

How Do I Get to Room 3106?

Student Wayfinding Designs for Old Main at Wayne State University

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Abstract. Built in 1895, Old Main is the oldest building on the Wayne State University campus. The building is a warren of rooms and hallways that is occupied by a wide variety of academic disciplines. However, there has never been any signage system for Old Main. Through using the experience of volunteers who specifically navigated to rooms and locations in Old Main, design students developed signage prototypes that connected the “story” of the building’s information (e.g., rooms and locations, landmarks, stairs and elevators, hallways) with the “story” of the volunteers (e.g., the time it took to get to room, their use of landmarks, obstacles they encountered). This paper describes the students’ design process and design work to demonstrate the importance of user-testing and the use of storytelling in design education.

Keywords: Wayfinding · Storytelling · Information design · User-testing · User-based design · Design education

1 Introduction

1.1 Where Am I to Go? How Do I Get There?

To ask for a map is to say, “Tell me a story.”— Peter Turchi, *Maps of the Imagination: The Writer as Cartographer*, p. 11.

Who will help me find my way?— Paul Arthur and Romedi Passini, *Wayfinding: People, Signs, and Architecture*, p. V.

Information Design and Wayfinding. In her essay, “Chaos, Order, and Sense-Making,” Brenda Dervin writes that “information is a tool designed by human beings to make sense of a reality assumed to be both chaotic and orderly.” [2, p. 39] Thus— by developing strategies for people to find, understand, and use the information that they need— information designers help us make sense of the world around us. A key method in shaping effective information design is storytelling. Through finding ways to interweave the “story” of the information with the “story” of the people using the information (their experiences, background, knowledge, emotions, etc.), information designers create a new “story” that makes the information meaningful and accessible for those who need to use it. [5] This approach is especially useful for

wayfinding design. Wayfinding is about understanding, organizing, and visualizing information so that a person can spatially orient him- or herself within a location and then be able to move with confidence between places in that location. [3, p. 37] This understanding of wayfinding and the role of storytelling in information design was at the heart of the project for Wayne State University graphic design students in Fall 2013: design signage for the Old Main building on the WSU campus, a large five-story building that is a spatial maze but with no consistent signage system.

2 The Project

2.1 Old Main: The Building's Story

Designed by the architects Malcomson and Higginbotham in the American Romanesque Revival style and built in 1895 and renovated in 1997, Old Main is the oldest building on the Wayne State University campus. With its exterior of yellow brick and carved limestone, the building sits at the corner of Cass and Warren Avenues in mid-town Detroit and is home to a wide variety of art, humanities, and science disciplines. Its clock tower is an iconic symbol of the WSU campus Fig. 1.



Fig. 1. Old main from the corner of Cass and Warren avenues. The arched Cass avenue entrance is at the base of the clock tower. (Photograph courtesy of the author.)

Old Main's physical structure consists of a ground and four floors connected through several stairwells and two elevators. There are a number of entrances to Old Main, but the main entrance is a wide, rounded entrance archway on Cass Avenue that

surrounds two sets of double doors. These doors open to a tiled foyer with stairs on each side leading down through arches to the ground floor and with a stairway leading up to a pair of solid metal doors that open onto the first floor. A stairway is to the left of the doors. The floors share a common central corridor with north and south wings at the eastern and western ends of the corridor; the two elevators flank the eastern end of the corridor. The north wing forms a square on the lower level and on the first two floors, but is truncated to two sides on the third floor. The south wing has two sides or arms on the ground through the third floor level. On the fourth floor, the central corridor morphs into a rectangular hallway with no wings, only a block of rooms at its east end.

General lecture classrooms populate the building's ground and first floor. The ground floor is also home to the university Planetarium and the Department of Geology; the west side hallway leads south to the graduate studios of the Department of Art and Art History and to the Elaine L. Jacob Gallery and the Schaver Recital Hall. The first floor central corridor houses the Anthropology Department and Museum while the west side of the north and south wings are occupied by Department of Music offices. Several programs in the Department of Art and Art History are located on the second, third, and fourth floors; the Department of Music has additional rooms on the second and fourth floors. The second floor corridor functions as a student lounge; classrooms and computer labs for Fashion Design and Interior Design of the Department of Art and Art History comprise the east side of the wings; music studios occupy the south wing; and faculty offices and the offices of the Dean of the College of Liberal Arts and Sciences occupy the rest of the north wing. On the third floor, classrooms and computer labs for Graphic Design, Interdisciplinary Electronic Arts, and Drawing and Painting form the eastern portions of the north and south wings. The Department of Theatre and Dance offices occupy the central corridor and the western side of these wings. On the fourth floor, the central corridor becomes a rectangle that anchor a series of music practice rooms as well as classrooms, computer labs, and darkrooms for the Photography program. The block of rooms at the eastern end of the fourth floor belongs to the Department of Communication: the Media Arts classroom, editing studios, and equipment check out for the Department of Communication.

