about his or her search experience (interview questions are in Appendix 2). All data were collected during a four-hour block of time on three consecutive days (Thursday evening, Friday afternoon, or Saturday 10:00 a.m.-2:00 p.m.).

The total time to complete each task for each participant was calculated using each video recording. The average completion time for all tasks was also calculated. All video recordings and field notes for each participant were reviewed to determine the patterns and methods used by each group to complete each scenario. Emphasis was placed on where participants stopped and what wayfinders used or did while completing each task.



Note: Letters indicate participants

Figure 1.
Senior and freshman student scenario map

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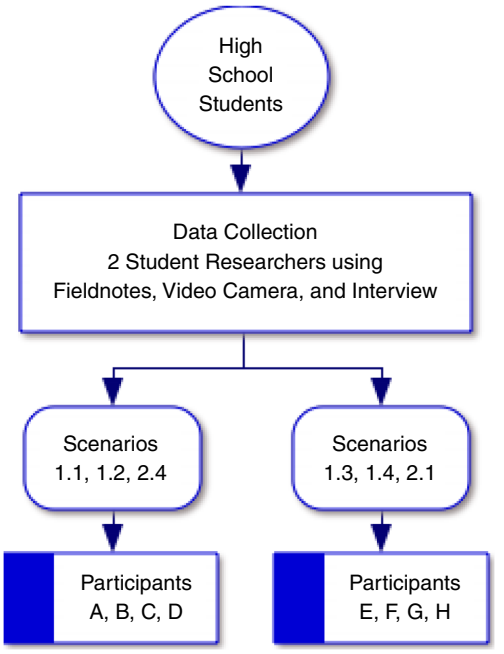

Figure 2.
High school student scenario map

Note: Letters indicate participants

Findings

Quantitative evidence

The average time to complete each task and the average total time to complete all tasks for each group were calculated. Each group had some participants who were considered outliers in regards to the time required to complete some tasks. An outlier is defined as any participant in a group whose total time for completing the scenario was double or more the average time for that group on that specific scenario. As the outliers considerably raised the average time for the group on that specific scenario, the average completion times were reported with the outlier both removed and not removed from each group. Small sample sizes prevented further quantitative analysis. Average times for each task and each group are shown in Table I.

Using the lowest mean completion times (with or without outliers) the high school students, as expected, were slower than both the freshmen and seniors. Depending on the scenario, times (reported in minutes:seconds) ranged from 0:23 to 2:17 slower. Seniors were faster than freshmen on all but three tasks. However, on seven of the 12 scenarios the difference between average times for freshmen and seniors was less than ten seconds. The seniors were faster by about one minute (0:57 and 1:05) on only two scenarios.

When comparing the average time for the six scenarios common to all groups, the high school students were about one minute slower than freshmen and seniors (0:57 and 1:01, respectively). Seniors were only four seconds faster than the freshmen. When using total time needed to complete the six scenarios, the high school students were 5:43 slower than freshmen and 6:06 slower than seniors. For the same six tasks, freshmen were only 0:23 slower than seniors.

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Scenario	High school With outliers	High school Without outliers	Freshmen With outliers	Freshmen Without outliers	Seniors With outliers	Seniors Without outliers
1.1	2:48	–	2:08	–	2:53	2:12
1.2	3:50	2:32	2:09	–	1:35	–
1.3	3:13	–	2:32	2:05	2:24	–
1.4	1:37	–	0:49	–	0:48	–
2.1	7:35	–	5:18	–	5:20	–
2.2	–	–	6:06	–	5:57	–
2.3	–	–	3:08	–	2:11	–
2.4	2:22	1:05	0:46	0:38	0:30	0:25
3.1	–	–	2:02	1:38	1:35	–
3.2	–	–	4:29	3:47	2:42	–
3.3	–	–	1:44	–	1:43	–
3.4	–	–	0:39	0:34	0:30	–
Common 6	3:34	3:08	2:17	2:11	2:15	2:07
All 12	–	–	2:39	2:30	2:20	2:16

Note: Time is reported in minutes:seconds from start of task at the HBLL entrance to completion or cessation of scenario

Table I. Average completion times for each scenario task by group with and without outliers

Qualitative evidence

The video recordings, field notes, and interview data offer insights into the wayfinding tools used by patrons to navigate pathways. Data indicated four dominant wayfinding tools all students used: signs, maps, service desks, and technology. Each wayfinding tool was not used equally among the three groups. Table II shows the total number of uses of each wayfinding tool (signs, maps, service desks, and technology) by each group (high school, freshman, and seniors) for all wayfinding tasks. Use patterns of each tool are discussed below.

Signs. The primary wayfinding method used was library signs with 165 uses across all groups and all scenarios. Each group of university students used signs at a more than double the high school students on the six common scenarios.

