

Sit Project_design process report Laundry Room

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Project selection and mission statement

1) Reason for selecting the laundry room

The women's laundry room had critical problems regarding the user experience.

- Inefficient waiting time

- Cutting lines

- Unhygienic laundry storage

- Boring interior design

2) Mission statement

- Efficient laundry process

- Create efficient waiting time

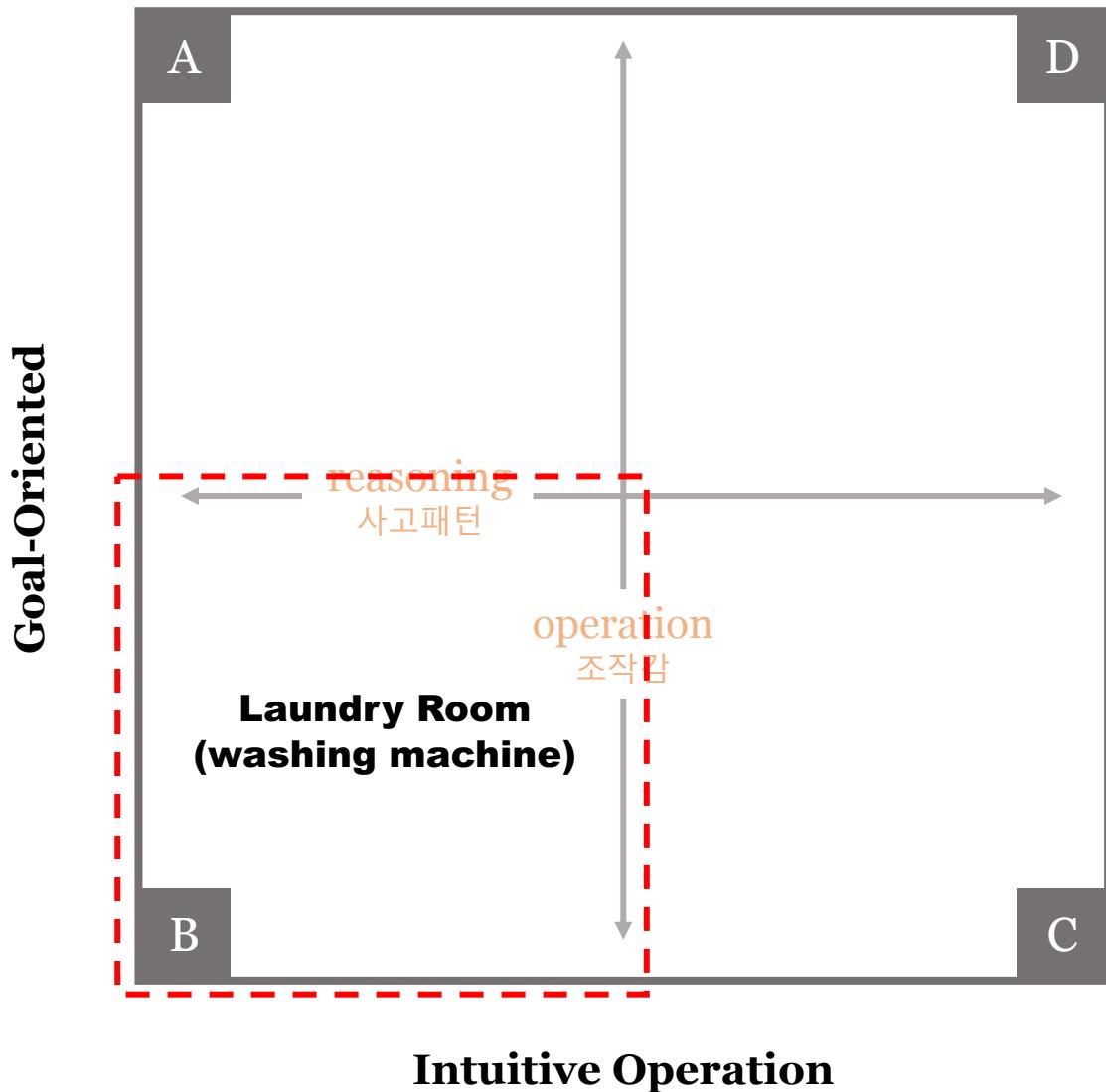
- Create a unique atmosphere

Understanding user and context

The Users of the Laundry room are:

- students that live in the 2nd dorm
- female
- people who use the laundry or/and drying machine
- people who use the ironing board
- people who study or use their phone as they wait for their laundry
- people who return to their dorm room as they wait for their laundry
- either Korean or from abroad

User Interaction Classification



Type B: intuitive, goal-oriented (hard/mode)

- 1) With the Laundry room, the users have a definite goal of washing their clothes and putting them in the washing machine and the dryers.
- 2) In the Laundry room, users should intuitively know what to do right away, reducing the process to a simple one.
- 3) Especially, with the task of doing the laundry with the washing machine, dryers, and the ironing machine, the task time should be brief.

User research planning and procedure

– Overall planning

The space that our team aimed to redesign was the laundry room that female students in the second Dormitory use for their self-laundry processes(from wash and dry to iron). Our team selected the laundry room as the ‘must-be redesigned’ space because we had captured several problems within the laundry room, especially the problems of laundry process efficiency and the problems of users spending waiting time in relatively poor environments(space design). To capture these problems more thoroughly and to discover new problems or information regarding the laundry room, we conducted four research methods: Fly on the wall, In-depth interviews, Behavioral mapping, and Survey. Since we could analyze and expect the pain points of users by observing them, most of the research methods included basic observation and several variations were added in each method.

User research planning and procedure

– Fly on the Wall

Fly on the wall was conducted on October 28th, for about 1hour 30 minutes at peak time of the room(11pm-1am on the weekends). We had our sit on the far corner table of the room and observed users. The key points that we aimed to answer through this method were these following four questions: ‘How do students use their time while waiting for the laundry?’, ‘What do students perceive the laundry room as? (relaxing, rigid, comforting, fun, etc.)’, ‘How many students use the laundry room and during what time?’, ‘What hinders their movement while using the laundry room?.’

11:15 pm

There are two long plastic tables in the center of the room and 3 smaller wooden tables to the side. On the plastic tables, there are 4 people who are waiting for their laundry. Two are watching something—a video considering that they have earphones— person 3 is scrolling down her phone while person 4 is studying. Person 3 stands up and starts taking out the laundry of another person and puts them on top of the machine. The owner of the laundry (person 4) comes in and intervenes, albeit silently, by putting her cloths into a separate bag. During the process, person 4's socks and under garments spill onto the floor and she has to pick them up and dump it into a separate bag. When Person 4 leaves, person 3, who had been waiting for the girl to leave, removes the used filter on the drying machine. She picks up the vacuum cleaner that is near the drying machine and cleans the used filter. Person 3 puts the filter and clothing and then leaves the laundry room with her detergent on one hand. Person 5 enters; she is talking on the phone. She waits a couple of seconds until her laundry is fully finished and then dumps the wet clothes into a separate basket and leaves. During this time, the girl whispers into her phone. (The laundry room is silent throughout the observation.) Person 6 enters the room. She puts her laundry inside the machine and takes a seat at one of the plastic tables. She opens her laptop and notebook. Up until this point, persons 1-6 are all wearing comfortable home-wear and slippers, and most seem to be at home without any makeup. Nobody talks, they are each focused on one task.

11:50 p.m.

The machine's song rings out signaling that the laundry is finished. Person 4, who was studying, takes out her laundry and puts it in line of a drier that is currently still operating. The signal of one of the driers goes off and person 2, who was sitting in the white plastic table and watching something on her phone, takes out her cloths. She cleans out the filter and puts another basket full of wet clothes. She returns to her seat and resumes watching something on her phone. Person 7 is waiting for her cloths to come out in front of the machine. After her cloths are finished, she puts it in a separate basket and leaves the room. Person 8 cleans the screen and cleans the drying machines with the vacuum cleaner. She puts her cloths in, starts the machine, and checks how much money she has in her laundry card. Person 1, who had been watching something on her phone in the corner table, stands up, dumps the clothes that was in line to use the drier into the machine. She resumes to her seat to watch something on her phone in the corner table.

12:03 a.m.

A new girl (person 9) enters the laundry room at 12:03. She puts her laundry inside the machine. She then charges her laundry card and leaves the room. Person 10 enters in 12:06. She puts her laundry in two separate washing machines and leaves. Two international students enter (person 11, 12). One pulls out her dried clothing out from the drier, folds it, and places them in her basket. Her friend starts to help. Person 13 enters. She has a white plastic basket to take her laundry out from the machine. Person 3 is back. She sits down at the table and looks at her phone; she is waiting for her laundry to finish completely. The two international students leave. Person 3 takes out her finished clothes and folds them into a small basket. Person 14 enters. She is on her phone and she is carrying a bag full of clothes. Person 14 dumps her laundry, activates the device, and leaves the room. Person 3 with her dried clothes leave the room. Person 15 enters and takes out her dried laundry from the far corner drying machine. The laundry had been there for some time. Person 16 enters with some detergent and laundry. She is on the phone. She puts her laundry in the machine.