For all the variety of its structure and occupants, there has never been any signage system for Old Main. Currently only room numbers on small placards, a small evacuation map on each floor near the elevators, and a smattering of divergent signs by the academic programs that "own" specific areas of the building serve as signage in the building. Often makeshift signage appears in the form of sheets of paper taped on the elevators, stairways, and various entryways that say things like, "dance auditions on the 3rd floor."

2.2 Old Main and User-Based Research: The First-Time Visitor's Story

On the first day of every academic term, dozens of Wayne State University students can be seen wandering the halls of Old Main, class schedule in hand, looking for their assigned classrooms. Sometimes, in desperation, they will ask another person for help. People making deliveries in Old Main or arriving at Old Main to attend or

participate in an activity also do this “wayfinding dance” of scanning the environment for clues, frequently stopping to figure out which way to go, and often asking others they encounter for directions and/or re-tracing their steps. All of them experience frustration and spend more time than expected in reaching their destinations.

In Fall 2013, students in the WSU information design course directly confronted the signage deficit in Old Main through the development of prototype designs based on the experience of those trying to navigate its hallways. The design students observed volunteers – students from the College of Engineering who had never before been in Old Main – find specific room numbers (e.g., room 3106) and named locations (e.g., the Planetarium) in the building. They noted how the volunteers navigated to those places (e.g., the landmarks they used, if they re-traced their steps or backtracked, if they asked help from others in the building) and how long it took to reach each place; listened to the volunteers’ comments as they searched for those places (e.g., their process for figuring out the next step); and learned details about the volunteers’ experiences through a survey after arriving at their destinations (e.g., what was confusing and what was easy to follow). The students thus learned about each volunteer’s wayfinding “decision plan,” that is, the hierarchical problem-solving steps (from general to specific) used to arrive at his/her destination, and used that information in the development of their signage systems. [1, pp. 29-31].

Since the key to this wayfinding project was to conduct user-based research for the development of the designs and then test the designs, the project protocol, the survey instrument, the research information sheet, and volunteer recruitment materials were approved by the WSU Institutional Review Board (IRB). The students passed the Collaborative Institutional Training Initiative (CITI) basic course Responsible Conduct of Research training and read the research information sheet to each volunteer prior to his/her participation in the project. Five Engineering student volunteers participated in the project: three in the research phase of the project and two tested the prototype designs.

Each volunteer was requested to find a specific room in Old Main; everyone started inside the main Cass Avenue entrance. When presented with a room number, the first decision of the volunteers was to find the correct floor. This was the initial and most general decision of the volunteer’s decision plan and the beginning of his/her story. In Old Main, room numbers have four digits, the first digit representing the floor or level; “0” stands for the ground or basement floor, “1” for the first floor, etc. One volunteer who received a ground floor room assignment initially went to the first floor because the Cass entrance, which presents the visitor with a choice of stairs going both up and down, provides no indication that the downward stairs lead to the ground floor and that the upward stairs lead to the first floor. The person assigned to find the office of the Dean for the College of Liberal Arts and Sciences (which is on the second floor) took the stairs up from the Cass Avenue entrance and continued up the staircase by the metal doors to the third floor. Not knowing the floor of the office, this individual randomly chose the third floor and nothing in the Cass Avenue entrance indicated that the elevator access lay just past the double doors. After searching unsuccessfully for the office on the third floor, the participant found the elevator and took it to the first floor. After searching in vain for a while, the participant finally asked someone for help and was directed to the second floor. The third volunteer correctly intuited from the assigned room number that it was

on the fourth floor and that going through the metal doors meant finding an elevator. This participant reasoned that since most people streaming into the entrance went up the stairs and through those doors – many of whom would probably be going to the different floors – that there must be an elevator somewhere inside the building.

After arriving on the correct floor, the each volunteer stopped at the eastern end of the central corridor to figure out where to go next. It was here that he/she began to search for the number of the room and beginning the next tier of decisions in his/her decision plan. Most volunteers walked down at least one hallway only to re-trace their steps to another hallway. They could only tell the direction of the room numbering sequence for a hallway by moving close to the small signs located by the door of each room. All the volunteers took wrong turns and had to re-trace their steps. The volunteer searching for the ground floor room did not initially realize the need to go through an “exit” door to find the room. When the volunteer searching the office of the Dean for the College of Liberal Arts and Sciences got off the elevator at the second floor, that person looked down the central corridor, went down the south wing hallway until almost reaching its end, and then retracing those steps, walked down the north wing to find the office at the end of that hallway. The volunteer with the fourth floor room assignment got off the elevator and stopped, standing for almost a minute in front of a set of double doors not knowing whether to go through the doors or proceed down a short hallway to the left. Finally opting to go through the doors, this individual found the room only after walking most of the rectangular hallway there.

