The Spaces Between the Rooms:

A Post-Occupancy Evaluation of Informal Social Spaces in the HEDCO Education Building

Ву

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A THESIS

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Approved:

Professor Jenny Young

Currently the Campus Planning Department at the University of Oregon requires that most new academic buildings built on campus include a certain variety of informal social spaces. This is based on a belief that good informal social spaces in university buildings can contribute to the intellectual life of the university by creating opportunities for frequent interaction between faculty, graduate students, and undergraduate students, as well as foster interdisciplinary research and collaboration.

This post-occupancy evaluation, developed in cooperation with Campus Planning, investigates the social spaces in the HEDCO Education Building and evaluates their effectiveness in terms of how many people use them, whether they like them, how well they create opportunities for interaction between user groups, and whether they are actually assisting or enabling research collaboration.

It identifies problems that can be fixed in the short term, and develops the implications of the findings for the future design of social spaces to improve campus planning projects in the future using a variety of evaluation methods including a quantitative and qualitative space analysis, formal observation and trace analysis, an online survey distributed to College of Education members, follow-up interviews after the survey, and person on the street interviews.

The results suggest that HEDCO is very effective as a community center, and student-faculty interaction does appear to be well supported. However, there was no evidence found that the social spaces in HEDCO are contributing in a significant way to formal research collaborations.

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1- INTRODUCTION

It's the learning communities that universities establish and nurture that remove them from the realm of a delivery service, or from being mere traffickers of information, to knowledge creators.

—John Seely Brown¹

This thesis explores informal social spaces on university campuses and how they can contribute to the social and intellectual life of the university. Traditionally the focus of academic and design discourse about the spaces of higher education has focused on how classrooms can support the latest pedagogical style or what new improvements can be made in the laboratory and research spaces. But in the last 20 years there has been a growing recognition of the importance of in-between spaces. It turns out that the spaces in between the classrooms, offices, laboratories, and dorms where the students and faculty mix, mingle, pass, and interact can have a tremendous effect on the traditional teaching and research missions of higher education. This is a study of the spaces where that happens. The thesis will demonstrate that the social spaces in the HEDCO Education Building are overall quite successful and that their success can be used to inform the design of future camps social spaces.

OBJECTIVES OF THE THESIS

The objective of this thesis is to explore the potential of informal social spaces to contribute to the intellectual life of an institution of higher education by facilitating informal interactions between and among students and faculty as well as fostering

¹ John Seely Brown, "Learning in the Digital Age," in *The Internet & the University: Forum 2001*, ed. Maureen Devlin, Richard Larson, and Joel Meyerson (Aspen: Forum for the Future of Higher Education and EDUCAUSE, 2002), 65–91. 69

interdisciplinary research and research collaboration. Informal interactions include many forms of casual, spontaneous information sharing among members of the campus community. This thesis is primarily concerned with informal interactions that happen face to face. Interdisciplinary research is research that incorporates elements from multiple fields of academic study. Research collaboration is research that is conducted by two or more researchers working together to produce scientific knowledge.

POST-OCCUPANCY EVALUATION

The case study component of this thesis is a post-occupancy evaluation (POE) of the informal social spaces in the main campus of the College of Education at the University of Oregon. There are social spaces in all three of the main education buildings, including the Lokey Education Complex, originally built in the early 1920s, and the Clinical Services Building, which was built in 1969, but the focus is on the HEDCO Education Building, which was completed in the spring of 2009 as part of an extensive renovations and additions project for the College of Education that also included renovations to the other two buildings. This post-occupancy evaluation was conducted to evaluate the success of the informal social spaces in HEDCO and to extract lessons from the successful and unsuccessful aspects that can be applied to future projects on the University of Oregon campus and in higher education projects elsewhere.

Post-occupancy evaluations (POEs) are studies that examine completed building projects and evaluate how successful they are in fulfilling the goals of their designers and those who commissioned the buildings. They compare expected and actual performance to determine what worked and what didn't in the building's design process and finished

product. The "occupancy" in post-occupancy is derived from "the occupancy permit that is issued when a building is completed, inspected, and deemed safe according to building codes and regulations." It is important to remember that the "occupancy" refers to the process of occupying a building, not the building's state of being occupied, and thus POEs are conducted some time after the building has become operational, not after it has ceased to be occupied.

Post-occupancy evaluations offer many potential benefits in the short, medium, and long term for building designers and owners. As Preiser, Rabinowitz, and White write in their book *Post-Occupancy Evaluation*, short term benefits include problem identification and performance improvement, middle term benefits assist managing building operational costs and adapting to organizational change, and long term benefits include improving design standards and measurement tools.³ An alternate framework for considering the benefits of POEs divides them into two types: those that improve the existing building and those that improve future buildings. Improvements to existing buildings are important because although the cost of having a building designed and built is expensive, it is far more expensive to run and maintain it during the lifecycle of the building.⁴ Buildings may cost millions of dollars to build but flaws in buildings that significantly hinder productivity, or do not successfully support the intended mission of the building, may cost much more over the course of the building's lifetime, making it often worthwhile it to fix them. Studies geared toward improvements for future buildings through development of design guidelines or performance criteria are also important

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² Wolfgang F.E. Preiser, Harvey Z. Rabinowitz, and Edward T. White, *Post-Occupancy Evaluation* (New York: Van Nostrand Reinhold Company Inc., 1988). 8

³ Ibid. 5

⁴ Graham Ive, "Re-Examining the Costs and Value Ratios of Owning and Occupying Buildings," *Building Research & Information* 34, no. 3 (May 2006): 230–245, accessed December 29, 2013, http://www.tandfonline.com/doi/abs/10.1080/09613210600635192.

because they have the potential to have a much wider influence on the state-of-the-art or standard-of-practice of the entire industry.

ORGANIZATION OF THE THESIS

This thesis is organized into two parts. The first part, chapters one through three, consists of research that provides background information for the project. Chapter two discusses the history of the buildings used by the College of Education and the context in which the HEDCO building was designed. Chapter three is a review of the literature surrounding places of informal interaction in higher education, including empirical studies, theory, and design literature. The second part, chapters four, five, and six deal with this particular post-occupancy evaluation. Chapter four discusses the history of the project and the details of its methodology. Chapter five is a discussion of the results of the evaluations, and chapter six contains conclusions drawn from the results as well as recommendations for future designs.

SUMMARY OF CONCLUSIONS

The results suggest that HEDCO is very effective as a community center. It attracts members of the college who work in other buildings on campus and provides spaces where members like to eat, study, work, and socialize. HEDCO also does appear to support student-faculty interaction very well for the departments based in the building but the results indicate that the common social spaces work better for faculty than students. There was no evidence found that the social spaces in HEDCO are contributing in a

significant way to formal research collaborations. Use of social spaces in HEDCO was not positively correlated with the likelihood of a researcher being in a collaboration or discussing their research with others. The thesis also identified wayfinding problems associated with users accessing the third floor and noted the fireplace as an exceptionally successful social place. Overall HEDCO's social spaces were found to be successful and good examples for future campus building projects.

The College of Education (COE) at the University of Oregon was founded in 1910, making it the fourth professional school at the university.⁵ The first building built to house the college was Peterson Hall, which is currently part of the Lillis Business Complex. Built in 1916, Peterson was the first building on campus to be designed by Ellis Lawrence, who designed many important buildings on Oregon's campus as well as the 1914 campus master plan.⁶ Peterson housed the College of Education for five years, until 1921 when the College moved to its current location in the south-west corner of the University of Oregon campus.⁷

⁵ Melissa Stoller et al., "Peterson Hall : Historic Resource Survey Form," *University of Oregon Cultural Resources Survey.* 2

⁶ University of Oregon Planning Office, "Lawrence/Cuthbert Era (1914-1946)," *UO Heritage Landscape Plan*, accessed January 30, 2014,

http://uplan.uoregon.edu/projects/HLP_website/hlp_LC.htm.

⁷ Stoller et al., "Peterson Hall: Historic Resource Survey Form."

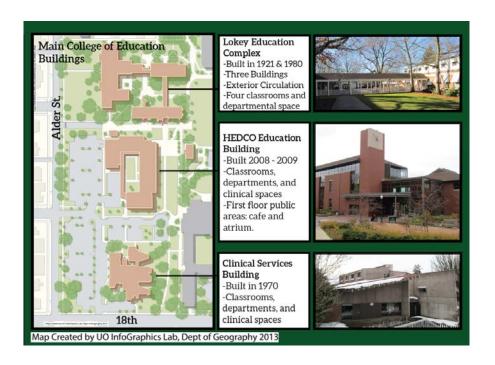


FIGURE 1: COLLEGE OF EDUCATION BUILDINGS - MAP USED WITH PERMISSION OF UO INFOGRAPHICS LAB

LOKEY EDUCATION COMPLEX



FIGURE 2: LOKEY EDUCATION COMPLEX

1921 was the year that the Education East and Education West buildings, also designed by Ellis Lawrence, were completed. Education East was the home of the College of Education and Education West, also known as the University High School, was a model high school where students in the college could observe high school education in progress and get experience teaching high school classes.⁸ The University High School also hosted weekly lectures and musical performances that UO seniors were expected to attend. It continued to function as a high school until 1953 when the high school closed and the College of Education expanded to fill it. ⁹

In 1978, the architecture firm Martin Soderstrom Matteson started designing a third building for the Education Complex. The principal architect on the project, Will

⁸ Shawn Lingo et al., "Education (B) (West): Historic Resource Survey Form," *University of Oregon Cultural Resources Survey*, last modified 2006, accessed December 20, 2013, http://uplan.uoregon.edu/projects/HLP_website/building surveys/EducationWest05_30_07.pdf. 2 ⁹ Ibid. 2

Martin, was a University of Oregon graduate. The third building was completed in 1980 as "Education South." Also designed and constructed at the same time was a covered walkway to connect Education West and Education South, as well as the courtyard in the space surrounded by the three buildings. ¹⁰

Currently Education East houses some classrooms, the Department of Education

Studies, and the Department of Educational and Community Supports. The Department of

Educational Methodology, Policy, and Leadership and the Center at Oregon for Research in

Education are in Education West. Education South is the home of the Department of

Behavioral Research and Teaching; the Office of the Dean; and the Office of College

Advancement, Communication, External Affairs, and Development.

The Education Complex is seen very favorably by current members of the college. The courtyard in particular is seen as one of the most successful outdoor spaces on the University of Oregon campus. During the programming phase for the HEDCO Building the Campus Planning Department found that "this courtyard should set the standard for other spaces in this area of campus". A survey of good and bad spaces in the College of Education campus by in that same report described the Education Complex as having "nice materials, nice scale, wonderful outdoor spaces, especially the arcades." It also listed the courtyard and the north façade of Education East as "sacred" places of the campus. 13

¹⁰ Edward H. Teague, "Education Buildings," *The Architecture of the University of Oregon*, last modified 2004, accessed January 2, 2013,

http://library.uoregon.edu/guides/architecture/oregon/education.html.

¹¹ University of Oregon Planning Office, *College of Education Additions and Alterations Project: Project Description* (Eugene, 2005). 10

¹² Ibid. 29

¹³ Ibid.

CLINICAL SERVICES BUILDING



FIGURE 3: CLINICAL SERVICES BUILDING

The Clinical Services Building was designed by the architecture firm Balzhiser Seder & Rhodes from Seattle. ¹⁴ It was opened in January of 1970 and originally housed a "variety of bio-medical and behavioral professions, including education" that are concerned with developmentally disabled children. ¹⁵ The building originally included medical exam rooms, classrooms, individual work rooms, a vocational unit, and an observation deck with one way mirrors on the second floor that could overlook all the

 $^{^{14}}$ Edward H. Teague, "Clinical Services Building," *The Architecture of the University of Oregon*, last modified 2004, accessed January 9, 2014,

http://library.uoregon.edu/guides/architecture/oregon/clinical.html.

¹⁵ Charlotte Bobo, "Fleming, Morse Speak at Dedication: New Clinic Ready for Retarded," *Daily Emerald* (Eugene, January 26, 1970).

classrooms and play areas. 16 The observation deck was fitted with microphones and closed-circuit televisions, some capable of being piped into the 150 person auditorium, to facilitate clinical observation. ¹⁷ There was also a library of instructional materials for use by researchers and teachers when working with the children. 18

Currently the Clinical Services Building is still used as a clinical center for working with children, both disabled and not. It houses the Childhood Development and Rehabilitation Center (affiliated with the Oregon Health and Science University), an Early Childhood CARES classroom, and a Head Start of Lane County classroom. It is also the home of the Early Intervention Program, Department of Secondary Special Education and Transition, Center on Human Development, Institute on Violence and Destructive Behavior, and the University Center for Excellence in Developmental Disabilities. The two auditoriums on the second floor are used by Education classes and assorted classes from other colleges in the university.

At the time it was built, the Clinical Services Building was praised as "a physical symbol of man's humanity to handicapped children" and as an embodiment of the idea that "every human being has worth and dignity" 19. However, since then the Brutalism style of the building has fallen out of favor and it is not popular on campus. The programming phase discussions about College of Education Buildings prior to the design phase of the HEDCO project found the Clinical Services Building to be "poor functioning," and an analysis of good and bad places in the College of Education's campus reports "The Clinical

¹⁶ Ibid.; Barbara Coleman, "Clinical Observation: The Spy Technique," Daily Emerald (Eugene, January 16, 1970).

¹⁸ Barbara Coleman, "Center Features Unique Library," Daily Emerald (Eugene, January 16, 1970).

¹⁹ Bobo, "Fleming, Morse Speak at Dedication: New Clinic Ready for Retarded."

Services Building needs to go away...far, far away."²⁰ THA's conceptual report for the HEDCO project tactfully states "While Clinical Services Building is an interesting example of a building purpose-designed for a specific method of clinical study, unfortunately the space layout has become somewhat obsolete and the building is, by its nature, difficult to adapt."²¹

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²⁰ University of Oregon Planning Office, *College of Education Additions and Alterations Project: Project Description.* 20, 29.

²¹ Thomas Hacker Architects, Conceptual Design and Programming Report (Portland, 2007). 26

HEDCO EDUCATION BUILDING



FIGURE 4: HEDCO EDUCATION BUILDING

After the Education South construction project in 1980 there were no more expansions for the College of Education for over 20 years. The school had still been growing, however, and was leasing off-campus space and using temporary structures on campus to accommodate the overpopulation. ²² In 2000 the university commissioned a conceptual program from the Design Partnership, a firm in Berkeley, California, which called for 94,000 square feet of new construction and 17,000 square feet of renovations. The report included observations on the lack of needed workspace, the substandard nature of twenty percent of the space, the problem of there being "No space dedicated to

²² University of Oregon Planning Office, *College of Education Additions and Alterations Project: Project Description.* 5

the students of the college, and the needs of the rapidly changing student demography for new space.²³

The Design Partnership program was followed by a conceptual design report by ZGF Partnership that proposed a similar size project with a three to four story building with wings defining courtyards and interacting with campus spaces. ²⁴ Based on these reports and a series of meetings with the user groups of the College, in late 2005 the Campus Planning Office issued the *College of Education Additions and Alterations Project: Project Description* in which the goals and intentions of the project were laid out, and a call was made for proposals from architects to design a new building and renovate the old.

This project description booklet makes it clear that informal social spaces were very important in the original set of goals for what would become the HEDCO building. The University of Oregon uses a certain style of design guideline called "patterns" which are "statements that describe and analyze design issues and suggest ways in which those issues might be resolved....These patterns ideally function together as words in a sentence, creating a cohesive whole built on a common design language, the 'pattern language." ²⁵ The patterns are intended to facilitate a dialogue about design issues for building projects using a vocabulary that both design professionals and people unfamiliar with design can understand. This "pattern language" approach to design was articulated by Christopher Alexander, who helped the University of Oregon develop its planning process in the 1970s, in his books *The Oregon Experiment* (1975), *A Pattern Language* (1977), and *The Timeless Way of Building* (1979). ²⁶ The first building on campus to use this approach to design was

²³ Ibid. 6

²⁴ Ibid. 7

²⁵ University of Oregon Planning Office, *Campus Plan*, 2nd ed. (Eugene, 2011). 61

²⁶ Ibid. Teague, "Education Buildings."

the Education South building in 1980.²⁷ The project description lists patterns from the Campus Plan that are relevant to the proposed project with particularly important patterns called out by additional comments. In addition, the user groups assembled to represent the users of the new education building came up with their own patterns which represented goals and intentions specific to this project. Many of these patterns include goals about the inclusion of informal social spaces. "Excited Faculty and Staff" includes the requirement that faculty and staff need "opportunities to interact with other faculty and staff," and "Excited Students" mentions the importance of group work space and "a place where they can see and meet other excited students."28 "Commuter Home" mentions the necessity of "hat hanging" and "shoulder rubbing" space for teachers and administrators coming to evening or weekend courses, and "Building Teaches the Profession" is about the importance of researchers benefiting and being inspired by the research that their colleagues are doing and the discoveries that are being made. The entire text of "Network of In-between Spaces" is included below to drive home the importance of informal interaction for the people commissioning the design of HEDCO:

> The best connections between research and teaching are embodied in graduate students (particularly Ph.D students), who inhabit both worlds on a day-to-day basis. Increasing potential for interconnections among teaching and research faculty, staff, and students is important. Maintaining these connections is a function of the in-between spaces where people casually encounter each other, share a snack, chat at a mailbox, and enjoy displayed materials from classes or research projects.

Therefore: Ensure that certain areas – hallways, gathering spaces, entries to major teaching spaces, and areas where essential services are provided – support opportunities for social encounters (examples include benches, access to natural light, and tables and

²⁷ Ibid.

²⁸ University of Oregon Planning Office, *College of Education Additions and Alterations Project:* Project Description. 15

chairs). These spaces contribute to the intellectual and social life of the university. In-between spaces without names are essential.²⁹

From this and the other patterns, as well as the needs identified by the Design Partnership, it is clear that informal social spaces were very important to the users who were involved in deciding what the priorities would be for the additions and alterations to the Education campus.

Based on the project description and the conceptual work done by the Design Partnership and ZGF, the 2005 Oregon state legislature authorized a spending limitation of 34 million dollars (which was later increased by the a 2008 emergency board to \$52,800,000) for the project. Thomas Hacker Architects, from Portland, was chosen to design the new building and the renovations to the education complex. ³⁰

Recognition of the importance of informal social spaces in this project clearly translated to the architects. The *Conceptual Design Report* published by THA in February 2007 includes detailed plans for how the informal social spaces would be provided in the new building, from the idea of departmental nuclei called "academic area hubs" to the café and atrium combination that would be right off the main circulation paths and serve as the "building hearth." Allocations were made in the program for distributed seating to be located near classrooms and along corridors. The schematic design report released in May of 2007 shows these same ideas at the next level of refinement. In this report each pattern from the project description is discussed in detail, including how the building

²⁹ Ibid. 17

³⁰ University of Oregon Planning Office, "Completed Between 1997-2012," *Campus Planning and Real Estate*, last modified 2012, accessed January 9, 2013,

http://uplan.uoregon.edu/projects/projects-completed.htm#COE. Thomas Hacker Architects, *Conceptual Design and Programming Report.* 6

³¹ Ibid. 44, 76

³² Ibid. 81

design addresses each one. The responses to "Excited Students" and "Excited Faculty and Staff" both mention the importance of the double height entry space and adjacent café as the vibrant social center of the building and the College of Education as a whole.³³ Under "Network of In-between Spaces" THA writes that

One of the primary concerns when developing plan layouts for the new building was to create active circulation zones and opportunities for informal interaction. This can be seen in both the new and existing buildings. The same approach is brought to the organization of spaces within departments, with "Area Hubs" and "Great Rooms" providing many opportunities for the coming together of individuals.³⁴

The space program shows that over 1,700 square feet were devoted to the café and atrium, and 1,340 square feet were devoted to "distributed informal seating areas." It is clear that informal social spaces remained a priority of the design team through the design process, but did it translate into successful social spaces?

The project resulted in 70,120 square feet of new construction including the HEDCO Education Building and its courtyards and outdoor spaces, renovations to 42,000 square feet of the Education Complex, which was renamed the "Lorey I. Lokey Education Complex", and 3,000 square feet of the Clinical Services Building. ³⁶ This research project investigates the success of the spaces created by that construction to support interaction among faculty and students, connections between researchers, and to contribute to the intellectual and social life of the College of Education.

³³ Thomas Hacker Architects, *Schematic Design Report* (Portland, 2007).

³⁴ Ibid.

³⁵ Ibid.

³⁶ University of Oregon Planning Office, "Completed Between 1997-2012."

3- LITERATURE REVIEW

The user groups involved with the HEDCO project focused on social spaces with good reason: the importance of informal interaction for colleges and universities in terms of creating community, facilitating student success, and producing collaborative research is well supported by the current academic literature on effective practices in institutions of higher education. Despite these findings on the significance of informal interaction in academic literature, it is not covered very thoroughly in the architectural literature surrounding buildings for college and university campuses. This section is a review of the literature on the importance and community-building benefits of informal interaction in higher education and how design literature has and has not responded to that importance.

"COMMUNITY" AND INFORMAL INTERACTION

In 1996 Galen Cranz and a team from the University of California, Berkeley, investigated whether the new Haas School of Business at Berkeley succeeded in creating a community. They found that there are a couple ways to conceptualize the relationship between interactions and "community," but whether interactions are "the means by which the feeling of community is created" or the interactions themselves are "the actuality of community" it was clear that interactions were key elements of community and thus they became the focus of their investigation.³⁷

STUDENT-FACULTY INTERACTION AND STUDENT SUCCESS IN COLLEGE

Beyond being integral to a concept with an unclear definition but generally positive association like "community", interaction has been show to have a relationship

³⁷ Galen Cranz, Amy Taylor, and Anne-Marie Broudehoux, "Community and Complexity on Campus and How to Grow a Business School," *Places* 10, no. 4 (1997): 38–51. 40

with more concrete benefits for universities. For example, there is a well established relationship between informal student-faculty interaction and student success in college. According to Mark A. Lamport's review of the literature on the subject student-faculty interaction has been studied since the late 1960s.³⁸ The significant body of empirical research that has accrued since then strongly supports the importance of the role of faculty as socializing agents in students' college experiences, in both formal and informal roles. Some studies have found that "faculty influence appears more profound at institutions where association between faculty and students is normal and frequent, and students find teachers receptive to unhurried conversations out of class." 39The studies also suggest that there are several other possible benefits. One is improved academic achievement. There have been many studies attempting to correlate informal facultystudent interaction with academic performance and many of them do suggest that student-faculty informal relationships have a positive correlation with improved academic performance to varying degrees.⁴⁰ There are so many variables affecting a student's academic performance that it is difficult to establish a clear relationship. There is a clearer link in studies between student-faculty interaction and overall college satisfaction. While peer groups are usually found to be the primary source of student satisfaction, interactions with faculty members are still significant.⁴¹ Other studies have found positively correlated relationships between informal faculty-student interaction and reduced attrition, higher career and educational aspirations, and intellectual and personal development.

³⁸ Mark A. Lamport, "Student-Faculty Informal Interaction and the Effect on College Student Outcomes: A Review of the Literature," *Adolescence* 28, no. 112 (1993): 971–991 *Psychology and Behavioral Sciences Collection*, EBSCOhost (accessed January 19, 2014). 1

³⁹ Ibid.

⁴⁰ Ibid. 4

⁴¹ Ibid.

Informal Interaction with Faculty and Freshman Ratings of Academic and Non-Academic Experience of College, a study by Ernest T. Pascarella and Patrick T. Terenzini in 1976, is a good example of the type of study that forms the body of literature used to draw the above conclusions. In it 500 freshman from Syracuse University were asked to rate the quality of their life and to estimate the frequency of various kinds of faculty interactions they had had. They were also asked a series of questions about other aspects of their life such as academic major and residence situation to control for those variables in their model. While the authors emphasize that no causal claim can be made, they do say that "results of this investigation support the hypothesis of a positive relationship between the amount of informal interaction freshman students have with faculty members and their perceptions of both their academic and non-academic experiences of college."42 The authors also note that their findings suggest that informal interaction between faculty and students can amplify the positive effects of formal, classroom based faculty interaction and that they found both cognitive and affective benefits associated with increased interaction.⁴³ They go on to note that these benefits were found in a wide range of students, suggesting that these are not benefits that only apply to a narrow demographic but have generally applicable possibilities.

The book *Student Success in College* represents a different type of study. It was done by a team from the American Association for Higher Education which identified colleges and universities that performed better than predicted (given their "student and institutional characteristics" 44) in the National Survey of Student Engagement and better

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⁴² Ernest T Pascarella and Patrick T Terenzini, "Informal Interaction with Faculty and Freshman Ratings of Academic and Non-Academic Experience of College," *The Journal of Educational Research* 70, no. 1 (1976): 35–41, http://www.jstor.org/stable/27536952. 39

⁴⁴ George D. Kuh et al., *Student Success in College: Creating Conditions That Matter* (San Francisco: Jossey-Bass, 2005). 10

than predicted for their six-year graduation rate. Then they selected as diverse as possible a sample size of 20 schools from among those that performed better than expected and studied them in depth, attempting to document the effective educational practices that contributed to the schools' success. From this they generated a series of recommendations for other schools. One of the chapters in their book is devoted to student-faculty interaction. This chapter discusses the importance of "socially catalytic spaces" for promoting naturally occurring regular informal contact between faculty and students, explaining that "regular contact can reduce the psychological distance between faculty and students and increase perceptions of accessibility." One of the summary points recommends encouraging informal interaction by setting chairs "at the ends of hallways or in other places to permit students and faculty members to continue conversations started in class." It is clear that the team that conducted this study considered the frequency and quality of faculty-student interaction to be an important factor in the success of a college experience for a student.

Since the mid 2000s, the body of research on learning spaces themselves has grown significantly. Dana Gierdowski, in her review of empirical research on learning spaces, claims that factors such as "21st-century technologies, a historical shift to the knowledge age, as well as teaching and learning trends, such as constructivist theory and active learning pedagogy" have led to the renewed focus in this field.⁴⁷ She also notes that research on the subject is scattered among the various scholarly publications of a variety of disciplines such as the STEM fields (Science, Technology, Engineering, and Math), architecture and design, environmental behaviorism, library sciences, and teaching and

45 Ibid. 209

⁴⁶ Ibid. 218

⁴⁷ Dana Gierdowski, "Studying Learning Spaces: A Review of Selected Empirical Studies," in *Cases on Higher Education Spaces: Innovation, Collaboration, and Technology*, ed. Russell G. Carpenter (Hershey, PA: Information Science Reference, 2013), 14–39. 15

education making synthesis of this work difficult because the researcher needs to navigate not only the variety of empirical research styles, but also the lack of common language and vocabulary between fields. Most of the studies summarized and discussed by Gierdowski are of innovative classrooms or spaces designed to accommodate formal teaching processes but she does include a section of studies on informal learning spaces. For example Nancy Fried Foster and Susan Gibbons conducted a comprehensive study of the University of Rochester's library that used a wide variety of innovative research methods to learn about the actual students' processes for writing papers and completing other homework assignments.⁴⁸ This study, however, like the others in the informal learning spaces of Gierdowski's review focuses on the use of informal spaces for the completion of academic work, not on the social potential of these learning spaces.

Both Gierdowski and Lamport noted that despite the fairly robust body of empirical research on informal interactions between faculty and students and informal learning spaces there is a lack of theoretical studies of the subject.⁴⁹ The most relevant theoretical discussions have focused on the changing conceptions about learning, from linear, one-directional models in which information is conveyed from a teacher to a student in a classroom, to much more expansive and multi-dimensional views that consider social learning, dialogue based instruction, hands on experience, and integrating new information with past experience. Some theorists have focused on the spatial implications of these new ideas. In "The Changing Social Spaces of Learning: Mapping New Mobilities," K.M. Leander et al. make use of an analysis by Lefebvre in which a house, which appears to be quite immobile, is revealed through critical analysis to be permeated

⁴⁸ Nancy Fried Foster and Susan Gibbons, *Studying Students: The Undergraduate Research Project* (Chicago: Association of College and Research Libraries, 2007).

⁴⁹ Lamport, "Student-Faculty Informal Interaction and the Effect on College Student Outcomes: A Review of the Literature." 2; Gierdowski, "Studying Learning Spaces: A Review of Selected Empirical Studies." 15

from every direction by flows of energy in the form of water, gas, electricity, and TV and radio signals. Thus the immobility of space is replaced with a complex of mobilities.⁵⁰ Leander et al. draw the distinction between the "container-like" view of space as a location where activity occurs and Lefebvre's "nexus-like" view of social space as actually being defined by movements. Each classroom is constantly permeated by "materials (books, clay, earthworms, mounds of trash), energies (electricity, gas), resources (federal money, lottery surplus), [and] information flows (Channel One, Internet, parent phone calls)." 51 Even the students and teachers that use them constitute a flow of humanity bringing with them their own histories and influences. Leander et al. go on to discuss the implications of classroom-as-container vs. classroom-as-nexus ideas on researchers of educational settings. They argue that a nexus-like viewpoint allows researchers and other people who think about educational theory to more fully understand and influence the affectively charged places of learning, learning trajectories, and networks that students inhabit.⁵² While this discussion takes place at an abstract, theoretical level, the shift in discourse from the classroom (existing in a vacuum) as the location of learning towards a recognition of the learning and influences that extend beyond the classroom is relevant to this study's focus on the ancillary spaces that are in between the classrooms and other main programmatic elements but still can have a great influence on learning.

At a less abstract level, educational thinkers like John Seely Brown have written about the changing nature of learning, and how newer generations learn differently than older ones have. In *Learning for the Digital Age*, Brown explains how "Learning is a

⁵⁰ K. M. Leander, N. C. Phillips, and K. H. Taylor, "The Changing Social Spaces of Learning: Mapping New Mobilities," *Review of Research in Education* 34, no. 1 (March 12, 2010): 329–394, accessed October 8, 2013, http://rre.sagepub.com/cgi/doi/10.3102/0091732X09358129. 334.

⁵¹ Ibid. 332

⁵² Ibid. 336

remarkably social process. In truth, it occurs not as a response to teaching, but rather as a result of a social framework that fosters learning."53 In another book, Brown writes that:

A great deal of learning on campus happens outside the classroom. Inside the classroom, you get information. Outside the classroom, you start to socially construct your own understanding. Most of what we know today has been learned by talking things over with other people or working together in shared problem solving.⁵⁴

With this he affirms the importance of social interaction and support for social uses for not only the learning of the students, but also for the other primary mission of most institutions of higher education - research.

INFORMAL INTERACTION AND RESEARCH COLLABORATION

It is important to remember that spaces that support informal interaction are not only beneficial to the learning process through faculty-student interactions. They can also contribute to research collaboration and cooperation by encouraging casual faculty-faculty interaction as well. Collaboration is an important part of current academic research, especially with the rise of interdisciplinary research and its promising new questions and methods. Benefits for scientists in participating in research collaborations include sharing material and intellectual resources, changing the research process itself in a desirable way by making it more fun or improving the quality, maintaining preestablished relationships, or because they believe that participating in collaborations per

⁵³ Brown, "Learning in the Digital Age." 65

⁵⁴ John Seely Brown et al., *Storytelling in Organizations: Why Storytelling Is Transforming 21st Century Organizations and Management* (Burlington: Elsevier Butterworth-Heinemann, 2005). Cited in Thomas Hacker Architects, *Conceptual Design and Programming Report*.

se or working with a particular person would be beneficial to their careers. Often it is a combination of multiple or all of those reasons.⁵⁵

Richard Kraut, Jolene Galegher, and Carmen Egido published several studies on collaboration in scientific research in the late 1980s and early 90s. In their article "Relationships and Tasks in Scientific Research Collaboration" they studied 50 pairs of scientific researchers who had worked together to characterize the communication processes that take place in order to understand how computers and telecommunicationsbased tools could assist in the process. They found that during the initiation phase of a research project, when peer collaborators (as opposed to faculty-grad student or principle investigator-paid research assistant relationships which have more formal initiation procedures) are establishing mutual interests and beginning to move towards committing to work together, "the effects of simple proximity and frequency of interaction seem to be as powerful in facilitating research collaborations as they are in social relations." ⁵⁶ This is because "the frequent, low-cost contact that is made possible by physical proximity creates many opportunities for potential collaborators to become acquainted, to identify common interests, and to assess interpersonal compatibility."57 They also found that during the execution phase, as the research is in process, "low-cost communication and the opportunity for quick and easy access to a partner are crucial for collaborators' joint supervision of the project and each other's work."58 Distance can raise the cost of communication, making short messages seem not worthwhile, and decreasing the quality of the dialogue of feedback between researchers.