User research planning and procedure

– In-depth interview

In-depth interview was conducted for about 3 hours. As interviewees, we selected a Korean first-time user and a foreign expert in the laundry room. We selected extreme users so that we could earn their characteristics and gain more insights regarding the laundry usage processes and difficulties. The interview was conducted and kept continued while doing the laundry to get lively information.

Interview in the process of using the washing machine

Q: Are the washing machine comfortable to use?

A: It is right now, but when I first used it, being a foreigner there were no English instructions, so it was hard for me. Also, the card for the machine only gets cash, it is a bit annoying. I hope it can make us use cards.

Q: You have to bring your own detergent?

A: Yes, I have to. They don't have space in the room to put my detergent.

Q: (The detergent spills out of the washing machine) Does this happen frequently? This Spilling.

A: It often happens, but not a real bother for me.

Q: So, where do you go now for waiting the machine?

A: For me, I usually go to my room because its close. And also there is no chair or enough space to sit on in the room. I think people from D or F stays in here a lot.



Interview in the process of waiting for the machine to finish

Q: What do you usually do for the waiting time?

A: I usually go to the room to rest. However, this is really hard because if I sleep in the middle, I forget about getting my laundry. I keep the timer of it, but still it is quite uncomfortable. Also, when all machines are full, I have to wait for it also.

Q: So, when it is the machines are full, do you wait there or in your room?

A: Usually in my room because it is close. However, sometimes I am worried of my turn getting changed so I wait there. If there is a seat.

Q: You never thought of waiting for the whole process in the room?

A: No for me. There is nothing to do in the room, and the room it quite hot and stuffy.

Q: (The phone alarm rings, but we went there and the machine is still working)

Is the timer of the machine is not accurate always?

A: For me it had 5 mins. of difference. I thinks it is not that accurate.



Interview in the process of waiting for the turn in the dryer

Q: You just wait your turn by putting the bags in a line?

A: Yes, but the frustrating part is that somebody actually puts there things first, even if there is a line. I think it happens because we don't accurately know when is our turn.

Q: You wait again in the dorm room?

A: Yes, I have to. That is the reason why I don't like to laundry a lot. It has so many steps. Especially for the waiting.

Q: (Somebody put their laundry in the dryer while we were in the dorm room) What do you do in this situation?

A: Not much. I just have to wait for another hour or so. This is really frustrating.

Q: Any functional difficulties in the dryer itself?

A: Not much. The problem is that there are not much dryers compared to the washing machines. And also the waiting line. It is not working orderly.



Interview in the process of reading the instructions (First time user)

Q: Are the machine for the laundry card easy to use?

A: It is so uncomfortable. Especially that I have to use cash. But, other than that, there are instructions so it is okay for me.

Q: For the washing machine, did you ever used it before in your house or any other places?

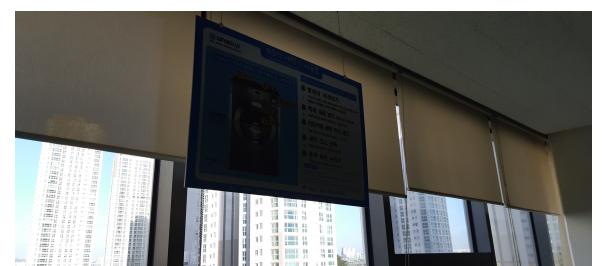
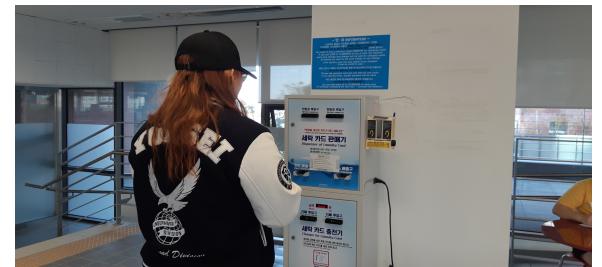
A: I used it in the house, so I know the basic way to use it.

Q: (While looking at the instructions for the washing machine) Are the instructions straight? Do you have any confusions while reading it?

A: The instructions are quite straight, but I don't know if I have to put the detergent on the laundry, or in this box.

Q: Why didn't you have used the laundry room before?

A: Um.. I am quite lazy for it, and I go to my house once a week, so I can bring my laundries. Do not need to wash them here.



Interview in the process of using the washing machine (First time user)

Q: Are the washing machine comfortable to use?

A: Yes. The instructions are in Korean with stickers, so I think it is easy to use.

Q: (While waiting for the washing machine to end) Where do you want to go to wait for the laundry?

A: Umm... My room is just one floor below. I think I will go to my room. 50 min is so long for me to wait here.

Q: How would check the time for the washing machine if you wait in your room?

A: Maybe, the phone timer I guess.

Q: (After 50 mins. We came back but the laundry is still going on) What will you do for the left 5 mins?

A: I think I will just wait here. This is tiring.

Q: Will you use the dryer?

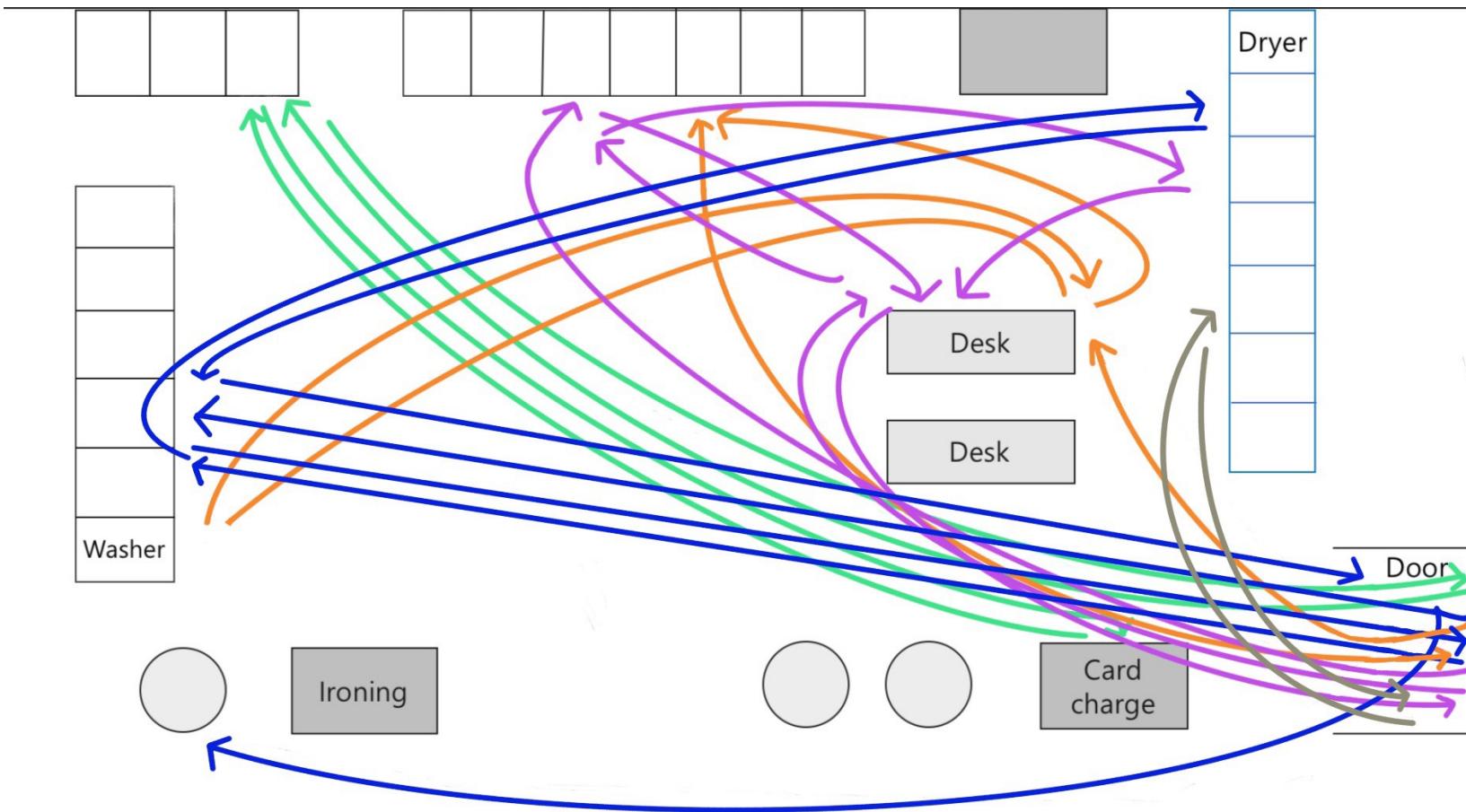
A: Personally, I like sun drying. I think I will take it to my room and dry it using the hanger.



User research planning and procedure

–Behavioral Mapping

Behavioral mapping was conducted on October 31st, for two hours in the peak time(11:00pm -1:00am). We observed laundry room-users at the table on the far right corner, and especially focused on four users' movements&behaviors within the laundry room. Additionally, besides the fours users, we tracked other users' general(overall) movements as well.