According to the volunteers, the most difficult aspects of their way finding task were figuring out what floor a room was on and, once on the correct floor, then figuring out which hallway the room was on. This included uncertainty about access through the double doors located at the east end of the central corridor on floors two and three. The volunteers also mentioned the need to get close to the room signs in order to see the number. When asked on the survey to state the easiest part of their way finding experience, they answered, “nothing,” “not much of anything,” and “wasn’t very easy to find.” And when asked what they would add or delete to the current Old Main signage, they responded that “large signs telling [the] range of rooms,” “add more signs, have a floor map,” and “add a board at the entrance of the building saying where department offices are located.”

2.3 Student Wayfinding Designs

With the information gathered from the volunteers, the thirteen design students working in four teams wove the “story” of the building’s information (e.g., rooms and locations, “landmarks”, stairs and elevators, hallways) with the “story” of the volunteers (e.g., time it takes to get to a room, their use of “landmarks”, obstacles in finding a location) into signage system prototypes that addressed experiences of the volunteers. Finished work consisted of full-scale mock-ups of at least three signage elements, a 24 × 36 inch poster describing the signage system, and a 5-7 min video documenting their design process.

Team 1. Lisa Ansteth, Caitlyn Gazarek, Kenny Szymanski, and Christopher Weber; *Team 2.* Catherine Belletini, Daniel Herrle, and Brittany Vadalabene; *Team 3.* Robyn

Eakin, Courtney Howell, and Jane Warunek; *Team 4*. Amanda Fairchild, Ashley Ratusznik, and Megan Yount.

To address the first concern and decision-making level of the volunteers – what floor is my room on? – the students designed placards that listed each floor with its corresponding room numbers, named facilities, and discipline areas. A common feature of all the students’ signage systems was to place these placards in the Cass Avenue entryway, the first navigational decision point inside Old Main. One team’s sign wrapped the wall space between the up and down stairs and had arrows by the floor numbers that pointed to their corresponding stairs. The teams put the placards on every floor at every major access point – stairway and elevators doors – but emphasized the respective floor number and its room numbers and facilities. Two teams also posted a version of their placard in the elevators above the floor stops buttons. A variation on the floor listing occurred for the stairwell signage. At the entry to each floor landing in a stairwell, one team placed a vertical list of all floor numbers with the current floor number reversed out of a background of the floor’s designated color code. Another team simply put the color-coded number by the door, and another team posted a sign with the floor number and what was located on that floor Fig. 2.

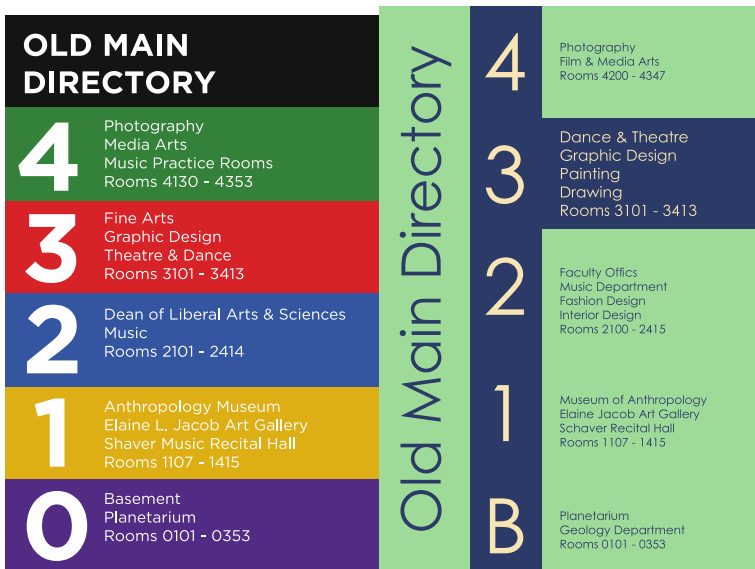


Fig. 2. Directories. cass avenue entrance: Team 2 (left) and 3rd floor: Team 3(right)

Another common design feature to the placards was color-coding. Each floor has its own color. Only one team did not use color-coding but instead used light and dark contrasts to identify floors. On those placards, light type on a dark ground indicated the current floor while dark type on light ground signaled information for the other floors. The color-coding continued throughout the building: the signage on each floor used that floor’s assigned color.

There were also common issues inherent in way finding that were addressed by each team but visualized in different ways such as the use of typography and terminology. All the teams used sans-serif typefaces – Gotham, Avant Garde, Univers condensed, and Futura – to provide a high level of readability especially at a distance. Students created full-scale mock-ups that helped them choose the type weights, sizes, and spatial relationships that best signaled hierarchies of information. As to terminology, a variety of terms were used to connote the ground floor: ground, basement, or level 0; there was no research data about terminology preference.