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⁵⁵ Robert E. Kraut, Carmen Egido, and Jolene Galegher, "Relationships and Tasks in Scientific Research Collaboration," *Human-Computer Interaction* 3 (1987): 31–58. 35

⁵⁶ Ibid. 36-37

⁵⁷ Ibid. 36

⁵⁸ Ibid. 45

A later article, published in 1990, by Kraut, Galegher, and Egido found quantitative support for their initial qualitative interview based findings. In a study of 500 researchers at a research and development company they found that 82% of collaborations were between researchers on the same floor, even though these made up only 12% of the possible pairings.⁵⁹ Even though it is true that researchers who are interested in the same topics tend to be located close to each other (e.g. in the same department building on a campus) the effects of collocation on research collaboration hold true even when the analysis is controlled for organizational proximity and research similarity.⁶⁰ Kraut et al. specifically include a section on the benefits of informal communication, claiming that the frequency, quality, and low cost of "naturally occurring, informal contact and communication" make it easier for the collaboration process to be started and managed efficiently.⁶¹ In general they found that without opportunities for informal communication there are not nearly as many collaborations formed and when the opportunities for informal contact in a collaboration decline, the collaboration work "typically slows down, becomes more burdensome and, sometimes, comes to an end."62 It is important to note that Kraut et al. are not arguing that long-distance collaboration is impossible, and their research also covers many of the mechanisms such as conferences and correspondence that allow long distance partnerships to begin. However, they do make a compelling case that physical proximity and frequent informal contact remove many of the barriers faced by long distance collaborations and are important factors in the formation and success of many collaborations.

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⁵⁹ Robert E. Kraut, Carmen Egido, and Jolene Galegher, "Patterns of Contact and Communication in Scientific Research Collaboration," in *Intellectual Teamwork: Social and Technological Foundations of Cooperative Work*, ed. Jolene Galegher, Robert E. Kraut, and Carmen Egido (Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers, 1990), 149–171. 157

⁶⁰ Ibid. 158-159

⁶¹ Ibid. 159-163

⁶² Ibid. 163

DESIGN LITERATURE

So far we have seen the evidence for the importance of informal social interaction for both primary missions of many colleges and universities: teaching and research. Yet, despite the empirical evidence and theoretical support for the importance of informal social spaces in higher education buildings, the design of successful social spaces that will support the interactions discussed above is not discussed frequently in the architectural literature surrounding buildings for colleges and universities. Social spaces are often featured prominently in glossy, photo-focused surveys of built projects, and on the webpages of architecture firms that do a lot of higher-education projects. However, the design literature, the guides and reference documents intended to assist in the design process, usually do not discuss the issue of how to design social spaces or what makes social spaces successful in any detail.

Building Type Basics for College and University Facilities, by David J. Neuman, is a typical example. The book is divided into sections based on the types of buildings often found on college and university campuses like libraries, academic and classroom buildings, science research buildings, or campus housing. Within each section is a discussion of that building type's needed building systems, such as the ventilation required in lab buildings, or major program elements such as the lecture rooms in an academic building. There is a section devoted to "social and support facilities" which talks about the importance of social life on campus but that is referring to the type of building

⁶³ Roger Yee, *Educational Environments No. 3* (New York: Visual Reference Publications Inc., 2007); Sibylle Kramer, *Colleges and Universities: Educational Spaces* (Salenstein: Braun, 2010); Perkins+Will, "Higher Education," *Perkins+Will*, last modified 2012, accessed January 18, 2014, http://www.perkinswill.com/work/higher-education; BAR Architects, "Academic & Institutional," *BAR Architects*, last modified 2012, accessed January 18, 2014, http://www.bararch.com/work/academic-institutional.

that is often called a student center or student union. Within the guidelines for each building type there are often sentences like "a simple double loaded corridor is efficient and helps to foster faculty collegiality" or "parallel to the increased emphasis on student interaction in the laboratory is the growing importance of student-student and student-faculty encounters outside the classroom. Science buildings now regularly include a variety of spaces for social interaction," but there is nothing more descriptive or proscriptive. Social space design tends to be lost in the conversation about the design requirements for the program spaces that explicitly relate to the "function" of the building at its most basic level. This common method of organizing books on higher education design leads to informal social spaces getting lumped into the same "non-classroom program elements" paragraph as security desks and I.T. support spaces.

There are, however, some examples of resources that address the design of informal social spaces for university campuses. *People Places*, a book of design guidelines for urban open space, contains a chapter on campus outdoor spaces that has a high-quality discussion of the possibilities of well designed "front porches," "front yards," and "back yards" for the informal social life of an academic campus and the buildings in it as well as guidelines and diagrams for designers who would like to make their spaces successful. The authors of that chapter, Clare Cooper Marcus and Trudy Wischemann, note at the beginning that "a search for published literature on how campus open spaces are used (or indeed how campus buildings are used!) proved to be a thankless task." They dismiss glossy books with many pictures and little text as "containing little that is helpful to the landscape architect or any professional concerned with the use and design of spaces

⁶⁴ David J. Neuman, *Building Type Basics for College and University Facilities* (New York: John Wiley and Sons, 2003). 114, 121

⁶⁵ Clare Cooper-Marcus and Trudy Wischemann, "Campus Outdoor Spaces," in *People Places: Design Guidelines for Urban Open Space*, ed. Clare Cooper-Marcus and Carolyn Francis (New York: John Wiley and Sons, 1998), 175–208. 175

between buildings" and deplore the attitude of the reference books they found as seeming to believe that "the impression of a building from a distance was all-important, but the eye-level day-to-day experience of passing through and using the spaces between buildings was seemingly of little consequence." 66 Cooper Marcus and Wischemann conclude the literature review section of their chapter by explaining that "some of the deficiencies in the literature on campus outdoor use are beginning to be filled by studies written by students and faculty at schools where post-occupancy evaluation is part of the curriculum. These are drawn upon for the guidelines presented in this chapter." 67 This thesis project was partially inspired by this passage and is intended to contribute to that body of literature.

There is broad support in the academic literature for the importance of social spaces for institutions of higher education. Not only is interaction a critical piece of generating a successful "community," but empirical studies have demonstrated the positive relationships between informal interaction and the teaching and research missions of universities. This has accompanied a shift in the theoretical discourse on learning from a linear model that focused on formal classroom instruction towards a constructivist model that emphasizes social and experiential learning. However design literature and studies of learning spaces tend to focus on the primary program elements of campus buildings, neglecting the interstitial spaces where a lot of informal interaction takes place. There is a clear need for more study on the qualities, amenities, and spatial characteristics that determine the success or failure of these spaces.

66 Ibid.

⁶⁷ Ibid. 176

Currently the Campus Planning Department at the University of Oregon requires that most new academic buildings built on campus include a certain variety of informal social spaces. This is based on a belief that good informal social spaces in university buildings can contribute to the intellectual life of the university by creating opportunities for frequent interaction between faculty, graduate students, and undergraduate students, as well as fostering interdisciplinary research and collaboration.

This study, developed in cooperation with Campus Planning, investigates the informal social spaces in the HEDCO building and evaluates their effectiveness in terms of how many people use them, whether people like them, what could improve them, how well they create opportunities for interaction between user groups, and whether they actually have a role in promoting research collaboration. Social spaces from all three major buildings in the College of Education are studied in order to evaluate the social spaces of the entire college as well as to provide a baseline against which the social spaces in the HEDCO building might be judged. The study was designed to identify problems that can be fixed in the short term, and to improve future building projects on the University of Oregon campus, and to contribute to the generally available body of knowledge and design resources about social spaces in academic contexts.

HYPOTHESES TESTED

The first step in the post-occupancy evaluation was to develop a series of hypotheses to define the scope of the evaluation and focus analysis of the data towards a usefully coherent set of recommendations.

⁶⁸ University of Oregon Planning Office, *College of Education Additions and Alterations Project: Project Description*; University of Oregon Planning Office, *Campus Plan*.

1. Community

By attracting users who do not work primarily at HEDCO, the social spaces in HEDCO provide a social center for the College of Education and help foster a sense of community in the college.

2. Student-Faculty Interaction

The social spaces in HEDCO provide opportunities for casual interaction between faculty, graduate students, and undergraduate students.

3. Interdisciplinary Research and Collaboration

The social spaces in HEDCO provide opportunities for researchers to interact with each other and facilitate interdisciplinary research and collaboration.

POST OCCUPANCY EVALUATION METHODOLOGY

This post-occupancy evaluation relies on several methods of evaluation to test the complex hypotheses. Dana Gierdowski, in her review of empirical studies of learning spaces, argues that "when designing empirical studies and assessment plans for learning spaces, mixed methods and multiple targets are critical to obtaining deeper, more meaningful data on the relationship between space and learning." ⁶⁹ Relying on one method is less reliable and more likely to miss contributing factors. Using multiple methods allows the researcher to verify and confirm results between methods and, through aggregation and "triangulation" of results, reach a deeper and more

⁶⁹ Gierdowski, "Studying Learning Spaces: A Review of Selected Empirical Studies." 16

multidimensional understanding of the relationships between the spaces and the people using them. 70

The methods used in this evaluation come from an extensive body of literature devoted to the practice of post-occupancy evaluation.⁷¹ The specific techniques used are described in most if not all of those works, but the research design process for this thesis made particular use of John Zeisel's *Inquiry by Design*, a classic text in the field with extensive notes and examples of each technique. The Campus Planning staff at the University of Oregon have extensive experience with conducting post-occupancy evaluations for University of Oregon projects and they have provided invaluable feedback on this project's methodology.

This research uses four major methods to collect data: space analysis, an online survey, interviews, and observations. Each method was chosen to measure or study a different aspect of the issues in the hypotheses.

The space analysis component provides an understanding of the actual spaces involved in the study. Both quantitative and qualitative data about the spaces were gathered from the floor plans of the buildings and through visits by the researcher to the sites in person. This was used to create a catalog of social spaces in the College of Education Buildings. Issues relating to the privacy of patients and the limited scope of the project meant that social spaces in clinical areas and non-academic centers were not included in this analysis. The complete catalog of spaces can be found in Appendix A. Each catalog entry includes the approximate area of the space in square feet as well as qualitative data about the character of the space including furnishings, amenities, access

⁷⁰ Ibid. 26. 31

⁷¹ For example: George Baird et al., *Building Evaluation Techniques* (New York: McGraw-Hill, 1996); Federal Facilities Council, *Learning From Our Buildings: A State-of-the-Practice Summary of Post-Occupancy Evaluation* (Washington D.C.: National Academy Press, 2002); Preiser, Rabinowitz, and White, *Post-Occupancy Evaluation*.

or lack of access to natural light, combinations with other functions, and the materiality of the wall, floors, and ceilings. Tracking and evaluating the size of areas allows the researcher to investigate how much area of these buildings is being used for social functions and whether the social benefit is worth the cost of the area. The other qualitative data, when used with the other evaluation techniques, allows the researcher to determine what qualities are important for social spaces to be successful.

The online survey employs the online survey platform Qualtrics.com. It contains questions that pertain to all of the hypotheses as well as questions that are included in the standard post-occupancy evaluations conducted by Campus Planning. The data can then be used by Campus Planning for direct comparison to other buildings they have evaluated. The survey was sent out via the College of Education mailing lists to students, faculty, and staff of the college. The survey includes internal logic that made some questions only visible to the respondents for whom they were relevant. For example, faculty are not asked where they do homework, and graduate students are asked what graduate program they are a part of, not whether or not they have already declared a major. Surveys are useful because they provide an efficient way to get the opinions of a lot of people in a standardized way. The results are also easily quantifiable, which can lend rhetorical weight to the conclusions of the study, when used in conjunction with insightful qualitative analysis.⁷²

The flexibility of the online platform also allows the researcher to ask unusual questions and get answers in easily comparable ways. For example, the respondents are asked to click on their favorite location on a floor plan and their responses are automatically aggregated into a heat map by the software. Another advantage of the online

⁷² John. Zeisel, *Inquiry by Design* (New York: W.W. Norton and Company, 2006). 261

platform was that the researcher has access to immediate results as the surveys are being taken, allowing him to design other aspects of the research to address early trends noticed in the survey data. A disadvantage of surveys is that each person may have a different ability and willingness to report on their own behavior.⁷³ One of the other disadvantages of the survey is that the survey questions need to be reviewed by the Institutional Review Board months ahead of the actual data gathering.

The interview components of this project were intended to mitigate the disadvantages of the survey technique. Two types of interviews are used in this project and both are flexible enough to adapt to information learned after the survey design was completed. The first type of interview is informal interviews. These are short, maximum of three or four minute, "person-on-the-street" style interviews in which people were approached while occupying social spaces in the College of Education buildings and asked, if willing, to answer a few short questions about why they chose to use that space and what they liked and did not like about the space. The "interviewer approaching the interviewee" format allowed for information to be collected from users who for whatever reason did not respond to the survey, while still respecting their right to not be interviewed. It also covered users who attend classes in College of Education buildings but are not members of the College and who were thus not on the mailing list for the survey. Situating the interviews in the spaces being studied was beneficial because it allowed the interviewer and interviewee to have a conversation about elements in the space that were relevant to the interviewee's experience. For example "Do you like that kind of bench?" or "Have you ever used that entrance?"

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⁷³ Linda Kathryn Zimmer, "A Post Occupancy Evaluation of Operational and Experiential Support in an Open Office Group Work Setting" (University of Oregon, 1990).

The second type of interview is the follow-up interview. At the end of the online survey participants were given the opportunity to volunteer for a 15-20 minute follow-up interview with the researcher. This allows the researcher to ask for further information on anything unusual noted in the data collected from the online survey, to probe into aspects of the hypotheses that were difficult to formulate into survey questions, and offers the interviewee the opportunity to bring up thoughts or feedback that the researcher had not thought to ask for in the survey but were relevant.

The observation components of the research methodology assist in understanding relationships and factors in the environment that are not noticed by the users of the spaces. There are two different types of formal observation undertaken as part of this study. The first is physical trace analysis. Zeisel describes physical trace analysis as "systematically looking at physical surroundings to find reflections of previous activity that was not produced in order to be measured by researchers. Traces may have been unconsciously left behind (for example paths across a field), or they may be conscious changes people have made in their surroundings."74 This technique is useful because it gives researchers glimpses of what happens while the observer is not there, and it can suggest changes that are happening over a longer period of time than covered by the observations. In the case of deliberate modifications of the physical environment it can suggest how strongly the user cared about a problem by how much effort went into fixing it. Traces can be on many different levels of scale, from patterns of wear on seat cushions to additions that have been built on to buildings. The primary disadvantage of physical trace analysis is that by observing and making educated guess about the traces left behind the researcher can come up with possible or likely reasons for the trace to be there, but he

⁷⁴ Zeisel, *Inquiry by Design*.159

or she cannot know for sure. There is too much guesswork involved for the conclusions in themselves to be very reliable. However, when used in conjunction with other techniques, physical trace analysis can be usefully incorporated as supporting evidence in addition to other data.

The second type of formal observation used in this project is behavioral mapping. Behavioral mapping involves a researcher regularly taking a survey of the space being studied and marking on floor plans the locations of people in the space along with coded notes representing what that person is doing, whether he or she is in a group, etc. When this is done at regular intervals, the maps for each interval can be put together, and this can allow the researcher to gain a comprehensive view of behavioral patterns in the space. If the information is coded in a standardized way, then quantitative analysis can be performed on the data set, as well as qualitative judgments made about the patterns seen in the data. The major advantages of this technique are that it allows the researcher to notice patterns in behavioral use over longer periods of time and the organized data format allows the evidence supporting or refuting a particular behavioral pattern hypothesis to be understandable to peers reviewing the data.

THE SPACES

Informal social interaction in the College of Education takes place in a large variety of spaces. This study divides them into four categories:

Building Common Areas: These are open spaces that have been observed by the researcher to be commonly used for casual social interaction. They are used by a

broad range of people with different roles, from different departments, and non-College of Education members. They are open to anyone who walks in.

Outdoor Common Areas: The outdoor spaces in and around the College of Education buildings are important elements in the network of social spaces throughout the college. The University High School Courtyard in particular is considered one of the most successfully outdoor spaces on campus by Campus Planning.

Habitable Hallways: These are spaces where the proportions and circulation use mark them as hallways, but they have been designed, renovated, or furnished in an apparent attempt to encourage users to stop, linger, or stay for a while.

Departmental Common Areas: These spaces vary widely in size and furnishing but they tend to be smaller. They are not as open to the general public as the building common areas. They are either within a department's delineated territory, as is common in HEDCO and the Lokey Education Buildings, or off hallways that are only used by one or two departments, as is common in the Clinical Services Building. These spaces are intended for use by members of the department more than the general public and access can be restricted.

The HEDCO Atrium is a prime example of a building common area. It is a 1,400sf double height space at the entrance to HEDCO as visitors approach from campus. It can be entered or exited through the main entrance doors of the building, through a door that leads directly to the HEDCO courtyard, from stairs that wrap around the atrium and go up to the second floor, and through hallways heading south towards the Learning Commons

or west towards the cafe, ground floor classrooms, and Student Academic Services.

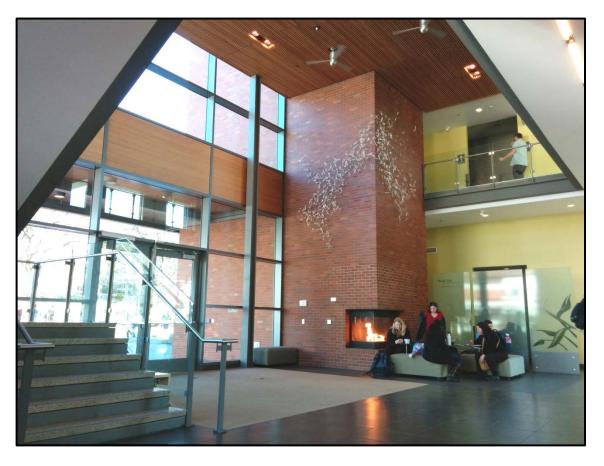


FIGURE 5: HEDCO ATRIUM

The atrium floor is mostly empty which accommodates the heavy flows of circulation that run through the center of it, between the entrances and exits described above. It is bounded to the east by a wall of windows facing the entrance plaza and on the north by a wall of windows facing the Education South building. On the west it is half open to the hallway towards the café and half bounded by a wall that separates the atrium from the café. To the south it is bounded by some translucent screens that shield from direct view a little hall that leads to the stairs, bathrooms, and elevator. There is a television on the west wall that displays information relevant to members of the college. A particularly notable feature is the fireplace in the southeast corner of the atrium. It is protected by glass and set into a large brick pier that contains the elevator shaft. This is the most prominent

element in the atrium. There is bench seating clustered around the fireplace and in the northwest corner under the stairs.

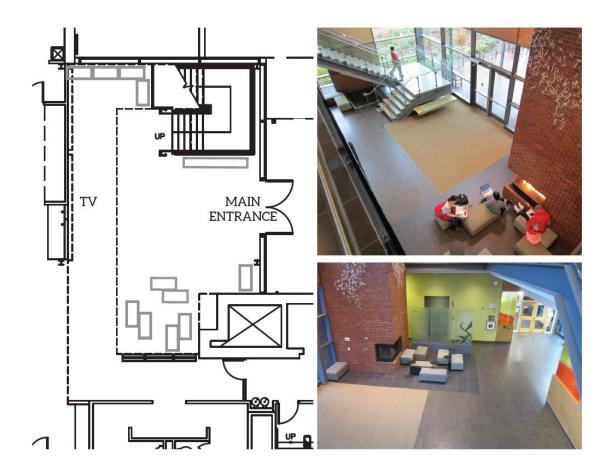


FIGURE 6: HEDCO ATRIUM FLOOR PLAN AND VIEWS

HEDCO's courtyard is a good example of an outdoor space. It is encircled on the north, east, and parts of the south and west sides by the HEDCO building. To the south west it is bounded by covered walkway that runs from the HEDCO classrooms to the parking lot and the Clinical Services Building. On the other side of the walkway is a low wall and views over the parking lot to the west. The main courtyard surface is grass, there are concrete walkways around the north and west sides with wooden benches. On the east

side there are planter boxes, with sculptures in them. The courtyard can be accessed from multiple points on the HEDCO main hall on the ground floor, or from the southwest.



FIGURE 7: HEDCO COURTYARD

The hallway that forms the spine of the first floor of the HEDCO building is an example of a habitable hallway that actually forms one of the main social spaces in the building. It runs west from the atrium, past the café and then to a T intersection which leads to the ground floor classrooms. There are several exterior doors to the courtyard, and double doors at each end of the north-south leg. There are window walls along the edge that borders the HEDCO courtyard. The east-west leg is an average of 11.5 feet wide

and has small tables, for 2-3 people, along the window wall, and booths against the opposite wall. The north-south leg has small benches along both walls, near the classroom doors. Notable features include the large floor-to-ceiling windows between the classrooms and the hall which make the classrooms very visible from the hallways and vice versa, and Student Academic Services which divides the café section of the hall from the booth section.



FIGURE 8: HEDCO GROUND FLOOR MAIN HALL

One good example of a departmental common area is in the Department of Global and Online Education, located on the second floor of the HEDCO building, on the northwest corner. There are two large social spaces in this department. At the west end,

there is a large area, 400sf, with seven chairs arranged in a partial circle with an assortment of end tables between them. There are bookshelves, empty, against the north wall. The west wall is all windows above about three and half feet. There are two tables against the west wall with plants on them. There is a television on the south wall. At the southeast corner of this area is the kitchenette. It has a small refrigerator next to a countertop with cabinets below and above. There are two microwaves, one on the counter and one in an alcove in a top cabinet, and two coffee makers. There is also a sink set into the countertop. The other large social area is at the south end of the department. It also has seven chairs in it, but they are in a more freeform arrangement. There are several circular tables scattered about, one had an in-progress puzzle on it, another had a plant under the window. There are windows on the west and south walls. There are several bookshelves against the walls, again empty. There are a couple pairs of chairs with endtables in this department, mostly near the entrance or in between the entrance and the west social space.



FIGURE 9: GLOBAL AND ONLINE EDUCATION LOUNGES

In Appendix A, starting on page 92, there are complete descriptions and pictures of all the social areas cataloged as part of this study.

THE PEOPLE

In the 2013-2014 academic year there were 1,572 students enrolled in the College of Education. 1,016 undergrads and 556 graduate students. There are about 320 faculty and staff members associated with the college, of which approximately 42 are tenure related faculty. The gender balance amongst students is heavily weighted towards females. 89% of the undergrads are female (908 females to 108 males) and 75% of the

graduate students are female (415 female to 141 male).⁷⁵ Among tenure related faculty (in 2012) there were 52% females and 48% males (22 female to 20 male).⁷⁶ Classes from other schools in the university do use College of Education buildings for classrooms and there are many College of Education centers and clinics that are located off-campus, so it is difficult to precisely quantify the number of people who use these buildings on a frequent basis.

CONDUCTING THE EVALUATION

HEDCO was selected as the subject of this study during meetings with representatives of Campus Planning during the spring of 2013. The study formally began in September of 2013 with hypothesis generating meetings with Campus Planning, preliminary observations, and visits to the site. The online survey was put together through October of 2013, and submitted with the research plan and informed consent documents as part of the application for exemption from full IRB review to the Office of Research Compliance on November 7th. After two rounds of revisions, it was approved on December 12th. Immediately following that, a survey of social spaces in the College of Education was made, gathering most of the information contained in the catalog of social spaces (Appendix A).

The online survey was sent out to the College of Education mailing list which had 1,104 people on it on January 15^{th} , the Wednesday of Week 2 of Winter Term, 2014. The survey remained active until Tuesday January 28^{th} at 10:00 PM. A total of 118 responses were received for a response rate of 10.6%. This is comparable to other return rates

 $^{^{75}}$ Figures from correspondence with Lisa Fortin, Director of Events and Outreach for the College of Education

⁷⁶ Office of the Vice President for Equity and Inclusion, "University of Oregon Tenure-Line Faculty Report June 2013", 2013.

Campus Planning has experienced with POE surveys.⁷⁷ Informal interviews were conducted on January 30th and February 4th and 6th. There were nineteen informal interviews conducted, seventeen individuals and two groups, for a total of twenty-two people. The follow-up interview script was designed based on early survey results, and submitted to the Office of Research Compliance on January 21st, 2014. It was approved without any amendments on February 6th. There were seven formal interviews. The formal interviews were conducted on February 11th, 13th, and 18th.

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⁷⁷ Martina Bill, "Living-Learning Center – Post-Occupancy Evaluation – Final Draft," *Post-Occupancy Evaluations*, last modified 2009, accessed February 16, 2014, http://uplan.uoregon.edu/plandoc/POE_LLC/LLC_POE_summary_finaldraft.pdf.

5- POST-OCCUPANCY EVALUATION RESULTS

The results of this post-occupancy evaluation provide insights into people's use of informal social spaces in higher education, and what makes social spaces more or less successful. Some of the results show ways in which HEDCO's social spaces are clearly successful, and some are more ambiguous. The limited time and resources available for this study necessarily limit the rigor and general applicability of the findings, but valuable insights may still be gained by studying the results. ⁷⁸

LIMITATIONS AND INFLUENCES IN THE EVALUATION

It is important to consider some factors which had the potential to influence the results of the evaluation. One important factor is that there were no undergraduate responses to the survey. According to the respondents' self-reported demographic information there were 51 faculty or staff respondents, 39 master's degree students, 28 doctoral degree students, and 0 undergraduate students. Due to confidentiality issues, the researcher did not have access to the email list the survey was sent to. It was forwarded to the list by the marketing staff of the college who reported that there were 1,104 addresses in the list. This number was used to calculate the response rate for the survey. In a separate email exchange, the Director of Events and Outreach provided the enrollment numbers as described in the case study chapter of 1,016 undergraduates, 556 graduate students, and 320 faculty and staff. Given these numbers it is unclear the exact population who received the emailed survey invitation. Requests for clarification to the marketing staff who forwarded the survey invitation email to the list were not answered. To compensate for the lack of undergraduate responses to the online survey, the researcher

⁷⁸ The organization of this chapter was based on, and owes much to: Zimmer, "A Post Occupancy Evaluation of Operational and Experiential Support in an Open Office Group Work Setting."

made an effort to include as many undergraduate students in the informal interviews as possible.

Another potential influencing factor is selection bias in the informal interviews. Potential interview respondents were only approached in the social spaces in HEDCO. People with negative opinions about the spaces are less likely to be there and therefore less likely to be interviewed than people with positive opinions. This has the potential to skew the results because the set of interview respondents might not be representative of the population of the College of Education as a whole. The results of the online survey are less likely to be influenced by this effect and can therefore be taken as a more reliable representation of the members of the College of Education.

The results of the evaluation are reported by hypothesis. Under each hypothesis, the results for each method of evaluation are reported separately.

HEDCO AS A COMMUNITY CENTER

To evaluate the success of the HEDCO social spaces as community centers this study uses traditional indicators of successful social spaces, such as the amount of people using the space, as well as measures specific to this situation, such as the proportion of members of the College of Education whose primary workspaces are in other buildings who use the social spaces in HEDCO.

Findings indicate that the social spaces in HEDCO are functioning as social centers for the College of Education. They are frequently used and often busy. There is also evidence that the members of the College of Education whose primary workspaces are not in HEDCO use the social spaces in HEDCO regularly. The attractions mentioned most

frequently by people who use the space are the fireplace, the café, the natural light, and work areas like the Learning Commons and the booths in the main hallway.

Survey Results

Of the survey respondents whose primary workspaces are not in HEDCO, 52% indicated that they use the café once a week or more, and 45% said that they use the ground floor of HEDCO once a week or more. For both of these questions the most popular answer was "2-3 Times per Week."

How often do you spend time in or use the following common spaces within the College of Education Buildings?

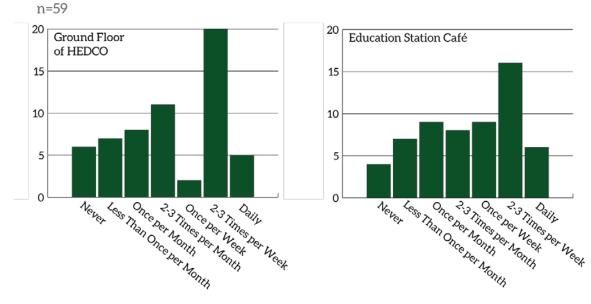


FIGURE 10: USE OF HEDCO SOCIAL SPACES BY MEMBERS OF THE COLLEGE WHOSE PRIMARY WORKSPACES ARE IN OTHER BUILDINGS.

When asked where they like to spend breaks or free time, 32% of all survey respondents selected "A Common Area in a College of Education Building" and of the respondents who selected that option, 48% chose the ground floor of the HEDCO Education building as the common area they like to take breaks in. The top three common

spaces for taking breaks in were all in HEDCO: the ground floor of HEDCO, the Learning Commons in HEDCO, and the café in HEDCO. These three responses combined for 74.2% of respondents who use common areas on their breaks. All of the HEDCO options combined for 91% of respondents who use common areas on their breaks.

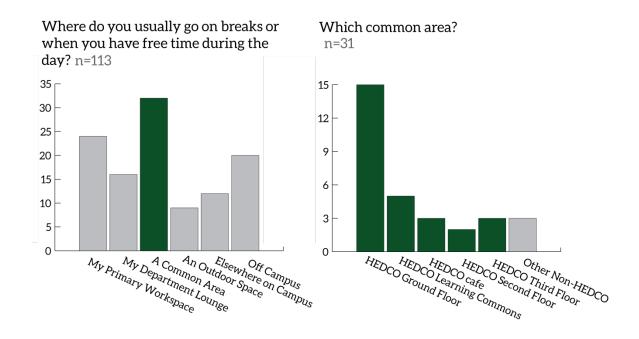


FIGURE 11: USE OF HEDCO SOCIAL SPACES IN FREE TIME

There were several free-response questions in the survey that asked respondents to comment in their own words on their favorite places in HEDCO, what they liked and didn't like about HEDCO, and if there were things they would change. Many of the responses indicated that there is an active community life in the social spaces of HEDCO, for example:

"I love that I can come in to something visually pleasing, that feels more like home. The fireplace is inviting. I always see people engaging in that spot. I wish the space was a bit bigger, so that there were more spots to sit around the fire. It is lovely because it is close to the cafe. i [sic] can almost always walk by someone I know in this area... creating a nice community place to reach out to others and connect."

"I love studying in the booths by the windows. It is so nice to be able to look outside while studying. I also enjoy seeing my fellow cohort members in the building studying or talking as well."

"They have these cool booths in the hallway. They are a good size and we usually meet here before classes or between classes and discuss things"

"I really enjoy HEDCO, I think that it has become a center for many education students and it provides opportunities for interaction but [sic] a lot of student supports"

These responses often mention the likelihood of running into people the respondent knows, and some, like "creating a nice community place" and "center for many education students" use the language used by this study and the literature on community and informal interaction. However, not all responses were positive. There were several that indicated that the respondents do not frequently run into people they know in HEDCO, or that they do not use the social spaces at all, for example:

"I would just like some kind of space that is more loungy [sic] and comfortable where people I know could be found."

"I never run into people I know, unless it's a short break in the class and people head to the cafe."

