Master's Thesis

University counselors research for the design of student mental healthcare platform

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Abstract

In the modern era, the recognition of the severity of mental health issues and the need for effective care has grown significantly. Experts advocate for active mental healthcare, particularly among university students, who experience rapid changes in their surroundings and are susceptible to deteriorating mental health. Consequently, universities worldwide have established affiliated counseling centers for the mental well-being of their students.

Despite these efforts, many students are still unaware of the importance of proactive mental healthcare and the available resources. Paradoxically, university counseling centers struggle to meet the growing demand due to resource shortages. To address these challenges, a project was initiated at a South Korean university to develop a solution. The project aimed to provide preventive treatment, detect early signs of mental health issues, and create a supportive environment for mental healthcare in students' daily lives.

The project applied user studies with counselors and ongoing collaboration. Activities such as interviews, observations, and role-playing sessions were conducted, and their results were analyzed using affinity diagrams and system visualization. The tacit knowledge accumulated by counselors over time in their counseling systems was a crucial aspect of these efforts. As a result, a smartphone app for student users and a web platform for counselors' service operations were developed. The design prioritized enhancing the efficiency and convenience of the existing offline counseling system. The project goal was to make the design outcomes directly applicable to the service operations of real university counseling centers.

This paper provides comprehensive documentation of the entire process, including the applied methodologies, conducted analyses, derived insights, and the rationale behind the digital platform's features and design. This knowledge may offer valuable insights for similar digital service designs from a service provision perspective, particularly in university counseling center operations.

Keyword: University students mental healthcare, University counseling center, Design user study, Digital service design

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1. INTRODUCTION

1.1. Necessity of mental healthcare for university students

In the modern era, the importance of mental healthcare has been growing, leading to active research and improvements in awareness. Some experts specifically emphasize the significance of mental healthcare for university students, and its rationale is evident in numerous studies (Auerbach et al., 2016; Hunt & Eisenberg, 2010; Kitzrow, 2009; Oswalt et al., 2020; Pedrelli et al., 2015). In line with this, nearly every university has established counseling centers with the goal of providing developmental, preventive, and therapeutic counseling to assist students in defining and achieving their personal, academic, and career goals (Kitzrow, 2009). However, the mental healthcare problem of university students is still an ongoing issue. Their mental illness issues are becoming more serious over time (Oswalt et al., 2020), and consequently, the demand for intervention is increasing.

Unfortunately, most university counseling centers face the reality of insufficient resources compared to the demand (Gallagher, 2015). This situation results in the inability to adequately supply services, even when students express a desire for counseling. As a measure, many places are introducing a 'preventive model', encouraging students to manage their mental health on their own. The main point is that early detection and prevention of mental health deterioration before symptoms of illness manifest is important and effective (Conley et al., 2015).

Prevention can be a cost-effective and viable choice in university counseling centers that cannot afford sustained significant resources for the treatment after the onset of symptoms (Le et al., 2021; Mihalopoulos et al., 2011). Especially after the widespread adoption of smartphones, there have been attempts to integrate digital services into mental healthcare (Ebert et al., 2017). This is because leveraging digital tools for preventive treatment activities can further enhance their advantages. Despite the increasing demand for counseling among students, paradoxically, many students still do not seek treatment (Oswalt et al., 2020) and thus do not receive proper diagnosis and care. If preventive measures are digitized, it can significantly contribute to the mental healthcare of university students by overcoming psychological barriers due to mental illness stigma and mitigating the physical and temporal constraints caused by a lack of awareness (Michaels et al., 2015).

1.2. UNIST digital mental healthcare platform design

UNIST, a university in South Korea, has also undertaken a project to establish a digital platform for mental healthcare and prevention. With its relatively large scale and well-equipped infrastructure

compared to other universities in South Korea, UNIST has been actively managing the mental health of its students. However, with the increasing interest in mental health and growing demand, there is a shortage of counseling personnel resources. As a result, many students, despite wanting counseling, face a waiting period of 1-2 months.

Therefore, it was decided to equip a digital platform for more efficient and effective management of mental healthcare and prevention. The project was directed to enhance students' accessibility through a smartphone app, enabling them to access services and beneficial content provided by the mental healthcare center. This approach encourages self-assessment of their mental state, illness prevention, increasing mental health interest, and the reduction of stigma. As a result, it is anticipated that students will be more aware of mental health, prevent deterioration, enhance overall mental well-being on campus, and facilitate prompt counseling for students in need.

1.2.1. Problem definition and research aim

To make a digital service platform that improves the situation, an investigation into university counselors was necessary. The counselors at UNIST are the only resource for providing counseling services and operating the counseling center. Hence, it was essential to design a digital tool that is convenient and efficient from their perspective. The new system had to be immediately applicable and sustainable without burdening the counselors. Given that counselors are accustomed to existing, albeit inefficient systems, introducing new tools that demand learning and impose additional burdens would be highly inefficient. It was the most important consideration to be avoided.

To design such an outcome, a user study with counselors was conducted as a prerequisite. The university counseling system is different from typical mental counseling services, and it is relatively less known. Each center independently constructs and operates services based on its unique circumstances. Moreover, understanding specific tasks counselors do and the stages of the counseling process proved challenging with limited available information.