Once on the correct floor, student designs addressed the second concern and next series of decisions for the volunteers – figuring out which hallway the room was on. The teams approached this in a variety of ways. One design team suspended a 15×72 inch sign from the ceiling on each floor where the eastern end of central corridor and of the north and south wings, the stair landing, and elevator access all converge. The overhead sign had a large floor number and listed room numbers and names with corresponding arrows. The information on each side of the sign was oriented to the direction in which you are facing; thus you would not see information about rooms or areas that you have already passed Figs. 3, 4, 5 and 6.



Fig. 3. Hallway banner and directory, 3rd floor (Team 1)

Other teams provided directional guides at eye level: horizontal arrows containing room numbers at the ends of hallways, 3-D illusionistic arrows with room numbers on double doors, and “you are here” or “heads-up” [4, p. 155] maps near the elevators. Two teams provided maps for each floor: one team focused on hallways and the room numbers and one focused on all the facilities of the floor, but both called out named offices and locations. One team tackled the design of the room number plates, using the



Fig. 4. Arrow on double doors, 3rd floor (Team 3)



Fig. 5. Map/floor plan, ground/basement floor: Team 4 (left) and Team 2 (right)

experiences of the volunteers, the presence of makeshift signs, and the design of the current room number plates: black squares with raised white numbers in the upper left corner. Some plates include the purpose of the room, such as computer laboratory; other plates have a cutout lower portion for customizing information and often used for faculty offices and multi-purpose classrooms. The team noticed that the volunteers had to get very close to a room plate to read the number. Students also noticed announcements about activities pertaining to a classroom – a canceled class, a visiting lecture– consisted of sheets of paper taped to or near the classroom door. The students thus envisioned a room plate with larger type sizes, color-coding, and as a digital device that could display and update a variety of information.



Fig. 6. Room plate, 4th floor (Team 2)

2.4 User-Testing

Two of the four signage systems were tested (Teams 1 and 2); one volunteer was assigned a location on the third floor and the other assigned a room on the second floor. Each volunteer quickly scanned the placard at the Cass Avenue entrance and proceeded confidently in the direction of the correct floor. At the elevators, they noticed the placards that reinforced the floor at which they need to arrive. Once on the floor, they stopped at where the central corridor, wings, and floor access points converge and again scanned for information that would direct them to the room. All the volunteers quickly found the placard or directory or overhead sign that directed them to the correct hallway. Once in that hallway, they readily found their destination. As one person stated on the survey, “[I] looked around for maps as soon as I reached a new floor.” No volunteer made a wrong turn or had to re-trace his/her steps. All the volunteers, each using one of the signage systems, stated that they found it easy to find their assigned room or location. They stated that the easiest part of their wayfinding experience was “looking at the signs” and “reading the maps.” When asked to name the most difficult part of the experience, one person said finding the stairs while the other person simply said, “it wasn’t too hard.”

3 Conclusions and Reflections

The user-testing showed that the volunteers took less time to find the rooms using the students' designs than it took them to find the rooms without the benefit of the designs. The stories of the volunteers (the wrong turns, the re-tracing of steps, the many stops to figure out where to go next) as they wrestled with the story of Old Main (the wide range of disciplines and facilities housed there, the different lay-out of its floors, its lack of signage) enabled the students to construct wayfinding systems that told a new story—one that makes it easy to find a room on any floor of the building. By utilizing the decision plans of the first set of volunteers, the student designs enabled the second set of volunteers to move more confidently through their decision plans. By observing how specific individuals navigated a building's interior, the students were able to create effective signage systems, as evidenced by an initial round of testing.

Ideally, the next step for the students would have been to re-work their designs for another round of testing; the design process for wayfinding in the "real world" would involve several iterations of design and testing that could extend over months or even years. Also a more extensive wayfinding project would include all of the many entrances to Old Main and the participation of more volunteers in the research and testing. The limitations of the project were due to various time and recruitment constraints. While acknowledging these limitations, the students reflected on the success of their work in the final critique as well as what could be changed and/or added. All teams wanted to further develop their signage for people with special needs such as limited sight and impaired mobility. Three teams wanted to include the design of the room plates. The team with the wrap-around Cass Avenue directory wanted to better clarify where the up and down stairs lead. Other teams wanted to fine-tune such things as type and placard sizes, color choices, and the visual composition of directories.

Through this project students learned how to conduct user-based research, the importance of input from people in making effective design decisions and in creating effective wayfinding strategies. They also learned about the importance of ethics and protocols when using human subjects in research, the value of pre- and post-testing survey instruments, and insight into the amount of time required to create designs that truly meet the needs of people. The students now have a solid foundation in user-based design and understand how their work as designers can help people find their way.

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