"The common spaces tend to be very noisy and messy. There are often papers left around and food messes. HEDCO is also often very cold in temperature. The overhead lights are hard fluorescents [sic]. I am classified staff her [sic] and have been full time for 5 years, and changed to part time this year because I am now also a master's student in a COE program. I do not use any of the common, shared spaces for the reasons stated above. Whereas their location is convenient, they are not comfortable nor are they clean, and I either cannot hear my own group members if working with others, or find it too noisy to do my own work."

The negative comments are, however, significantly outnumbered by responses that support the hypothesis that HEDCO has become a social center for the College of Education.

The fireplace is often mentioned as a feature that attracts people to use the area around it. Other attractors that are mentioned frequently in the responses include the booths in the main hall and the natural light in the space:

"I love the monitors in the booths there; my colleagues and I frequently work there on presentations and projects."

"I love studying in the booths by the windows. It is so nice to be able to look outside while studying. I also enjoy seeing my fellow cohort members in the building studying or talking as well."

"They have these cool booths in the hallway. They are a good size and we usually meet here before classes or between classes and discuss things"

"Good meeting spot The [sic] fireplace is nice when it is cold. Super casual. Probably better for social interactions rather than studying."

"the [sic] fireplace is so inviting--i [sic] love seeing students hang out there-it is a real gathering place."

"Leave the fire place on at all times PLEASE:)"

"I love the abundance of natural light in this building. The large windows in HEDCO are one of my favorite features. Also, my second favorite common area is the sitting space in front of the fireplace on the first floor. This is a great environment for informal gatherings."

"Fireplace and chance for social interactions is high. Pleasant. Good natural light."

"I like the atrium and the cafe. this [sic] spot includes a bit of both, or in between. The natural light, ambiance and movement of people through the space, [sic] is inviting, comfortable, and interesting. The space is aesthetically pleasing"

Interview Results

Responses from the interviews also indicated that HEDCO is a successful social center. In the informal interviews several subjects mentioned that they are likely to run into people they know in HEDCO. The fireplace area in particular was mentioned as a good place for meeting people. One undergraduate student interviewed near the fireplace was

waiting to meet a friend and one graduate student interviewed next to the fireplace said that she often has chance encounters with people she knows in that area. A side-effect of HEDCO's popularity that came up in six of the interviews was how busy the ground floor social areas can get. Several subjects said that they wished there were more chairs because sometimes they are all occupied.

The formal follow-up interviews provided the chance to explore HEDCO's role in the community of the College of Education in more depth. One subject in particular, who had been a member of HEDCO's building committee, had noticed a "huge" difference in the community. He said that HEDCO kept students and faculty on campus more and there was a noticeable increase in the number of people around the college area. He does not spend much time in the social areas because he gets a lot of informal social interaction as part of his job, but he said that he has noticed that the ground floor hall and atrium are always full of students. He said that during the design phase for HEDCO he had actually been against the fireplace, and he still didn't like it all that much but it did really seem to draw students.

The café in particular was reported to be a large draw for users of the spaces. It was mentioned in many of the informal interviews, and in several of the formal follow-up interviews. A pair of staff members from the Department of Educational and Community Supports in the Lokey Education Complex said that they usually come over to HEDCO to get coffee from the café. A grad student whose office used to be in the Clinical Services Building said that she and other members of her cohort would come over to HEDCO for coffee and snacks, or to work in the booths. One faculty member from the Department of Educational Methodology, Policy, and Leadership, which is based in the Lokey Education Complex, says she sometimes comes to HEDCO to get coffee with people and is likely to run into people she knows in the cafe.

Observation Results

Anyone who walks through HEDCO during the middle of the day can observe that it is a busy and active place, but the formal observations in this study did uncover some interesting trends. Behavior mapping indicates that there were frequent small groups forming and disbanding in the main hallway of the ground floor of HEDCO at peak hours. Group forming activity tended to be clustered around the seats near the fireplace in the atrium, in the café where the lines formed for the microwave, and in the narrow point of the hallway in front of Student Academic Services. Groups formed in the hallway narrow point or near the microwaves usually did not last more than a couple minutes, but groups formed near the seats next to the fireplace had the potential to move into the seats and remain for quite some time.



FIGURE 12: GROUPS FORMING NEAR MICROWAVE LINE

The activity level in the ground floor social areas is cyclical throughout the day, closely tied to class transfer times. Peak busyness tends to be just as classes release at

twenty or fifty minutes past the hour, as the crowds from the classes leave and the people waiting for their classes start to move towards the classrooms.

FACULTY-STUDENT INTERACTION

The hypothesis that HEDCO supports interaction between and among faculty, graduate students, and undergraduate students is supported by the results of this study. The evidence suggests that the HEDCO building common areas are more conducive to informal student-faculty interaction than the other buildings in the College of Education. However the effects of HEDCO's social spaces on informal student-faculty interaction are limited in departments that are not based in HEDCO. Some findings also suggest factors that influence the likelihood of student faculty interaction including noise levels on the ground floor of HEDCO. It is important to remember that these results are complicated by the other factors affecting student-faculty interaction, including the policies and practices of individual teachers.

Survey Results

The quantitative results from the survey indicate that HEDCO does a better job of promoting student-faculty interaction than the other buildings in the College of Education. 80% of respondents whose primary workspaces are in HEDCO said their department has a hub where faculty and graduate students cross paths. This is higher than any of the other primary workspace locations, especially Lokey Education where only 50% of respondents felt like their department has such a hub.

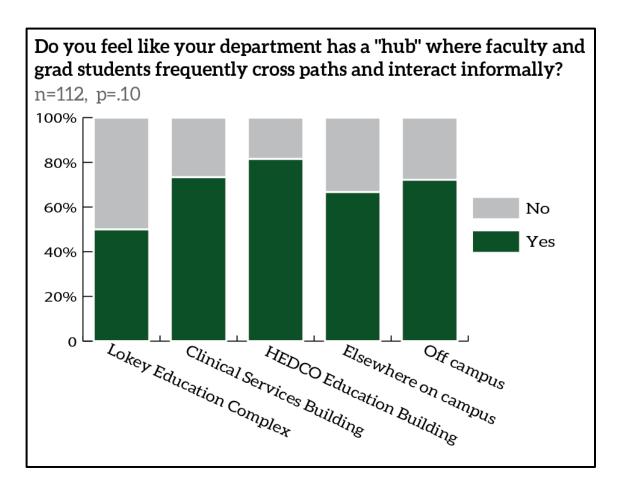


FIGURE 13: DEPARTMENT HUB BY PRIMARY WORKSPACE LOCATION

The results indicate that HEDCO is not as good at facilitating student-faculty interaction for students whose primary workspaces are not in HEDCO. They rated HEDCO's opportunities for student-faculty interaction at a mean value of 48 out of 100, while students whose primary workspaces are in HEDCO rated it at 65 out of 100. There are several possible reasons for this result: the department hubs could be more important for student-faculty interaction than the building common areas, students and faculty whose workspaces are not in HEDC could be less likely to be in HEDCO at all, it could be some other factor, or it could be a combination of multiple factors. The survey data does not support any reason for this disparity, but this issue was addressed in more depth in several of the follow-up interviews.

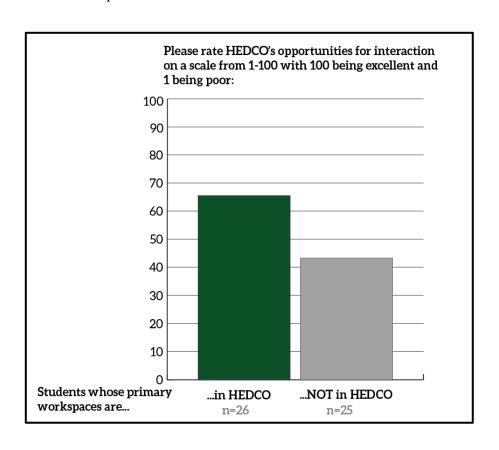


FIGURE 14: STUDENT-FACULTY INTERACTION BY PRIMARY WORKSPACE LOCATION

The free responses from the survey include positive and negative comments relating to student-faculty interaction in HEDCO. Overall, it was not mentioned as frequently as community related issues were. Most of the responses that indicated a lot of student faculty interaction were about the ground floor, while the comments about the second and third floor were more likely to say that there was not much student-faculty interaction:

"This [café on HEDCO ground floor] is where I see faculty members and students most of the time at this place between classes."

"Fireplace, good informal place to hang out, meet students, comfy seating"

"I really enjoy this spot especially during the winter months with the fire going. It is a good place to relax, talk with peers, and connect sometimes with faculty"

"We need to encourage more faculty to hand [sic] out in the common areas on the 2nd and 3rd floors with students. Perhaps arrange a few more work table type environments with comfy chairs in the broader back common area? Maybe promote exercise or fun as well - some 'balls' to sit on - not sure what. In addition, the huge backs to the lounge furniture in that area discourages [sic] faculty from entering the middle lounge area and sitting with students. Can this be rearranged?"

"Find a way so students and faculty can interact more"

"I would just like some kind of space that is more loungy [sic] and comfortable where people I know could be found. I also never see faculty or staff unless I make an appointment with them and go to their offices."

There was some evidence in the survey that noise was a factor that might cause faculty and students to spend time in different types of areas. 10% of all the free response comments by faculty and staff mentioned spaces being too loud, while only 4% of grad student responses mentioned noise at all. Below are some representative quotes from faculty and staff responses to a question asking what the respondents would like to change about HEDCO:

Investigation by this researcher found that at peak hours of use noise levels can reach an average of 70dB near the tables across from the café on the first floor and high noise levels of $80dB^{79}$ which is about as loud as an alarm clock. It is possible that this is too loud for many faculty members but an acceptable level for many students, but more testing would be required to confirm this.

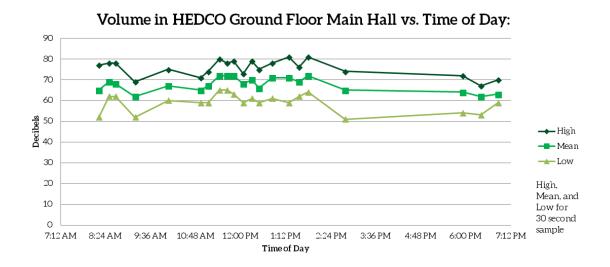


FIGURE 15: VOLUME IN HEDCO GROUND FLOOR MAIN HALL BY TIME OF DAY

58

[&]quot;More soundproofing treatment"

[&]quot;Some way to make the spaces slightly muffled or buffered from people's offices, but still feel open"

[&]quot;Very noisy - make it quieter?"

[&]quot;Better acoustics. The cafe produces so much noise."

[&]quot;Expectations about volume to protect faculty/staff work needs"

 $^{^{79}}$ Average and high dB readings of a 30 second sample taken periodically through the day, see Figure 15: VOLUME IN HEDCO GROUND FLOOR MAIN HALL BY TIME OF DAY

An interesting trend in the results of responses from faculty were the respondents who either wanted more spaces separate from students, for example:

"I think the students hang out in the common areas quite a bit - that's good. I wish there was a staff-faculty lounge of some sort that was inviting and quiet..."

"Some of the common areas are so open that they are heavily populated by students. This makes it challenging as a faculty to have space that is JUST for faculty to intermingle. And, it makes it very loud and difficult to work sometimes because of the heavy student traffic around faculty work areas."

In both these responses it is not clear if the desire for a separate staff-faculty lounge is primarily driven by the need for informal quiet spaces, or if it is important that it just be for faculty and staff for other reasons with noise being a secondary issue. However this suggests the potential for a more thorough investigation into the ideal balance of mixed and separate spaces for informal student and faculty use.

The survey results for this hypothesis can provide insight into interactions between graduate students and faculty, but their general applicability is severely limited by the lack of survey responses from undergraduates. To compensate as much as possible for this deficiency the researcher focused on interviewing undergraduates in the informal interview stage of this evaluation.

Interview Results

The informal interviews with undergraduates suggest that they do see opportunities for interaction with faculty, but whether those opportunities are taken advantage of is less clear. All of the College of Education undergraduates

who were asked if they see their faculty around HEDCO said that they do, at least to some degree. The undergraduates who were in majors based in departments that are in HEDCO, i.e. the communication disorders and sciences (CDS) majors as well as the family and human services (FHS) major, all said that they frequently see their teachers around and occasionally talk with them. The member of a major that is not based in HEDCO, i.e. the woman majoring in educational foundations which is based in the Lokey Education Complex said that she sometimes sees her old faculty members around, but she sees her current faculty members very rarely.

The graduate students who participated in the formal follow-up interviews offered a more nuanced understanding of the opportunities for these interactions in HEDCO because they participate in student-faculty interactions as a student with their department's faculty, and the GTFs participate in the teacher role for undergraduates in their classes or discussion sections. A graduate student from the Department of Educational Studies, which is based in Lokey Education, said that she rarely runs into faculty from her department. Doctoral students like her have a small lounge on the second floor of the Education West building, which is accessed separately from the main department areas. She said that she has little reason to be in the department areas on a day to day basis unless she is using the copy room and because of this does not see the faculty in her department very often. Apparently there are occasional department social functions but they are not well attended. She doesn't like the windowless second floor lounge, so most of the time she works at a table on the second floor of HEDCO where there are nice windows, it is quieter, and there are a lot of plugs. At HEDCO, even around the café, she does not see her professors very often and when she does it is only in passing,

not a conversation opportunity. She does, however, see her undergraduate students often in the public areas of HEDCO. She said that they do come up to her and say "hello" or ask questions about coursework, and she said that she sometimes approaches them as well.

One graduate student whose office was in the Clinical Services Building but who was in a program in a department based on the third floor of HEDCO said that she would run into faculty occasionally at the café getting coffee, but she didn't spend enough time there to have a lot of interactions in that place. She said that in the department lounges on the third floor, relations between students and faculty were complicated by ambiguous understandings about the expectations associated with faculty leaving doors open. She said that when faculty members leave their doors open, as they often do when trying to appear available for students dropping in, it would often cause the students in the nearby lounge to be as quiet as possible, to avoid disturbing the faculty. She said that grad students in the lounge didn't know if the open door meant that faculty members were more willing to have noise coming in from people in the lounge or if it would irritate them. She also said that grad students and faculty members would run into each other in the department spaces, but because of busy schedules they usually tried to plan those meetings ahead of time instead of relying on spontaneously running into each other.

Faculty members seemed to find students accessible, but they did not seem to think of HEDCO's public ground floors as ideal spots for student interaction. One said that she has seen colleagues hold office hours or student help sessions near the café but she finds that area too loud and distracting. She prefers to meet

students in the Learning Commons. Another faculty member, whose office is in Lokey said that her building is locked every day from noon to one in the afternoon when the administrative assistants are on lunch break and she thinks that this really limits the chances for her students to come by her office. However she said when she comes to HEDCO to meet someone for coffee she does usually run into people. She thinks informal student-faculty interaction is very important because it reminds students that professors also have a life outside of the classroom and it makes professors more accessible when they are not only seen in formal contexts.

The Lokey Education Complex scored the worst on every question relating to department hubs, lounges, and break rooms. Several staff members based in the complex noted that they do not feel welcome to eat in their break room because there is no place to sit and people come in frequently to use the copy machine, making it an awkward and unpleasant place to eat.

Observations

The difficulty of identifying student-faculty interactions by sight alone limits the possibilities of observation to contribute to this hypothesis in a significant way. However, during one three hour period of behavior mapping the researcher witnessed two student faculty interactions, both short conversations about class assignments that happened within ten feet of where the researcher was sitting. Though the incidents were anecdotal they do suggest that student-faculty interaction does occur in these spaces.

Space Analysis

Space analysis of department hubs in the College of Education buildings found that there is a large disparity in the quality of amenities and equipment in department lounges. The only lounges in the Lokey Education Complex that have any seating are the doctoral students' lounge attached to the department of Educational Studies and the break room attached to the Office of the Dean. The lounges in HEDCO, in contrast, all have many chairs and couches in one or two main lounges as well as several benches and pairs of chairs scattered in various corners throughout the department.



FIGURE 16: EDUCATION STUDIES KITCHEN - LOKEY EDUCATION COMPLEX

RESEARCH COLLABORATION

The results of my evaluation indicate that while HEDCO is successful at facilitating casual discussion about research, it has not had a significant effect on formal collaborations. However, the long turnover time on many serious academic studies means that it is possible that HEDCO has not been active long enough for any effects to be apparent.

Survey Results

A couple of the results from survey questions support the hypothesis that HEDCO's social spaces facilitate informal research collaboration, but overall no strong relationship was found between use of HEDCO's spaces and collaboration. 60% of survey respondents who do research either agreed or strongly agreed that the informal nature of HEDCO's café area encourages them to talk with other researchers, however there was no correlation found between how frequently a respondent would use the social spaces in HEDCO and how often they informally discuss their research project with someone who is not working on it.

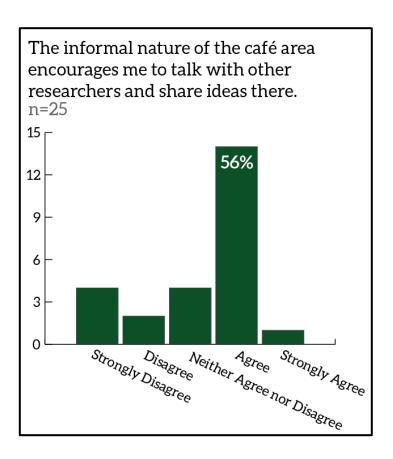


FIGURE 17: INFORMAL RESEARCH INTERACTION IN CAFE AREA

There was also no statistically significant relationship found between how often respondents claim to use the social spaces on HEDCO's ground floor and whether they are in research collaborations, who their collaborations are with, and how those collaborations started. In fact, despite the relatively small sample size, there was an almost perfectly random distribution of answers. According to this quantitative survey data the social spaces in HEDCO have no effect on research collaboration in the College of Education.

	How often do you spend time in the ground floor of HEDCO Education Building?	How often do you spend time in the café floor of HEDCO Education Building?
Are you collaborating, or have you recently collaborated on your project with other researchers?	p-value= 0.81	p-value= 0.86
Who are you collaborating with? Choose all that apply.	p-value=1.00	p-value= 0.97
How did you begin your research collaborations?	p-value= 0.95	p-value= 1.00

FIGURE 18: NO CORRELATION BETWEEN SOCIAL SPACE USE AND RESEARCH COLLABORATION

The answers to the free response questions do not add much to the data on this issue. Several of the responses mention collaboration but in many of them it is unclear if the respondent is referring to group projects for classes or research work, for example:

"Convenient and comfortable place to work with others. I like the booths, and the large screens make collaboration easy."

"I find the building very conducive to meeting, collaborating and getting my work done in my office"

There were no explicit mentions of research collaboration and none of the collaboration related comments appear to be referring to long term collaboration. It does appear that collaborative work is facilitated by elements such as the booths in the main hall, but it is difficult to extract any broader arguments from this data.

Interview Results

The formal follow-up interviews with graduate students, staff, and faculty provided a better opportunity to understand this issue in more depth. None of the interviews described social spaces in HEDCO as being important to research

collaboration but the faculty members did bring up that informal interaction can have other benefits for the atmosphere of the departments and the College of Education.

Of the graduate students that I interviewed, one who is a doctoral candidate in the Department of Education Studies, based in the Lokey Education Complex, said that most of her research collaboration takes place online. She said that outside of formal collaboration interactions her research does not come up in conversation with many people. There are limited opportunities for her to run into faculty or colleagues from her department, so she does not discuss her work with them often. She says that her department does host occasional social functions but they are poorly attended.

Another graduate student, who is based in the Department of Educational Methodologies, Policy, and Leadership but does research with the Department of Behavioral Research and Testing, both of which are in the Lokey Education Complex, also said that her research does not come up in conversation that often in social settings. However, she says that she does discuss her research work with peers in her cohort. All of the students in the cohort are so busy that most of this interaction takes place during classes that they all attend or between common classes.

None of the faculty members interviewed saw informal interaction being important to their research work, instead choosing to focus on the importance of informal face to face interaction between faculty in a social and collegial sense. The faculty member from the Department of Educational Methodology, Policy, and Leadership said that she finds informal interaction between faculty to be

important in fostering a positive atmosphere in the college because it gives faculty a chance to get to know each other outside of the sometimes loaded atmosphere in faculty meetings. She finds that this decreases interpersonal problems between faculty. This is consistent with the responses from the interview with the faculty member from the Department of Family and Human Services who said that informal interaction does not play a large role in her research process, but that it is nice to catch up face-to-face with department members when she is on campus to stay abreast of developments in her colleagues' work.

Observation Results

The difficulty of identifying research collaborations by sight alone limits the role that observations can play in confirming or contradicting this hypothesis. Faculty and staff members were observed to be interacting with each other in the HEDCO social spaces but the nature or subject of these interactions is unknown.

OTHER RESULTS

The above sections summarize the results for the issues related to the hypotheses on which this study was based, but there was also a diagnostic element to this project.

While investigating the hypotheses the researcher also paid attention to other trends and issues that appeared in the data that would be useful for Campus Planning to be aware of. Two issues that appeared frequently in the results are discussed below.

WAYFINDING

The results of my evaluation indicate that there is a wayfinding issue in HEDCO for people trying to get to the third floor via stairs. Respondents who spend a lot of time in the building do not have trouble with the route to the third floor but the data suggests that it is difficult for people unfamiliar with the building.

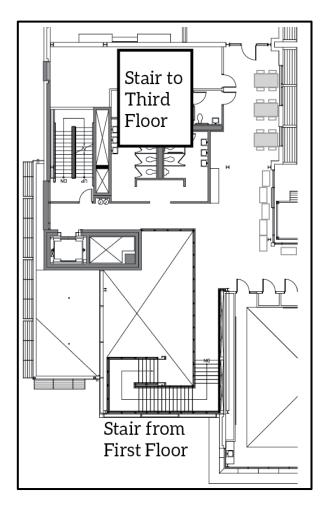


FIGURE 19: STAIR LOCATIONS IN HEDCO 2ND FLOOR

Survey Results

The only indication from the quantitative survey results that there is a wayfinding problem in HEDCO is that respondents rated HEDCO's "Directional Signage and Finding

Your Way in HEDCO" at an average of 64 out of 100, much lower than the other two attributes in the same question.

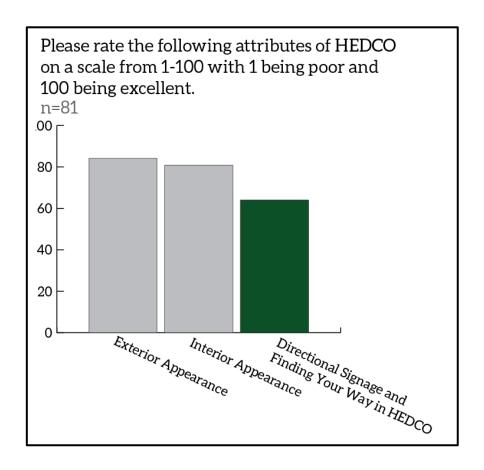


FIGURE 20: HEDCO WAYFINDING

In itself this is not significant but becomes more so when looked at in the context of the data from the free response questions. The issue of finding the third floor or directing people to the third floor came up frequently:

"Most people don't even know there is a third floor of HEDCO."

"...and no one is ever able to find the 3rd floor or the bathrooms."

"Can be confusing directing people to the third floor since the atrium stair case does not go to the third floor"

Interview Results

This was confirmed by the data collected in the interviews. The staff member who worked in the Learning Commons confirmed that the front desk there is often asked for directions to the bathrooms and the third floor. The graduate students knew about the third floor and two of them mentioned that they like working there because it is so quiet. One said that no-one knows how to get to the third floor, but once you are "in on the secret" it is a great work place. Of the two staff members from the Department of Educational and Community Supports, the one who usually takes the elevator reported no problems with the third floor while the one who usually takes the stairs said that it took her "forever" to figure out the route to the third floor. Several people mentioned the "fire escape" feel of the stairs to the third floor.

The faculty member of the Department of Educational Methodology, Policy, and Leadership, was not aware that HEDCO had a third floor until asked about it by the researcher. She has been with the College of Education for less than a year but during that time has taught several classes on the second floor of HEDCO and had not realized that there was another floor of the building above that.

Observation Results

Observations by the researcher found that while the stairs from the atrium to the second floor are highly visible and a prominent feature in the atrium, from the top of those stairs there is no visible route to the third floor. The stairs to continue going up are around a corner, out of sight. If a user goes around the corner the only indication that there are stairs opposite the elevators is the green EXIT sign next to the blank fire door and a small, easily missed sign saying that these are the stairs to the third floor. This does not make

clear that it is the route that goes up to the third floor and not just the route down and out of the building.



FIGURE 21: VIEW FROM TOP OF ATRIUM STAIRS



FIGURE 22: HALLWAY TO STAIRS

The researcher also observed physical traces of the confusion that this causes. The most prominent example is a sign taped to the door of the department on the second floor explaining that the Department of Family and Human Services is on the floor above. It appears that people have been asking in at this department where FHS is.



FIGURE 23: SIGN IN SECOND FLOOR DEPARTMENT ENTRANCE

FIREPLACE

Across all evaluation methods and throughout the course of this study the fireplace in the HEDCO atrium stands out as a prominent and beloved feature for the users of this building. It is possible that this is influenced by this study being conducted during an unusually cold winter for Eugene, Oregon, but the overwhelming popularity of this element in the data suggests that the literal hearth in this building's metaphorical hearth is one of the most successful social spaces in the college.

Survey Results

One of the questions in the survey asked respondents to click on floor plan of HEDCO's ground floor where their favorite place was. The heat map that was generated by aggregating those clicks shows that the fireplace was the most popular location by far.

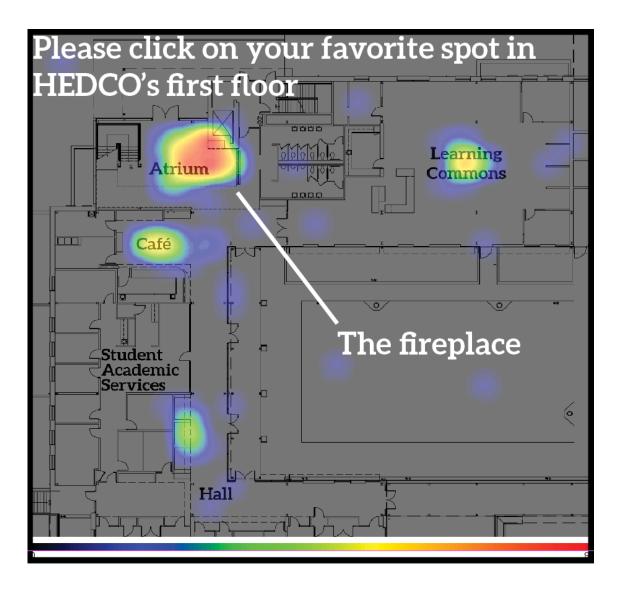


FIGURE 24: HEAT MAP SHOWING RESPONDENTS' FAVORITE PLACES IN HEDCO GROUND FLOOR

The fireplace was also mentioned more than any other element of the building in the responses to the open ended survey questions:

"I love that I can come in to something visually pleasing, that feels more like home. The fireplace is inviting. I always see people engaging in that spot. I wish the space was a bit bigger, so that there were more spots to sit around the fire. It is lovely because it is close to the cafe. i [sic] can almost always walk by someone I know in this area... creating a nice community place to reach out to others and connect."

"the fireplace is so inviting--i [sic] love seeing students hang out there--it is a real gathering place."

"It's in front of the fireplace and it's a spot where I can get cozy to read or chat with friends."

"The inclusion of a gas fireplace in the lobby was a great design decision, as were windows that can be opened."

"How about more fireplaces or a bigger fireplace. Often the area is crowded and I cant [sic] sit near the fireplace like I long to do."

"Leave the fire place on at all times!!! Leave the fire place on at all times!!! Leave the fire place on at all times!!!" [Repetition in original]

"Leave the fire place on at all times PLEASE:)"

The opinions expressed by survey respondents about the fireplace are almost universally positive, and many requested more seating by the fire because the area fills up so frequently.

Interview Results

The popularity of the fireplace was evident in the data collected in the interviews. Several of the informal interviews were conducted next to the fire and in every one of those interviews the subject(s) said this was their favorite place in the building. One grad student explained that the only problem is when a group takes over the cluster and individuals don't feel like they can sit next to the fire without intruding. A group of three undergraduates said that the only thing they would like to change about HEDCO is to have

the fireplace going all the time during the winter. One jokingly added that it should become a fountain in the summer.

The subjects in the formal follow-up interviews had similar comments. Only one interview subject did not like the fireplace, he thought it was a waste of gas for not a lot of heat, but he said that it did seem to be a big draw for students. The two staff members from Educational and Community Supports said that they often wish that they could drink their coffees next to the fire but the seats are always occupied.

Observation Results

Behavior mapping shows that the area around the fireplace is almost always occupied except during the quietist times in the building. It appears to support a wide variety of activities including meeting, eating, working on computers, reading, and sleeping. Several users were observed lying full length on the benches and reading books while busy foot traffic passed by five feet away. This suggests an unusual degree of comfort in a highly trafficked public space.



FIGURE 25: FIREPLACE USE

This chapter develops results from the evaluation into specific suggestions for changes in the existing setting which may improve informal interaction in social spaces in the HEDCO building. This is followed by a discussion of the evaluation results in terms of general implications for future designs of informal social space.

RECOMMENDATIONS FOR CHANGE

Post-occupancy evaluation results indicate that noise is a concern for a significant number of respondents in the ground floor social areas of HEDCO. While a certain level of noise is often considered necessary for a social space to feel lively, some users, especially faculty and staff, cited noise as a reason that they do not spend time in the ground floor social areas. Measurements of noise levels up to 80 dB, about the level of an alarm clock, suggest that the space might be improved by tempering the noise in the space. This could be done through the introduction of some sound absorbing materials into the walls or ceiling of the space, though some experimentation would be required to ensure that sound levels do not become too muffled for a lively social atmosphere. Observations by the researcher indicate that despite the large numbers of people in the space and heavy traffic through the space, the loudest sound source in the ground floor is regularly the equipment used by the baristas in the café. Shrill whistles from this equipment are what raised the decibel-meter to 80 dB and can be distinctly heard throughout the ground floor common areas. The machine that appears to be producing these noises is on top of the counter next to where the main corridor passes the café. It is possible that peak noise levels in the area could be reduced by relocating this machine to a sheltered location or shielding it with an acoustical barrier from the main circulation space.

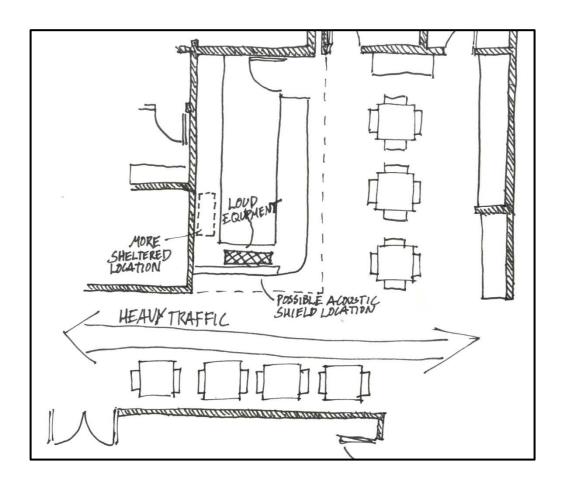


FIGURE 26: CAFE NOISE SOURCE

The evaluation results also indicate that the most popular location on the ground floor of HEDCO by far is near the fireplace. Many of the free responses from the survey and the informal interviews indicated that people wish they could sit there more often but that it is often busy or full. One graduate student mentioned that one problem with the area is that if there is a group occupying part of the seating there, it is hard for someone not associated with that group to sit there as well without feeling like they are encroaching. Behavior mapping shows that members of large groups tend to occupy the edges of the bench cluster and face inward. If a single bench were added against the fireplace but around the corner from the current bench cluster it might provide a place for individuals to sit close to the fire where they wouldn't feel like they were intruding on a group using

the cluster. The current single bench against the windows does get used occasionally by singles but does not feel close to the fire.