Signs were generally helpful, especially when participants understood the system (i.e. the first number indicates floor level and the remaining three numbers indicate room number), but other signs had some issues. Signs at eye level were more helpful than those hanging from the ceiling unless the sign was, at some point, at participants' eye level. For example, the Music/Dance help desk is located behind a wall in the music section of the library with a sign hanging from the ceiling indicating its location. Several participants walked under the sign on the ceiling and went

	Signs	Maps	Service desk	Technology	Total
High school	23	22	14	0	59
Freshman	74	61	43	3	181
Senior	68	57	29	11	165
Total	165	140	86	14	

Notes: Maps totals includes static map and Directory Kiosk use. Service desks includes all Table III categories. Technology includes computers and hand-held devices

Table II. Total uses of wayfinding tools (signs, maps, service desks, technology) by group (high school, freshmen, seniors) on all scenarios

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directly to the map adjacent to the Music/Dance help desk sign and entrance. However, as students went down the stairs toward the auditorium and special collections, they were able to see and use the signs hanging from the ceiling because the signs were, at some point, at eye level. In other cases, the required sign was sufficiently far from where the student started so that the signs hanging from the ceiling appeared to be near eye level.

Contrasted signs were more helpful than those that blended in with surroundings. For example, students noticed black signs with white lettering more than they noticed clear signs with white lettering in front of a brown, wood panel wall. Students also noticed signs that were in their sight line more than those off to the side. Students located signs occupying a three-dimensional space more easily than they located signs that occupied a two-dimensional space. For example, book call number signs positioned perpendicular to or in a triangle shape from shelving were seen better than signs flat on the side of shelves.

The ordering of floors in the HBLL also caused some problems. Initially high school students had difficulty figuring out that they were starting each scenario on floor 3. Any signs indicating that they were on floor 3 were not seen. An exception occurred for those taking the elevator. High school students clearly saw signs placed next to the elevator floor buttons, but several of them did not understand that the small elevator by the entrance started on floor 3 and only went down from there. This created several situations where a high school student would enter the elevator thinking he or she was on level 1 and press the button for level 3 only to have the door open to where they entered. University students did not experience this problem.

Maps. Used second most, maps had a total of 140 viewings. On the six common scenarios, total map usage by the three groups was quite close (high school = 22 uses, freshmen = 22 uses, and seniors = 30 uses). However, key differences occurred between the groups. Freshmen and seniors were more likely to use the slanted, static maps located by the staircases on each floor. When using the static maps on each floor, university students found the legend at the bottom helpful, but no high school students used this legend. The static floor maps only referred to the respective floor. It was apparent that patrons using these maps wanted to see maps of each library floor.

Novices used the interactive Directory Kiosk map on floor 3 as their primary map (high school = 75 percent, freshmen = 56 percent, and seniors = 37 percent). Despite being at BYU for one or more years, this was the first use of the Directory Kiosk for many freshmen and seniors. Most of them did not know that the Directory Kiosk was interactive and either ignored it or only discovered its interactive nature for the first time during this study.

Several participants had difficulty reading the maps. One map was turned 90° to the layout of the library. This caused considerable difficulty for some students because they had to mentally rotate the map to find landmarks. In other cases, the coloring or labeling on the map caused difficulty. For example, students did not understand that colored areas represented bookshelves. When they traveled to a location, they were surprised to find their sight lines obscured by shelving. Also, several participants commented that they did not initially see the light blue lettering on the map because it blended into the map. For this reason, participants missed or overlooked some map details.

Service desks. The third most wayfinding tool used was asking library personnel at service desks (security, help desks, or circulation) who were approached a total of 86

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times (see Table III for the count by group and service desk). On the common six scenarios, high school students asked for help slightly more than freshmen and seniors. However, high school participants were unique in that they were the only participants who would randomly stop anyone and ask for help in addition to asking at service desks. Neither the freshmen nor the senior participants asked non-librarians for help.

No high school students asked for help at the security or circulation desks. Both university student groups sought help at all three service points. However, the freshmen students used service desks about 30 percent more than seniors. They also asked for help at circulation and security desks at double the rate of seniors.

Another difference occurred where participants asked for help. If high school participants asked for help of anyone on any floor, they rarely asked for assistance at help desks on other floors. Freshmen and senior participants commonly employed a "close enough" strategy. After receiving initial directions, they would go to an approximate location and then seek further directional help, either from maps or help desk personnel, to move them toward their intended goal. Seniors were more likely to head to an area of the library without asking for any directions before seeking additional help as they came closer to their destination.