Therefore, the project team set out with the research objective of gaining a deep understanding of counselors' tacit knowledge (Spinuzzi, 2005) through user studies and comprehending the context of university counseling and the counselors' tasks. In reality, the counseling center at UNIST had no manualized materials regarding counseling and operations, allowing work practices to naturally evolve without fixed rules based on counselors' needs. To investigate this, the project team planned user studies to delve into counseling and counselor tasks, aiming to gain insights for designing the outcomes.

It was tried to learn about counselors' tasks, work environment, and information about the counselors themselves, and also about their philosophies and attitudes. We sought to understand how counselors

have evolved the counseling center's operation system, the efforts they made, and the direction they take in operating university counseling. Additionally, to implement new features in the digital platform, the counselors' tasks, tools used, and optimization methods were investigated. The goal was to identify areas where counselors experience discomfort or have specific needs within the current system. Consequently, we intended to gain a deep understanding for designing features of a digital platform tailored for counselors based on the insights from the user study results.

1.2.2. Project overview, outcome, and contribution

The project included various progresses to develop a functional digital platform. Starting with a competitive analysis of online mental healthcare and counseling services, user studies were conducted with UNIST students who would use the platform and university counselors who would provide mental health services through the platform. The existing competitive services typically offered meditation, fixed content, or counseling with counselors via video, phone, or chat—a format that did not align with the direction or required features for providing counseling specialized to students at university mental healthcare centers. Therefore, to design a platform suitable for the university context, design research was conducted, including interviews, observational studies, role-playing, design workshops, aesthetic keywords, mood boards, and affinity diagrams with students and counselors.

The user study results from students who receive the service were mainly utilized to set the direction of UI visuals based on their perceptions and experiences with university counseling centers. The development of service features was primarily discussed and decided upon in collaboration with counselors, given that available resources for service provision are highly dependent on them. As a first step, close user studies with counselors were conducted to aim for practical and sustainable platform development. Recognizing that counselors were accustomed to existing, albeit inefficient systems, the research team had to avoid the imposition of new learning requirements and burdens. Therefore, through user studies with many counselors, the research team tried to learn about their 'tacit knowledge,' systematized their naturally established working methods without fixed rules, and sought insights into their philosophies and needs. As a result, a smartphone app for student users and a web platform for counselors' service management were developed as design outcomes.

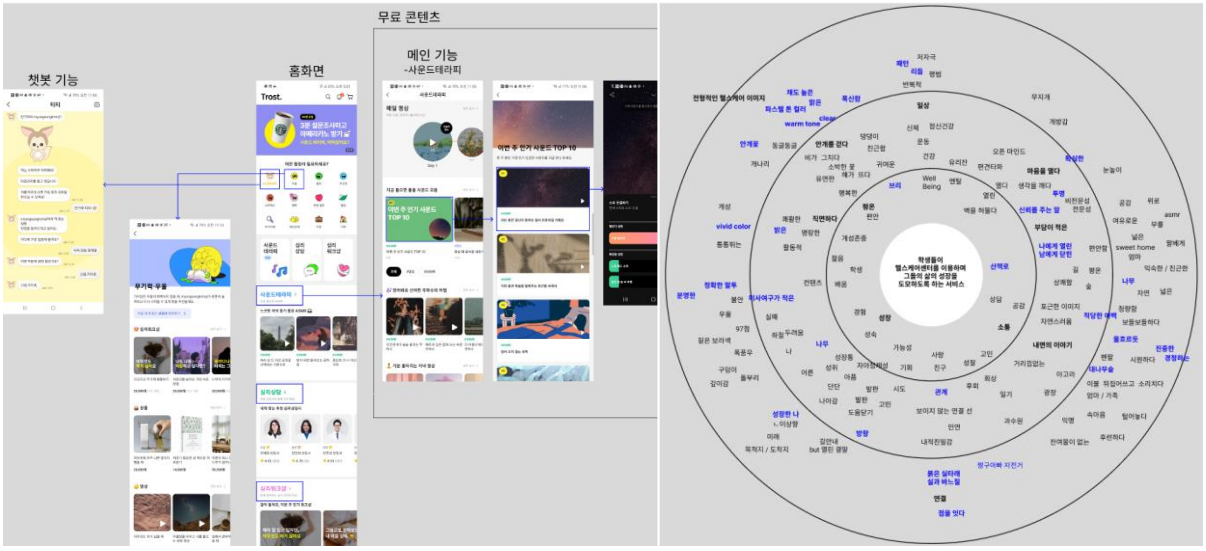

Figure 1. Competitive analysis(left) and student user study(right)

Figure 2. Design workshop with counselors

In this thesis, the focus is on the process of conducting user studies to uncover insights and implementing a digital platform design that faithfully incorporates those insights. It describes the research methods and results concerning the context of university counseling services, the roles and tasks of counselors within that context, and the journey from the study to the development of design outcomes.

This research provides a concrete description and narrative of the context of student mental healthcare and counseling service delivery in the university setting, contributing valuable insights to the field. It is considered that organizing information about the actual situations in university counseling, rather than quantitative or clinical outcomes, is beneficial for subsequent projects or other related studies.