User research planning and procedure

– Behavioral Mapping

User 1 (green)

1. Entering the laundry room and walking straight to available washer
2. After putting all her clothes in the washer, walking to card charging machine and checked balance
3. Going back to washer and paying the fee
4. Walking out from the laundry room right away

User 2 (orange)

1. Entering the laundry room with huge laundry basket and putting it on the desk
2. Wandering around the washer area to look for an available washer
3. Spotting an available one and going back to desk, taking the basket on the desk
4. Going to the washer and putting all clothes in it
5. Walking out from the laundry room right away

User 3 (purple)

1. Entering the laundry room and walking straight to an available washer
2. After putting all her clothes in the washer, sitting down on the desk and starting to read a book
3. About 10 minutes later, walking out from the laundry room (phone call)
4. Coming back to her sit after about 15 min later and reading her book again
5. After getting done with the washer, she put the clothes in her basket and laid the basket on the waiting line in front of the dryer
6. Coming back to her sit and reading a book again

User 4 (blue)

1. Entering the laundry room and walking straight to an available washer & walking out from the room right away.
2. After about 1 hour later, coming back to the room and taking the clothes to an available dryer.
3. Going back to the washer and checking it again if there's no left clothes
4. Walking out from the laundry room
5. After about 5 min later, coming back to the room with a laptop
6. Sitting on the desk on far left corner and doing the laptop & chatting with two users(presumably friends) who were there for more than two hours(these two users were on that desk from the start to the end of the observation, no movements)

General Movements of Users

- most of the users go straight to a washer and walk out of the room right away / or go straight to a washer and take out all clothes, put those clothes in a dryer and walk out of the room.
- even though the available washers are located on the far left wall as well, users tend to use washers close to dryers or the door
- Some users enter the room and check the remaining time of washers or dryers. If the time left, they usually sit on the available chairs and do their phones – For these users, it takes about 5-10 minutes to wait for the remaining time and walk out of the room right away.

User research planning and procedure

– Survey

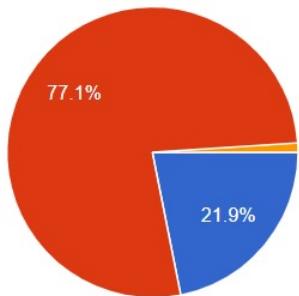
Survey was conducted from October 31st to November 4th. We collected total 96 responses from students who have experience of using the self-laundry room. The questions were mainly focusing on habits and complaints regarding the usage of the self-laundry room. Therefore, we expected to get important findings related to dryers, activities in the laundry room, detergents, and dispensers. We also included open-ended questions to get detailed opinion regarding the laundry room.

Questionnaire

- (1) Gender
- (2) Dormitory Building
- (3) How often do you use the self-laundry room?
- (4) Do you use the drying machine after doing laundry?
- (5) Do you iron your clothes in the self laundry room after doing laundry?
- (6) What do you usually do when you wait for the laundry to finish?
- (7) How do you use your own detergents and softeners?
 - (7-1) Why do you use your own detergents and softeners?
 - (7-2) If we put free detergents in the self-laundry room for sharing, would you be willing to use them?
- (8) Tell us any complaints regarding the usage of the self-laundry room.

1. Gender / 성별

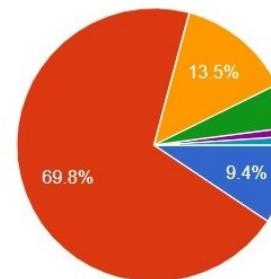
응답 96개



- Male / 남성
- Female / 여성
- Prefer not to answer / 무응답

3. How often do you use the self-laundry room? / 셀프세탁실을 얼마나 자주 이용하시나요?

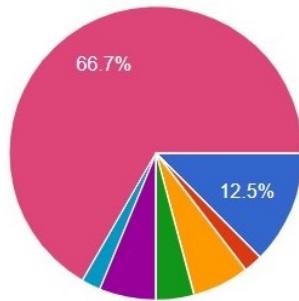
응답 96개



- More than once in a week / 일주일에 한번 이상
- Once in a week / 일주일에 한번
- Once in every two weeks / 이주에 한번
- Once in a month / 한달에 한번
- 일년에 두번
- 원래는 적어도 일주일에 한 번은 이용했는데 건조기를 써도 건조가 잘 안돼서 외부 셀프빨래방을 이용하고 있...

2. Dormitory Building / 거주하는 동

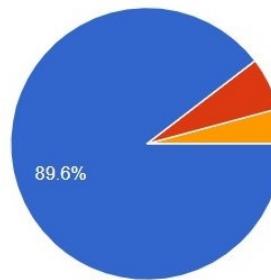
응답 96개



- A dong / A동
- B dong / B동
- C dong / C동
- D dong / D동
- E dong / E동
- F dong / F동
- G dong / G동

4. Do you use the drying machine after doing laundry? / 빨래 후 건조기를 이용하시나요?

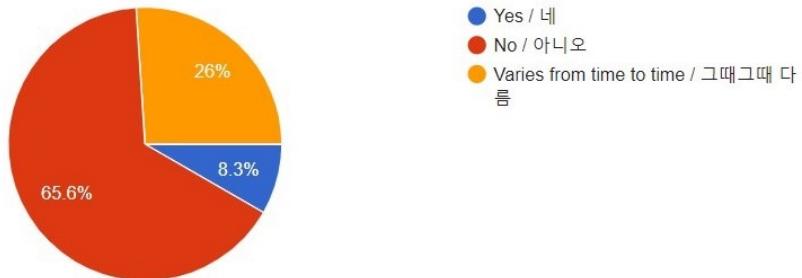
응답 96개



- Yes / 네
- No / 아니오
- Varies from time to time / 그때그때 다른

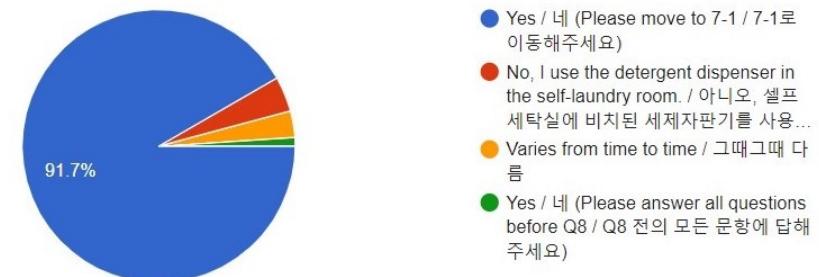
5. Do you use iron your clothes in the self laundry room after doing laundry? / 빨래 후 셀프세탁실에 비치된 다리미를 이용하시나요?

응답 96개



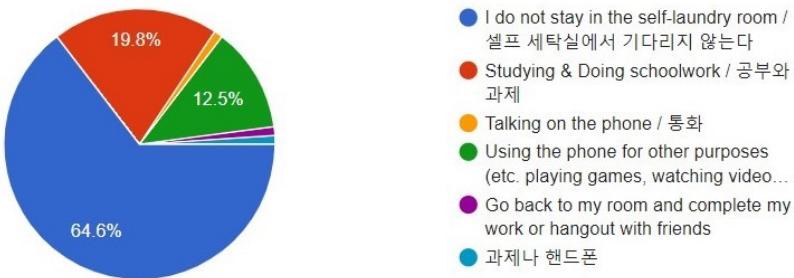
7. How do you use your own detergents and softeners? / 본인의 세제와 섬유유연제를 들고다니며 쓰시나요?

응답 96개



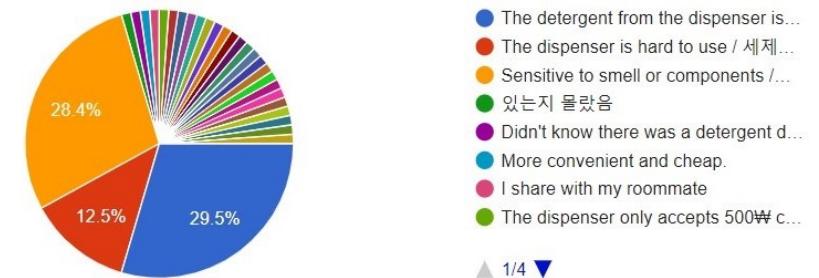
6. What do you usually do when you wait for the laundry to finish? / 빨래를 기다리면서 주로 무엇을 하시나요?

응답 96개



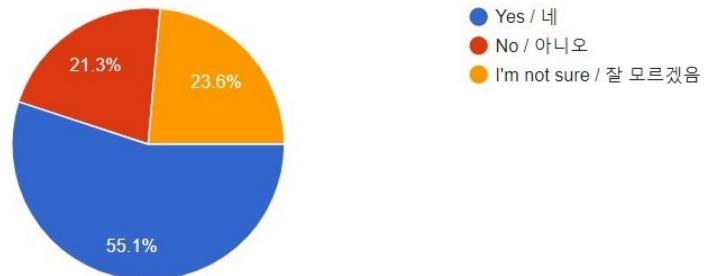
7-1. Why do you use your own detergents and softeners? / 왜 본인의 세제와 섬유유연제를 쓰나요?