It is also noteworthy that, while wayfinding participants asked instructions at all three types of service desks, the desks were not equal in how they gave directions. Circulation and help desks routinely used library maps on their computers and showed participants where to go. The security desk provided instruction but did not pull up library maps on their computer. In the few instances where the security desk personnel could not help, patrons were referred to circulation or the nearest help desk.

While good instructions were initially given, it was common for participants to forget some or all of the instructions provided shortly after leaving the service desk. These cases appeared to be instances of "too much information" for the patron to process and remember. On several occasions help desk personnel offered to take and then took the participant to where he or she wanted to go. In the case of finding the book, several, but not all, help desk employees pointed out how to use call numbers. When taking people to other locations or services, the service desk personnel did not always point out key landmarks or signs that would be helpful for finding items in the future.

Technology. Computers and smart phones were the common technology used for wayfinding. No high school students used these technologies to find directions in the library. Seniors used computers more than freshmen to look up items and locations in the library, but only for specific items, such as a book. Several freshmen indicated that they did not use the computer because it took too long to log on and look up an item. Seniors also used smart phones more to look up maps of the library. However, this strategy was often abandoned because of slow or poor internet connectivity.

	Help desk	Circulation	Security	Total
High school	14	0	0	14
Freshman	25	8	10	43
Senior	21	4	4	29
Total	60	12	14	

Notes: Service desks = security, circulation, and help desks; group = high school, freshmen, seniors

Table III.
Total uses of service desks by group on all scenarios

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Previous experience. Although it is not a specific tool, previous experience emerged as one of the most used strategies in wayfinding. A total of 107 references were made that indicated participants approximately knew where the scenario location was because of previous experience. University students commented that they knew the scenario location because they had previously attended a class, a lecture, or a special presentation in the location or had seen the location of the scenario because of previous experience. Previous experience seems to be picked up quite quickly as high school students also made comments that they had seen or knew the location during a previous search.

Seniors made about 39 percent more comments than the other groups that referred to knowing where a scenario location was because of previous experience. Often seniors began walking directly to the location in the scenario without seeking help at a service desk or looking at a map or sign on floor 3, although some did check wayfinding tools along the way.

Other. Students in all groups were confused by the call numbers provided for finding the book. The call number system was misidentified as the Dewey Decimal system instead of the Library of Congress system. Students had difficulty using the call number as an area locator on both signs and maps. However, it was felt that this confusion was more of an indication of how few students had checked out a book than the efficacy of signs. Several freshmen and seniors commented that this was the first book they ever had to locate in the library.

On a final note, once patrons employed a successful strategy, they often repeated that strategy with other scenarios. That is, if using the Directory Kiosk on one search was helpful, they returned to use the Directory Kiosk a second time. It was also common for participants to use several wayfinding tools in combination with each other when trying to complete a scenario.

Limitations

Several limitations were noted. First, each group was skewed by gender. The high school students had more males than females (6 to 2), but the reverse was the case with the freshmen (1 to 15) and seniors (6 to 13). Second, the high school student sample was limited. Arrangements were made for 20 students to come from one participating high school, but only six students came. These six along with two other students, each from a different high school, made up the high school group. These low numbers limited the total number of completed scenarios for high school students and prevented statistical analysis.

Third, since no pilot test was done using high school students, it was felt that the number of scenarios should be limited. However, as the study proceeded, it was evident that high school students could have completed most, if not all, of the scenarios within the allotted time. This would have allowed for greater comparison between novice and expert groups.

Fourth, one scenario provided the title and call number of a randomly chosen book. Unfortunately, this book was checked out as the wayfinding activities began. As a result, participants were considered to have successfully found the book when they located the shelf location where the book was supposed to be.

Fifth, three scenarios (finding the book, finding a librarian's office, and finding a group study room) were all within a short distance of each other on one floor. Two of these scenarios were in the same group and, depending on randomization, finding the

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second location may have been facilitated by finding the first. However, since the scenarios were randomized, there were few occurrences where finding one location was immediately followed by finding the other. Although accidental, this occurrence highlighted the importance of previous experience in finding locations in the library.

Sixth, one scenario asked participants to find government documents. Unbeknownst to the scenario author, different types of government documents are now located in three different areas on the first floor of the library. Most participants sought assistance from the first floor help desk, who referred participants to auxiliary storage, where the public does not have access. It was considered to be a successful scenario completion when students arrived at the locked auxiliary storage door. While each of these limitations were present, it was felt that they represented real-life wayfinding possibilities and, as such, they did not influence the findings of the study in a negative manner.