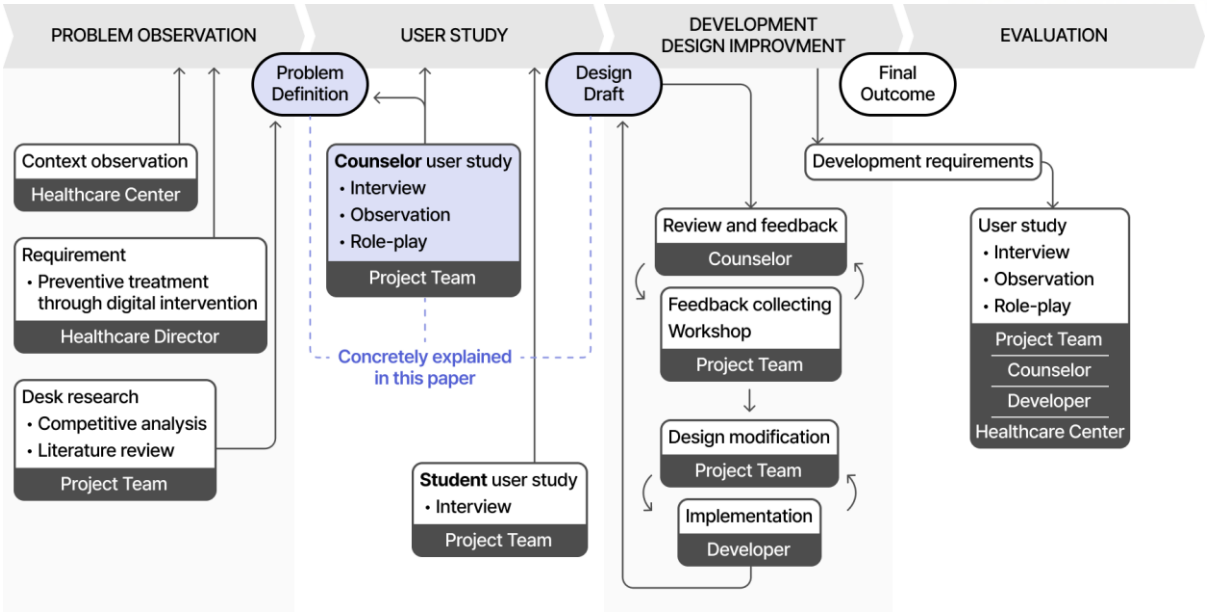

Figure 3. Overall process of the project

2. LITERATURE REVIEW

2.1. University students' mental healthcare status of quo

Mental health issues among university students are very common now. It is important for them to take appropriate treatment and prevention, and many studies support this argument (Blanco et al., 2008; Castillo & Schwartz, 2013; Conley et al., 2015). Typically, when high school students become university students, many environmental factors significantly change. They may live away from their parents, becoming adults without getting used to the responsibilities and obligations that come with adulthood. In addition, financial issues, academics, and interpersonal relationships can make university life a challenging period. This is not an exception for non-traditional university students who enter higher education after becoming adults. Naturally, this has an impact on inducing stress and mental health issues (Pedrelli et al., 2015). In particular, after the lawsuit related to mental illness incidents at prestigious universities in the United States, concerns about mental health incidents have been raised—such as a mentally troubled student at Harvard murdering a roommate and committing suicide (Thernstrom, 1997), and a student at MIT committing suicide without appropriate measures due to weak ethical guidelines at that time (Healy, 2002). As a result, many universities have been urged to pay more attention to the mental health management of university students (Kim, 2009; Kitzrow, 2009).

The country where the project is being conducted, South Korea, has ranked as the 1st country in suicide rates among OECD nations for the past few years (OECD, 2023). Since suicide is highly correlated with mental health issues such as depression and anxiety, people's mental healthcare is crucial (Ministry of Health and Welfare National mental health center, 2022). Additionally, similar to global trends, South Korea has an increasing prevalence of mental health disorders and extreme choices (Korea Disease Control and Prevention Agency, 2022; Ministry of Health and Welfare, 2021; Statistics Korea - Statistics Research Institute, 2023). For Korean university students, the lifetime prevalence of suicidal ideation is high, reaching 39.2%, indicating a serious issue at both the individual and national levels. Although their experience with mental disorders is 27.8%, only 4.8% have received counseling (Ministry of Health and Welfare National mental health center, 2022). Therefore, there is an urgent need for approaches to provide appropriate treatment for them.

2.2. Digital platform as a preventive treatment

The means of digitization matches well with the purpose of preventive treatment. It aims to detect and assist individuals in coping with mental health issues before they develop into serious illnesses (Conley

et al., 2017). When technological elements are integrated into preventive treatment, it can enhance effectiveness by providing advantages (Mohr et al., 2013) such as economic efficiency, improved accessibility, increased coverage, and alleviation of psychological barriers.

Economic and social losses attributed to mental illness have a substantial impact. According to the Centers for Disease Control and Prevention (CDC, 2023), suicide and self-harm incurred national costs exceeding 500 billion dollars, including medical expenses, productivity loss, and costs related to the quality of life in 2020. "Mental health at work: policy brief" released by the World Health Organization (WHO) and the International Labour Organization (ILO) reported that depression and anxiety result in an annual loss of 1.2 billion working days, causing nearly one trillion dollars in global economic losses (WHO & ILO, 2022). These contain both direct and opportunity costs incurred due to absenteeism, resignations, and decreased job performance resulting from the deterioration of mental health. Preventive treatment is economically and socially beneficial, as it allows for the prevention of such losses with smaller investments before they occur.