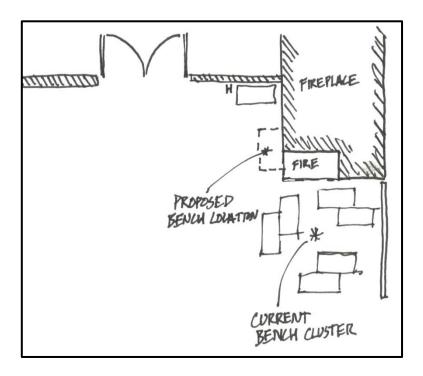


FIGURE 27: PROPOSED BENCH ADDITION

The wayfinding issue regarding the third floor needs to be resolved. The Department of Family and Human Services is one of the biggest departments in the College of Education and it is in one of the hardest locations to find. The main problem, as indicated by the survey and interview data as well as the researcher's observations, is that there is no clear, visible route to the third floor from the top of the stairs leading from the atrium to the second floor. Some signage or other indicator of the location of the stairs to the third floor is needed in the field of view of a user reaching the top of the atrium stairs. The door to the fire stairs should also be more clearly marked as third floor access as well as fire egress.

DESIGN IMPLICATIONS: COMMUNITY CENTERS

The results of this evaluation indicate that the ground floor social spaces in HEDCO are popular and attract members of the College of Education who work in other buildings.

This section analyzes the responses from users relating to why they like using these spaces in order to provide recommendations for future social space designs.

The fireplace was the most mentioned draw for users whose favorite space on the ground floor of HEDCO was the atrium. It is mentioned more than any other element in the building in the free response questions in the survey and with almost universally positive reactions.

Besides the warmth and visual interest provided by the fire itself, respondents also mentioned the distinctive and prominent nature of the brick fireplace structure (which doubles as an elevator shaft and clock tower), as being a good landmark to meet people by. The fireplace column creates a distinctive place in the atrium where a large amount of space is empty, undefined, and devoted to circulation. The height and mass of the tall brick pier is balanced by the low, human scale of the fireplace itself. Therefore when designing large, prominent, heavily used circulation spaces such as atriums and lobbies, the inclusion of a prominent focal element with human scale seating arrangements can create a place where people are encouraged to linger and meet. This promotes use of the atrium space in between class transfer times and becomes an entry landmark for the building.

Another big attractor of users to the HEDCO social areas was the café. Based on the results of the survey and interviews a significant portion of the campus community requires a regular coffee and food supply. During peak hours the café in the HEDCO

building was usually the busiest location on the ground floor and frequent interactions were observed between people standing in line to order food or use the microwave. Based on observations of this café and interviews with people who use it, the seating area attached to a café should respond to a wide variety of user types and uses. Seating and tables should accommodate individuals, pairs, and groups of four or five. Some people work while eating and some focus on socializing or people-watching. During peak times close to the middle of the day table occupancy turnover increased and during quiet times users were more likely to linger over a single drink or pastry.

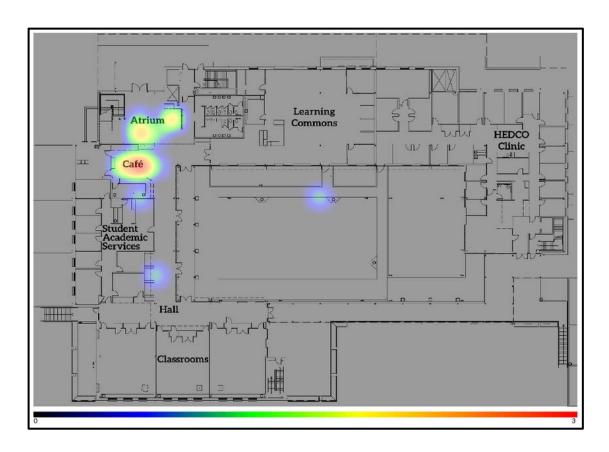


FIGURE 28: WHERE DO YOU LIKE TO SOCIALIZE?

The third feature that users mention attracting them to HEDCO social spaces is good work spaces, for both individuals and groups. Individuals tend to prefer quieter work

environments. In HEDCO they often use the second and third floors which are perceived as being quieter and calmer. Group work requires not only seating and enough table space for many laptop computers, but also the impression that it is okay to be loud. For this reason groups tended to work on the first floor. As one survey respondent put it: "It's already so noisy that I don't feel like I'm interfering with anyone's work." In the survey several people mentioned that it did not feel appropriate to talk and make noise on the second and third floors where they might disturb individuals working in the hall or nearby offices and departments. Therefore, make sure to provide group workspace in busier locations and near circulation, which is naturally loud, in order to give groups the freedom to make noise. Place individual workspaces in more secluded locations that are quieter and where there are fewer distractions.



FIGURE 29: QUIET SECOND FLOOR HALL AND BUSY GROUND FLOOR HALL

The fourth significant attractor of people to the HEDCO social spaces was the natural light. In the interviews and survey responses people in general appeared to appreciate giving their eyes a break from fluorescent light and detail work. Many respondents mentioned the large windows facing the courtyard in the ground floor of

HEDCO, noting in particular the light-filled quality it gave the hallway and also the refreshing nature of the natural view. Therefore, when designing places for people to take a break and socialize in, also give their eyes a break with natural light and views to the outdoors.



FIGURE 30: DAYLIT ATRIUM

DESIGN IMPLICATIONS: STUDENT-FACULTY INTERACTION

The results from this evaluation indicated that HEDCO is more successful than other buildings in the College of Education at providing opportunities for student-faculty interaction, but there were also some areas for improvement. This section explores both

the successes and shortcomings of HEDCO regarding this hypothesis and extrapolates general design implications from those findings.

The difference in availability of seating in department lounges or break rooms appears to be significant. In order for department hubs to be successful at creating opportunities for faculty and graduate students to cross paths there needs to be a place for users to stay for a while. Therefore when designing department lounges make sure that they are spaces to remain in for a while by providing chairs and tables. The effects of putting the copy room in the break room need to be studied in more depth due to conflicting responses in the interview data. It does appear to increase chance encounters in those areas, but also has the potential to make users uncomfortable about preparing or eating food when office work is being done in the same room.



FIGURE 31: EDUCATIONAL AND COMMUNITY SUPPORTS KITCHEN AND COPY ROOM

Graduate students, undergraduate students, classified staff, and faculty members all cited the availability of coffee as being a major draw for them to use the ground floor social spaces in HEDCO, making cafés ideal spots to encourage intermingling of user

groups. However, many faculty and staff respondents noted that the ground floor was too noisy for them to want to stay long. Therefore, when designing a café seating area, design the acoustics of the space to let the noise level be high enough to make the place feel lively but not loud enough to be distracting for people.

A potential contributing factor to this problem at HEDCO is that the main circulation route of the ground floor runs right through the café seating area. There are no tables or booths that are more than three feet from heavy foot traffic. Thus the noise and bustle of class transfers are quite close to people sitting at the tables or in the booths. In future designs include seating that is adjacent to circulation to draw people in and let café users see passersby, but separated enough from the circulation that users do not feel overwhelmed by passing crowds. The seating in front of the fireplace in HEDCO does a good job of providing this variation. Users can sit at the edge of the seating, close to the circulation route, or farther into the corner where there is some space between the users and passing crowds.

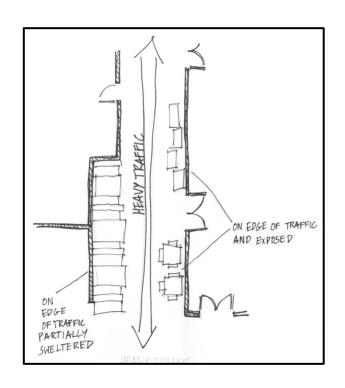


FIGURE 32: HALLWAY SEATING

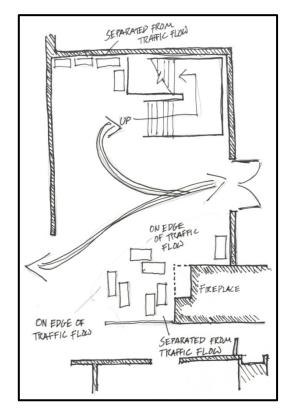


FIGURE 33: FIREPLACE SEATING

DESIGN IMPLICATIONS: RESEARCH COLLABORATION

The results of this project's investigation into research collaboration in the College of Education showing no relationship between use of HEDCO social spaces and collaboration makes it difficult to extract any design implications from the data in this study. It is possible that the presence and quality of informal social spaces do not have an effect on research collaboration in an academic setting like the College of Education, but it is too early to definitively know. Several factors including the relatively short time HEDCO has been active and the dispersed nature of the College of Education at the University of Oregon detract from the general applicability of these findings.

DESIGN IMPLICATIONS: WAYFINDING

In the future, the problem that HEDCO has with users' difficulty locating the stairs to the third floor can be avoided by ensuring that there is a clear line of sight from each circulation space to the next. If the most prominent vertical circulation at the entry does not continue through the rest of the building then there should be a clearly marked route from the end of this space to the vertical circulation access for the rest of the building. If the primary stairs used to access one or more floors of the building are also fire stairs then extra effort needs to be made to make users aware of them and help them feel comfortable using them for day-to-day use.

SUMMARY

The overall findings of this survey suggest that the informal social spaces in the HEDCO Education Building have successfully become centers of community for the College of Education and offer better opportunities for student-faculty interaction than the other buildings on the education campus. However, no relationship was found between the informal social spaces and research collaboration.

The thesis validates Campus Planning's belief that successful informal social spaces can contribute to the social life of the university and supports their efforts to ensure that social spaces are integral parts of future building projects on the University of Oregon campus. The research results clearly indicate that the users have responded positively to the attention paid to social spaces during the design process of HEDCO and they are well used. Many aspects of the design of HEDCO and its social spaces are tied to the specifics of the context in which it was built, and a successful social space in another project might look nothing like the spaces in this building. The important attributes, amenities, and qualities that make HEDCO work well can be applied in many situations and take many different forms. In this regard it is hoped that this thesis has contributed to the underdeveloped body of literature on the design of successful social spaces and, perhaps, that it has sparked the reader's interest in the spaces between the rooms.

RECOMMENDATIONS FOR FUTURE RESEARCH

This post-occupancy evaluation has responded to Campus Planning's tradition of conducting POE's of completed building projects, but has also departed from the traditional evaluation in the focus on social spaces as well as the development of several new survey question types. The data collected on social spaces especially through these new question types would only be strengthened by using similar processes to evaluate other buildings on and off the Oregon campus. As more buildings get evaluated with this focus or using these techniques it will be easier to understand the quality of the results from HEDCO and how HEDCO's social spaces compare to others on campus.

The results of this survey indicate that the acceptable noise level of social spaces for different user groups on campus would be worth an investigation, in order to design spaces that will work well for their intended users. The findings on faculty and student interaction also indicated a fruitful avenue of inquiry into the ideal mix between segregated and mixed social spaces for students and faculty. The current mode of thinking supports as much mixing as possible, but results in this study found that some faculty may prefer more private social spaces.

The effect of informal social spaces on research collaboration could be explored much further. The nuances involved in the varying degrees of collaboration and their relationships with informal social spaces is worthy of a study unto itself. HEDCO's effect on research collaboration could usefully be revisited sometime in the future after more time of academic research project turnover has elapsed.

An issue that was not addressed in this study but which also influences the informal social life of the college is the degree to which College of Education buildings are

segregated by department compared to other colleges in the university where the offices of faculty from different departments are interspersed through one or more buildings.

Further study on the effects of more or less segregated departments on informal interaction between and among departments would be useful in understanding the results of this survey on a deeper level.

APPENDICES

APPENDIX A - SOCIAL SPACE CATALOG

This study divides the social spaces in College of Education buildings into four categories:

Building Common Areas: These are open spaces that have been observed by the researcher to be commonly used for casual social interaction. They are used by a broad range of people with different roles, from different departments, and non-College of Education members. They are open to anyone who walks in.

Outdoor Common Areas: Several of the important informal social spaces are outdoors. The outdoor spaces in and around the College of Education buildings are important elements in the network of social spaces throughout the college. The University High School Courtyard in particular is considered one of the most successfully outdoor spaces on campus by Campus Planning.

Habitable Hallways: These are spaces whose proportions and use for circulation mark them as hallways, but they have been designed, renovated, or furnished in an apparent attempt to encourage users to stop, linger, or stay for a while.

Departmental Common Areas: These spaces vary widely in size and furnishing, but they are not as open to the general public as are the building common areas. They are either within a department's delineated territory, as in HEDCO and the Lokey Education Buildings, or off hallways that are only used by one or two departments. These spaces are not made inviting to the general public in the building.

Building Common Areas

One of the problems identified in the 2000 programming investigation made by the Design Partnership was a lack of spaces for students in the Clinical Services and Education Complex buildings. HEDCO's design was, in part, a response to that and included two such spaces: the Education Station Café and the HEDCO Atrium.

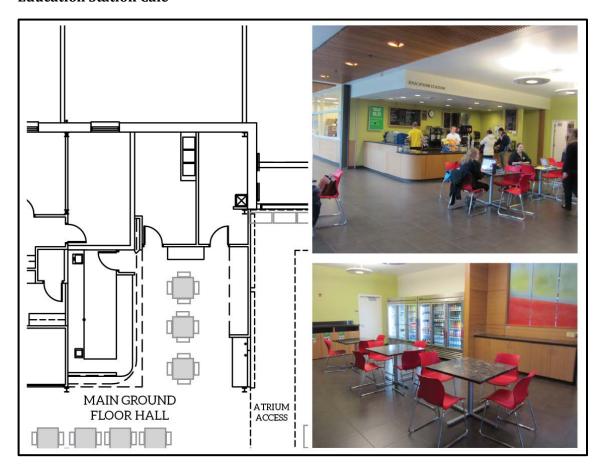
Outdoors there are two spaces that fulfill similar functions: the University High School Courtyard and the HEDCO Entrance Plaza.

HEDCO Atrium



The HEDCO Atrium is a 1,500 square foot double height space at the entrance to the building as visitors approach from campus. It can be entered or exited through the main entrance doors of the building, a door that leads directly to the HEDCO courtyard, stairs that wrap around the atrium and go up to the second floor, and hallways heading south towards the Learning Commons or west towards the atrium, ground floor classes, and Student Academic Services. The atrium floor is mostly empty which accommodates the heavy flows of circulation that run through the center of it, between the entrances and exits mentioned above. It is bounded to the east by wall of windows facing the entrance plaza, on the north by a wall of windows facing the Education South building, on the west it is half open to the hallway towards the café and half bounded by a wall that separates the atrium from the café, and to the south it is bounded by some translucent screens that shield from direct view a little hall that leads to the stairs, bathrooms, and elevator. There is a television on the west wall that displays information relevant to members of the college. A particularly notable feature is the fireplace in the southeast corner of the atrium. It is protected by glass and set into a large brick pier that contains the elevator shaft. This is the most dominant element in the atrium. There is bench seating clustered around the fireplace and in the northwest corner under the stairs.

Education Station Café



The Education Station Café is a 600sf space at the center of public areas on the ground floor of the HEDCO Building. It is accessed along its south edge which opens to the main hallway of HEDCO's ground floor which runs between the atrium and the ground floor classrooms. There are three tables with four chairs each on the floor of the café with additional seating in the adjacent hallway. The café is bounded on the west by the counter where the employees who run the café work, on the north by a wall with trash and recycling receptacles against it, on the east by a wall which has several refrigerated packaged drink displays and a counter that holds a microwave, straw and napkin dispensers, condiments, and plastic silverware. On the south there is a window wall facing the HEDCO courtyard on the other side of the hallway clear space with some small table and chair sets against the window wall.

Learning Commons



The College of Education does not have a library in the traditional sense, what it does have that fulfills part of the role a library would is the Learning Commons on the first floor of HEDCO. This is a large space, about 3000sf, with furnishings and resources geared towards group work, and computer access. There is a large bank of computers on the east of the entry to the Learning Commons and three tables with about five computers each in the northeast corner of the Commons. Along the west edge, where there are big windows to the HEDCO courtyard there is a series of benches towards the north and two booths towards the south. Along the south wall are small rooms with chairs and desks suitable for small groups of people, as well as a couple tables with a television monitor on the wall and chairs for each. In the middle of the Commons are four clusters of furnishings. In the northwest and southeast corners of the middle there are L shaped couches similar to those in the student lounges of the Counseling Psychology and Human Services department and the Special Education and Clinical Studies department. Each L shaped couch has low tables in front of it and some chairs completing the rectangle suggested by the two legs of the L. In the northeast corner of the middle of the Commons there are four

chairs whose configuration gets changed on a day to day basis and in the southwest corner there are two tables surrounded by four chairs each. The northern middle groups are separated from the southern middle groups by a low bookcase. Overall the Commons is carpeted, interior partition walls are made of gyp board painted yellow-green, the western exterior wall is finished with white gyp board and the eastern exterior wall has exposed CMUs.

Outdoor Common Spaces

The earlier two buildings in the College of Education engaged with their surrounding outdoor spaces in very different ways. The Education Complex encircles a courtyard and has most of its circulation in arcades along the edges of the buildings. The Clinical Services building is very condensed and inward facing, not engaging spatially with the landscape. The HEDCO building attempts to follow more in the vein of the Education Complex, creating courtyards and plazas.

University High School Courtyard



The University High School Courtyard is a 15,000sf outdoor space in the middle of the Lorey I. Lokey Education Complex. It has entrances and exits leading north, between Education West and Education East, towards the end of Kincaid Street and Knight Library, west into the Education West building, southwest between Education West and Education South towards the HEDCO parking lot and the intersection of 16th and Alder, up some stairs to the south and the second floor of Education South, on ground level to the south and the Department of Behavioral Research and Testing as well as a classroom, and to the east where there is a scholar's walk that leads to HEDCO, the Dean's Office, and the Department of Educational Methodology, Policy, and Leadership, or straight east along the back of Knight Library and towards the center of UO's campus. The main courtyard habitable zone is red brick pavers with boundaries curving between the entrances to the courtyard. There are benches along the edges of the paved section. Most of the courtyard is shaded by English oaks, myrtle, maple, and a Katsura tree. 80 Off the main pavers of the courtyard there is a small section with more benches paved with concrete close to Education West. The arcades of the three education buildings bound the courtyard on the north, west, and south. The east is bounded by the scholar's walk between the South and East buildings. Notable features include the large American elm⁸¹ in the northeast corner which has a prominent presence in the courtyard and the gazebo-like structure which serves as a landing for the stairs on the south edge and has several benches in it.

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⁸⁰ Tree names from: University of Oregon Planning Office, "University of Oregon Atlas of Trees," last modified 2006, accessed January 11, 2014,

http://infographics.uoregon.edu/campusmaps/treeatlas.pdf.

⁸¹ Ibid.

HEDCO Entrance Plaza



The HEDCO Entrance Plaza is a 4000sf square outside the main entrance to the HEDCO building. There are walks leading north from it towards the Lokey Education Complex, northeast towards the Southwest Campus Green and Knight Library, and south towards a vehicle pick-up and the music school. The square itself is paved with brick pavers. The plaza can also be accessed from the main entrance of HEDCO to the west, or, also on the west, a set of double doors leading to HEDCO's stairs. The plaza is bounded on the north and south by grass, low ground cover, and young trees. To the west is the glass window wall of the HEDCO Atrium and to the east is a series of three large concrete steps, topped by a concrete platform with benches on it. Behind the benches is a planter box with some young trees in it, a path that is a main north south circulation axis from 18th street to the rest of campus, and the Education Annex, a small, historical, red house with a gable roof used to house The Center on Teaching and Learning Reading Clinic. On the plaza are several stone seats in sculptural forms on the north and south edges as well as some wooden benches closer to the HEDCO entrance. There is a flat roof that shelters the area around the entrance. A particularly notable feature is the clock tower which rises from HEDCO just south of the atrium and faces north.

HEDCO Courtyard



HEDCO's courtyard is a 12,500sf space encircled on the north, east, and parts of the south and west sides by the HEDCO building. To the south west it is bounded by covered walkway that runs from the HEDCO classrooms to the parking lot and the Clinical Services Building. On the other side of the walkway is a low wall and views over the parking lot to the west. The main courtyard surface is grass, there are concrete walkways around the north and west sides with wooden benches. On the east side there are planter boxes, with sculptures in them. The courtyard can be accessed from multiple points on the HEDCO main hall on the ground floor, or from the southwest.

The Arcades



The Crossing (see below) is the only internal circulation space between departments in the Lokey Education Complex, the rest happens in arcades along the outside edges of the building. These arcades are six or twelve feet wide. They connect all the departments in the complex. There are benches placed either against the building or towards the outside of the arcade regularly spaced around the courtyard.

Clinical Services Little Courtyard



There is a little courtyard in the Clinical Services building, only 350sf, which is only accessible from the hallway through the Early Intervention Program but visible through a window from one of the main east-west corridors on the first floor. There is a concrete platform in the middle of the courtyard, with a thick border around it of potted plants and some plants in a square of exposed earth. The plants are mostly low ferns or flowering plants but there is one significant tree rising 10 or 12 feet in the air. This tree is not listed in the University of Oregon *Atlas of Trees*. 82 Under the tree there is a small table with a potted fern on it and two chairs next to it. There is a green metal bench against one of the walls. It is surrounded on all sides by high concrete walls or windows into the building.

⁸² Ibid. 118

Habitable Hallways

All three buildings in this study have hallways that have accommodations for people to spend some time in them. In the HEDCO Building the hallways were clearly designed for this, with alcoves and wide hallways where there is room for seating and work-surface furniture outside of the flow of traffic. Most of Lokey Education's hallways are actually outside, making them more weather and temperature dependent in terms of their suitability for casual social interaction. The hallways of the Clinical Services are narrower and darker but they have clusters of furniture and some tables.

The Crossing



The Crossing is a 1400sf hallway in the form of a cross in the Education West building. To the east it leads to the University High School Courtyard, to the south it leads to the Department of Educational and Community Supports, to the west it leads to the entrance facing Alder Street, and to the north it leads to the Department of Educational Studies. There are also some stairs to the north leading up to additional room for Educational and Community Supports. The four arms are on average 12ft wide. There are a couple banks of seats in the south hall with some little tables attached to the armrests. The east and north halls have a couple tables with chairs and several chairs with small

tables on the armrest. The west hall has five benches with two little tables and several vending machines set into an alcove in the wall.

HEDCO First Floor



The hallway that forms the spine of the first floor of the HEDCO building is one of the main social spaces in the building. It runs west from the atrium, past the café and then to a T intersection which has access for the ground floor classrooms. There are several exterior doors to the courtyard, and double doors at each end of the north-south leg. There are window walls along the edge that borders the HEDCO courtyard. The east-west leg is an average of 11.5 ft wide and has small tables, for 2-3 people, along the window wall, and booths against the opposite wall. The north-south leg has smaller benches along both

walls, near the classroom doors. Notable features include the large floor-to-ceiling windows between the classrooms and the hall which make the classrooms very visible from the hallways and vice versa, and Student Academic Services which divides the café section of the hall from the booth section.

HEDCO Second Floor



The main hallway on the second floor of HEDCO is L shaped. From the northeast corner where the stairs from the atrium reach the second floor it heads west towards Global and Online Education and south towards Counseling Psychology and Human Services. The hallway is 12ft wide on average. There are four person tables near the departments along the window wall that faces the courtyard and benches close to the corner where the stairs come up. On the opposite wall are more benches in alcoves to the west and bathrooms to the south. The most notable feature is the entrance to HEDCO 220. This is the only classroom on the second floor and a major traffic destination.

HEDCO Third Floor



HEDCO's third floor only has one wing. It is accessed from the stairs or elevator southeast of the atrium. From there the hallway runs west and then turns south to the Special Education and Clinical Services department. There are windows on the north and west walls, but just in sections, not window walls. There are three table and chair sets near the entrance to the department. The hallway is an average of twelve feet wide. On the outside of the corner where the hall bends there are several pairs of chairs and small tables holding plants and magazines.

Clinical Services Ground Floor Main



The main entrance hallway on the ground floor of the clinical services building is about 480sf and an average of 8 ft. wide. It runs through the center of the building and only has daylight at the north and south ends where there are building entrances. On the sides are entrances to the Child Development and Rehabilitation Center (affiliated with OHSU) and bathrooms. The hall has alcoves set into the wall on the west of the hall with chairs placed in them. There are also several chairs against the east wall. At the south end of the hall there are chairs placed against a window and to the west is a plain rectangular room with more chairs against the walls. Notable features are the large brick piers that create the alcoves and regulate the rhythm of the hallway.

Clinical Services Other Hallways

There are chairs, benches, and couches scattered throughout the rest of the halls in the clinical services building. The other hallways in the building area all quite narrow (relative to the other habitable hallways) except for some big corners in the east side of the ground floor near the children's classroom. They also uniformly have no access to daylight.

Departmental Common Areas

This section describes social spaces within department territories or off of hallways only used by one or two departments. In general, most departments had several small areas created by one or two chairs in a hallway nook or corner, as well as a more defined lounge or break room. These descriptions will mention the more notable small areas and attempt to convey the character, quality, and quantity of them in each

department, but not list them exhaustively. The more defined lounges and break rooms will be treated in some detail. The observations were made by the researcher on November 21, 2013. Therefore it should be noted that the locations of the more portable equipment such as toasters or coffee machines might change and were just described as they were at that one point in time.

Anecdotally, when asked by the researcher for permission to survey their break room or lounge, reception staff of departments in the HEDCO building exhibited more excitement and pride in their spaces than staff in the Clinical Services Building or Lokey Education. This is consistent with the higher level of quality and amount of room devoted to such functions in the HEDCO departments than in either of the other buildings.

Education Studies



The main common space in the Department of Education Studies, in the north wing of the Education West Building, is a small, 150sf, room labeled "kitchen" which is the first door to the east as you enter the department. The south wall has cabinets and a countertop with a toaster, sink, microwave, and full size refrigerator. The north wall has a

rack of jugs for the water cooler. There is a door on the east wall opposite the entrance door which leads to a classroom. There is a beige vinyl floor, fluorescent lights, neutral colored gyp board walls and no natural lighting. There is no seating in this room. In the rest of the department there were only a couple clusters of chairs near the entrance.

Educational and Community Supports



The main common space of the Department of Educational and Community
Supports, also in Education West, is a 235sf combination of kitchen and copy room. It has
counters along the north and west sides of the room, with a refrigerator in the middle of
the north wall. To the west of the refrigerator the counter has mostly office related
equipment like staplers, a paper trimmer, and, at the time of the researcher's initial
observation, a stack of binders. To the east of the refrigerator there is more food and
beverage preparation equipment such as a toaster oven and coffee maker. The east wall of
the room has, from north to south, a sink set into a counter, a rack of magazines and fiction
books, and a copy machine/printer. There is a beige vinyl floor, fluorescent lights, neutral
colored gyp board walls and no natural lighting. There is also no seating in this room.
Outside of this room, this department had several clusters of chairs at various points in the
entry of the department between the doors to the Crossing (see section on habitable

hallways above) and the reception desk. There are also several open work desks and tables in the easternmost open space in the department.

Educational Methodology, Policy, and Leadership



The main common space of the Department of Educational Methodology, Policy, and Leadership is in the center of the Education East Building. It is a space, 200sf, set off from the open cubicles around it by approximately seven feet high walls. The east side of this enclosure is devoted to kitchen facilities and the west side is has a copy machine and other office equipment. On the east side there is a counter with a toaster on it and a sink in it. The microwave is in a dedicated cubby in the millwork, and there is a refrigerator to the side. The floor is carpeted and there are fluorescent lights, but unlike in the two departments in Education West these lights are set into a drop ceiling. This room doesn't have any seating. In the rest of the department there are several chair clusters scattered throughout and a couple wheeled table and chair sets in unoccupied pockets of space.

Behavioral Research and Testing



The Department of Behavioral Research and Testing occupies two floors of the Education South Building. The break room area is on the second floor and is defined by two parallel walls with openings at each end, approximately 150sf. The east wall has the refrigerator, cabinets, and a counter top with a toaster, microwave, and coffee maker on it. The west wall has a counter top with a sink set into it and a pantry closet that has food storage in it. The floor is carpeted and the two parallel walls have been painted blue. At the north end of this kitchen there is a window overlooking the University High School Courtyard. There is no seating in this area. This department does have clusters of chairs near the entrance to the department on the north wall and under some windows on the south wall of the building.

Office of the Dean



The main common area in the Office of the Dean is a 250sf room in the southeast corner of Education South. Against the north wall is a refrigerator and a counter with a sink and small kitchen appliances. There are cabinets above with a microwave cubby. Also in the room are several filing cabinets and a table and chairs set with a puzzle on the table. The floor is vinyl and the walls are painted a neutral color. The room is well daylight, with windows to the outside on the east and south walls. There are two doors in the room, one leading to the rest of the department and the other leading to an outside sunken porch on the south side of the building. There are a couple metal chairs on this porch. The only other social center is a cluster of chairs in a nook right next to the entrance with windows out to the scholar's walk. Outside the entrance to this office is a low brick retaining wall that is sometimes used as seating.

Early Intervention



The Department of Early Intervention is housed in the northeast corner of the first floor of the Clinical Services Building. It is 375 sf. Their main social space is an L shaped room that wraps around a bathroom. It is divided almost into two rooms, with only a small connection between the two. The space to the north, where the entrance from the hallway is, has a love seat, an easy chair, and a four chair and table set placed against the north wall and a countertop with cabinets below and above along the south wall. There is a sink in the countertop and a closet at the end of the countertop. The south space a countertop with cabinets below on all three sides: north, south, and east. There are two microwaves in here, one in a cabinet above the countertop on the north side and one on the countertop on the south side. There is a sink in the countertop on the east wall as well as a dishwasher, the only refrigerator I found in a break room in this survey. There is a refrigerator on the south wall. The west wall of the entire double space is a countertop with cabinets below.

Secondary Special Education and Transition



The Department of Secondary Special Education and Transition's break room is a small, 100sf room at the north end of their department on the second floor of the Clinical Services Building. It has cabinets and a counter top on the east and west walls of the room. The east wall also has a refrigerator and closet. The west wall has a sink in the counter, a water cooler to the side of the counter, and a microwave in the cabinets above the sink. The north wall has a rack of jugs for the water cooler. There is a beige vinyl floor, fluorescent lights, neutral colored gyp board walls and no natural lighting. There is no seating in this room. There is not very much seating in the rest of the department either, but there are four chairs, three tables, and two benches in the entrance area, near the reception desk.

Center on Human Development / Institute on Violence and Destructive Behavior



The Center on Human Development / Institute on Violence and Destructive

Behavior area is on the third floor of the Clinical Services Building. It is not actually a room
but the end of the main hallway on the floor, after it goes around several corners and gets
narrower. It occupies approximately 200sf. On the west side of the room there is a
countertop with a sink on it and a microwave and several other small kitchen appliances
on it. There is one cabinet above. At the north end of the space is a door that enters into a
conference room at the center of the floor. At the east end of the break space are several
mismatched chairs and a refrigerator. At the south end of the space are several more
chairs and a table with two cacti on it. There is a window on the south wall which provides
a lot of daylight to the space.

Learning Commons



There is a break room, about 200sf, off of the Learning Commons on the first floor of the HEDCO building. The west, north, and east walls all have cabinets below and above a countertop. Because of the room's location directly below the server room there are a lot of wire and service conduits going through the ceiling. Most of the room is used for computer related storage, but there is a sink in the north wall with a microwave above and a mini-fridge next to it. The room has a drop ceiling, carpet, and neutral colored walls. There was one chair in here set up in front of a computer station.

Student Academic Services



The break room for Student Academic Services, just off the main hall of the first floor of HEDCO, is just a small alcove set into one of the hallways that allows access to the offices. It is 85sf. In the alcove is a small kitchenette with a countertop that has cabinets below and above, a refrigerator, microwave, several small kitchen appliances, and a sink.