Discussion

This study highlights several differences between novices and experts when wayfinding in a library. The dominant finding is the influence of experience in the location. Experts were able to start their wayfinding of scenarios without seeking help. However, even with a few experiences, the gap between novices and experts all but disappears. This is indicated by how close the times were between the freshmen and senior groups. The freshmen group only had a few months' experience in the HBLL compared to several years' experience for the seniors, yet their times were almost identical on all but two scenarios. Experience was also highlighted when high school students recognized areas from previous wayfinding efforts; when participants in all groups returned to a wayfinding tool they had successfully used in other scenarios; and how experts used signs, maps, and elevators. In terms of improving wayfinding skills, it appears that nothing beats experience. This finding should encourage the library to host a variety of activities and events that draw patrons into the building. Once in the library, the patrons become more familiar with the surroundings and are able to find their way more effectively.

Another key finding is the limited number of tools patrons used. In this case maps, signs, and service desks met the majority of wayfinding needs of patrons. In fact, each of these tools were often used in combination with one another. However, each of these tools needs to be clearly seen and labeled. This finding supports previous research by Frankenstein *et al.* (2012), where wayfinders wanted clear sight lines to assist in wayfinding. Service desks that were clearly visible were accessed most often. Tools also need to be labeled and framed in the world of the patron, instead of in the library's world. Novices asking for assistance at help desks, but not at security and circulation illustrates this principle. Similarly, poor labeling prevented freshmen and seniors from knowing that the Directory Kiosk was, in fact, an interactive map.

Another example was indicated by novices not understanding what floor they were on because of inadequate or poorly located signs. It would be helpful to provide floor signs in locations where patrons will look. For example, floor signs could be located at the entrances to the library or other areas in the patron's line of sight. Wayfinding tools should also be labeled in such a way that patrons will identify it as a wayfinding tool.

Proper identification of wayfinding tools will also assist patrons in wayfinding activities. Another finding indicates the importance of providing adequate information at each wayfinding tool. Participants liked the Directory Kiosk because they could access maps of all library floors. Static maps did not reference other floors, which prevented patrons from knowing if they were on the correct floor or needed to move to

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another level. Symbols used on maps and signs should have a uniformity and provide accurate information regarding the area. For example, shelving could be better illustrated than simply using a solid color. Landmarks should be clearly indicated with appropriate symbols.

As with findings in other studies (Hund and Gill, 2014; Hund and Padgitt, 2010; Lorenz *et al.*, 2013), directions provided at service desks should be simple and concise. Often they can direct patrons to the next wayfinding tool to simplify the directions, or provide take-along maps to assist in wayfinding efforts. In this sense there needs to be a balance between providing too much or too little information to assist wayfinding efforts.

Summary

Wayfinding is a critical element in patrons being able to access and use library resources and services. There is little point in having a resource or service if locating it is a tiresome and frustrating experience for patrons. Discerning the difference between novice and expert wayfinders assists librarians as they frame wayfinding tools in the world of patrons instead of trying to fit patrons into the world of libraries. Knowing the differences enables librarians to help patrons move from novice wayfinding strategies to those of experts. Adjusting librarians' thinking and actions to model the way patrons think and act will make library services and resources more accessible.

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Appendix 1. Wayfinding scenarios

1.1 You have a library information class in HBLL 2234. How do you get there?

1.2 You are taking a music class and you need help finding *Classical Hillbilly Songs* by Mozart's Gypsies. Please find the Music help desk to locate this item.

1.3 You are meeting with a group to study for a class project. Please find group study room 5446.

1.4 You need help researching and writing a mid-term paper. Please find the Research and Writing Center (RWC).

2.1 Find the book *The Art of the Little Mermaid*, call number NC 1766.U52 D547x1997.

2.2 You need to locate the government documents in the library. Please go there now.

2.3 You have an appointment with Christiane Ramsay, Fine Arts Librarian, in HBLL 5,447. Please find her office.

2.4 You forgot to check out a book and set off the alarm at the security gates – where do you go to check out a book?

3.1 Your English class has a special lecture on cowboy poetry of eastern Mongolian tribesmen in the HBLL Auditorium. Find your way there please.

3.2 You want to edit a family video. Find where you can do this in the Multimedia Lab.

3.3 You want to see the current display of old artifacts the library has in Special Collections. Please go there now.

3.4 You need to print a paper quickly before class. Go to a location where you can do this please.

Appendix 2. Post wayfinding interview questions

(1) Tell us a little about how much you've used the library in the past.

(2) How do you typically use it?

(3) Tell us about your experience trying to find things just now.

(4) What was hard? Why?

(5) What was easy?

(6) Did anything about the search surprise you?

(7) When you got stuck, what helped you? Why? or How?

(8) If you were at (select one of the locations), would you please give us directions how to get there?

(9) Do you have any recommendations for what would have made things easier?

Follow-up questions were also asked to help clarify respondents' answers. In some interviews, the student researchers asked the participant to provide instructions on how to get to one of the wayfinding pathway scenarios.

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