2.3. Needs of studying counselors

Digitized preventive treatment may seem inherently beneficial, but there are opposing arguments. When examining recent research on university mental healthcare, most studies provide clinical data results, demonstrating the effectiveness of digital interventions. However, in real-life settings, these interventions are often found to be ineffective, and there is a lack of research conducted from the perspective of service provision in daily situations (Mohr, Lyon, et al., 2017; Mohr, Weingardt, et al., 2017). Therefore, through this research, it is needed to create practical cases involving close collaboration with actual service providers, the counselors. Through collaboration with counselors, insights for providing services in real university environments should be identified.

The context of utilizing a digital tool in the UNIST counseling center is distinct from merely creating a standalone mental healthcare service product and distributing it. The new tool should replace parts of the current offline service system at the counseling center with a more efficient digital platform. The objective is to improve the system, enabling counselors to concentrate more on their counseling duties.

For example, some of the expected effects include:

- Addressing mild concerns or psychological assessments to self-diagnosis or preventive content to reduce the burden on students counseling.
- Digitizing and simplifying the counseling application process to decrease the instances where individuals do not take treatment due to psychological hesitations.

- Alleviating one of the major challenges faced by Korean university counseling centers, which is the waiting period, by utilizing digital tools to provide preventive content for mild cases when face-to-face counseling with a counselor is not immediately available.

In the situation that a university counseling center has limited budgets, limited human resources, long waiting times, and short counseling sessions (Gallagher, 2015), the digital platform has to reduce the workload of counselors and provide mental healthcare services to more students in need of assistance. Therefore, the project team needs to understand the mental healthcare system that the university counseling center and counselors have naturally developed and design a digital platform that is suitable for real situations and offers better efficiency and effectiveness. To derive practical design outcomes, collaboration with experts, particularly counselors who are part of the current system and will operate the designed platform in the future, is essential. Without understanding their tacit knowledge (Spinuzzi, 2005), designing good outcomes is impossible.

2.4. Context of UNIST healthcare center

To help understand the scale of the university and mental healthcare center where the project was conducted, the following figures provide related information. The figures are referenced from internal data from the UNIST Healthcare Center, the "2023 Nationwide Survey Report on Student Counseling Institutions at Universities," (Counseling Council for University Student, 2023) and the "2021 Ministry of Education Guidelines for Supporting the Mental Health of University Students" (Ministry of Education, 2021).

2.4.1. Student population

This project is being conducted at the Ulsan National Institute of Science and Technology (UNIST) in Ulsan, South Korea. In 2022, the total number of undergraduate and graduate students was 3,774, and when considering all eligible members who could use mental healthcare services, there were 5,135 individuals. Among universities in Korea, those with fewer than 5,000 enrolled students account for the majority at 48.4%, and the remaining schools have more.

2.4.2. Mental healthcare service utilization rate

At UNIST, 431 undergraduate and graduate students, accounting for 11.4% of the total student population, applied for counseling psychologists' counseling or psychiatry doctor's diagnosis. They had a total of 2,695 sessions for individual psychological counseling and 486 sessions for doctor's diagnosis. While the number of psychological counseling sessions continued to increase, the number of diagnoses decreased due to a reduction in available appointment days.

2.4.3. Counseling resources

There is one clinical psychologist, four counseling psychologists, two external counseling psychologists, and one healthcare research professor who is also a psychiatrist at UNIST Mental Healthcare Center. When considering full-time counselors only, there are four, resulting in a ratio of 1:944 with students. In the national university average, 78.1% of counseling centers have 1 to 4 full-time counselors, and 47.9% have 1 to 2 counselors. According to survey responses, almost all universities consider a ratio of less than 1:1000 between full-time counselors and enrolled students as the most suitable. However, the average ratio is currently 1:1150, indicating that the majority of universities are facing a shortage of counselor resources. Especially, there are only 30 universities with one or more assigned responsible professors. Considering universities that were not surveyed, it can be noted that such cases are not very common.

2.4.4. Waiting period

When analyzing 254 individuals in UNIST who applied for psychological counseling, the average waiting period from receiving initial reception counseling to being assigned a counselor and receiving regular counseling was 38.1 days. The largest proportion of individuals, 42.1%, had a waiting period between 31 and 61 days, followed by 21.3% with a waiting period of 5 to 14 days. The minimum waiting period was 5 days, and the maximum waiting period exceeded 91 days.

Overall, UNIST seems to possess a mid to high level of infrastructure compared to other universities in South Korea. Nevertheless, there are universities that offer superior services, while others have more basic structures. In this context, the project team will initially design appropriate services and features in collaboration with UNIST Mental Healthcare Center. Subsequent research will aim to refine and optimize the outcomes by considering diverse situations from other universities.

3. USER STUDY METHODS

3.1. Participants

Four counselors from UNIST Mental Healthcare Center were recruited to participate in the research. Because of their busy work schedules, the user study was conducted with any available counselors who had time for interviews.

Table 1. List of participants

Code	Age	Gender	Position	Certificate	Working period	Role
A	34	Woman	Counselor	Couns Psychol Lv.2 Clin Psychol Lv.2	2018. 05. ~	External cooperation Outsourcing
B	35	Woman	Psychologist	Clin Psychol Lv.1	2016. 05. ~	Screening(Diagnosis) Reception management
C	33	Woman	Counselor	Couns Psychol Lv.2	2021. 03. ~ 2023. 03.	Contents producing
D	36	Woman	Counselor	Couns Psychol Lv.2	2015. 08. ~	Case management

- Couns Psychol = Counseling Psychologist
- Clin Psychol = Clinical Psychologist
- Lv.1 is a higher grade than Lv.2

3.2. User study structure

The counselor user study progress was done from November 2022 to March 2023, including the stages of planning, conducting research, documentation, and analysis. Due to their varied schedules, there were irregular gaps in the user study sessions for each counselor. During these intervals, the project team organized the results from conducted sessions and iterated on improving the planning for the next sessions.