Global and Online Education



The Department of Global and Online Education is located on the second floor of the HEDCO building, on the northwest corner of the building. There are two large social spaces in this department. At the west end, there is a large area, 330sf, with seven chairs arranged in a partial circle with an assortment of end tables between them. There are bookshelves, empty, against the north wall. The west wall is all windows above about three and half feet. There are two tables against the west wall with plants on them. There is a television on the south wall. At the southeast corner of this area is the kitchenette. It has a small refrigerator next to a countertop with cabinets below and above. There are two microwaves, one on the counter one in a cubby in a top cabinet, and two coffee makers. There is also a sink set into the countertop. The other large social area is at the south end of the department. It is 475sf. It also has seven chairs in it, but they are in a

more freeform arrangement. There are several circular tables scattered about, one had an in-progress puzzle on it, another had a plant under the window. There are windows on the west and south walls. There are several bookshelves against the walls, again empty. There are a couple more pairs of chairs with end-tables in this department, mostly near the entrance or in between the entrance and the west social space.

Counseling Psychology and Human Services



The Department of Counseling Psychology and Human Services is located on the south end of the second floor of HEDCO. It also has two main social spaces. One is located just north of where the department bends to the west. It is an open, loosely defined space of about 450sf. There is a kitchenette along the north wall of the space. It has a counter with cabinets below and above along the entire length of the wall except where the refrigerator is. There is a sink set into the counter and a microwave in the cabinets above. There is also a toaster on the counter. Along the south wall of the area is a conference type table with chairs around it. The west border of this area is a hallway that runs past it and that it is completely open to, and the east border is a wall that has a series of trash and recycling receptacles lined up against it. According to the receptionist for this department, this is the faculty break area.

The student break area is just south of this area at the end of the hallways that forms the west edge of the faculty break area, through a threshold created by an enclosed conference room which causes the hallway to narrow. It is about 1000sf. In it, a large L-shaped modular seating arrangement occupies the middle of the space. A couple chairs and the wall to the west loosely define the other two sides of the rectangular space suggested by the two legs of the L. There are small end tables low, larger tables in the middle of this space. Along the north edge of this area, across a hallway, is a smaller kitchenette than the one in the faculty break area. It has a counter with cabinets above and below. There is a sink in the countertop, a microwave in one of the top cabinets, and a mini-fridge next to the counter. On the south edge of this area there is a large table surrounded by chairs in an alcove. The south wall of this alcove is all windows above approximately three and a half feet from the floor. The west wall of this nook is dominated by a large bulletin board. The wall at the west edge of the student lounge area has a television on it and a white board. The wall to the east has a large bulletin board on it in between the doors to private offices.

Besides these two large social spaces this department has an area with pairs of chairs, end-tables, and potted plants near the entrance to the department. The whole area is carpeted, with white gyp board walls.

Special Education and Clinical Studies



The Department of Special Education and Clinical Studies is located directly above Counseling Psychology and Human Services, on the third floor, and has almost exactly the same floor plan as that department. There are only a couple differences, there is a chaise in the wall that makes the west wall of the student lounge a couple feet thicker than on the second floor, slightly shrinking the student lounge, and there is a meeting room in the southeast corner of the faculty lounge which narrows the end of the faculty lounge where the table is. These social spaces also have the same furnishings as those in the lounges below. The only other differences noticed by the researcher were in the small appliances such as coffee makers and toasters on the kitchenettes and the chairs in the student lounge had been shifted around some.

APPENDIX B - IRB APPROVAL



DATE: December 12, 2013 IRB Protocol Number: 11072013.008

Christopher Gebhardt, Principal Investigator TO:

Department of Architecture & Interior Architecture, Department of

RE: Protocol entitled, "A Post-Occupancy Evaluation of Informal Social Spaces in the College

of Education"

Notice of IRB Review and Exempt Determination as per Title 45 CFR Part 48.101 (b)(2)

The above protocol has been reviewed by the University of Oregon Institutional Review Board and Research Compliance Services. This is a minimal risk research protocol that qualifies for an exemption from IRB review under 45 CFR 48.101(b)(2) for research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior.

Please note that you will not be required to submit continuing reviews for this protocol, however, you must submit any changes to the protocol to Research Compliance Services for assessment to verify that the protocol continues to qualify for exemption. This exempt determination will expire December 11, 2018. Should your research continue beyond expiration date, you will need to submit a new protocol application.

Your responsibility as a Principal Investigator also includes:

- Obtaining written documentation of the appropriate permissions from public school districts. institutions, agencies, or other organizations, etc., prior to conducting your research
- Notifying Research Compliance Services of any change in Principal Investigator
- Notifying Research Compliance Services of any changes to or supplemental funding
- Retaining copies of this determination, any signed consent forms, and related research materials for five years after conclusion of your study or the closure of your sponsored research, whichever comes last.

As with all Human Subject Research, exempt research is subject to periodic Post Approval Monitoring review.

If you have any questions regarding your protocol or the review process, please contact Research Compliance Services at ResearchCompliance@uoregon.edu or (541)346-2510.

Sincerely.

Sheryl Johnson, BS, CHES, CIP Associate Director

Research Compliance Services

University of Oregon

CC: Jenny Young, Faculty Advisor

> COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS . RESEARCH COMPLIANCE SERVICES 677 E. 12- Ave., Suite 500, 5237 University of Oregon, Eugene OR 97401-5237

T 541-348-2510 F 541-348-5138 http://hum:ansubjects.uoregon.edu

sitted to cultural alwersity and compliance with the Americans with Disabilities Act



DATE: February 04, 2014 IRB Protocol Number: 11072013.008

Christopher Gebhardt, Principal Investigator TO:

Department of Architecture

RR-Protocol entitled, "A Post-Occupancy Evaluation of Informal Social Spaces in the College

of Education"

Notice of IRB Review and Exempt Determination-Amendment as per Title 45 CFR Part 46.101 (b)(2)

The amendment submitted on January 21, 2014 to the above protocol has been reviewed by the University of Oregon Institutional Review Board and Research Compliance Services. This is a minimal risk research protocol that continues to qualify for an exemption from IRB review under 45 CFR 46. 101(b)(2) for research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior.

Please note that you will not be required to submit continuing reviews for this protocol, however, you must submit any changes to the protocol to Research Compliance Services for assessment to verify that the protocol continues to qualify for exemption. This exempt determination will expire December 11, 2018. Should your research continue beyond expiration date, you will need to submit a new protocol application.

Amendment: This amendment includes a follow-up interview script and consent documents. The Research Plan was revised to reflect these additions.

Your responsibility as a Principal Investigator also includes:

- Obtaining written documentation of the appropriate permissions from public school districts, institutions, agencies, or other organizations, etc., prior to conducting your research
- Notifying Research Compliance Services of any change in Principal Investigator
- Notifying Research Compliance Services of any changes to or supplemental funding
- Retaining copies of this determination, any signed consent forms, and related research materials for five years after conclusion of your study or the closure of your sponsored research, whichever comes last.

As with all Human Subject Research, exempt research is subject to periodic Post Approval Monitoring review. If you have any questions regarding your protocol or the review process, please contact Research Compliance Services at ResearchCompliance@uoregon.edu or (541)346-2510.

Sincerely,

Sheryl Johnson, BS, CHES, CIP

Associate Director

Research Compliance Services

University of Oregon

CC: Jenny Young, Faculty Advisor

COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS . RESEARCH COMPLIANCE SERVICES

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APPENDIX C - SURVEY QUESTIONS

Revision note: The only revisions to this document are on page 37 of 44.

Explanatory Notes:

This survey is set up in Qualtrics so that it adapts based on respondents answers to questions. This way, for example, faculty will see questions geared toward them and undergraduate students will see some different questions geared toward them.

To explain the logics that control the displaying of questions, the following form is used:

Answer If Who are you? Student Is Selected

Q4 Which best describes you?

\sim	** 1	1 .	0. 1 .	(4)
\mathbf{O}	Undergra	duate	Student	(1)

- Master's Degree Graduate Student (2)
- O Doctorate Graduate Student (3)
- O Other (4) _____

The writing in the blue bar explains the logic that determines whether this question is displayed. In this case, this question is displayed if "Student" was the answer the respondent selected to the question "Who are you?"

"Q4" is the number of the question, respondents will not see these numbers, they will just see text reading "Which best describes you?"

The numbers in parentheses represent the coded values assigned to each answer; this is used by Qualtrics to store the respondent's answer. The respondent will not see these numbers.

If there is a long underscore, like the one in the question above after "Other" it means that there is a box provided for the respondent to write anything in. If the question is just shown as a question with no answer options that means it is a free response question with a text box for the respondent to write anything in.

There is one place in the survey where the paths of two types of respondents diverges significantly. If respondents are not involved in research, they will go from Q1-Q74 and then the survey will end. If they are involved in research then they will go from Q1-Q40, skip to Q75-Q88, then go to Q55-Q74 and then the survey will end. These skips and jumps will be done automatically by the survey logic, respondents will not notice them. These skips and jumps will be noted in blue text like this.

After the survey ends, respondents were automatically be forwarded to a separate Qualtrics survey) where they had the opportunity to enter a drawing for a \$50 Duck Store Gift Card or volunteer for a follow-up interview.

131028 Test

Q1 Thank you for responding to our survey. Please carefully read the details about the study listed below and, if you agree, choose "I agree" below.

Q2

Consent to Take Part in Research

Online Survey Consent

A Post-Occupancy Evaluation of Informal Social Spaces in the College of Education

Name of Researcher: Christopher Gebhardt

Faculty Adviser: Prof. Jenny Young

Introduction

- You are being asked to take part in research study that examines UO College of Education members' opinions and use of social spaces in College of Education Buildings
- This study is part of my coursework for my Honors College thesis at the University of Oregon.

Why have I been asked to take part in the study?

- Invitations to participate in this survey were sent to all staff, faculty, and students of the College of Education.
- Because you, as a member of the College of Education might have an interest in sharing your thoughts and feelings about the successes and shortcomings of the social spaces in the main campus facilities of the College of Education.

What do I do first?

- Before agreeing, please read this page.
- Please ask the contact at the bottom of this page any questions that you may have.

What is the Study about?

This study is about discovering how successful the social spaces in the new HEDCO
Education Building are compared with the social spaces in the older Lorey I. Lokey
Education Building and the Clinical Services Building.

Who will take part in the Study?

• A random sample of students, faculty, and staff in the College of Education.

If I agree to take part, what will I be asked to do?

- Answer survey questions for about 15-20 minutes.
- If you do not wish to answer a question, you can choose to skip it.

What are the risks of being in the study?

- There are no expected risks. All information collected on the survey is anonymous; it will not record your name or your IP address.
- If you do not wish to answer a question, you can choose to skip it.
- Because the survey is intended to be anonymous we ask you do not input any names of people or identifying information into the free response text boxes in the survey.

What are the benefits of being in the study?

- Short term: The results of this survey might bring a problem or shortcoming with the spaces in a College of Education building to the attention of the UO Campus Planning Department who can then take steps to improve the situation.
- Long term: The results of this survey will help the UO Campus Planning Department improve their planning and design process and better understand what does and does not work well in the College of Education. This will help them make better-informed decisions for future UO building projects.
- Personal benefits: If you complete this survey by [date] at the end of the survey you will have the opportunity to enter a drawing for a \$50 Gift Card to the UO Duck Store. If you enter the drawing your answers to the survey will still be anonymous.

How will things I say be kept private?

- All records collected in this study will be anonymous.
- In any type of report we may write, data will be reported in aggregate, not individually.
- Research records will be kept on a password-protected server.
- Research records will be deleted from the server within 6 months of the completion of the thesis project.
- Access to the research records will be limited to the researcher and campus planning staff.
- However, sometimes, sponsors, funders, regulators, and the University staff who review research may have to look at the research records.

What if I choose to not take part or leave the survey?

- This survey is voluntary, taking it or not taking it will not affect your relationship with the University of Oregon or the College of Education
- We ask that you follow the directions the best you can.
- We ask that you only answer the questions to your comfort level.
- You can stop taking the survey at any time, however if you stop without completing

the whole survey the answers you did complete will be recorded.

Who can I contact if I have any questions?

- You can call or email Christopher Gebhardt who is the researcher in charge of this study. His email is cgebhard@uoregon.edu and his phone number is 720-224-5412.
- If you believe you may have suffered injury or harm from this research, call Christopher Gebhardt at 720-224-5412. He will tell you what to do next.
- If you have any questions about your rights as a person taking part in the study, you may call: Research Compliance Services at 541-345-2510 or email ResearchCompliance@uoregon.edu.

Statement of Consent:

By choosing the "I agree" option you indicate that you have read (or have had read to you) the contents of this consent form, that you have been encouraged to ask questions, that any questions you had were answered, and that you consent to take part in this study.

Please click the "Print" button to print a copy for your records.

- O I agree (1)
- O I do not agree (2)

If I do not agree Is Selected, Then Skip To End of Survey

Q3 Who are you?
Student (1)Faculty or Staff (2)
Answer If Who are you? Student Is Selected Q4 Which best describes you?
 Undergraduate Student (1) Master's Degree Graduate Student (2) Doctorate Graduate Student (3) Other (4)
Answer If Who are you? Student Is Selected
Q5 Do you take classes in the College of Education?
O Yes (1) O No (2)
Answer If Who are you? Faculty Is Selected
Q6 Which best describes you?
 Tenured, or tenure track, faculty. (1) Instructor (2) Post-doctorate fellow (3) Adjunct faculty (4) Other (5) Officer of administration (6) Classified staff (7) Research Assistant (8) Student Employee (9)
Answer If Who are you? Faculty or Staff Is Selected
Q7 Do you teach classes in the College of Education?
Yes (1)No (2)

Answer If Who are you? Faculty or Staff Is Selected
Q8 Do you work in the education complex?
O Yes (1)
O No (2)
Q9 Are you full or part time?
O Full time (1)
O Part time (2)
Answer If Which best describes you? Undergraduate Is Selected
Q10 What is your major?
O Communication Disorders and Sciences (CDS) (1)
• Family and Human Services (FHS) (2)
O Educational Foundations (3)
Major not in the College of Education (4)Undeclared (5)
O Undeclared (5)
Assessment of Mills in the next of a continuous control of a control of the description o
Answer If Which best describes you? Undergraduate Student Is Selected Q11 What is your class standing?
· · ·
O Freshman (1)
Sophomore (2)Junior (3)
O Senior (4)

Answer If Which best describes you? Master's Degree Graduate Student Is Selected Or Which best describes you? Doctorate Graduate Student Is Selected

Q12 What program are you in? Choose all that apply. ☐ Special Education (Master's; Doctoral) (1) ☐ Communication Disorders & Sciences (Master's; Doctoral) (2) ☐ Counseling Psychology (Doctoral) (3) ☐ Couples and Family Therapy (Master's) (4) ☐ Critical and Socio-cultural Studies in Education (Doctoral) (5) ☐ Curriculum and Teacher Education (Master's) (6) ☐ Curriculum and Teaching-UO Teach K-12 Program (Master's) (7) ☐ Educational Leadership (Master's) (8) ☐ Educational Leadership (PhD, DEd) (9) ☐ School Psychology (Master's; Doctoral) (10) ☐ Communication Disorders (11) ☐ Special Education (K-12) (12) ☐ School Psychology (13) ☐ Music Education (14) ☐ Initial Administrator (15) ☐ English Speakers Other Language/Bilingual (16) ☐ English Speakers Other Language (ESOL) (17) ☐ Early Intervention/Early Childhood Special Education (18)

☐ Early Childhood (19)

☐ Continuing Administrator/Superintendent (20)

Answer If Who are you? Faculty Is Selected Or Who are you? Staff Is Selected

Q13 Which of these are you affiliated with? Choose all that apply.

	Behavioral Research and Teaching (1)
	Center for Advanced Technology in Education (2)
	Center for Equity Promotion (3)
	Communication Disorders and Sciences (4)
	Counseling Psychology and Human Services (5)
	Counseling Psychology (6)
	Couples and Family Therapy (7)
_	Center at Oregon for Research and Education (8)
_	Early Childhood CARES (9)
	Early Intervention Program (10)
	Educational and Community Supports (11)
	Educational Methodology, Policy, and Leadership (12)
	Education Dean and administration (13)
	Education Studies (14)
	Family and Human Services (15)
	Global Education (16)
	HEDCO Clinic (17)
	High School Equivalency Program (18)
	Center on Human Development (19)
	IntoCareers (20)
	Oregon Career Info System (21)
	School Psychology (22)
	Special Education & Clinical Services (23)
	Special Education (24)
	Student Academic Services (25)
	Western Regional Resource Center (26)
	Wired Humanities Project (27)
	Youth Enrichment / TAG (28)
Q1	4 Where is your primary workspace?
O	Lorey I. Lokey Education Building (1)
O	Clinical Services Building (2)
O	HEDCO Education Building (3)
O	Elsewhere on campus (4)
O	Off campus (5)

Answer If Where is your primary workspace? Lorey I. Lokey Education Building Is Selected Or Where is your primary workspace? Clinical Services Building Is Selected Or Where is your primary workspace? HEDCO Education Building Is Selected

Q15 Which floor is it on?

If Where is your primary workspace? Clinical Services Building Is

- O Basement (1)
- O 1st (ground) floor (2)
- **O** 2nd (3)

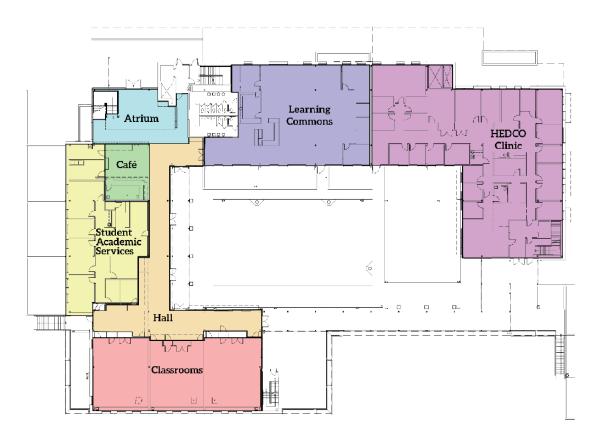
If Where is your primary workspace? Clinical Services Building Is Selected Or Where is your primary workspace? HEDCO Education Building Is Selected

O 3rd (4)

Answer If Where is your primary workspace? HEDCO Education Building Is Selected And Which floor is it on? 1st (ground) floor Is Selected

Q16 Please click on the zone where your primary workspace is.

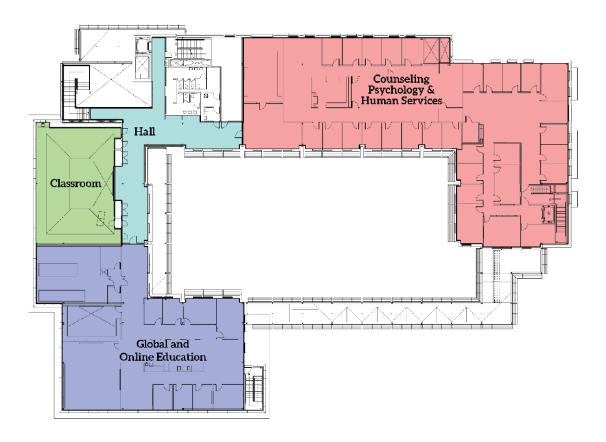
	Off (1)	On (2)
Atrium (4)		
Cafe (5)		
Classrooms (6)		
Student Academic Services (7)		
Hall (8)		
Learning Commons (9)		
HEDCO Clinic (10)		



Answer If Where is your primary workspace? HEDCO Education Building Is Selected And Which floor is it on? 2nd Is Selected

Q17 Please click on the zone where your primary workspace is.

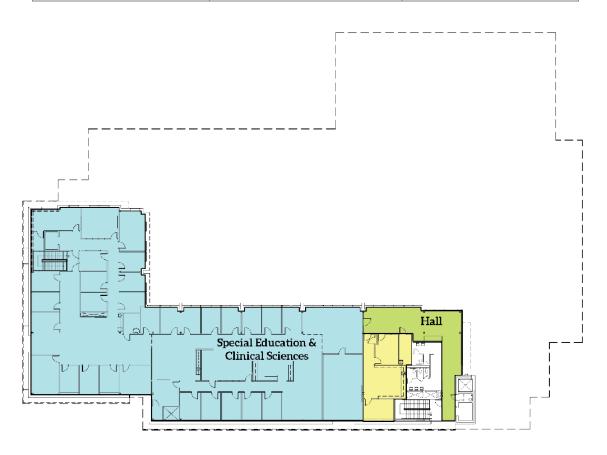
	Off (1)	On (2)
Classrooms (6)		
Hall (7)		
Hall (8)		
Unknown (9)		
Counseling Psychology & Human Services (10)		



Answer If Where is your primary workspace? HEDCO Education Building Is Selected And Which floor is it on? 3rd Is Selected

Q18 Please click on the zone where your primary workspace is.

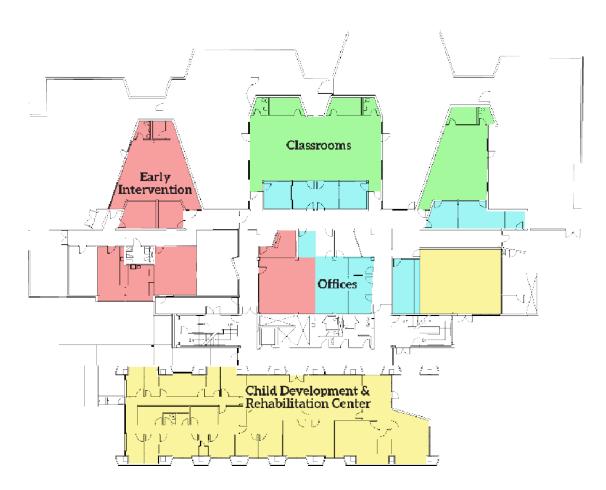
	Off (1)	On (2)
Unknown (6)		
Hall (8)		
Special Education & Clinical Services (9)		



Answer If Where is your primary workspace? Clinical Services Building Is Selected And Which floor is it on? 1st (ground) floor Is Selected

Q19 Please click on the zone where your primary workspace is.

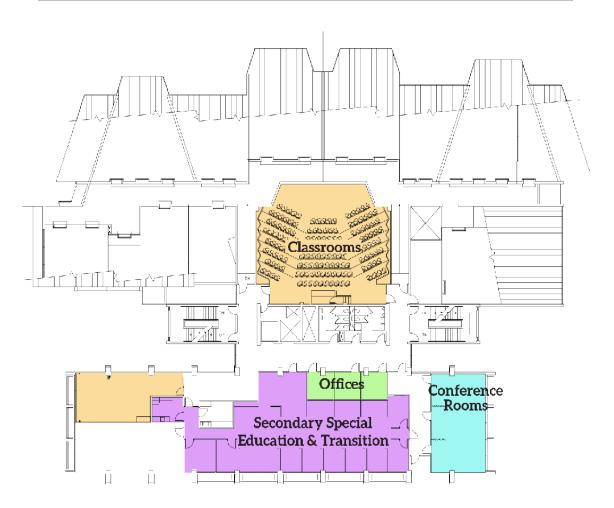
	Off (1)	On (2)
Child Development & Rehabilitation (1)		
Offices (2)		
Early Intervention (3)		
Classrooms (4)		



Answer If Where is your primary workspace? Clinical Services Building Is Selected And Which floor is it on? 2nd Is Selected

Q20 Please click on the zone where your primary workspace is

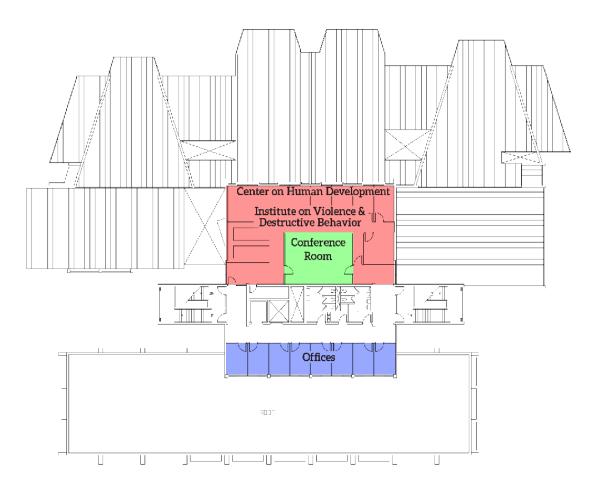
	Off (1)	On (2)
Classrooms (4)		
Conference Rooms (5)		
Offices (6)		
Secondary Special Education & Transition (7)		



Answer If Where is your primary workspace? Clinical Services Building Is Selected And Which floor is it on? 3rd Is Selected

Q21 Please click on the zone where your primary workspace is

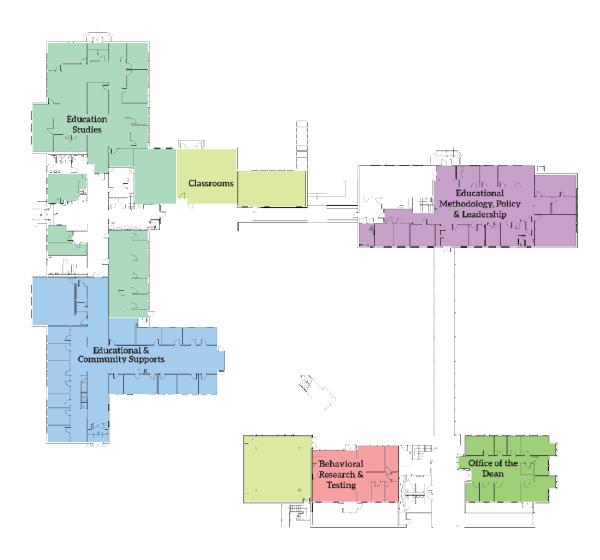
	Off (1)	On (2)
Human Development, Institute on violence and destructive behavior (4)		
Offices (5)		
Conference Room (6)		



Answer If Where is your primary workspace? Lorey I. Lokey Education Building Is Selected And Which floor is it on? 1st (ground) floor Is Selected

Q22 Please click in the zone where your primary workspace is

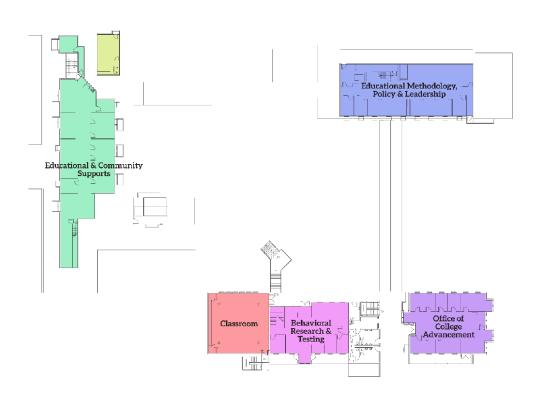
	Off (1)	On (2)
Classrooms (4)		
Education Studies (5)		
Educational & Community Supports (6)		
Educational Methodology, Policy & Leadership (7)		
Behavioral Research & Testing (8)		
Office of the Dean (9)		



Answer If Where is your primary workspace? Lorey I. Lokey Education Building Is Selected And Which floor is it on? 2nd Is Selected

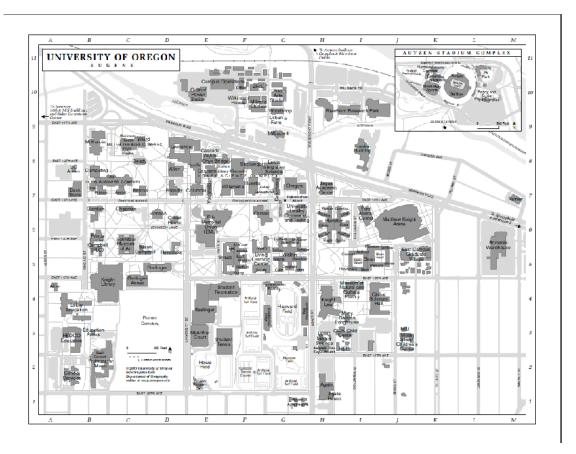
Q23 Please click in the zone where your primary workspace is

	Off (1)	On (2)
Classroom (4)		
Behavioral Research & Testing (5)		
Office of College Advancement (6)		
Educational Methodology & Leadership (7)		
Doctoral Student Lounge (8)		
educational & Community Supports (9)		



Answer If Where is your primary workspace? Elsewhere on campus Is Selected

Q24 Which building is it in? Please click on the building where your primary workspace is..



Answer If Where is your primary workspace? Lorey I. Lokey Education Building Is Selected Or Where is your primary workspace? Clinical Services Building Is Selected Or Where is your primary workspace? HEDCO Education Building Is Selected

Q25 How long has your primary workspace been in the \${q://QID5/ChoiceGroup/SelectedChoices}?

O	Less than 6 months (1)
\mathbf{C}	6 months to 1 year (2)

O 1 to 2 years (3)

O 2 to 4 years (4)

O 4 to 10 years (5)

O 10+ years (6)

Q26 What term best describes your primary workspace?

• A cubicle (2)

• An open work space (3)

O My residence (4)

O Other (5) _____

Q27 How often do you spend time in the following buildings?

	Never (1)	Less than Once a Month (2)	Once a Month (3)	2-3 Times a Month (4)	Once a Week (5)	2-3 Times a Week (6)	Daily (7)
Lorey I. Lokey Education Building (1)	•	•	O	O	•	•	O
HEDCO Education Building (2)	•	•	•	O	•	•	O
Clinical Services Building (3)	0	•	O	O	O	0	O

 $\ensuremath{\mathsf{Q28}}$ How often do you spend time in or use the following common spaces within the College of Education Buildings?

	Never (1)	Less than Once a Month (2)	Once a Month (3)	2-3 Times a Month (4)	Once a Week (5)	2-3 Times a Week (6)	1-2 Times a Day (7)	3+ Times a Day (8)
Ground floor of HEDCO Education Building (1)	•	•	O	0	•	•	•	O
The Learning Commons in the HEDCO Education Building (2)	•	•	•	•	O	O	•	o
The cafe on the first floor of the HEDCO Education Building (3)	•	•	•	•	•	•	•	•
Second floor of HEDCO Education Building (4)	•	•	•	•	•	•	•	O
Third floor of HEDCO Education Building (5)	•	•	•	•	•	•	•	•
Central crossing of Lorey I. Lokey Education Building (6)	•	•	•	•	•	•	•	0

First floor of Clinical Services Building (7)	•	•	•	•	•	•	O
---	---	---	---	---	---	---	---

Q29 How long, on average, do you spend in each of these common areas when you use them?

	I don't use this space (1)	0-5 minutes (2)	5-10 minutes (3)	10-30 minutes (4)	30 minutes to an hour (5)	More than an hour (6)
Ground floor of HEDCO Education Building (x1)	•	•	•	•	•	•
The Learning Commons in the HEDCO Education Building (x2)	•	•	0	•	O	0
The cafe on the first floor of the HEDCO Education Building (x3)	•	•	0	0	0	0
Second floor of HEDCO Education Building (x4)	•	•	0	•	•	0
Third floor of HEDCO Education Building (x5)	•	0	0	•	0	0
Central crossing of Lorey I. Lokey Education Building (x6)	•	•	•	•	•	0
First floor of Clinical Services Building (x7)	•	•	•	•	•	•

Q30 where do you usually go on breaks or when you have free time during the day?
 My primary workspace (1) My department lounge or common area (2) A common area in a College of Education building (3) An outdoor space close to a College of Education building (5) Elsewhere on campus (6) Off campus (7)
Answer If Where do you usually go on breaks or when you have free t A common area in a
College of Education building Is Selected
Q31 Which common area?
 Ground floor of HEDCO Education Building (1) The Learning Commons in the HEDCO Education Building (2) The cafe on the first floor of the HEDCO Education Building (3) Second floor of HEDCO Education Building (4) Third floor of HEDCO Education Building (5) Central crossing of Lorey I. Lokey Education Building (6) First floor of Clinical Services Building (7) A different department's lounge or common area. (8) Other (9)

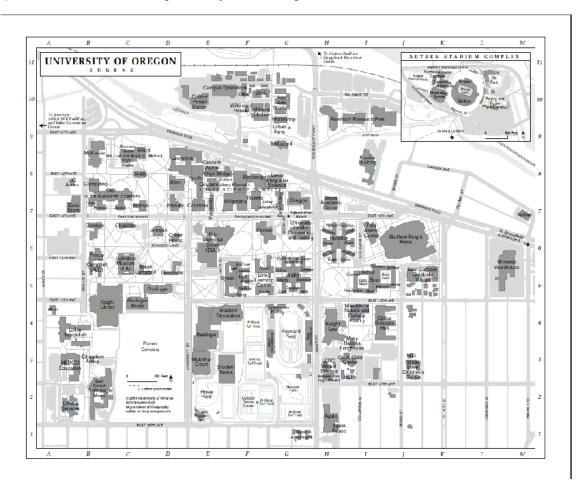
Answer If Where do you usually go on breaks or when you have free t... An outdoor space close to a College of Education building Is Selected

Q32 Please click on the map where you like to spend breaks or free time.