응답 88개



7-2. If we put free detergents in the self-laundry room for sharing, would you be willing to use them? / 만약 셀프 세탁실에 무료로 사용할 수 있는 공용세제를 비치한다면, 이용할 의향이 있으신가요?

응답 89개



8. Tell us any complaints regarding the usage of the self-laundry room. / 셀프 세탁실 관련하여 불만이 있다면 알려주세요.

응답 52개

Not enough dryers :(

not enough dryers

Not enough dryers

too many washers too little dryers

세탁기 수량 건조기 수가 너무 터무니 없이 적다. 공간이 넓은 것에 비해 빈 공간이 너무 많다고 느껴진다. 그 공간에 세탁기와 건조기를 더 설치해줬으면 한다

Lack of driers. (Usually have to wait awhile to use it.)

Small amount of dryers

세탁기에 비해 건조기 수가 너무 적다.

Not enough drying machines, always a long wait

There aren't enough seats. Also the tables are too small to use for yourself so you can't even share it. In general, both the table and chairs are quite uncomfortable

There aren't enough dryers for the amount of washers so a lot of the time people wait for a dryer and it can get quite crowded

Results and insights from each research methods – Fly on the Wall

By doing fly on the wall, we could observe users' various laundry processes within the laundry room. Washers, dryers, and an iron are furnished in the laundry room but not all students use them all. Most of the users do use washers and dyers while some users use only washers, not dryer. Some users rarely use an iron. Since there's a lack of dryers compared to washers, we observed a lot of users waiting in line(by laying their laundry on the floor) to use dryers – which is a significant pain point.

In the aspect of how users spend time while doing laundry, there are two different types of users: who do stay in the laundry room while waiting time, and who do not stay in the laundry room. Since we conducted fly on the wall in the laundry room, it was impossible to know what the users who do not stay in the room did outside the laundry room. However, we could observe how users spend their time within the laundry room. Some users did their phones(watch videos, just do random SNS or browsing), some users did their assignments(or study), and sometimes several users did their phone calls. So the users can be categorized to users who want to relax and just chill while waiting, and users who spend their time with studying and focusing on their works.

Results and insights from each research methods - In-depth interview

First of all, since one of the interviewees was expert in using the laundry room, so we could hear a lot of in-depth pain points from her. Since she is a foreign user, so we could recognize the difficulties of foreign users while using the laundry room. She said that she found it hard to the use the laundry room for the first time because there were no English instructions. Also, she said it was annoying for her to use only cash for card machine in the laundry room. We also noticed the problem of waiting in line by putting basket on the floor – because some users touch others' laundry and sometimes cut in line even if there's a waiting line. Second, for the other interviewee – first time user, since she is a Korean, she found it not difficult to follow instructions of laundry processes. However, she also felt uncomfortable regarding a card machine like the first interviewee. She also said she would rather go to her own room while waiting – the laundry room is not really comfortable place or atmosphere for relaxing and waiting.

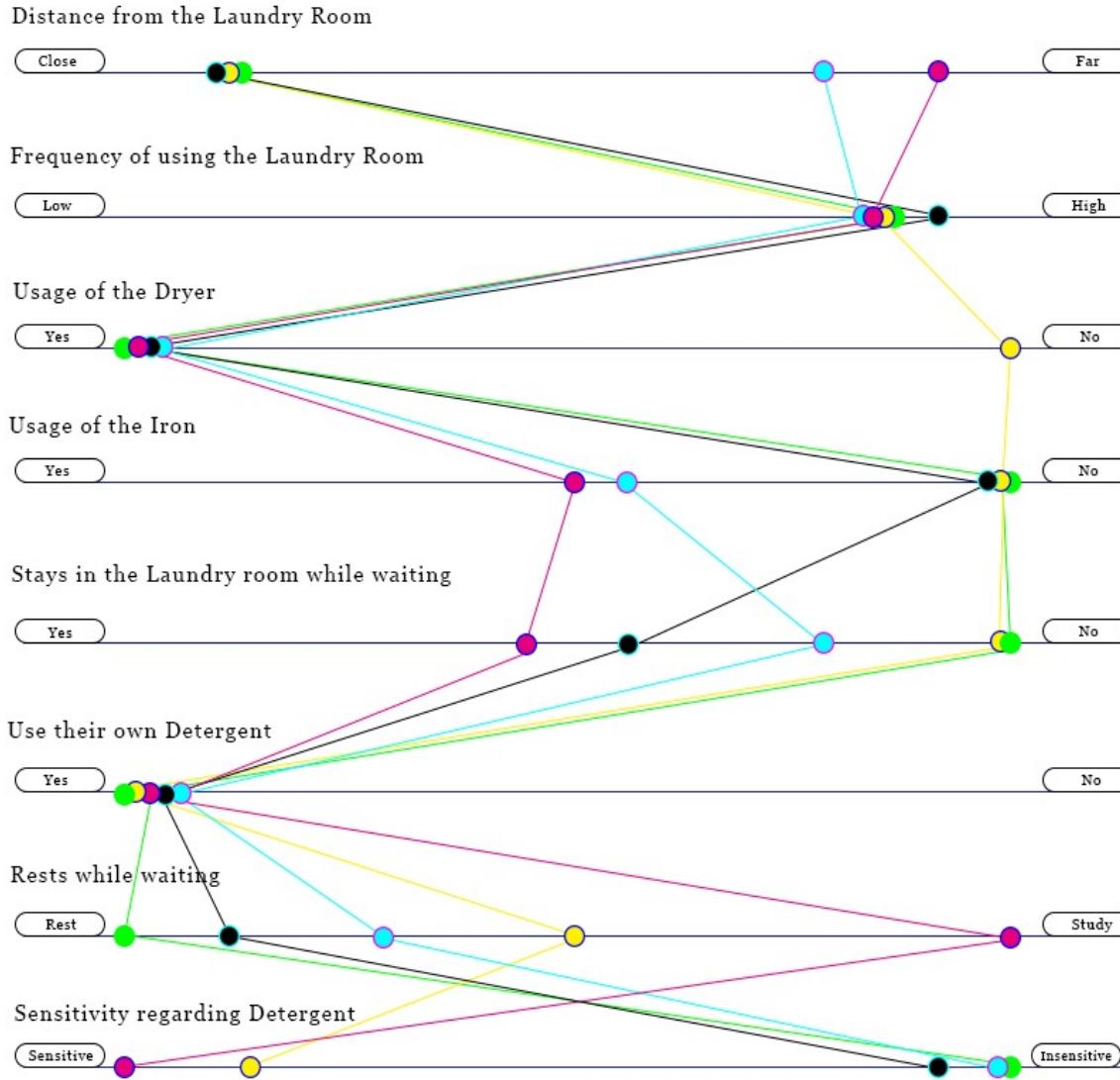
Results and insights from each research methods – Behavioral Mapping

Focusing on the fours users, we recognized that the laundry room was designed without considering the users' behaviors and moves within the space. There were more spaces that were not used and most students need to cope with inefficient moving between washers and dryers. Besides the four users, the general moves of users were found as well. Most of the users went straight to a washer and walk out of the room right away or go straight to a washer and take out all clothes, put those clothes in a dryer and walk out of the room. Some users enter the room and check the remaining time of washers or dryers. If the time left, they usually sit on the available chairs and do their phones – for these users, it takes about 5-10 minutes to wait for the remaining time and walk out of the room right away.

Results and insights from each research methods – Survey

Important findings were related with dryers, activities, detergents, and dispensers. According to the result, most of the students who do use self-laundry room use both of the washers and dryers (89.6 per). Regarding ironing, although not every student irons all time they use self-laundry, about 70 percent of the users still use an iron once in a while. 91.7 percent of the students use their own detergent and softeners and half of them responded that they are willing to use free detergent if it became possible. For the open-ended question for complaints, a lot of students expressed the problems of non-enough dryers as we observed that in other research processes. Several complaints were regarding the inefficient space and tables&seats. Through survey, we could re-recognize and confirm the problems that we observed through other methods and organized users' patterns within the laundry room.

Results and insights from each research methods – Behavior Pattern Mapping



Personal modeling process and two personas

We created two personas – main persona and the secondary persona. The creation of personas were based on the results of all researches. We referred to users' complaints, behaviors, and characteristics that were gained from research results.

Seoyoon Kim – Primary persona.

Since most of the users are categorized as the ones who study or the one who relax in the laundry room, we decided Seoyoon to be the user who works with assignments while waiting. Another categorization that we observed is that the ones who do all laundry processes or not. Therefore, we include a characteristic of 'preferring crisp clothes' so that she becomes the persona who do all laundry processes- washer, dryer and ironing. Besides these characteristics regarding laundry, we created basic and specific information as well, like she was born in Suncheon, majors in CDM and IID, has bubbly personality and has a boyfriend in another university, etc.

Sarah Parker – Secondary persona.

The primary persona is the user who studies in the laundry room, so the secondary person -Sarah- became the one who tends to relax and do her phone in her own room while waiting. For Sarah, laundry room is not an appropriate place for relaxing and for foreigners, she does not wait in the laundry room and goes back to her room. Also, while researching, we recognized that quite a lot of students do their phone calls in the laundry room. So we include the characteristic of 'enjoying gossiping with her sister in London' and thus does a lot of phone calls with her sister. Besides that, basic information were included as well - she is sophomore in STP major, loves BTS, and has quite clumsy personality.