User study with counselors consisted of interviews, observations, and role-playing sessions. On each predetermined date, 3-4 researchers visited the counseling offices of each counselor, conducting three sessions consecutively at the location where actual counseling and work takes place. The estimated duration for each user study was planned for a total of 4 hours, considering 1 hour per session along with buffers and breaks between sessions. For Counselor B, two additional interviews were conducted before and after the user study, to obtain different types of information and more detailed insights.

User study preparations, such as interview questions, observation targets, and role-playing scenarios, were prepared before each user study. After each user study, the recorded content from the sessions was promptly reviewed and organized. All these records were coded and organized using the thick description method.

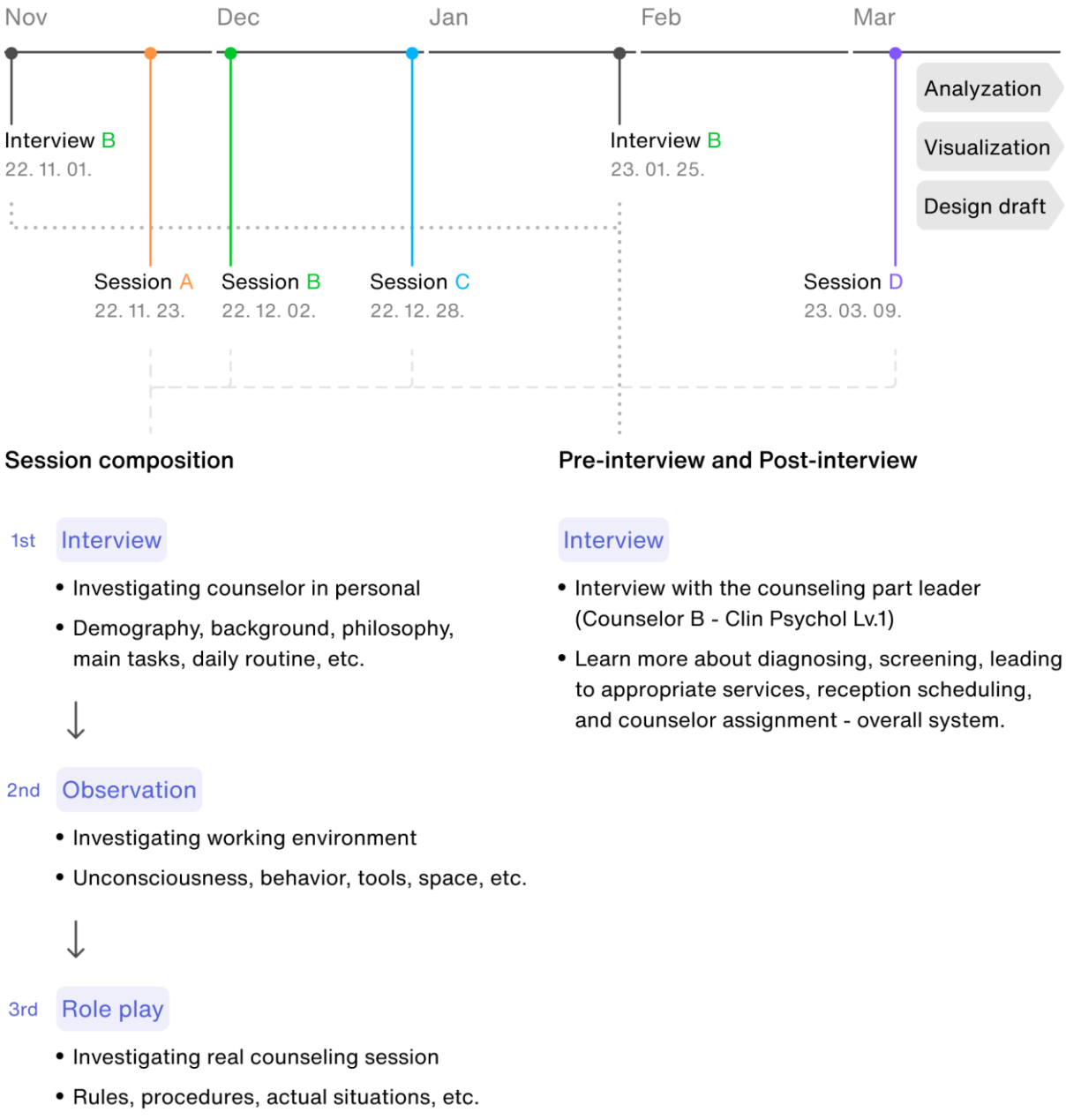

Figure 4. User study process

3.3. Preparation

To obtain information about knowledge and environments in different professional fields, interviews were prepared as the most popular and accessible method. Mental counseling is still not widely popular in detail regarding its methods and processes. Moreover, university counseling centers operate in their own most efficient ways, varying from one center to another. Therefore, interviews were prepared to gather diverse, abundant, and accurate information about it.

Common questions to obtain information about each counselor's personal things, including demography, background, counseling philosophy, main responsibilities, and daily routines, were referred to the interview part in About Face (Cooper et al., 2014). Subsequently, based on the specialized tasks they handle within the center or the content of their responses, on-the-spot follow-up questions were asked.