Answer If Where do you usually go on breaks or when you have free t... Elsewhere on campus Is Selected

Q33 Please click on the map where you like to spend breaks or free time.



Answer If Who are you? Faculty Is Selected Or Which best describes you? Master's Degree Graduate Student Is Selected Or Which best describes you? Doctorate Graduate Student Is Selected

Selected
Q34 Do you feel like your department has a "hub" where faculty and grad students frequently cross paths and interact informally?
O Yes (1) O No (2)
Answer If Do you feel like your department has a "hub" where facult Yes Is Selected
Q35 How close is this hub to your primary workspace?
O In the immediate vicinity (1)
On the same floor (2)
On a different floor of the same building (3)
O In a different building (4)
Answer If Do you feel like your department has a "hub" where facult Yes Is Selected
Q36 On an average day, how often do you pass through the hub?
O Never (1)
One to two times a day (2)
O Three to four times a day (3)
• Five or more times a day (4)
Answer If On average how long do you spend in the "hearth" each tim Less than a minute Is
Selected
Q37 On an average day, how often do you spend some time in the hub?
O Never (1)
One to two times a day (2)
O Three to four times a day (3)
O Five or more times a day (4)

А	inswer it bo you leet like your department has a "hub" where facult Yes is Selected
Q	38 On average how long do you spend in the hub each time you use it?
	Detween one minute (1) Detween one minute and five minutes (2) Detween five minutes and thirty minutes (3) Detween thirty minutes and an hour (4) Detween an hour and three hours (5) More than three hours (6)
Q	239 Does your department have a lounge or common area?
\subset	Yes (1) No, my department does not have a lounge or common area (2) No, I'm not associated with a department. (3)
Α	nswer If Does your department have a lounge or common area? Yes Is Selected
	40 Please rate your department's lounge or common area based on the following ttributes. You can drag the sliders or click on the bar to make the slider jump to a articular location. If you are unfamiliar with any of the attributes, select "Not Familiar".
Q a	
Q ar p	General ambiance/ appearance (1) Size (square footage) (2) Noise level (3) Heating (4) Cooling (5) Air quality (6) Access to power outlets (7) Quality of building materials (flooring, paint, etc.) (8) Electric lighting (9) Natural lighting (10) Comfort of furniture (11) Windows (12) Furniture arrangement (13)
Q ar p	Size (square footage) (2) Noise level (3) Heating (4) Cooling (5) Air quality (6) Access to power outlets (7) Quality of building materials (flooring, paint, etc.) (8) Electric lighting (9) Natural lighting (10) Comfort of furniture (11) Windows (12)

If Q4 Which best describes you? "Undergraduate student" is selected, then continue to Q41, all else skip to Q75.

Q41 How often do you study or work on schoolwork outside of class in the HEDCO building?

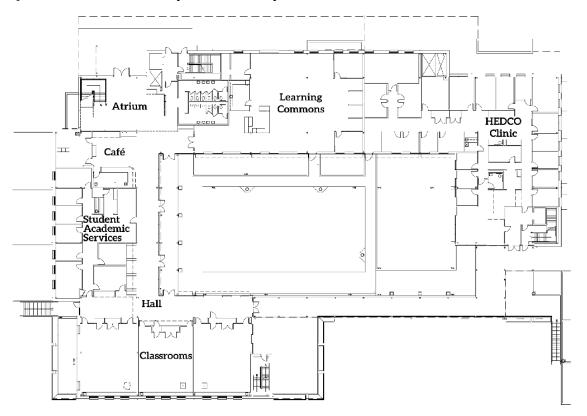
- O Never (1)
- O Less than Once a Month (2)
- Once a Month (3)
- O 2-3 Times a Month (4)
- Once a Week (5)
- **2** 2-3 Times a Week (6)
- **O** Daily (7)

Answer If How often do you study or work on schoolwork outside of c... Never Is Not Selected Q42 Where do you like to study or work in HEDCO? Choose all that apply.

- O Ground Floor (1)
- O Second Floor (2)
- Third Floor (3)

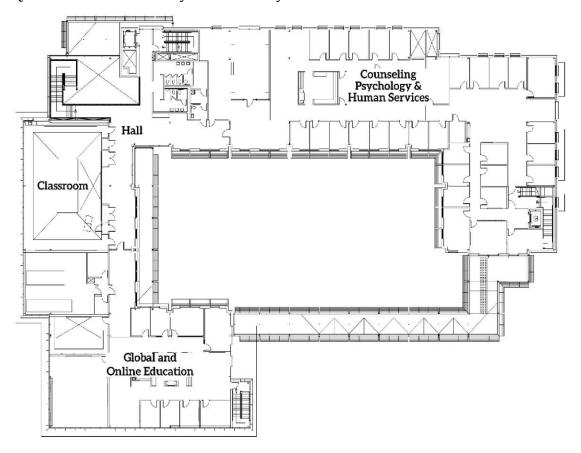
Answer If Loop 1: Ground Floor, Is Current Loop

Q43 Please click on where you like to study or work on schoolwork.



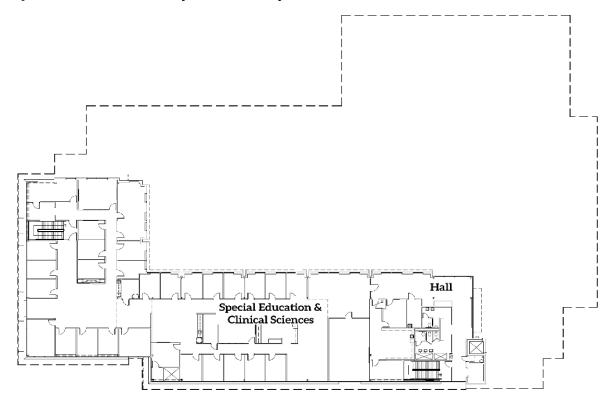
Answer If Loop 2: Second Floor, Is Current Loop

Q44 Please click on where you like to study or work on schoolwork.



Answer If Loop 3: Third Floor, Is Current Loop

Q45 Please click on where you like to study or work on schoolwork.



Q46 Why do you like to work there? Check all that apply.

- □ Location (1)
- ☐ Furniture (2)
- ☐ Good level of noise and activity (3)
- ☐ Accessibility to food (5)
- ☐ Good work-surface (6)
- ☐ Electrical outlets (7)
- ☐ Access to computers (8)
- □ View or scenery (9)
- ☐ Light quality (10)

Q47 Are there any other reasons you like to work there?

Q48 How often do you socialize outside of class in the HEDCO building?

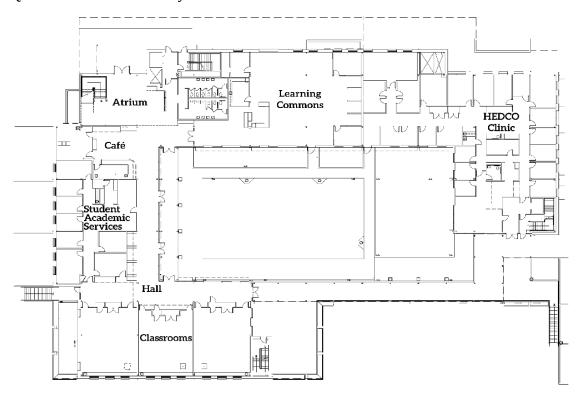
- O Never (1)
- O Less than Once a Month (2)
- Once a Month (3)
- O 2-3 Times a Month (4)
- Once a Week (5)
- **Q** 2-3 Times a Week (6)
- **O** Daily (7)

Answer If How often do you socialize outside of class in the HEDCO ... Never Is Not Selected Q49 Where do you like to socialize in HEDCO? Choose all that apply.

- O Ground Floor (1)
- O Second Floor (2)
- Third Floor (3)

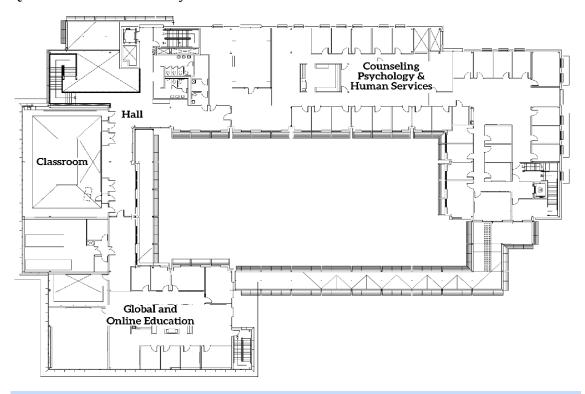
Answer If Loop 1: Ground Floor, Is Current Loop

Q50 Please click on where you like to socialize.



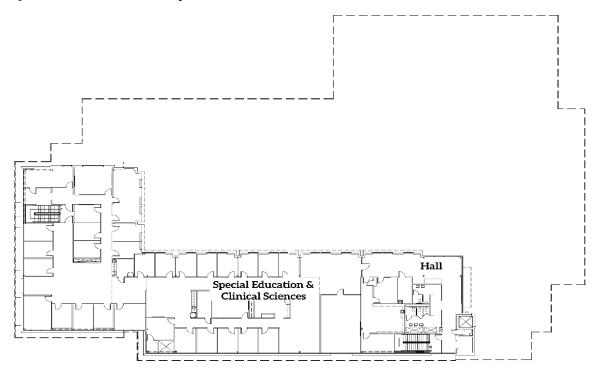
Answer If Loop 2: Second Floor, Is Current Loop

Q51 Please click on where you like to socialize.



Answer If Loop 3: Third Floor, Is Current Loop

Q52 Please click on where you like to socialize.



Q5	3 Why do you like to socialize there?
	Likelihood of seeing people you know (1) Location (2) Furniture (3) Good level of noise and activity (4) Accessibility to food (5) Good work-surface (6) Electrical outlets (7) Access to computers (8) View or scenery (9) Light quality (10)
Q5	4 Are there any other reasons you like to socialize there?
Q5	5 The last series of questions is specifically about the HEDCO Education Building
on slic	6 Common Areas Please rate the following attributes of the HEDCO Education building a scale from poor to excellent. You can drag the sliders or click on the bar to make the ler jump to a particular location. If you are not familiar with an attribute select "Not miliar"
	Ground floor common areas (1) Second and third floor common areas (2) Common area furniture (3) Common Area Furniture Arrangements (4)
on	7 Outdoor Spaces Please rate the following attributes of the HEDCO Education building a scale from poor to excellent. if you are not familiar with an attribute select "Not miliar"
	Courtyard (1) Entry plaza (2)

	se rate the following attributes of the HEDCO to excellent. if you are not familiar with an
OpportunitiesOpportunitiesOpportunities	for interaction with staff (1) for interaction with faculty (2) for interaction with students (3)
• 11	on Please rate the following attributes of the om poor to excellent. if you are not familiar with an
Exterior appearance (1) Interior appearance (2) Directional signage and finding yo	our way in HEDCO (3)

Q60 Please click on your favorite part of the ground floor common area of HEDCO.

Learning
Commons
Student
Academic
Services
Hall

Q61 Why is this your favorite spot?

-	The HEDCO building provides opportunities to display work so that it is visible to spective students, potential donors, and prospective faculty and staff.
O 1	Strongly Disagree (1) Disagree (2) Neither Agree nor Disagree (3) Agree (4) Strongly Agree (5)
Ansv	wer If Are you currently involved in research? Yes Is Selected
Q63	The informal nature of the café area encourages me to talk with other researchers share ideas there.
O 1	Strongly Disagree (1) Disagree (2) Neither Agree nor Disagree (3) Agree (4) Strongly Agree (5)
Ansv	ver If Which best describes you? Undergraduate Student Is Selected
Q64	wer If Which best describes you? Undergraduate Student Is Selected The informal nature of the café area encourages me to talk with faculty and grad lents there.
Q64 stud	The informal nature of the café area encourages me to talk with faculty and grad
Q64 stud	The informal nature of the café area encourages me to talk with faculty and grad dents there. Strongly Disagree (1) Disagree (2) Neither Agree nor Disagree (3) Agree (4)
Q64 stud	The informal nature of the café area encourages me to talk with faculty and grad lents there. Strongly Disagree (1) Disagree (2) Neither Agree nor Disagree (3) Agree (4) Strongly Agree (5)

Answer If M	thich hast	describes you?	Undergraduate	Student Ic Sc	Jactad
answer II w	vnich best (aescribes vou?	Undergraduate	Student is se	riectea

Q66 The informal nature of the atrium area encourages me to talk with faculty and grad students there.
 Strongly Disagree (1) Disagree (2) Neither Agree nor Disagree (3) Agree (4) Strongly Agree (5)
Q67 The HEDCO building has common areas where people like to congregate and want to spend time.
 Strongly Disagree (1) Disagree (2) Neither Agree nor Disagree (3) Agree (4) Strongly Agree (5)
Answer If Which best describes you? Undergraduate Student Is Not Selected
Q68 The HEDCO building supports a good balance between distinct department identities and interdepartmental interaction.
 Strongly Disagree (1) Disagree (2) Neither Agree nor Disagree (3)
O Agree (4) O Strongly Agree (5)
Q69 Do you have any comments or more detailed feedback on any of the above questions?
Q70 List up to three (3) things you would change about the informal social spaces in the HEDCO Education Building, rank in order of importance with (1) being the most important. Please provide an explanation of why with each change.
1 (1) 2 (2) 3 (3)

Q72 Gender:
 Male (1) Female (2) Other (3) Choose not to answer (4)
Q73 Age group:
 18-24 (1) 25-30 (2) 31-40 (3) 41-50 (4) 51-60 (5) 61 and older (6) Choose not to answer (7)
Q74 Thank you for responding to our survey, the "Submit" button at the bottom of this page will finalize your answers and record them. You will then be taken to a separate online survey where you may opt –in to the drawing or offer to meet for a follow-up interview so your answers to those questions will not be linked to your answers to this survey. This is to ensure the anonymity of your survey responses.
End of survey, respondents forwarded to contact information survey
Q75 Are you currently involved in research?
Yes (1)No (2)
If Q75 "No" is selected, AND Q4 "Master's Graduate Student" or "Doctorate Graduate Student" is selected, go to Q41, all else continue to Q76.

 $\ensuremath{\mathsf{Q71}}$ Is there anything else you would like to tell us?

Answer If Are you currently involved in research? Yes Is Selected			
Q76 Are you collaborating or have you recently collaborated on your project with other researchers?			
O	Yes (1)		
	No (2)		
Ans	swer If Are you collaborating on your project with other research Yes Is Selected		
Q7	7 Who are you collaborating with? Choose all that apply.		
	Other researchers from within your research unit (1)		
_			
	Other researchers from within the College of Education but not in your research unit (2)		
	Other researchers from within the University of Oregon but not in the College of		
	Education (3)		
	Other researchers from other universities (4)		
	Other researchers from non-academic institutions (5)		
	Professional educators or clinicians (6)		
	Other (7)		
Α	and the state of t		
	swer If Who are you collaborating with? Check all that apply.		
-	/QID35/SelectedChoicesCount Is Greater Than or Equal to 1		
Q7	8 How did you begin your collaborations? Choose all that apply.		
	Long distance correspondence (1)		
	Casual social interaction (3)		
	Other (5)		
	Chance encounter (6)		
	······································		

Answer If How did you begin your collaborations? Choose all that ap... Casual social interaction Is Selected Or How did you begin your collaborations? Choose all that ap... Chance encounter Is Selected

-	79 Which collaborations started after a chance encounter or casual social interaction? hoose all that apply.
	Other researchers from within your research unit (1)
	Other researchers from within the College of Education but not in your research unit (2)
	Other researchers from within the University of Oregon but not in the College of Education (3)
	Other researchers from other universities (4)
	Other researchers from non-academic institutions (5)
	Professional educators or clinicians (6)
	Other (7)
Α	nswer If Which collaborations started after a chance encounter or
q	://QID53/SelectedChoicesCount Is Greater Than or Equal to 1
_	80 Where have your chance encounters or casual social interactions
W	rith \${lm://Field/1} taken place? Choose all that apply
	My primary workspace (1)
	Second floor of HEDCO Education Building (5)
	Third floor of HEDCO Education Building (6)
	Central crossing of Lorey I. Lokey Education Building (7)
	First floor of Clinical Services Building (8)
	A different department's lounge or common area. (9)
	Other (10)
	My department lounge or common area (11)
	An outdoor space close to a College of Education building (12)
	Elsewhere on campus (13)
	Off campus (14)

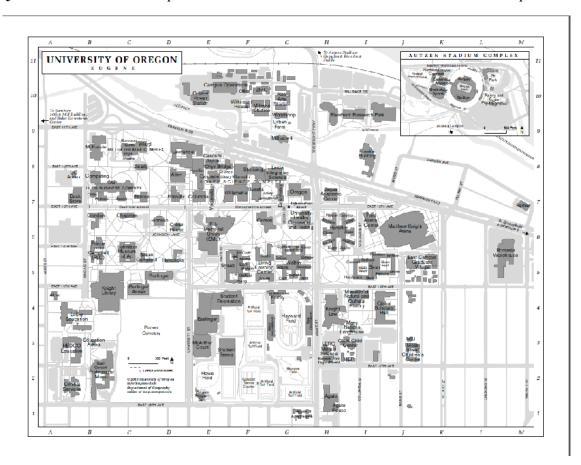
Answer If Where did the chance encounter or casual social interacti... An outdoor space close to a College of Education building Is Selected

Q81 Please click on the map where the chance encounter or casual social interaction took place



Answer If Where did the chance encounter or casual social interacti... Elsewhere on campus Is Selected

Q82 Please click on the map where the chance encounter or social interaction took place.



Answer If Are you currently involved in research? Yes Is Selected

Q83 How often do you discuss your project with colleagues who are not working on it?

- O Never (1)
- Less than Once a Month (2)
- Once a Month (3)
- O 2-3 Times a Month (4)
- Once a Week (5)
- **2** 2-3 Times a Week (6)
- **O** Daily (7)

Ans	swer If Are you currently involved in research? Yes Is Selected And How often do you discus
γοι	r project with colleagues who Never Is Not Selected
Q8	4 Who do you discuss it with? Choose all that apply.
	Other researchers from within your research unit (1)
	Other researchers from within the College of Education but not in your research unit
_	
	Other researchers from within the University of Oregon but not in the College of
	Education (3)
	Other researchers from other universities (4)
	Other researchers from non-academic institutions (5)
	Professional educators or clinicians (6)
	Other (7)
	Friends and/or family (8)
	swer If How often do you discuss your project with colleagues who Never Is Not Selected
	d Who do you discuss it with? Choose all that apply. q://QID60/SelectedChoicesCount Is
Gre	eater Than or Equal to 1
Q8	5 Where do you usually discuss your project with \${lm://Field/1}? Check all that
app	ply.
	My primary workspace (1)
	My department lounge or common area (2)
	A common area in the same building as my primary workspace (3)
	A common area in a College of Education building that is not where my primary
_	workspace is (4)
	An outdoor space close to a College of Education building (5)
	Elsewhere on campus (6)
	Off campus (7)

Answer If Where do you usually discuss your project with "\${lm://F... A common area in the same building as my primary workspace Is Selected And Is your primary workspace in a College of Education build... Yes Is Selected Or Where do you usually discuss your project with "\${lm://F... A common area in a different building from my primary workspace Is Selected And Is your primary workspace in a College of Education build... Yes Is Selected Q86 Which common area?

- Ground floor of HEDCO Education Building (1)
- The Learning Commons in the HEDCO Education Building (2)
- The cafe on the first floor of the HEDCO Education Building (3)
- O Second floor of HEDCO Education Building (4)
- Third floor of HEDCO Education Building (5)
- Central crossing of Lorey I. Lokey Education Building (6)
- First floor of Clinical Services Building (7)
- A different department's lounge or common area. (8)
- **O** Other (9) _____

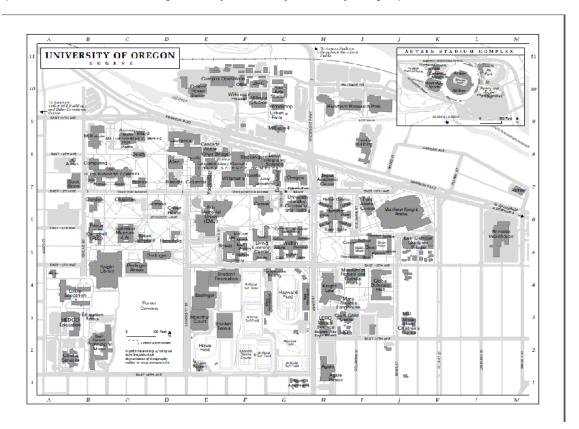
Answer If Where do you usually discuss your project with " \${Im://F... An outdoor space close to a College of Education building Is Selected

Q87 Please click on the map where you usually discuss your projects



Answer If Where do you usually discuss your project with " \${Im://F... Elsewhere on campus Is Selected

Q88 Please click on the map where you usually discuss your projects



Everyone go to Q55

Space does not permit all of the results collected in the online survey to be reproduced here. The complete data set is accessible for Campus Planning and they may make it available at their discretion.

APPENDIX D - INFORMAL INTERVIEW NOTES

1/30 - 12:18

Three undergraduate females sitting next to the fireplace

They are CDS students, so spend a lot of time hanging out in HEDCO. They especially like being close to the coffee. They hang out there even when they don't have classes in HEDCO. Their favorite things about the space are that it has comfortable seats, it is "loud but not too loud," the coffee shop, and access to computers in the Learning Commons. They wish that the fire was on all the time during the winter. What if it became a fountain in the summer? They see their faculty around all the time, and sometimes they talk to them, if they like them.

1/30 - 12:25

One undergraduate female sitting in the westernmost booth

She is a senior in the FHS program. She has classes all over Oregon's, including several in Mackenzie. She really likes the Learning Commons for working in. She likes that there is lots of seating on HEDCO's ground floor but wishes that there was more, especially around lunch time. She runs into teachers often in HEDCO, she likes that they are all close by and all in the same place. She only talks with them "occasionally." Her main problem with the space is that the wireless internet is really weak sometimes.

1/30 - 14:15

One undergraduate female sitting at table on south side of main hall, across from the booths.

She is a sophomore, and a business student. She doesn't have any classes in HEDCO but it is close to where she lives so she uses it often. She thinks that it is a nice environment and that it is mostly pretty quiet, it is a good place to do homework. Sometimes it gets busy, and when its busy she does somewhere else because she feels like it is really for the education students and she doesn't want to take one of their spots.

1/30 - 14:17

One undergraduate male sitting at a table in the hall across from the café

He is not in the college of education but has some classes in HEDCO. He says that his favorite things about the space are the view from the tables and the close access to coffee.

When asked if he would change anything he said he would not, it has a view and coffee, that's all he needs.

2/4 - 9:43

One undergraduate female sitting outside classrooms

She is waiting to go into one of her classes. She is an educational foundations major. She usually arrives an hour to thirty minutes early and hangs out. She really likes the Learning Commons for doing homework in. The thing she dislikes the most about the building is the trapezoidal tables in the classrooms, she says someone is always facing backwards in the classrooms. She does see old teachers around the building, but not her current ones as much. She really likes HEDCO.

2/4 - 9:46

One undergraduate female sitting in the westernmost booth

She is waiting for one of her classes. She is an educational foundations major. She usually arrives at around 8:30 for her 10:00 class. One of her favorite things about the building is the table groups in the classrooms instead of rows. She really likes that there is food available in the ground floor. She does not like the benches on the ground floor, she wishes there were more tables. She does see her faculty around a bit, but not very much.

2/4 - 10:09

One undergraduate female sitting at a table across from Student Academic Services

She is a psychology major, who just got out of her American Sign Language classroom. She likes to do homework in HEDCO after class. She really likes the first floor of HEDCO, especially that there is access to coffee. She likes that if you want to be warmer you can sit by the fire and if you want to be cooler you can sit by the windows in the hall. She likes that the layout of the first floor is open, but not distracting. She kind of wishes there were more tables, or more seating, even though she said she recognizes that there might not actually be room for them at the moment.

2/4 - 11:37

One undergraduate female sitting on a bench across from the classrooms

She is not a member of the College of Education but has just applied to it. She is waiting for class and usually gets to class about five minutes early, but this time happened to be

earlier than that. Her favorite thing about the space is the access to coffee. She does not like the benches, she wants more seats with backrests.

2/4 - 11:41

One post-baccalaureate male sitting on a bench across from Student Academic Services

He is actually a computer sciences major, but he has had several non-major classes in the HEDCO building. He is currently waiting for his class to start and usually gets there between thirty and fifteen minutes early. He really likes the "nice" aesthetic of HEDCO. He enjoys the furniture, he likes eating lunch at the tables. He kind of wishes that there was more seating for single people, where they don't feel like they are, by themselves, taking up space that a large group of people could use. He would also like more seating in general.

2/4 - 11:45

One undergraduate female sitting by the fireplace

She is a sociology major, but is in HEDCO for some American Sign Language classes. She usually gets here about 20 minutes early and really likes the building. She loves the café and the fire. She likes that it is a more open floor plan. She likes the benches but wonders if there could be some couches near the fire. The only problem she has with the space is that sometimes the café gets a little loud, so maybe if there were some glass or something blocking sound from the café but keeping the area feeling open that might be nice.

2/4 - 18:45

One graduate female sitting against the fireplace

She says that this spot is her favorite spot in the building. She likes the fire, and she likes that she can see people she knows coming through. The seating around the fire place is kind of flexible, but not flexible enough. She says it has trouble accommodating different sizes of groups and, if there is a group sitting here, it is hard for an individual to also sit here and separate him or herself from the group.

2/6 - 10:40

Two undergraduate females sitting across from the classrooms

They are waiting for a class to start. They said that they have an awkward one hour gap in between classes so they usually just come here then to wait for their class to start. They think that the ground floor of HEDCO is a really nice space, sometimes it gets crowded but

they can usually find a space. They really like the booths. Overall they think the building is really nice and better than the other buildings used by the College of Education.

2/6 - 10:42

One undergraduate male sitting by the classrooms

He is not in the College of Education but he wants to apply to get into it. He is waiting for a class to start, usually he only gets here about five minutes early, but this time he was earlier. He thinks that HEDCO is one of the nicer buildings on campus, it is warm, there are comfortable seats, he likes the little tablet tables attached to the benches. When asked if he didn't like anything or would change anything, he said there were no problems and that it was all good.

2/6 - 10:45

One undergraduate male sitting by the classrooms

He is in the O-Teach Program. He is waiting for classes to start, he estimates that he is usually around 15 minutes early. He likes the open tables, he likes that it's not too crowded, and that it is reasonably quiet. He just wishes that there were more tables there.

2/6 - 10:47

One undergraduate female sitting in the westernmost booth

She is an undergraduate in the College of Education. She is waiting for class to start. It depends on the day, and what the gaps are between her classes so she sometimes is there as much as an hour early, but usually it is closer to fifteen minutes early. She thinks HEDCO is really nice, it feels welcoming and it is helpful to students. She also described it as "inviting and useful." She said that she usually does run into students that she knows. She especially likes the Learning Commons.

2/6 - 10:50

One undergraduate female sitting in the middle booth

She is not in the college of Education and doesn't have any classes in HEDCO, but she does have a class in the Lokey Education Complex. She likes to wait here for it instead of there because HEDCO is quieter, more open, and there is a really good view. She can't think of anything she dislikes about HEDCO, it is all good.

2/6 - 10:51

A female sitting on the benches across from Student Academic Services

She is not a student of the University of Oregon at the moment, she was at some point and is currently in the process of applying to be once again. She is here today for an interview that is somehow part of this process. She really likes how warm HEDCO is, and she likes the fire. She likes that the seating areas in HEDCO feel partially enclosed. She likes the seats in the hallway and thinks that outlets are really important in social spaces.

2/6 - 10:57

One undergraduate male sitting under the stairs in the atrium

He is not in the College of Education and he does not have any classes in HEDCO, he is there today to meet someone. He really likes HEDCO though, he thinks it is nice and open, "the architecture is really nice" and modern and clean looking. It feels really accessible to him. He wishes it were closer to the center of campus so he could use it more. He does not like the Lokey Education Complex as much, it seems old, "rickety," and confusing to him. The Clinical Services building also seems really old to him. The other buildings he really likes on the University of Oregon campus are Lillis and Peterson and the rest of the buildings in the business complex.

2/6 - 11:00

One undergraduate male sitting at a table in the second floor hallway

He is a music student, but he often comes over to HEDCO to hang out. It is a nice place to study, he likes the café and the fireplace. He thinks that the architecture is really nice and aesthetically pleasing. He thinks overall it feels newer and nicer. He particularly enjoys the windows.

APPENDIX E - FORMAL INTERVIEW NOTES

2/11 10:30 - Faculty member of FHS

She really likes the lounge spaces in her department. She confirms which one is mostly used by faculty and which one is mostly used by grad students. She says that there is lots of mingling between staff and students, and that faculty talk and visit amongst themselves while preparing food.

She uses the ground floor of HEDCO for meetings with students and for meetings that use the technology such as the smart boards in the study room we are in.

She sees the Learning Commons primarily as a work space for students.

She sees a lot of people near the fireplace and in the café.

She says that many faculty members meet with students out near the café or at a table on the ground floor but she does not. There are too many distractions. She finds that the café and atrium are not "conducive to conversation." She likes them though, she thinks it is a great use of mixed space.

She does not like the Clinical Services Building at all, she worked at another university for a while that had a brand new facility where she was working, and when she came back here she was very pleased to find HEDCO had been built.

She has noticed a difference in the community since HEDCO was built, she things that the environment we are has a big effect on our mood, our productivity, and our motivation. She really likes most of the new buildings on campus, like Lillis, especially the atrium there.

She likes that this style of architecture is new, bright, clean,

What she likes in a place to work:

Natural light, control of lighting for specific spaces, clean, inviting, aesthetically pleasing, technology/lots of outlets, equipment that works.

She wants community spaces to be open to a wide range of people.

She has never had a problem finding the 3^{rd} floor, she comes in through the parking lot and the elevators are well labeled.

Informal interaction doesn't really play a role in her work, but she thinks that catching up with people face-to-face is important.

She thinks that universal design was pretty well done in HEDCO. She researches Autism Spectrum Disorder and says that people on that spectrum often need control over their lighting, break spaces, small spaces. The study rooms in the LC are actually pretty good, if only they had shades for the glass.

2/11 13:30 - staff member

He says that before HEDCO was built the college was totally lacking in social spaces.

The idea for booths was actually tested first in Lokey and it was very popular so they put them into HEDCO.

He says the Café was a big agenda item, he sees faculty out there all the time.

"There's such a synergy in accidental meeting"

The building committees wanted a lot of interaction between user groups, they also wanted to move more research on campus but that didn't work out. He thinks the chance encounter thing worked out really well though. Much better than in Lokey.