Personal modeling process and two personas



Seoyoon Kim, 22
xxseyoniya@gmail.com

Yonsei Univ, UIC
CDM & IID, Junior 2nd sem.

Quote of voguesy98 :
*"In order to be irreplaceable,
one must be always different"*

Who's Seoyoon?

Seoyoon was born in October 22, 1998. She had lived her whole teenager life in Suncheon and graduated from Regular Korean high school. Fortunately, she received an acceptance for admission to Yonsei Univ, HASS in 2017, without studying for another year. She moved to Songdo(her first move!) and started her first semester in Appenzeller house, 8th floor. Now, she currently lives in 'Dorm E', 5th floor. She declared her major as CDM in Sophomore year and started her secondary major, IID, in last semester. She is quite conscious and sensitive about the trends and style, so she frequently goes shopping for her clothes or cute accessories. She likes to hang out with friends and especially loves to visit delicious and fine restaurants(she loves delicious Mexican restaurants!) with them. Even though she is curious about a life in Sinchon campus, she is quite satisfied with her life in Songdo. Her lovely boyfriend is a student of Utah University.

Attitude Behavior Context with pain points

Style Preference

- has a lot of bright-color clothes
- sensitive to cleanliness of own clothes
- likes to wear crisp and stiff shirts
- has a preference to aromatic scent

Laundry routine

- does laundry once a week & occasionally twice in a week(in summer)
- uses her own detergent & Downey aroma fabric conditioner
- always uses washer and dryer
- does ironing about once in twice weeks in general
- but on shirts laundry day, does ironing without exception

Residence

- currently lives in Dorm 'E'
- since her room is far from the laundry room, stays in the laundry room until all laundry processes are done
- her hometown is Suncheon but visits once or twice every semester
- does laundry on the weekend(usually on Saturday but it depends)

Working(Studying) habits

- does her CDM or IID assignments in the laundry room while waiting
- likes a bit of white noise but not excessive noise
- prefer relatively comfortable working environment, not too tense or rigid
- tends to work or study in the night time
- comes to the laundry room later than peak time, not to be bothered too much while doing assignments in the waiting time

Seoyoon's Goals

*"more effective
time & moving
within the laundry room."*

*"comfortable and better
working or relaxing
environment for waiting
time in the room."*

Personal modeling process and two personas



Sarah Parker, 19
Sarahpr0025@gmail.com

Yonsei Univ, UIC
STP major, Sophomore 2nd Sem.

Quote of love in RM :
"Love Yourself"

Who's Sarah?

Sarah was born in November 17, 2001. She is currently a sophomore student at Yonsei university, Underwood International College. She majors in STP because she is really into science and politics at the same time. She lives at the international campus, 'G dorm'. Prior to Korea, she lived in Leatherhead, and graduated from Saint John's school. Her favorite pastime is watching Netflix and listening to BTS songs. She did have boyfriend in the freshmen year but now she doesn't. She is quite clumsy and lazy towards a lot of things but still has lovely personality.

Attitude Behavior Context with pain points

Style Preference

- has a lot of comfy clothes
- likes to wear hoodies and leggings
- prefers bulk buying product and clothes because she is often on a tight budget and does not care a lot about fashion

Laundry routine

- does not do laundry regularly; and only when she feels it is needed
- going to the laundry room is a chore
- sets the timer and returns to her room to watch Netflix
- has a lot of clothes and a lot of laundry
- often forgets to go back for her laundry

Residence

- currently lives in Dorm "G"
- since her room is not that far away from the laundry room, she usually goes back to her room to take a rest while she launders
- since she is an exchange student, she stays in the dormitory for the whole semester and visits home on summer and winter vacations

Details on Sarah

- clumsy and messy; she often loses her socks.
- still a beginner at Korean, although she wants to be able to at least converse in Korean.
- wonders sometimes whether she is a phone addict; she is on her phone 24/7.
- has made quite a few friends in Korea, but still misses her friends in Leatherhead
- very close with her family; enjoys gossiping with her sister who lives in London

Sarah's Goals

"wants the laundry room to change into an environment where she can relax"

"The dorm facility needs to become more inclusive to foreigners"

"wishes there was a way for her to be more meticulous"

Affinity Diagram



DESIGN CONCEPT

“ EFFICIENT LAUNDRY AND USING THE WAITING

For better efficiency:

Increased number of washing and drying machines

The creation of ‘Yonseitak’ allows students to reserve machines and get alerts when laundry is done

Unclaimed laundry can be stored in a more hygienic way in storing cabinets that correspond to each machine

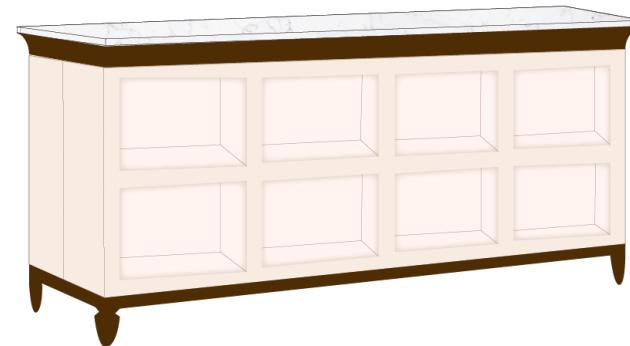
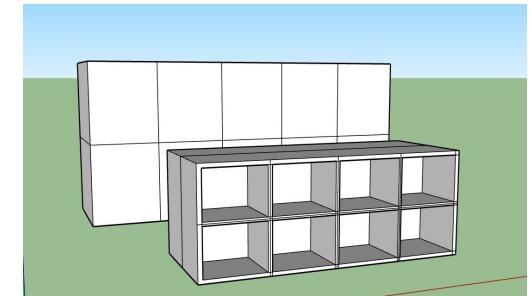
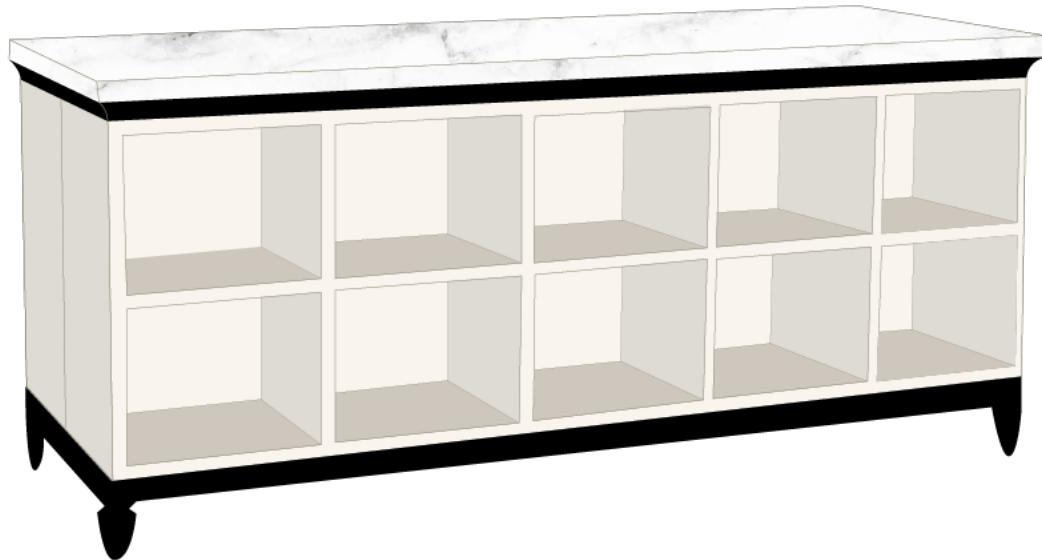
To improve students' waiting time:

Several sofas and a large study table were made for the waiting time

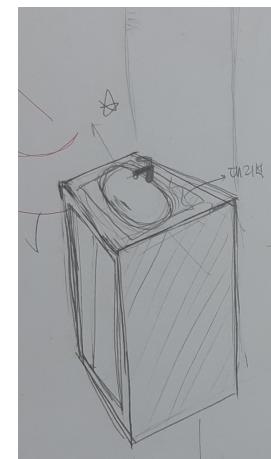
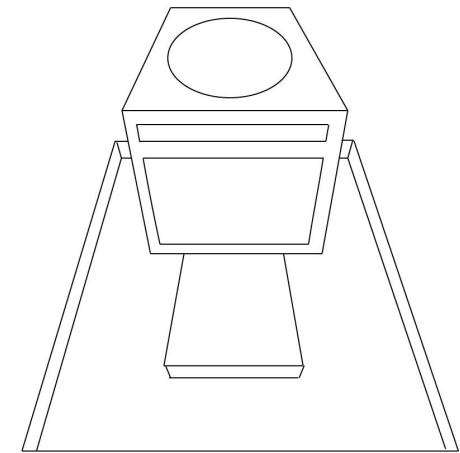
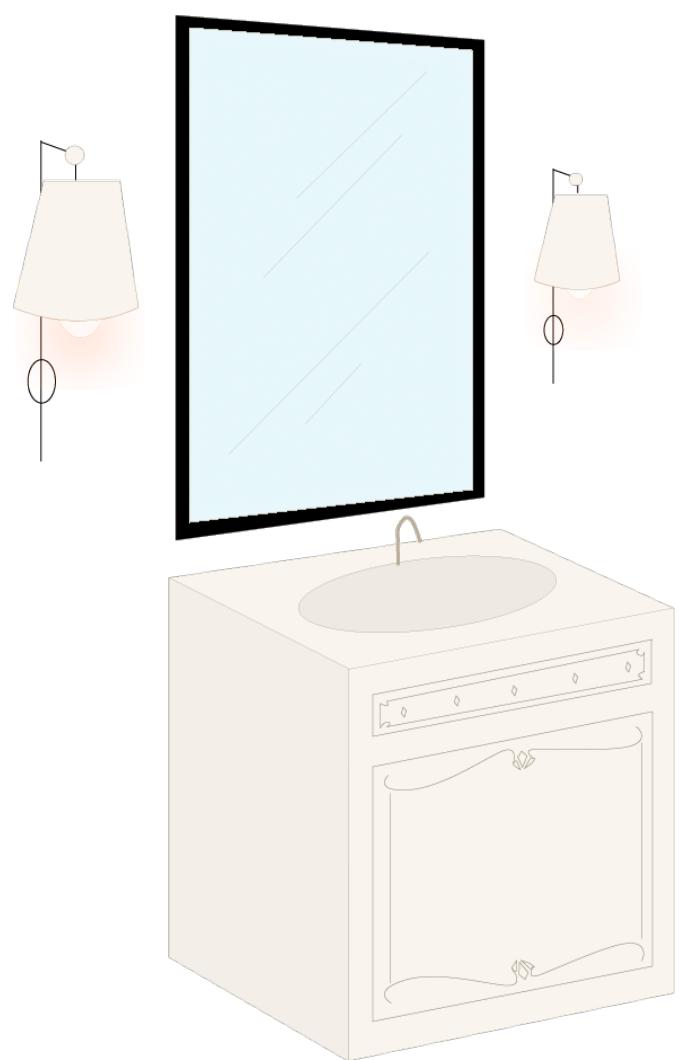
The installation of a garden and a private phoning area, so international students can use it as a private place, and make the waiting time a memorable experience

TIME EFFECTIVELY IN A UNIQUE ATMOSPHERE ”

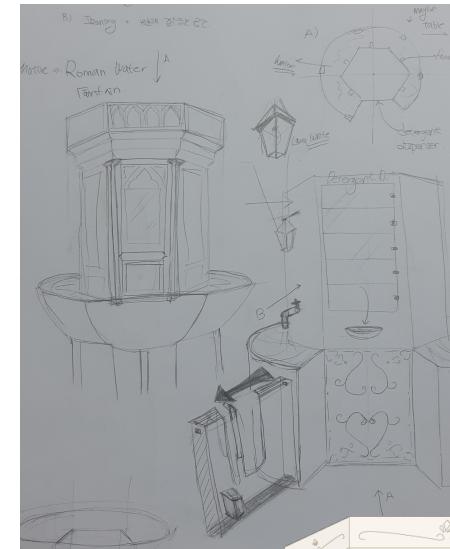
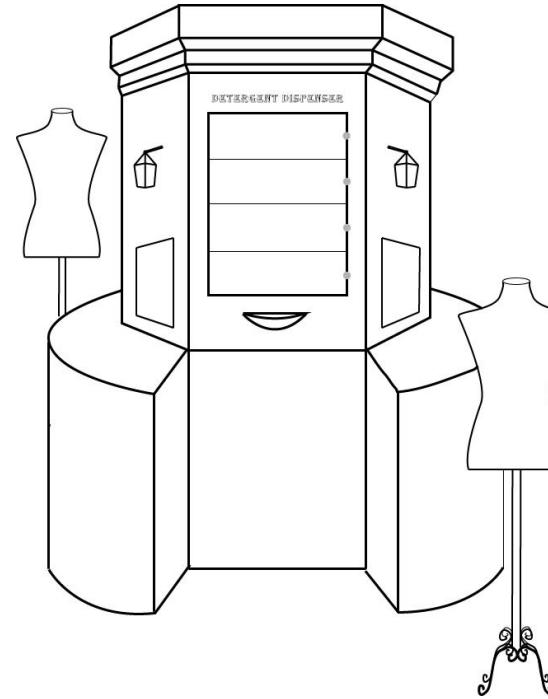
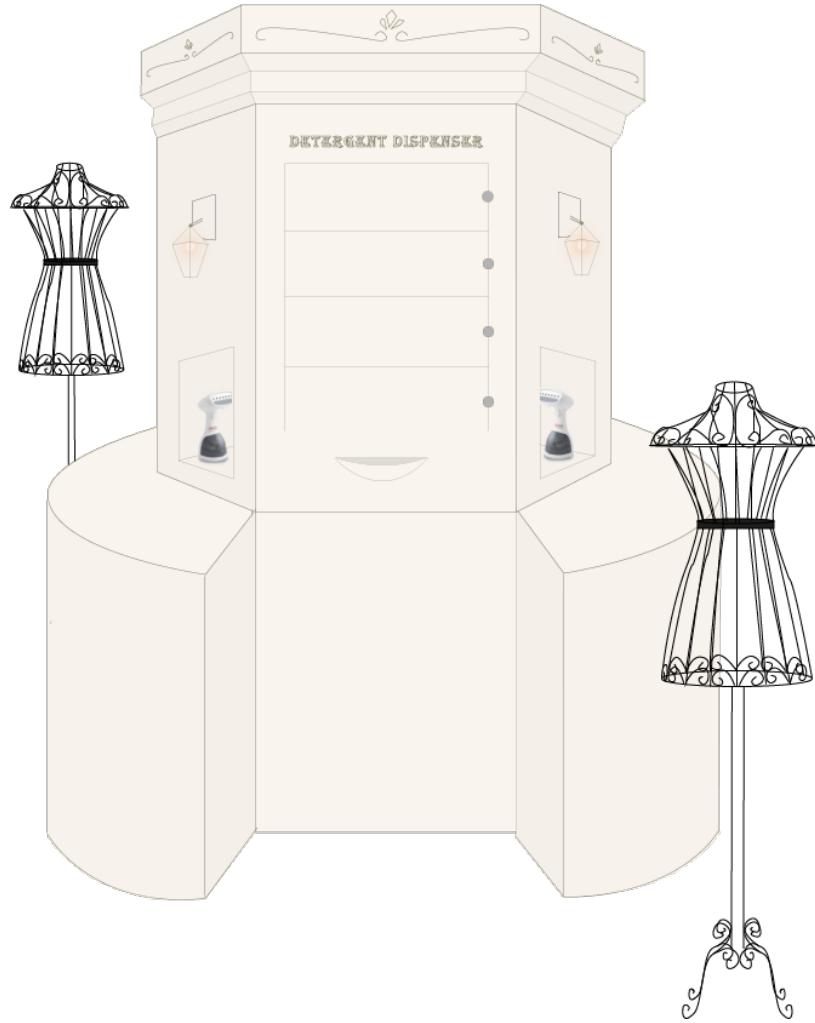
Sketches and Design Iterations – Laundry Drawer



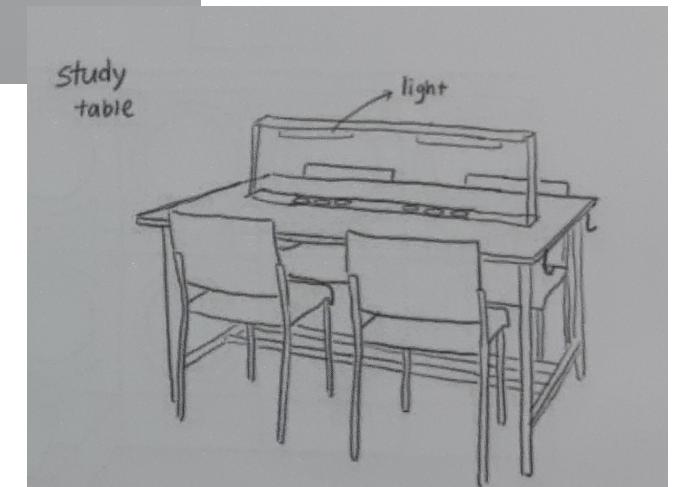
Sketches and Design Iterations - Personal washing area