Table 2. Common questionnaire

Category	Question
Guidance	Project introduction and interview guide Guide and consent request for recording and using of interview results
Personal understanding	What makes your day enjoyable? What ruins your day? What makes you think it is a waste of time? What tasks or values are most important to you? What do you think you will be doing after 5 years? What tasks do you not want to do or want to put off? What tasks do you enjoy the most or want to do first? Year of birth, place of residence, type of residence, time and method of commuting to work
Working space observation	Questions about the observed space
Counseling	What are you trying to get done today? What preparations do you make before the counseling? How do you organize your client's information? How do you coordinate the counseling schedule? What tools are used during counseling? What information is recorded during the counseling? What needs to be organized immediately after the counseling and how do you organize it? What are you preparing for the next counseling session? What do you do after the counseling is over?
Specialized tasks	Other than counseling, what mental health-related work are you responsible for?

Table 3. Additional questionnaire for counselor B

Category	Question
History of the center and counselors	Since when have you been working? What was the process of developing the center? Do you think it has developed in a good direction during your time working there? What role do you think you played in the development of the center? What spatial, working environment, resource, and social changes have occurred?

	Are there any related materials?
Counselor's Requirements	Are the counselors' needs well reflected? What percentage of requirements are reflected? What types of requirements are well reflected? How long does it take to be reflected?
Current status of centers and counselors	What are your predictions for the next 5 years of the center? What are the center's goals this year? What is the overall direction of the center?

Some aspects would be insufficient alone with interviews, and even counselors may find it challenging to describe themselves. Therefore, observational research was chosen to investigate the actual work environments of counselors, their behaviors during counseling, and how they optimize their surroundings for their tasks. This approach aims to explore unconscious behaviors and gain feature insights for the design outcomes by observing current tools used in their work and points of discomfort.

Table 4. Object of observation

Category	**Object**
Interior	Overall structure of counseling office Lighting selection and placement Interior props and arrangement
Working environment	Work desk setup Utilization of PC, using programs, tools, and messengers Notes and memos Filing Calendar and planner
Counseling table	Arrangement Atmosphere Tools used during counseling
Etc.	Bookcases, shelves, cabinets, home appliances

Lastly, to understand how the actual counseling, which is their primary task, is conducted, it was necessary to obtain information related to it through observation. However, observing actual student counseling sessions was impossible due to the sensitivity of the matter. Therefore, a role-playing (Medler & Magerko, 2010) session was planned as a substitute. One of the researchers created a persona (Norman, 2006) based on himself and immersed himself in the role of a student seeking counseling. He planned to conduct a single initial counseling session with each counselor, and that role-playing session would be observed and recorded as a means of gathering relevant information.

3.4. Procedure - Interview, Observation, Role playing

The interview sessions were scheduled at different times for each counselor to avoid their reserved counseling schedules, and they lasted around 1 hour each. The main interviewer and 2-3 recorders participated together. All content was recorded through note-taking and audio recording. Each counselor initially responded to common questions, and based on their responses and unique aspects, they answered the questions that spontaneously generated follow-up questions during the interview.

Note that one counselor has higher qualifications (clinical psychologist) compared to others so she has unique responsibilities at the center. Instead of directly participating in regular counseling, she manages the counseling reception, reviews documents, diagnoses the student's condition, and guides them to appropriate services. Moreover, she supervises the entire process of assigning counselors responsible for each student's regular counseling sessions. To enhance our understanding of her and her role, two additional interviews were conducted.