He said that the main hallway of the ground floor is a big draw, and it keeps people in the building more, instead of going other places. The outdoor rooms get a lot of action as well, when the weather is nice the plaza is used for a lot of events and the courtyard is used as well.

He doesn't actually like the courtyard in Lokey as much, he thinks a tree blocks too much of the sun.

He says that the Learning Commons is really a place for students to work together, and for the most part it works but some of the individual study rooms transmit a little too much sound. He says the computers near the front do a great job of snagging people who just want to print. The traffic patterns work well, the LC desk is the de facto front desk for the entire building.

He likes the furniture, he is glad it is really sturdy, he doesn't really like the L shaped couches because they don't get used as much. He really things for working people want tables and the couches don't cut it. The tables get more use than the couches and more than the individual soft chairs. He said that the benches in the hallways get used a lot.

He doesn't really like the fireplace, thinks it is kind of a waste of gas but it does seem to draw students so that is cool.

He say it is really confusing that Lokey Rooms are numbered Education XXX, and HEDCO rooms are numbered HEDCO XXX but people think of HEDCO as the education building, so they come here for EDU rooms and have to be routed back over to Lokey. Around the term he always has to help lots of confused students.

He says that he really tries to discourage staff and faculty from using the LC, it is for students.

He says a lot of faculty and staff use the café, but they usually grab and go, not stick around for a while. Partly that is because staff just get 15min breaks. There is not that much noise in the LC, the drop in printing zone is a good buffer.

He says that he thinks the benches out by the fireplace actually work really well for A.S.L. students and speakers, he thinks it would be interesting about looking at what they need for social space. Probably need to face each other or something.

Informal interactions are a big part of his job, but mostly people find him, instead of vice versa. Sometimes he would just walk through the hallway and people would just stop him and ask their questions.

He says that after HEDCO there was a huge difference in the community. He used to work in CSB and hated it, it was "cell-like" he ended up packing up and moving to the lounge attached to the Office of the Dean. He says that students were scattered all over. And he has always thought social spaces were really important.

He says that the hallways do get pretty noisy, mostly because of the hard surfaces, and that on the third floor all that noise echoes around and gets focused into 307 where this guy is trying to work but hears everything.

He is not a fan of the art in the courtyard, he and his wife don't really think it is "family friendly"

2/13 10:30 – 2 staff members from Education and Community Supports

They work in Lokey, don't get over to HEDCO very much but they do come for coffee every so often. They like the fireplace but never get to sit there because it is always occupied.

The one who takes the elevator said that the third floor was no problem to find but the one who likes taking the stairs said it was really hard, once she tried to go up in the west wing of HEDCO and it didn't work.

In general they like the building, they like how they managed to fit so much program into it, the College of Ed needed it really bad.

They get too much traffic by where they work, it is very distracting, people also hold impromptu meetings near their desks when they are trying to work.

They say that the booths are always really popular with students for group projects.

They say that their break room is also their copy and supply room, it is not big enough to have a table or chairs in there, so there is no place to eat. Whenever they try to eat standing up in there they get weird looks from people making copies.

They say that the numbering system in Lokey is very confusing. They always get undergrads coming up to their desks and asking them how to get places.

They like the fireplace in HEDCO, it is very nice, very popular, creates nice ambiance.

2/13 - 13:00 Faculty EMPL

The kitchen in their department works pretty well. She runs into people there lots of times. It is nice and communal.

She is not in HEDCO very much, but she does go over every so often to meet people for coffee. She likes the natural light and the gathering spaces.

Usually on breaks she goes outside and takes walks, often through the cemetery. She likes the Lokey courtyard but doesn't really hang out there very much.

She likes that she works in the old-fashioned former school building, but can go over to HEDCO when she wants. She thinks that there is pretty good faculty-student interaction in HEDCO, but not so much in Lokey. Her department only has grad students, she only has PhD. Students. Her building gets locked from noon to one every day while the administrative assistants are on lunch. She sympathizes with them needing lunch but it seems like it really blocks a prime time for students to try to catch their professors in their offices. It makes the faculty seem less accessible.

She likes that the dean here is on the ground floor near the circulation. It has a nice non-hierarchical vibe, she worked before this at a school where the dean was at the literal top of a tower and everyone was below and she didn't like that image.

2/13 - 14:00 former grad student

Had an office in CSB, a "walk-in closet"

Was over in HEDCO a fair bit, for classes, meetings, coffee

She used the booths a lot for group projects, and the Learning Commons

She thinks there were not enough chairs in the common areas, and she wished there were more chairs with backs instead of benches, to help people's postures.

She says that the issue with benches in a line is that more than three people can't talk together without someone sitting on the floor.

She says when she was on the third floor there were sometimes distracting disruptive children from the clinic running around , plus there were too many glass walls with no blinds.

She thinks getting to the third floor is very confusing for people, because it looks like you are taking the fire stairs.

It was also hard to tell people where the restrooms are.

She said that there is this issue in the FHS, CS lounges where faculty would leave their office doors open in an attempt to appear accessible. But the people in the lounges didn't want to disrupt the faculty working, so when the doors were open they would get really

quiet, which was frustrating because they couldn't talk as much as they would have otherwise.

She likes the secretary locations in those departments, very useful.

She thinks HEDCO's lobby is very welcoming, very nice. Food and Coffee are very important. She noticed in CSB that there is a nice lounge for master's students, but she was a PhD. Student and sometimes taught masters students so she could hang out there much because she was their teacher and also sometimes she had confidential data with her like grades.

She wonders why all the benches in the HEDCO courtyard face away from the building, it is very exposed, and pointing at a parking lot. Why look there when there is a nice relaxing green space right behind you?

2/18 10:00 - EMPL grad student

Student in EMPL program. They have a tiny kitchenette for faculty and staff, and a tiny room for students on the second floor where there might be a kitchen but she doesn't really know because she never spends time there. She does research in BRT and hangs out there a lot. They have a nice kitchen which she uses to prepare lunch and make coffee. Mostly she meets people in HEDCO.

She likes the area near the fire.

She uses the third floor to work sometimes, and says that it can be very hard to find if you don't know that it is there. The second floor is busier. Where she likes to work really depends on her mood, but she usually does not want to talk to people or be distracted by people. So working on the ground floor is really hard for her. Plus the little tablet desks on the benches are useless for working.

On breaks she likes to walk outside or sit outside.

She says that she often uses the Crossing in Lokey. Lots of people use it because you have to go through it to get to the bathrooms from the classrooms.

She runs into people in HEDCO frequently.

She does talk a lot about her research with her peers and people from other programs, but everyone is so busy that it usually only happens during breaks in classes that they are all taking.

She thinks overall the school has a good community, you can decide how much interaction you want with people. It is kind of competitive but that goes with the territory when the school is one of the top education schools.

The statue of the girl with the hair by the Dean's office always freaks her out when she walks by at night.

2/18 11:30 - EDS grad student

She is a student in an obscure EDS sub-discipline. The doctoral student lounge for EDS is a small windowless room on second floor. It is actually accessed separately from the department so she rarely goes into the department or runs inot people there.

She likes the 2^{nd} floor of HEDCO because it is quieter and there are a lot of plugs.

She is a GTF, she usually holds office hours in the café area, and she often sees her undergraduate students in HEDCO, but very rarely does she see her faculty members, and then only in passing. She tries to talk to the undergrads though, often they stop and say hi and she does as well.

She really likes the fireplace, wishes the atrium were used more.

She doesn't like that the only common area is the crossing. She says an issue is when she is waiting there to meet with a professor she is always self-conscious about the other professor's offices around and worried that she is making too much noise and annoying them.

She likes to hang out outside, but mostly does it in the entry plaza, not the HEDCO courtyard, she is not sure why.

She has used these study rooms a couple of times.

Mostly she works in HEDCO because it is nicer than Lokey. Coffee is very important, she likes having easy access to that. But when she wants to meet up with people they will usually go somewhere else, like Marche, or Café Roma.

Her research doesn't really involve informalt interactions with people. She is collaborating with some people online. Because she has no reason to be in the department area, she rarely sees her colleagues or professors, kind of wishes she did. She says every so often there are department social functions, but they are very poorly attended.

She knows very few people from other departments.

She spends most of her time working, does not spend a lot of time socializing.

The booths are really popular for group projects.

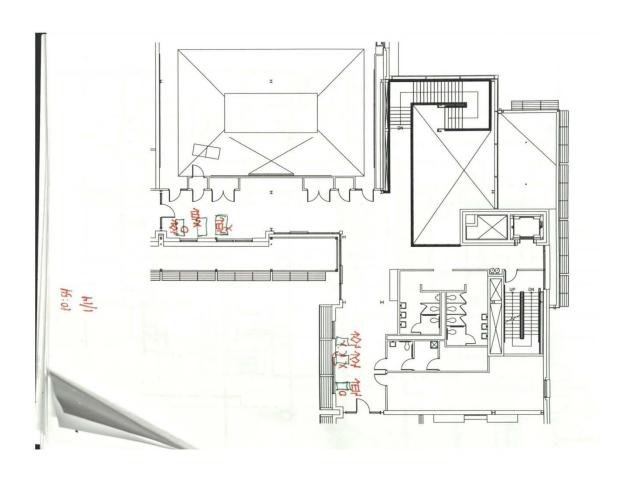
Outlets are very important, she needs to plug in her laptop a lot.

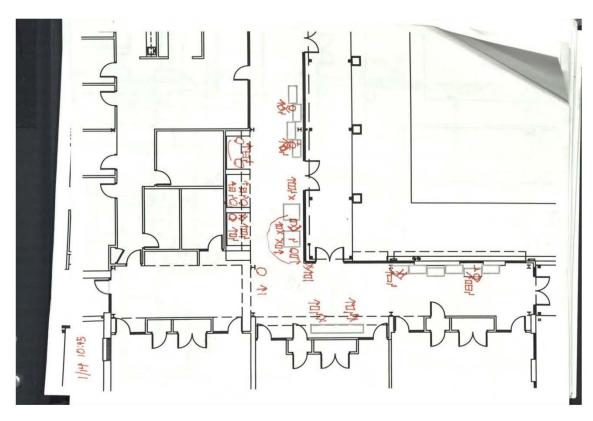
She really likes the aesthetics of the building, the openness, it seems nicely designed.

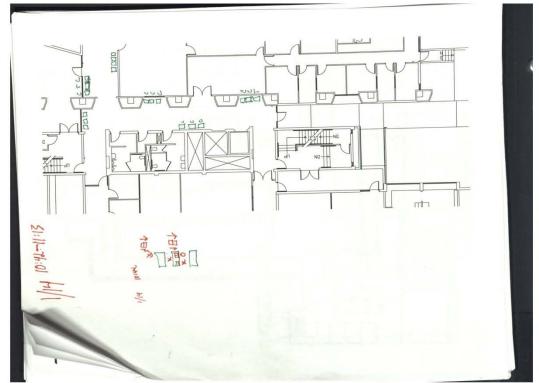
She says that CSB looks very 70s and Lokey has its charm but "this is just lovely"

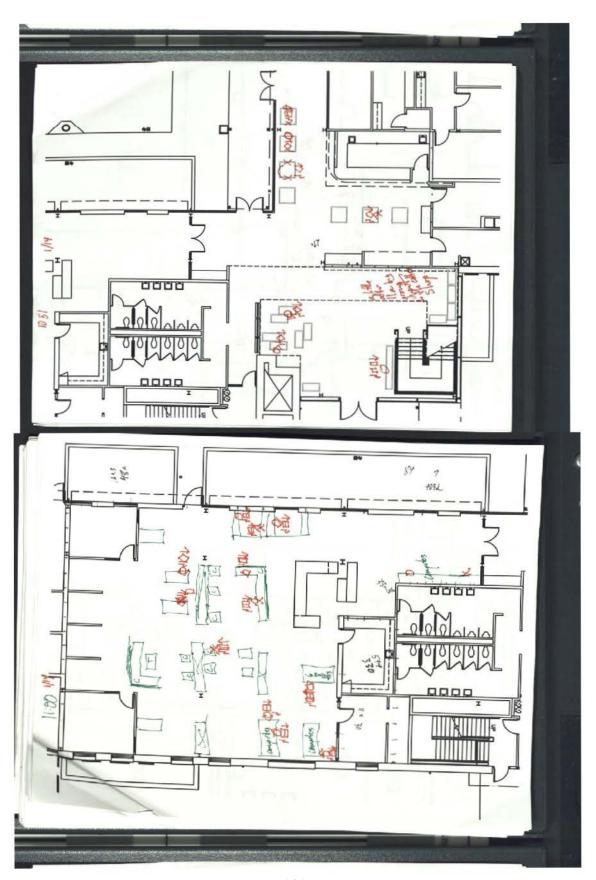
The big windows are nice.