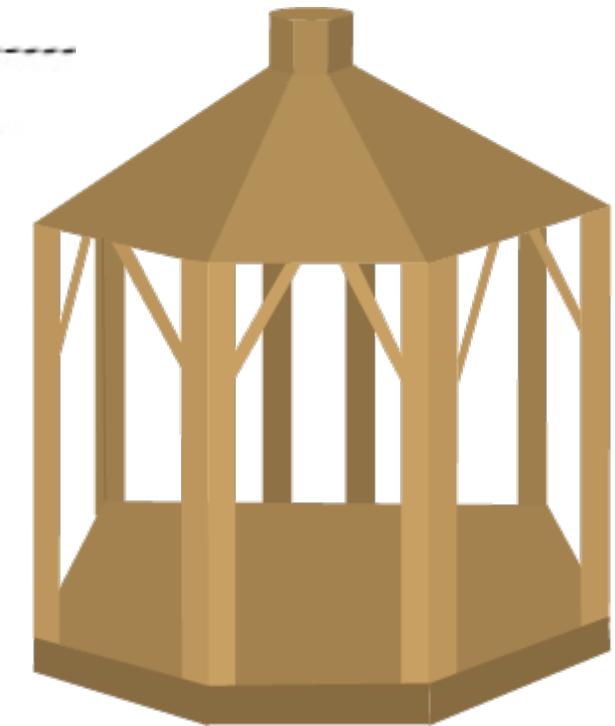
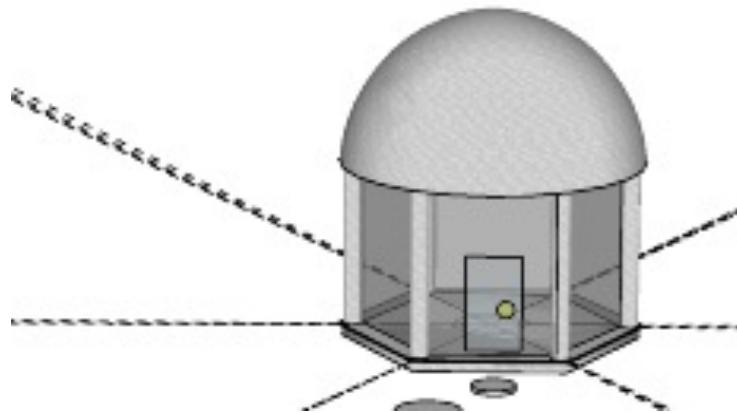
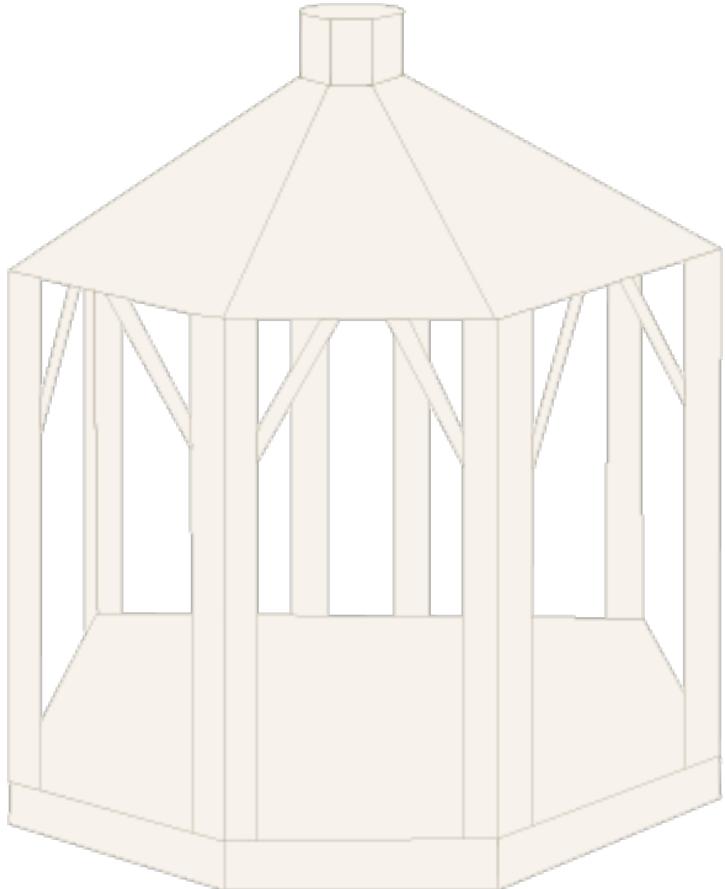
Sketches and Design Iterations – Ironing area



Sketches and Design Iterations – Community study table



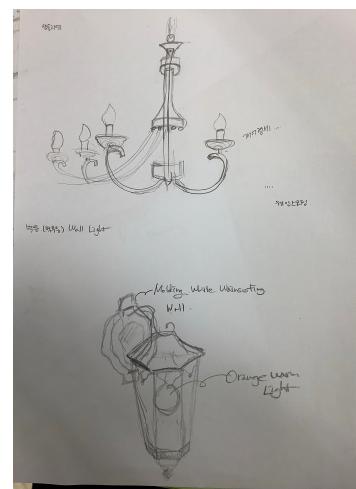
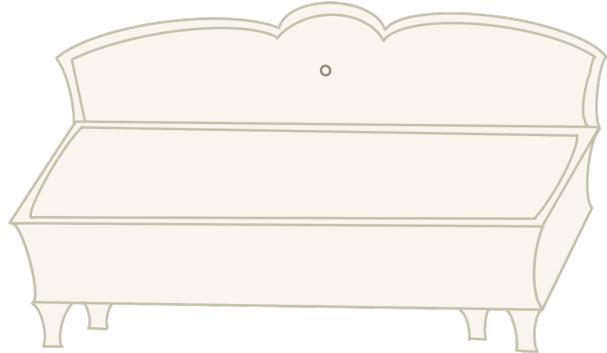
Sketches and Design Iterations - Gazebo



Sketches and Design Iterations – Telephone booth & Lamp post



Sketches and Design Iterations – Sofa & Chandelier



Final Design – Board Design

Laundry Room

Do In Kwon
Dong Eun Cheong
Seo Hyean Chung
Shin Yeong Park

Description of the Problem

The Laundry Room in G-Dong of Dorm 2 provides Yonsei students with inefficient laundry experience in the use of waiting time, the possibility of getting cut in line and the frequent loss of the laundry. Even with the enough space, the lack of dryers compared with the washers extends the waiting time. Also, the design of the desks and chairs in the room are inconvenient and far from a user-centered design. The descriptions without English made foreigners difficult to start their laundry as well. Finally, the inconvenient use of cash and laundry cards result in a worse laundry room experience.

Design Research

We conducted thorough observation of the laundry room through four methods:

Fly on the wall
general sense of users' movements and behaviors within the space through analyzing students' waiting time

In-depth Interview
interviews users to acquire user's and expert recognition about several problems and pain points of laundry room users through learning characteristics of the extreme users

Survey
conducts questionnaire samples overall information regarding laundry room user's habits and complaints related with dryers, detergents, laundry cards, and the room

Behavioral Mapping
insights for effective space arrangement through mapping and considering users' movement

Personas

Primary Persona(Seoyoon Kim)
more effective time and moving within the laundry room¹
conscious about the trends / does her laundry every once a week / prefers to pay with cash or card instead of CASH or IC ID assignments in the laundry room / sometimes desires for reliable laundry room environment

Secondary Persona(Sarah Parker)
more inclusive for foreign and clumsy users, more relaxing environment
clumsy personality / often forgets to go back for her laundry / feels the laundry room is not an effective space / not inclusive for foreigners as well / enjoys gossiping with her sister in London / looks for an appropriate space for phone calling

Design Concept

"Efficient laundry and using the waiting time effectively in a unique atmosphere."

Design Solution

Three changes were made for **better efficiency**.

- increased number of washing and drying machines.
- The creation of "Yonsetak" allows students to reserve machines. The app also alerts users when laundry is done.
- Unclaimed laundry can be stored in a more hygienic way in storing cabinets that correspond to each machine.

Changes were also made to improve **students' waiting time**.

- Several sofas and a large study table
- The installation of a garden and a private phoning area

Laundry Application System

연세탁(Yonsetak)
allows students to
1) reserve machines
2) pay for the fees through X-money/
3) alert users when laundry is done



Perspective #1



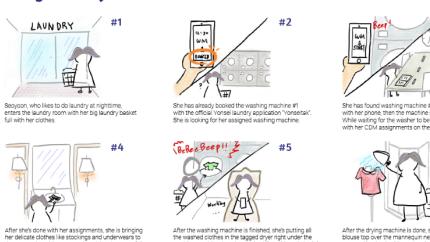
Perspective #2



Perspective #3



Storyboard of Scenario 1



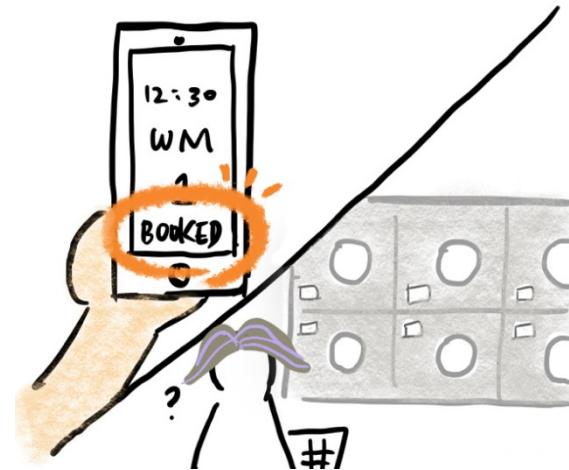
Storyboard of Scenario 2



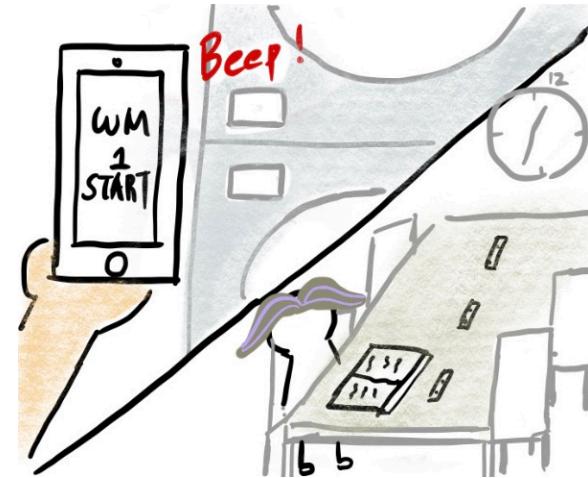
Scenarios with Storyboard – First Scenario (Seoyoon Kim)



Seoyoon, who likes to do laundry at nighttime, enters the laundry room with her big laundry basket full with her clothes.