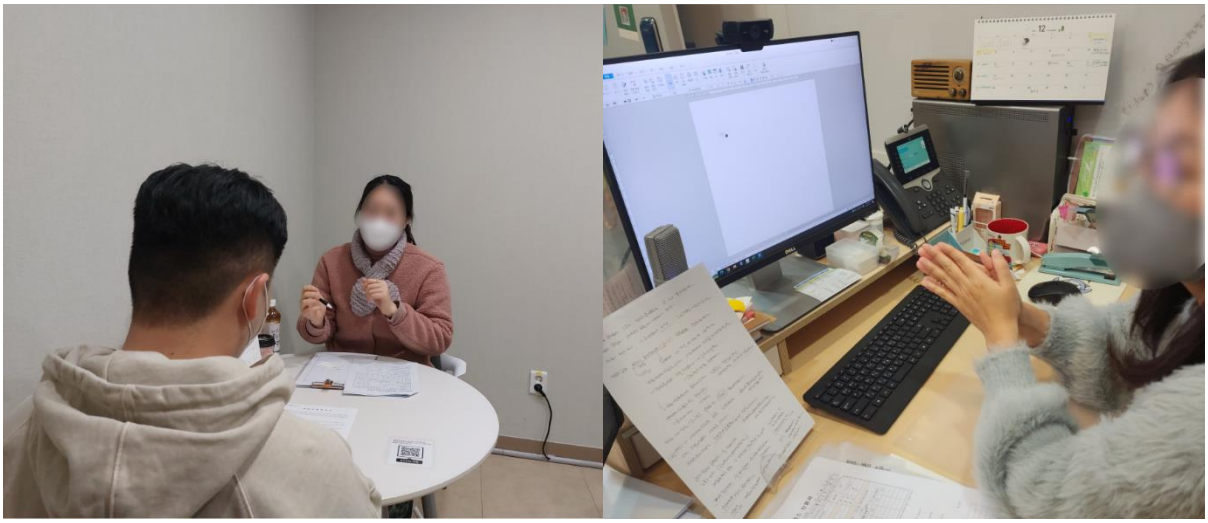

Figure 5. Interview with counselors

The observation sessions lasted around 1 hour each, involving the main interviewer and 2-3 recorders. The counselor's actual work for the day, office space, and the work desk were closely observed. To ensure an accurate investigation, it must match the actual work environment as much as possible, minimizing any disruptions caused by researchers. However, due to the sensitive nature of the information handled by counselors, installing cameras in the office for recording was not feasible. Instead, a minimal number of researchers were present in the office to observe counselors in approved areas. Consequently, additional interviews based on recorded footage were not possible. Considering that counselors may not be accustomed to such observational research, researchers asked questions about the counselor's work behaviors and space to facilitate sessions similar to Think Aloud. All content was documented through photography, note-taking, and audio recording.

Figure 6. Working environment observation

The role-playing sessions lasted around 1 hour each, involving the role-player and 2-3 recorders. Similar to the observational research, it was not possible to record the entire counseling session on video. Therefore, note-taking and photography were used for documenting observation. The counseling sessions followed the original counseling format, lasting approximately 50 minutes, and were conducted in each counselor's office to closely resemble the original counseling environment. The scenario assumed that a student was meeting the counselor for the first time for the counseling. After the counseling session concluded, researchers asked additional questions about points of interest. All content was documented through photography, note-taking, and audio recording.

Figure 7. Role-playing counseling

3.5. Analysis

3.5.1. Thematic analysis

To analyze and extract insights from the numerous conversations and observational content derived from user studies, the affinity diagram method was applied. Initially, the thick description (Geertz, 2008) technique was used to record details, including the context of interviews and observations. All notes and recorded content from each user study were divided into sentences and coded (see Appendix). Subsequently, the content of each code was converted into memo notes. Participants were then free to group and rearrange the notes without any specific rules. Once it was deemed unnecessary to continue this process, representative insights for each group were written as titles. Five researchers involved in the project repeated these steps twice, each with the same set of sticky notes.

Figure 8. Affinity diagram

3.5.2. System flow

The operations and counseling system at UNIST Mental Healthcare Center has not been documented or manualized since the establishment of the center. Over time, counselors have operated based on immediate needs and what they considered efficient, acquiring this knowledge as they went along. The potential strengths or weaknesses in the system might not have been known to the counselors themselves and the research team. Therefore, to facilitate smooth communication with counselors and stakeholders, visual representations of the center's service delivery system were created. One is a diagram illustrating the organic flow of services, and the other is a service blueprint (Shostack, 1984) of the center's counseling context. This approach ensured that the entire project team had a consistent, and accurate understanding of the service structure.

4. RESULT & INSIGHT

In this section, a detailed explanation of all the results from the user study involving interviews, observations, and role-playing is described. Understanding the context in presenting the research findings is important, so the results and insights are arranged by placing related elements in context, rather than introducing them in terms of time series. Some insights may include experiences in the field and casual conversations from informal discussions throughout the project. To ensure that these insights are based on research results, relevant appendix codes have been attached. (See Appendix)

Table 5. Thick description codes

Code	Session
UA	User study with A
UB	User study with B
UC	User study with C
UD	User study with D
IB	Interview with B

One thing to consider is that UNIST's counseling center is relatively well-structured in terms of supporting student mental healthcare among Korean universities. Additionally, it is noteworthy that the center is led by a professor of the UNIST healthcare research lab (IB35, IB36) and a psychiatrist at the same time. Nevertheless, the identified issues suggest that similar problems may exist in most universities, particularly those facing more challenging situations.

4.1. Counseling procedure

This is the visualization of the counseling service system at the UNIST Mental Healthcare Center, created to better understand the center's service processes. Firstly, Figure 9 illustrates the overall flow of students and counselors receiving and providing the center’s services. It enables an understanding of how specific activities impact others and identifies loops within the activities.