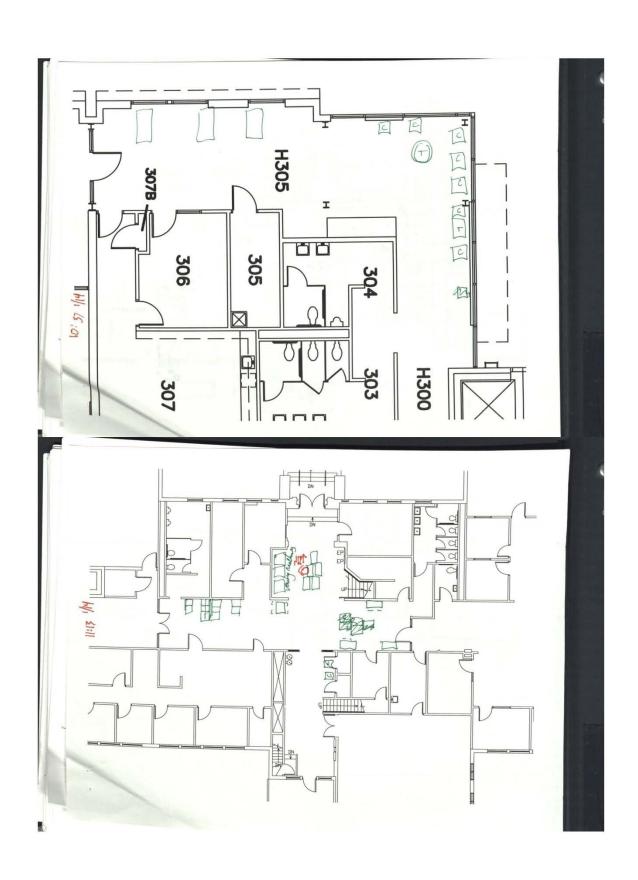
APPENDIX F- BEHAVIOR MAPPING

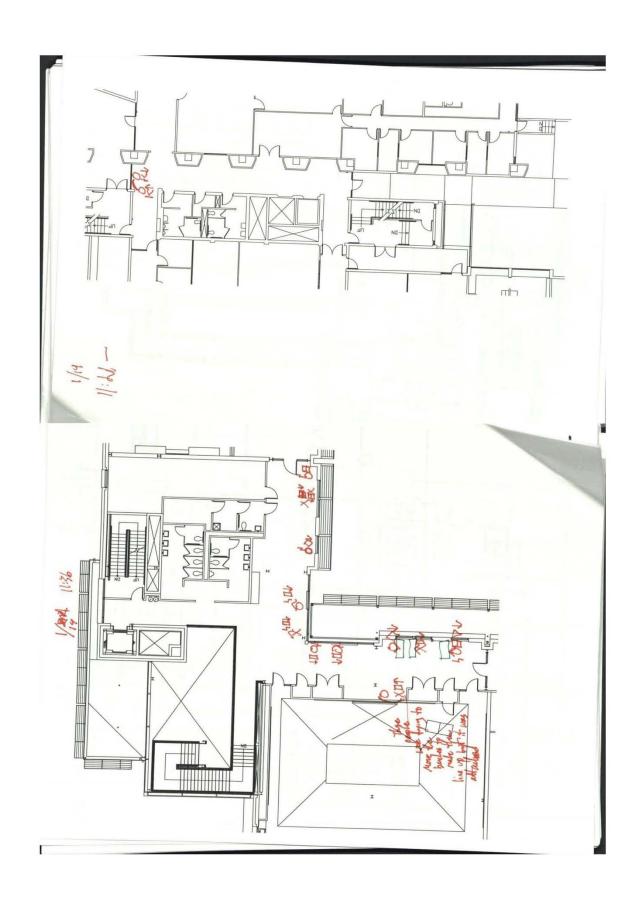


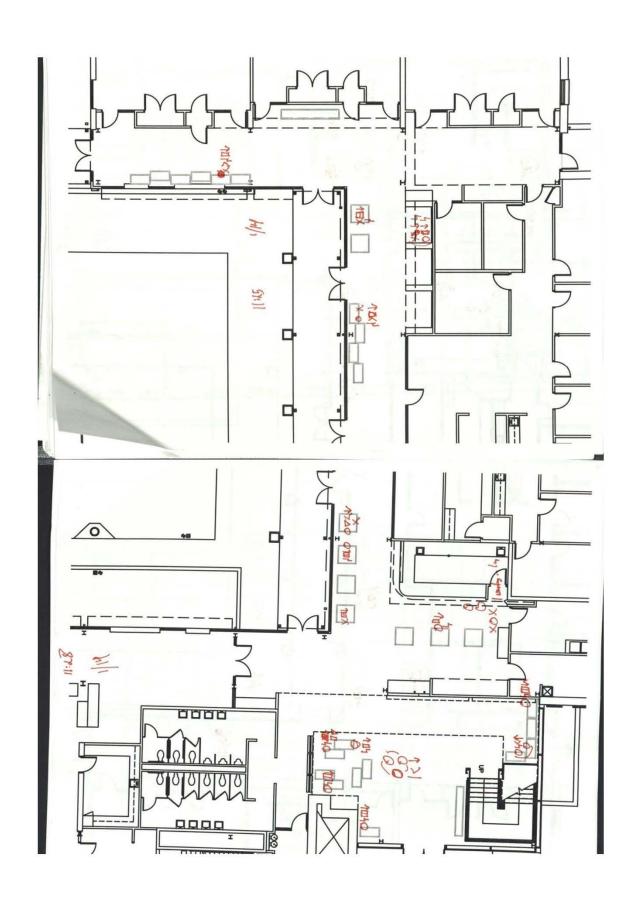


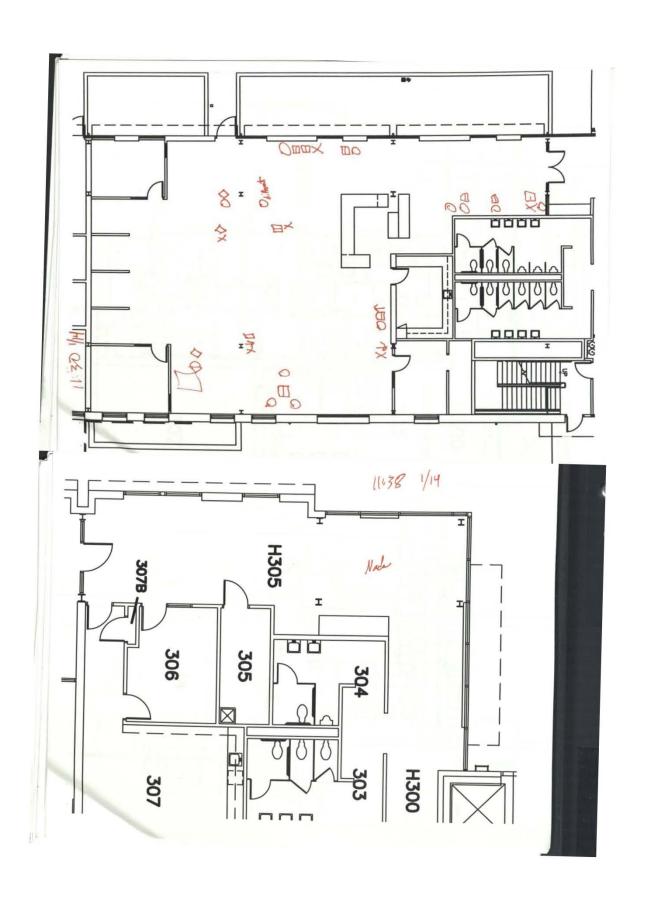


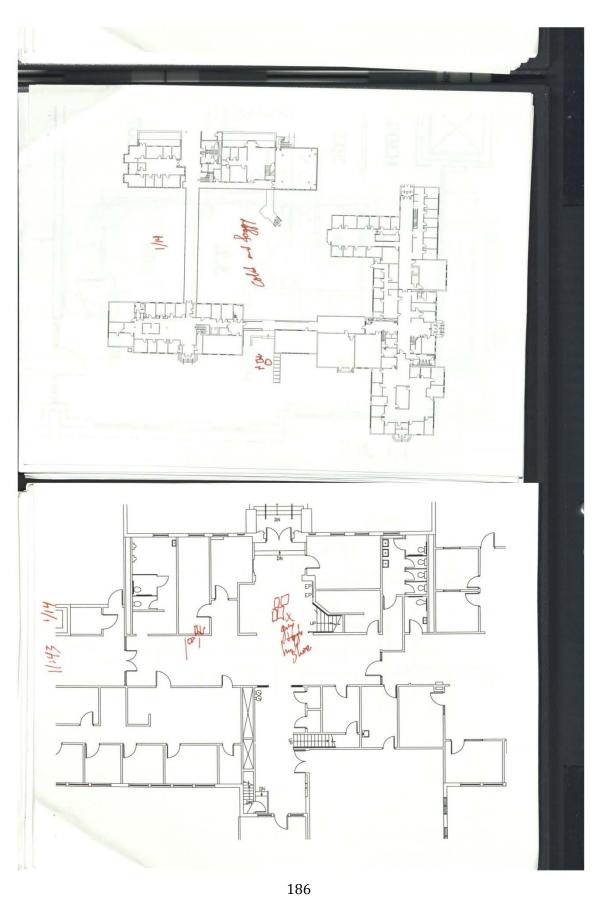


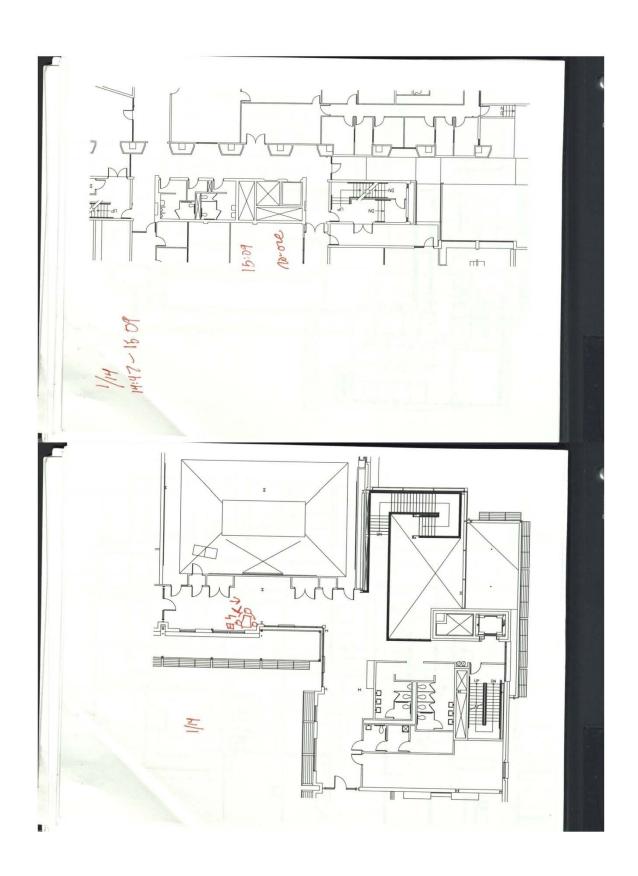


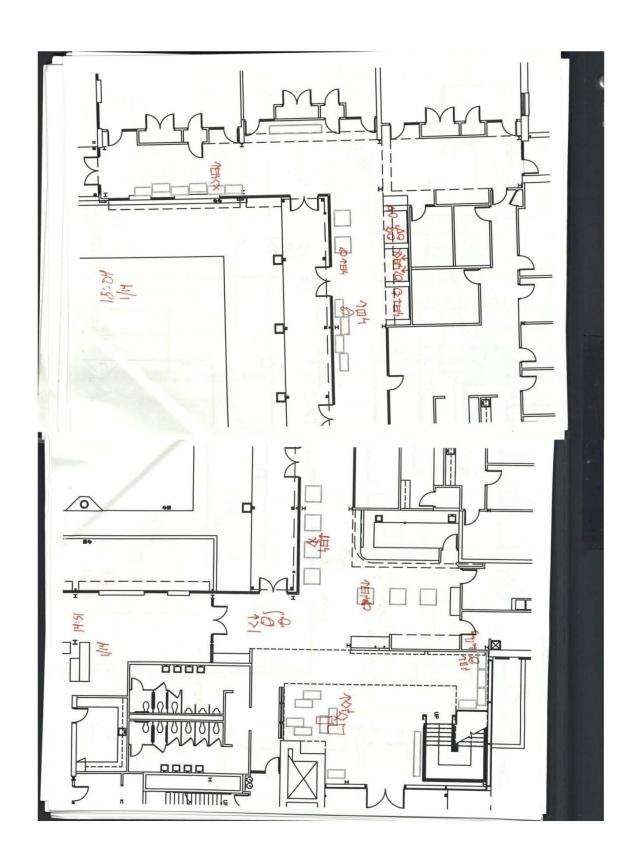


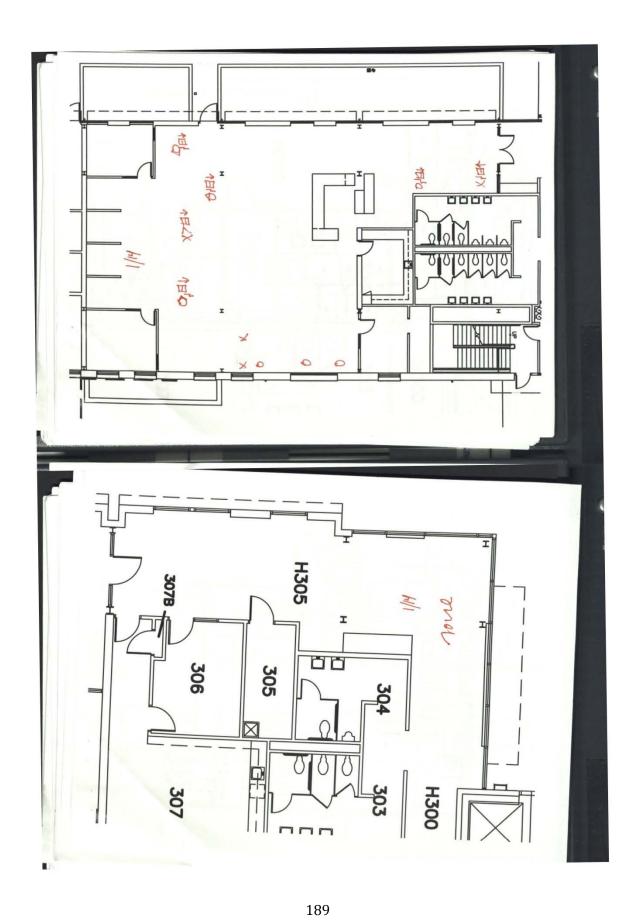


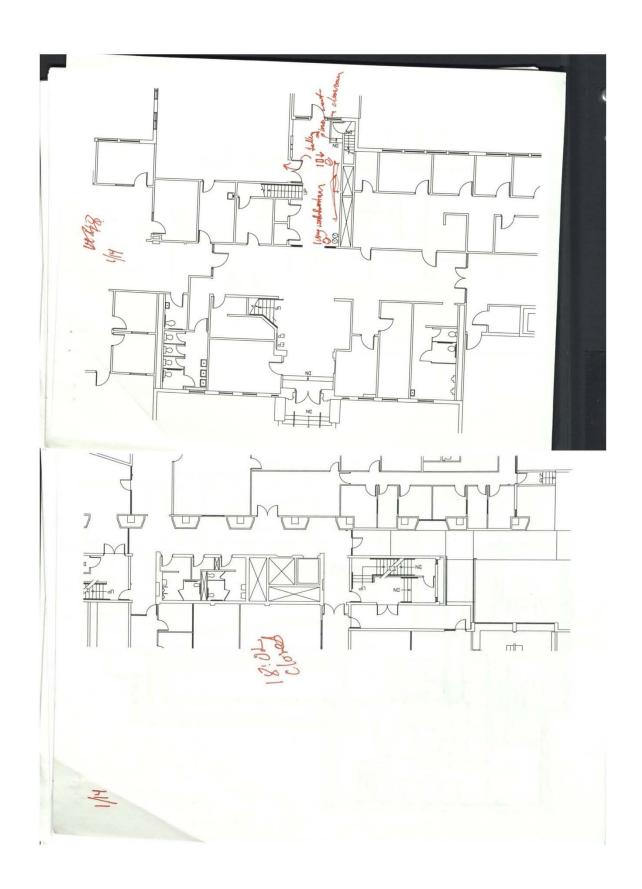


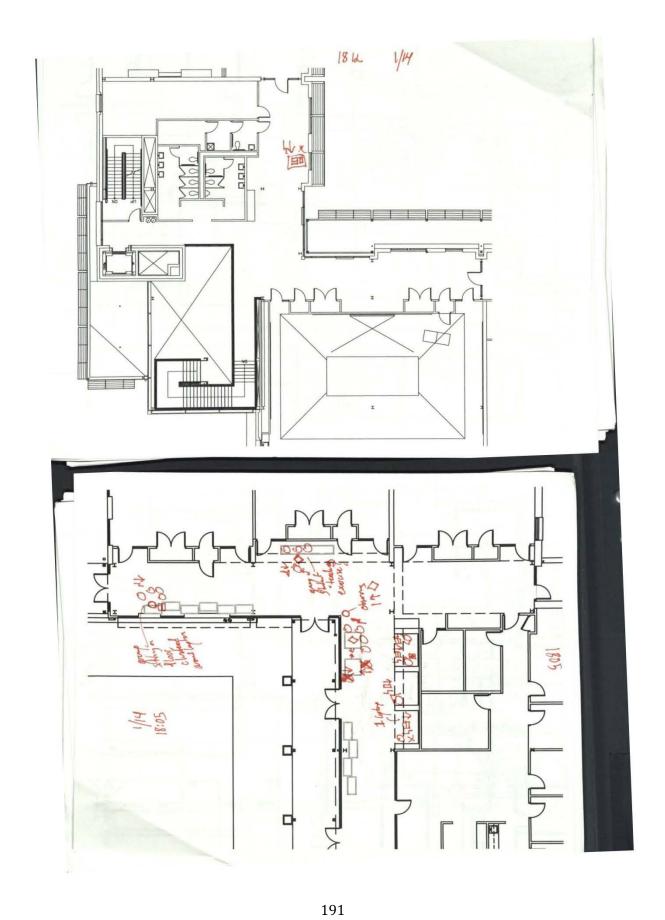


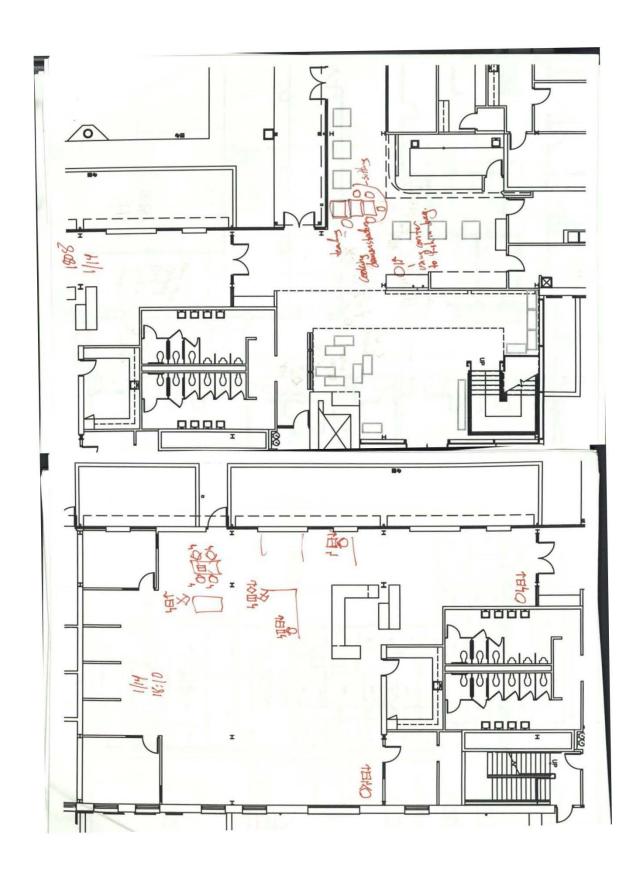


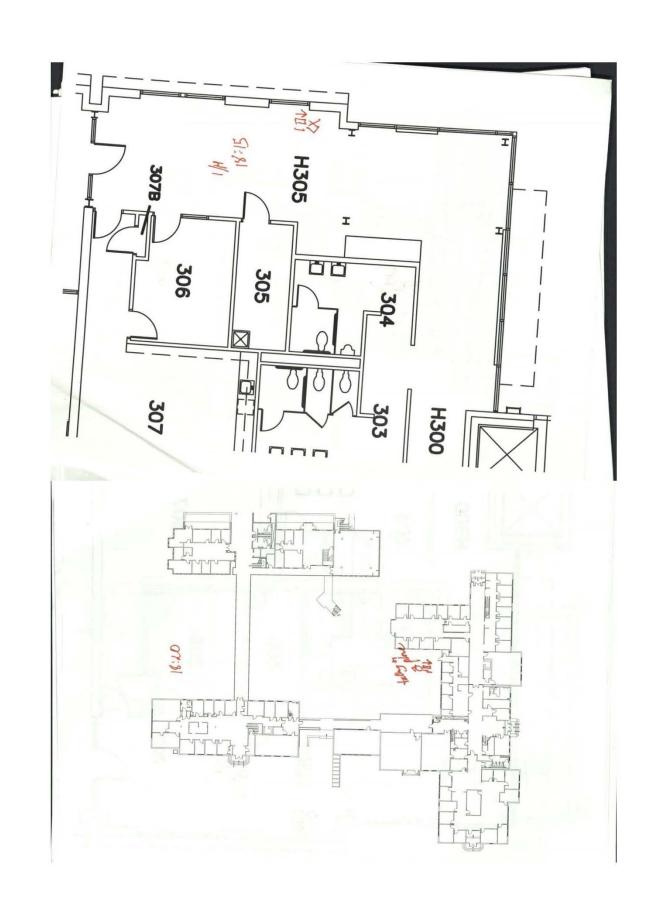


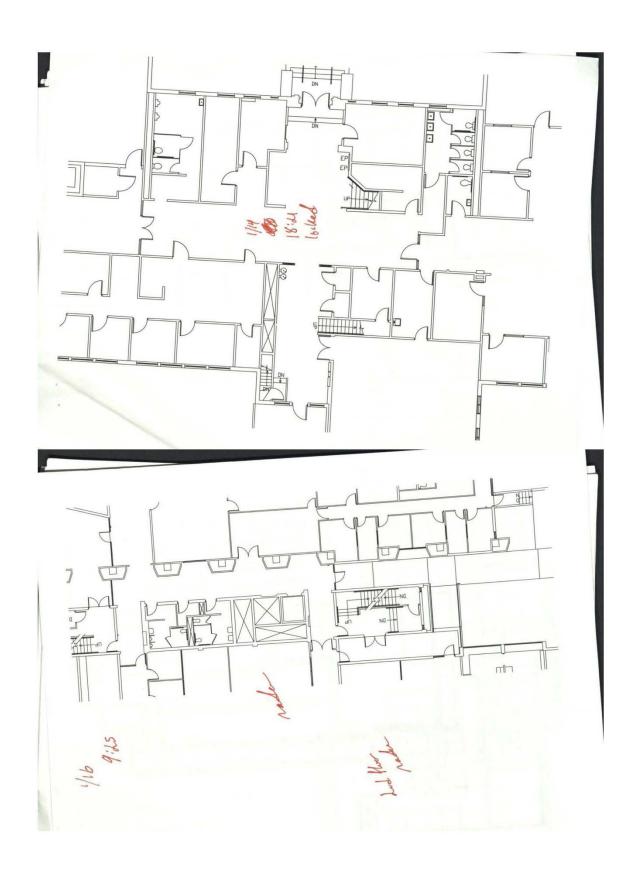


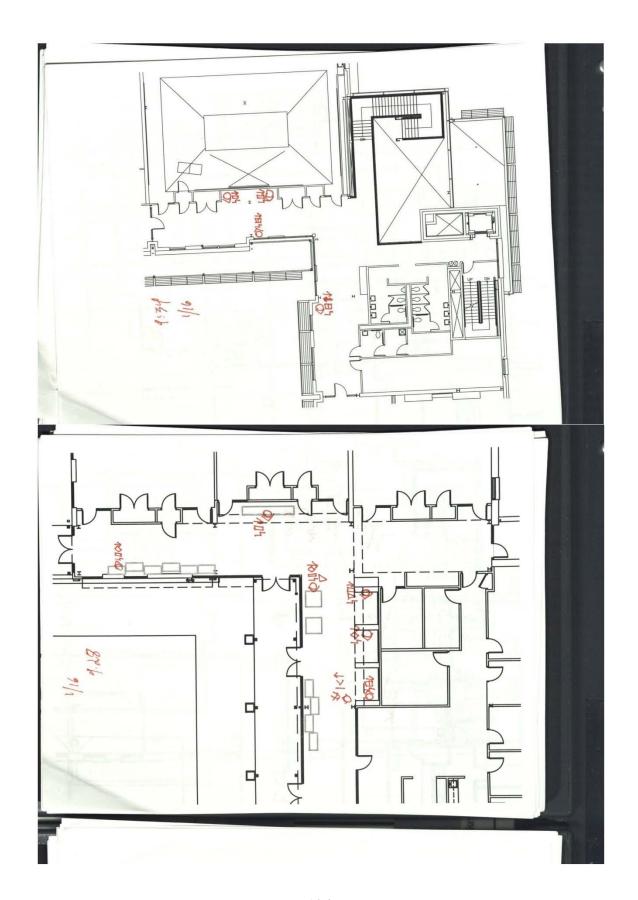


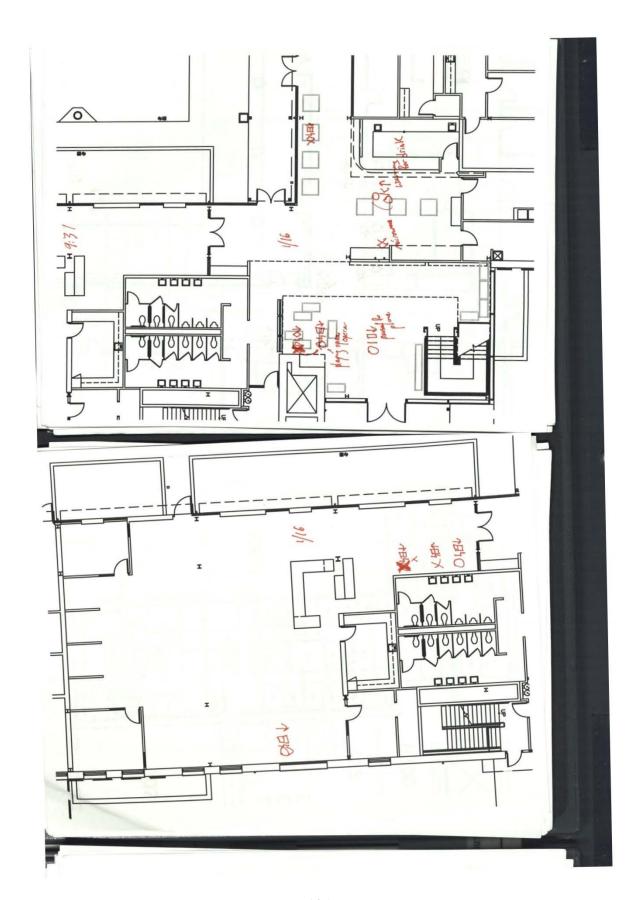


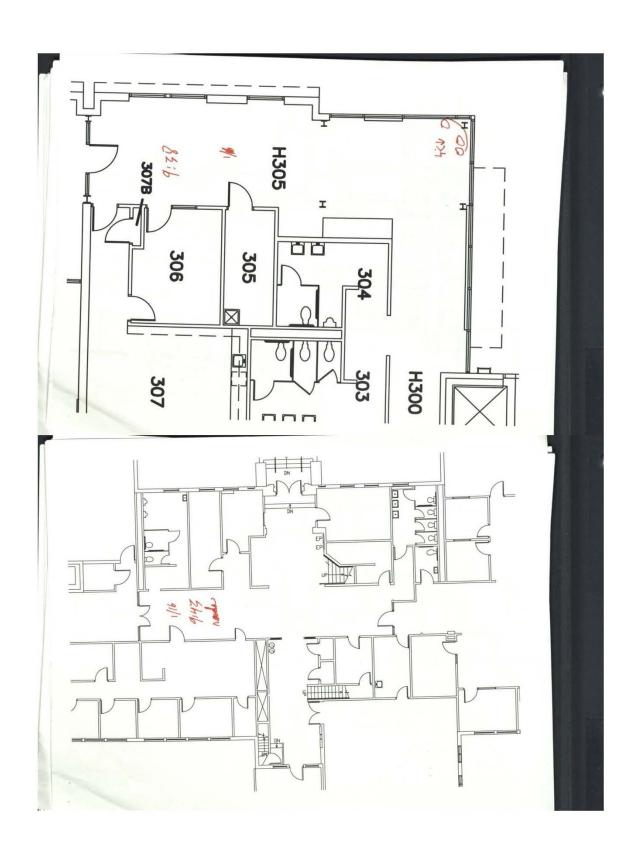


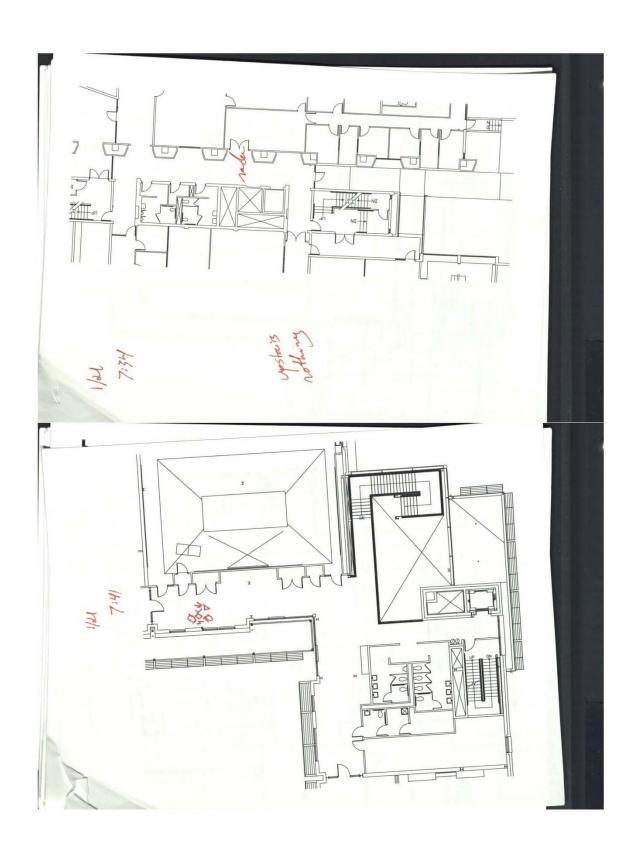


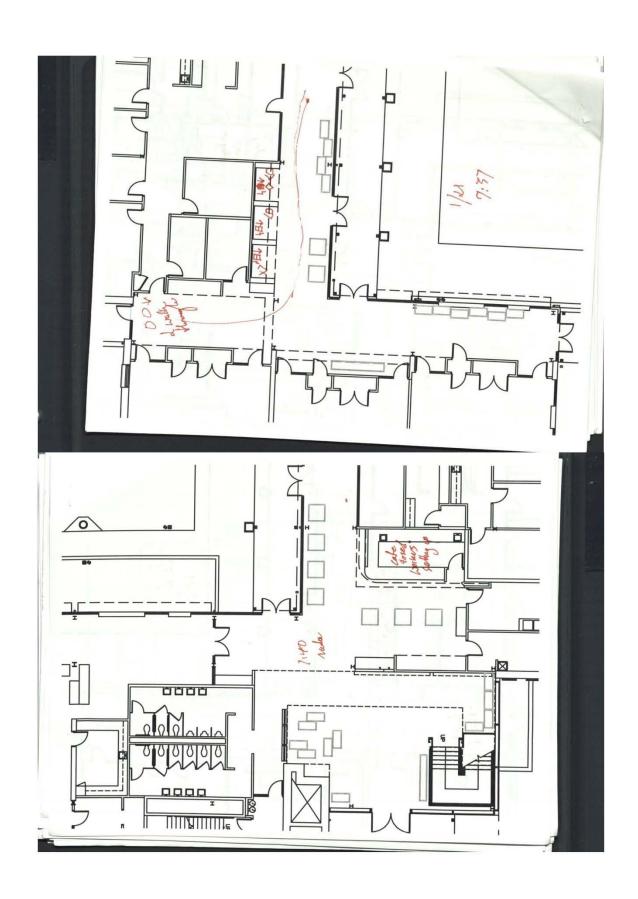


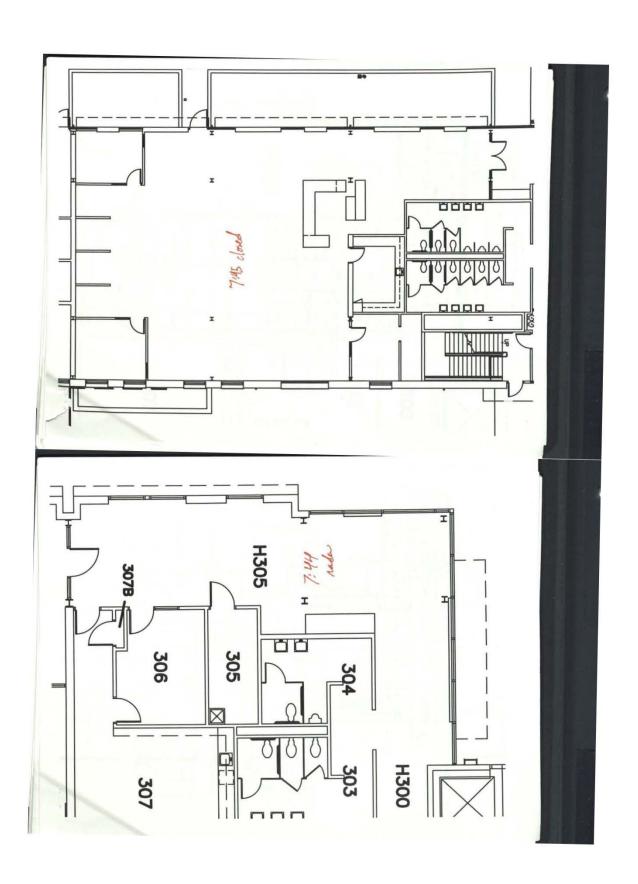


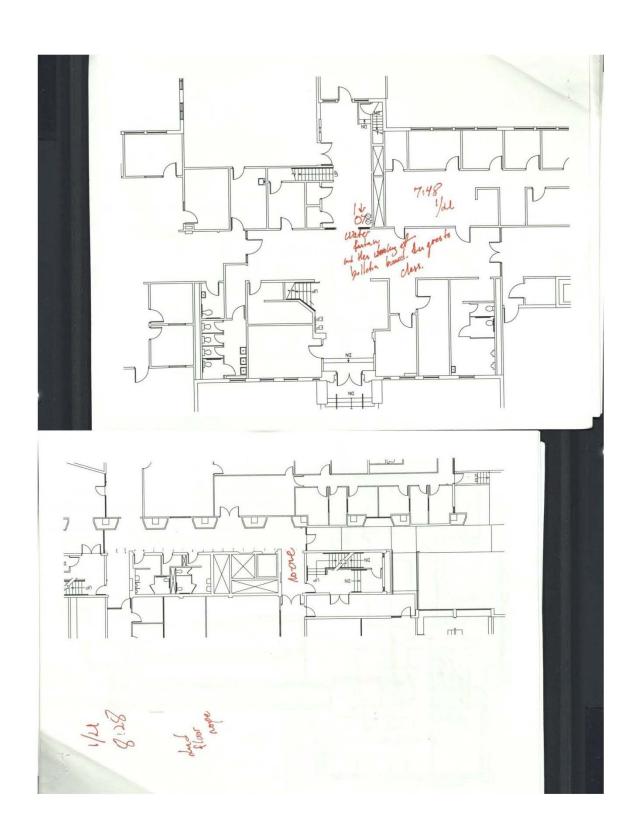


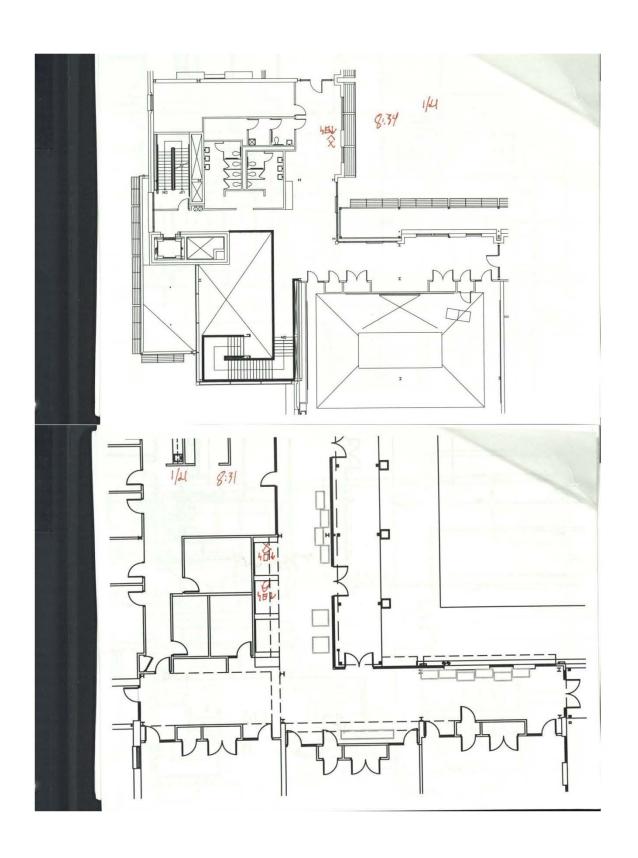


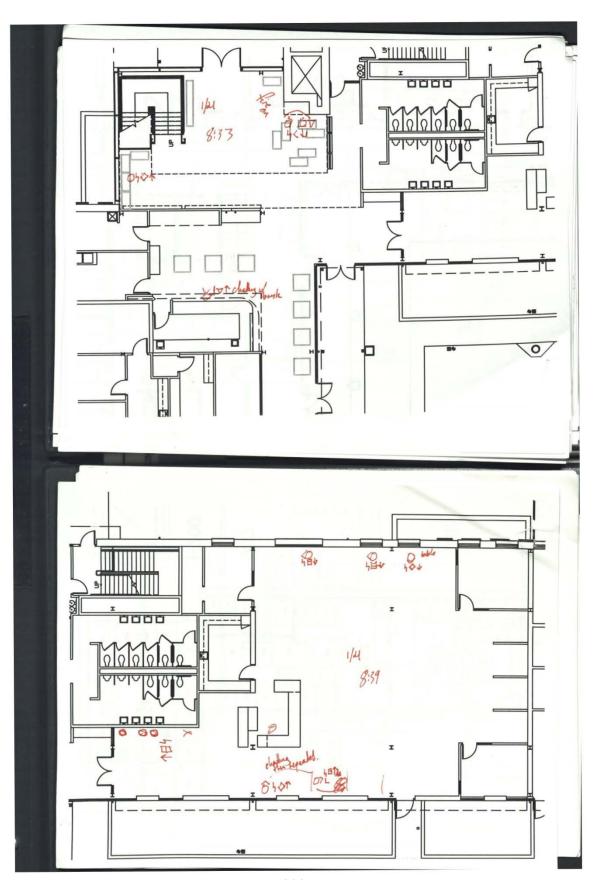


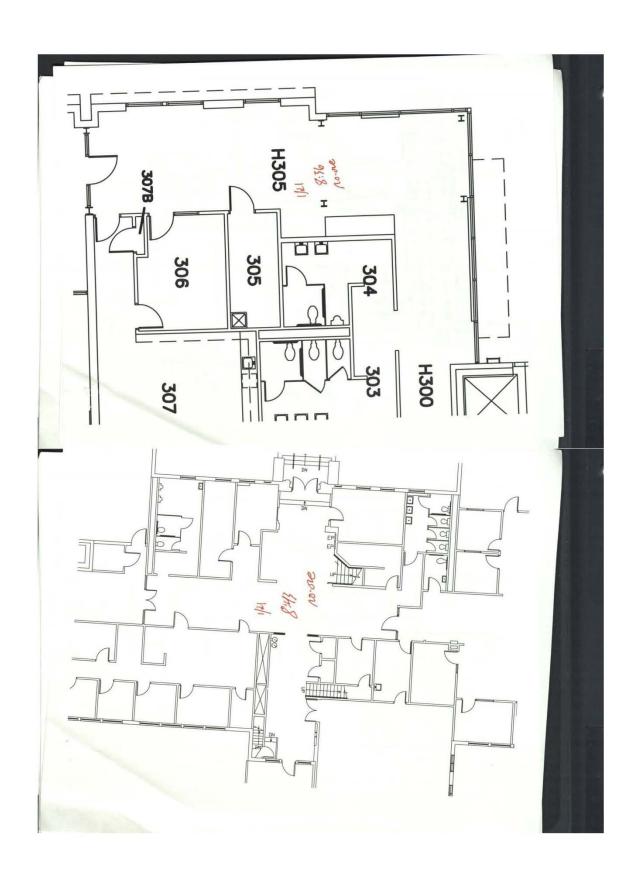


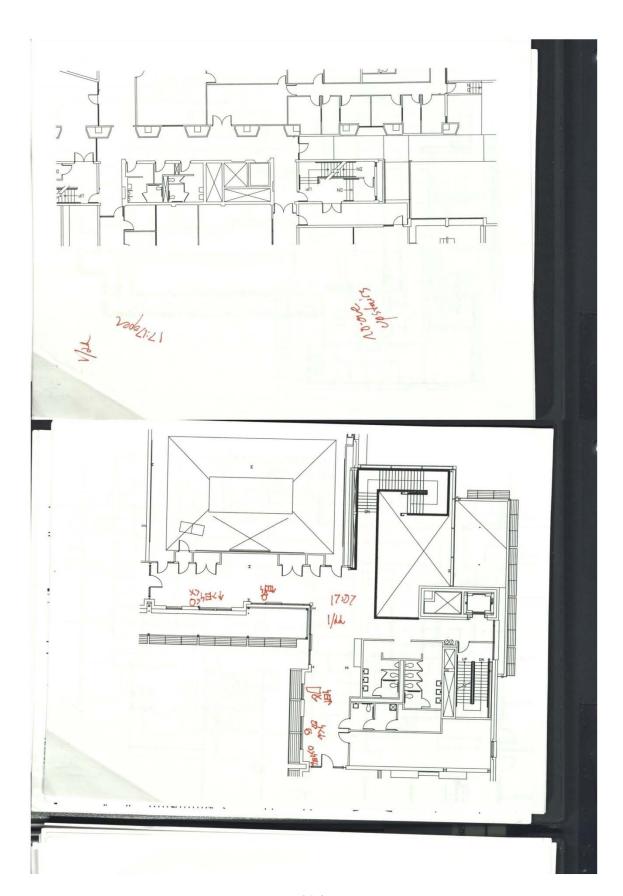


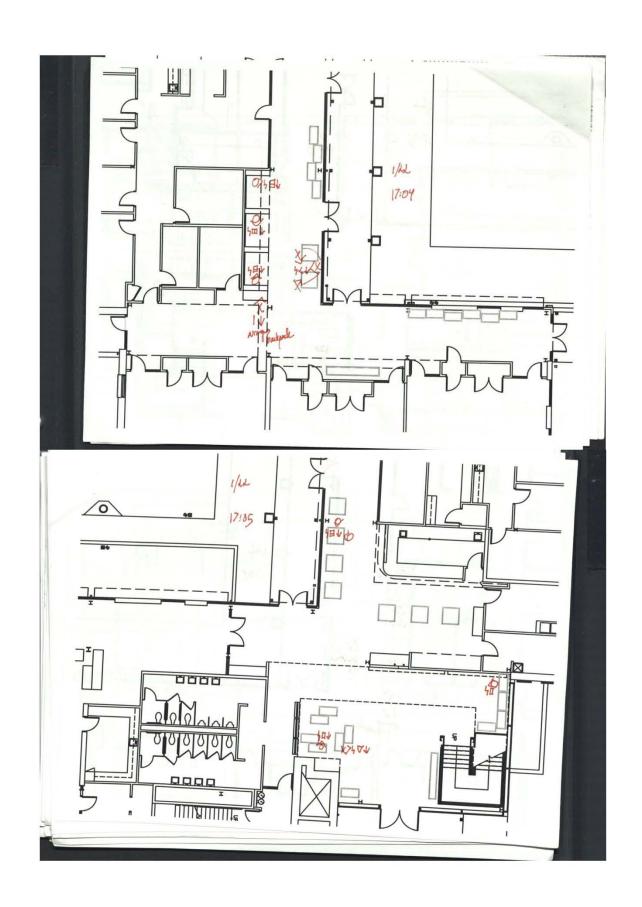


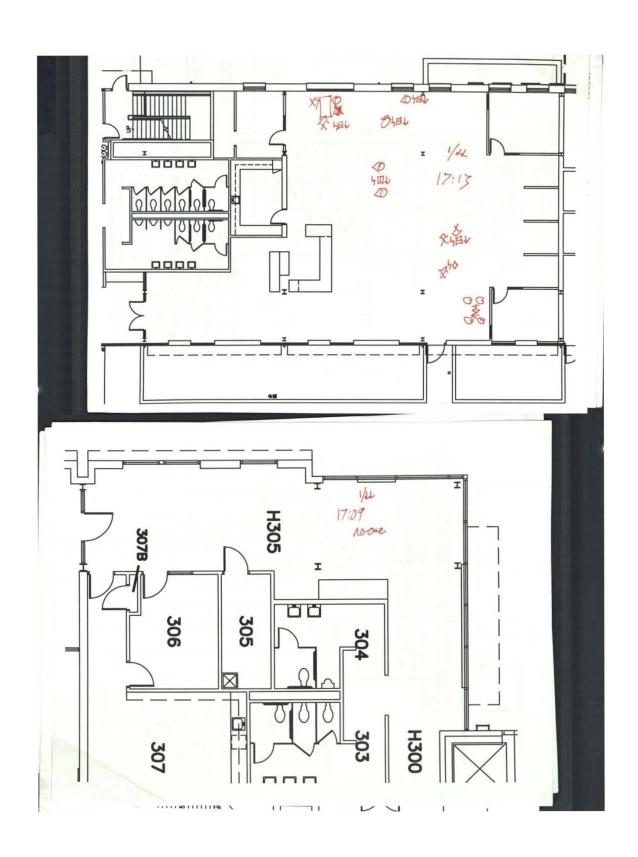


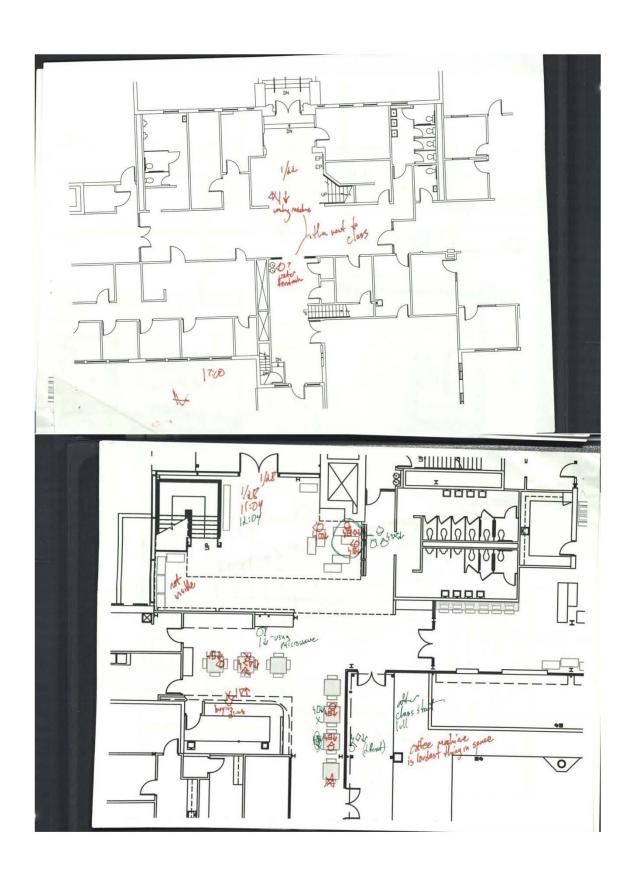


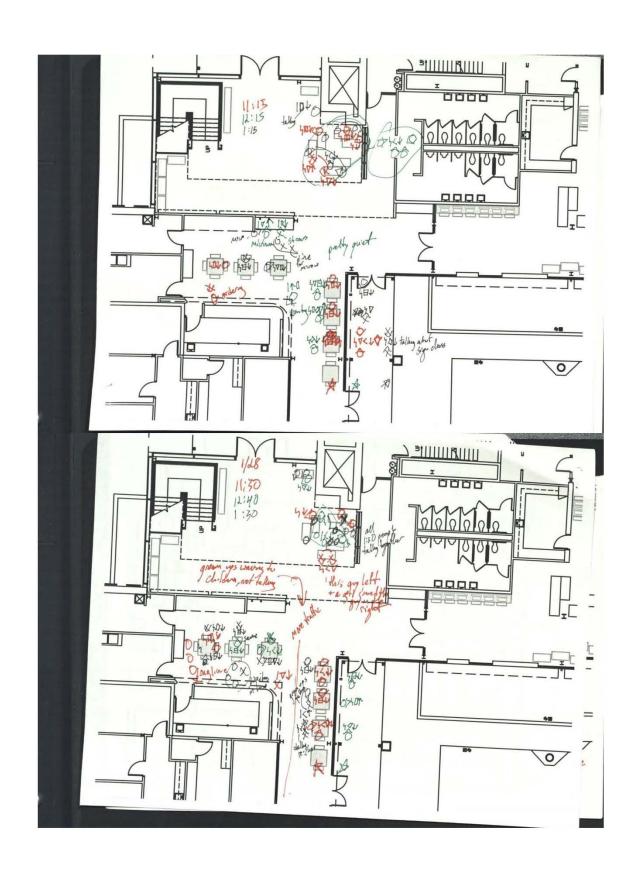


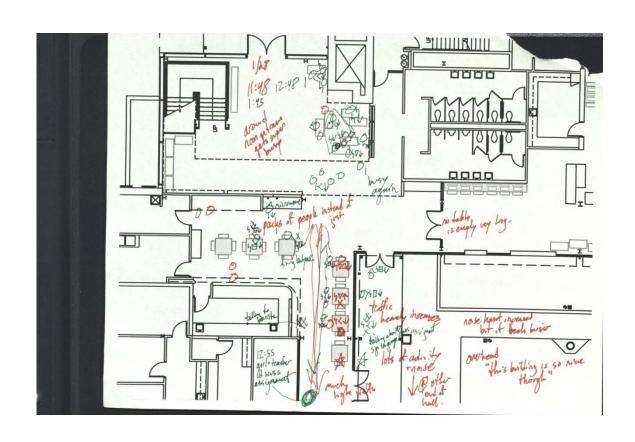












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