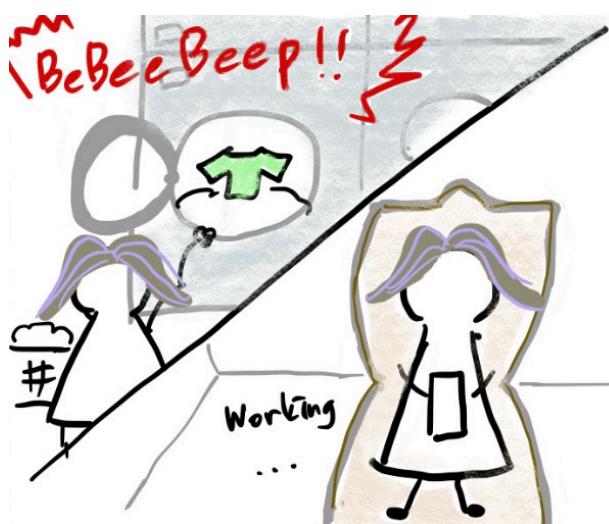
She has already booked the washing machine number 1 with the official Yonsei laundry application, "Yonseitak". She is looking for her assigned washing machine.



She has found washing machine 1 and tagged it with her phone, then the machine starts to operate. While waiting for the washer to be done, she works with her CDM assignments on the studying table.



After she's done with her assignments, she is bringing her delicate clothes like stockings and underwears to the personal washing area and washing them carefully.



After the washing machine is finished, she's putting all the washed clothes in the tagged dryer right under the washing machine that she used. While waiting, she's sitting on the individual chair and watching NETFLIX with her phone.



After the drying machine is done, she is draping her blouse top over the mannequin next to the ironing area and ironing it with a steam iron. Then, Seoyoon's all laundry processes are done!

Scenarios with Storyboard – Second Scenario (Sarah Parker)



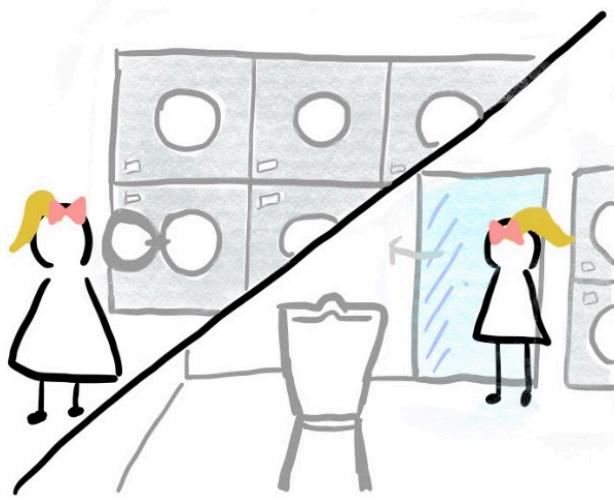
Sarah, who has quite clumsy personality, is late for her laundry taking out time. She is now rushing out to the laundry room.



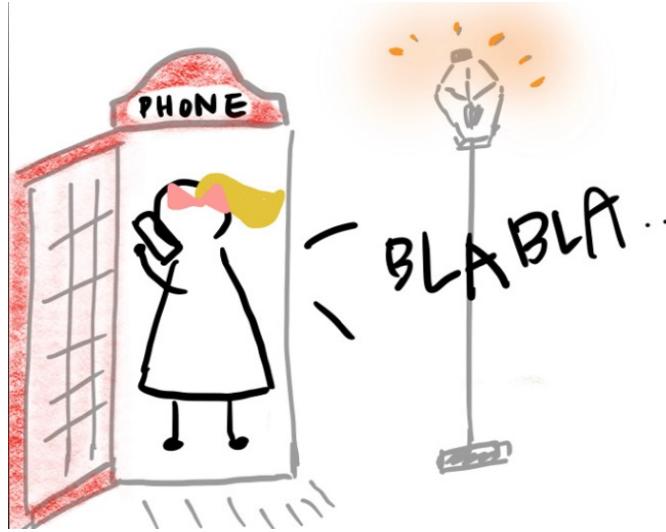
Five minutes is already passed since the washing machine that she tagged is finished. She can immediately identify this through the application, "Yonsei-tak".



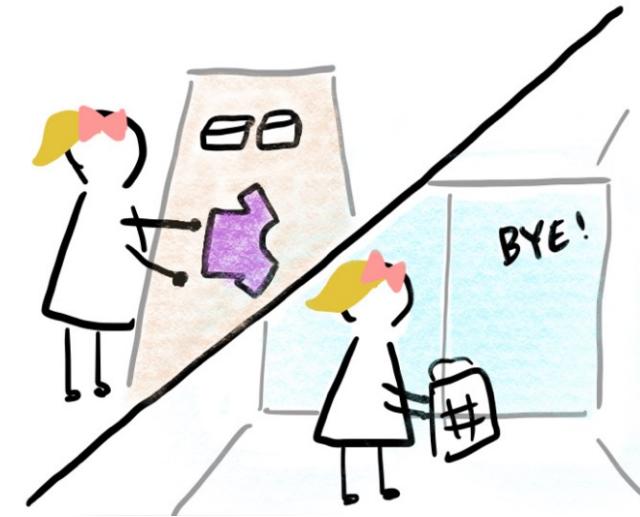
Now, she is pulling out her laundry basket from the laundry drawer. Since she was late for taking out time, the next user took out her clothes and put them in the drawer.



She is putting all her washed clothes in the dryer she has already tagged. After that, she is walking out to the garden outside through an automatic door next to the washers.



Sarah is close with her family and especially she enjoys gossiping with her sister in London. She is chatting with her inside the phone booth in the garden.



After she is done with the phone call, the dryer gets finished and she is folding up her dried clothes on the laundry drawer. Then, all Sarah's laundry processes are done!

Evaluation According to 3 Conditions for Optimal UX

1) Usefulness

We greatly increased the usefulness of using the laundry room by introducing many new useful functions. First, we put more washers and dryers to 1:1 proportion to avoid long lines. We added personal washing areas for hand-washing sensitive laundry and an adequate number of steam irons and hangers for convenient ironing. The drawers in between machines create a hygienic environment because students can put their laundry baskets in the designated places, rather than the floor. The drawers can also acts as tables to fold and organize the laundry. The laundry application system **연세탁** allows students to reserve machines, which reduces lines and waiting time.

2) Usability

The usability noticeably increased through our renovation of the laundry room. First, we created the floor plan using the result from behavioral mapping to reduce the user's movement to the minimum. We installed a garden, private phoning areas, and sitting areas for various purposes like relaxing, talking, and studying to improve students' waiting time. We also changed the original pushing doors to automatic doors, considering the fact that people are carrying heavy laundry baskets. Through our application, we addressed inconveniences found through surveys by allowing user to pay for the service through Y-money and alerting users when laundry is done.

3) Affect

We worked with the central color scheme of ivory and black to add a neat and refined feeling to our design of the laundry room. We also tried to add a colorful and lively sentiment to our design by renovating the garden and installing red phone booths.

Evaluation According to 6 Principles of Interaction Design

We tried to give “unity” regarding the principle of *Elegance and Simplicity* by standardizing the color scheme and measure of our design. In order to achieve “balance” within the principle of *Organization and Visual Structure*, we adjusted the number of washers and dryer to the right proportion reflected the result of the survey we conducted. “Consistent application” of the principle *Module and Program* was also achieved because we unified the design and system of 연세탁 to be the same with other Yonsei applications so that even first-time users can intuitively use our new laundry application. We also attained “distinctiveness” of *Style* by breaking from the conventional dull, boring atmosphere of the laundry room and changing it into a elegant space with digitalized systems.

However, our redesigning also had some drawbacks regarding “immediacy” of *Image and Representation*. We put too much effort in unifying the design of different machines that the users might not be able to intuitively know how to use the functions. Also, our design was weak in “appropriateness” within the principle of *Style* because some of the functions are unrelated to the purpose of space itself, which is to do laundry.