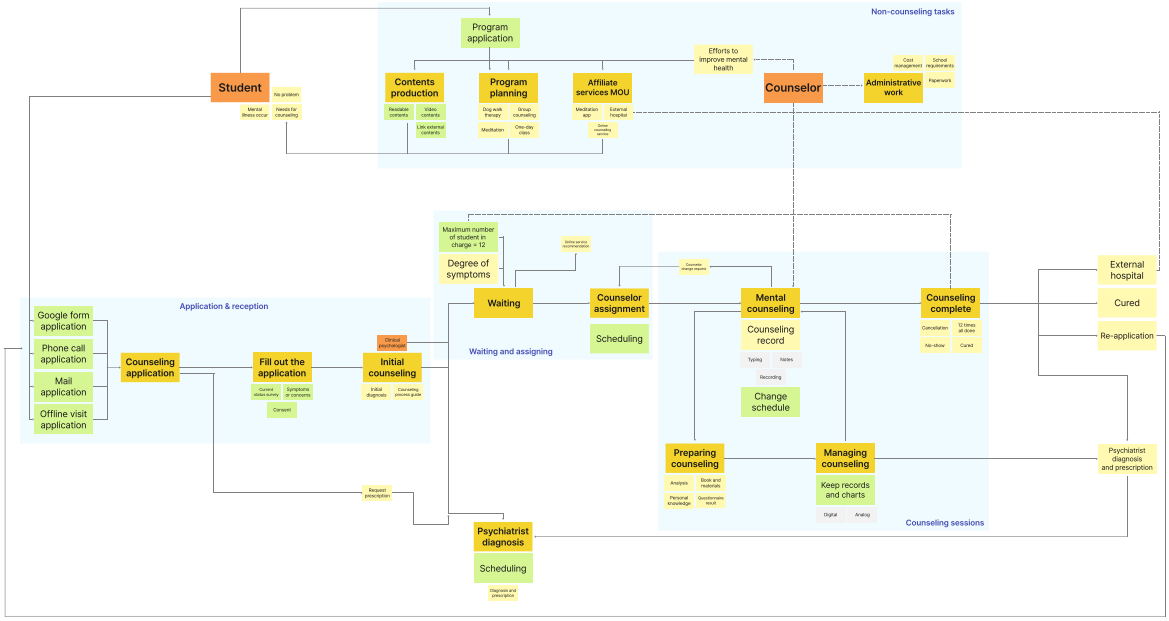

Figure 9. Mental healthcare services flow diagram

Secondly, Figure 10 provides another visualization of each stage in the counseling process based on the service blueprint concept. It distinguishes between tasks that counselors directly provide to students in counseling sessions and tasks performed behind the scenes, complementing the parts not visible to students who receive the services. As seen, the counseling service system can be explained in four stages: application and reception, waiting and assigning, counseling sessions, and non-counseling tasks.

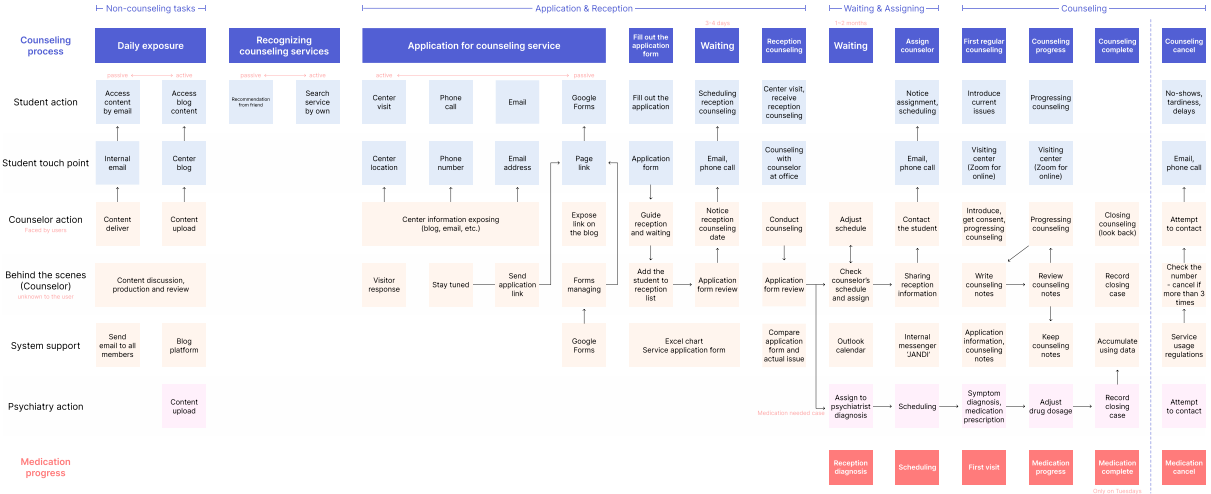

Figure 10. Mental healthcare service blueprint

4.1.1. Application and reception

Firstly, voluntary applications from students are necessary for receiving counseling. Therefore, many students need to be aware of mental health issues and be able to self-diagnose. For that, counselors make efforts in promotion, program planning, and requiring support from the school.

When a student decides to apply for counseling, various channels are available. Counselors have made multiple options for the convenience and accessibility of students, such as Google Forms, phone calls, text messages, emails, and in-person visits to the counseling center. However, eventually, students are required to fill out a paper application form and submit it to the center, and the previous channels are intended to guide this procedure. The application form includes academic and personal information, details about the issues the student is experiencing, and a diagnostic questionnaire with scoring.

Then, the clinical psychologist reviews the application form for specific details and contacts the student to schedule the reception counseling (UB10). While the details of regular counseling sessions will be explained later, reception counseling is not significantly different from them. However, reception counseling is solely conducted by the clinical psychologist just once. Through this, the clinical psychologist diagnoses the mental health status, assesses the risks, and guides the student to appropriate services (IB26, UB3). Typically, it is followed by regular counseling sessions with a counseling psychologist. However, at UNIST, there are other options like diagnosis by a psychiatrist and medication prescription. Therefore, the clinical psychologist assesses the appropriate treatment method, including these options. This process is referred to as 'screening' (IB42).

4.1.2. Waiting and assigning

After the reception counseling, students unfortunately have to endure a waiting period of one to two months. This extended delay arises due to the high demand from students, surpassing the capacity of the center's counselors. Ironically, the counselors' efforts contribute to a substantial number of students seeking counseling (IB41). Although counselors limited the number of regular counseling sessions for each student to make counseling accessible to as many students as possible (IB33, IB15), the challenge of a long waiting period persists. This complex problem was identified by the research team, and counselors were well aware of it.

However, if a student is assessed as having a serious mental illness and a high-risk level through reception counseling, the counselor specially marks him for intensive care (UA13, UB27). These students are given a higher priority for counseling to minimize the waiting period and prevent unforeseen incidents that may occur during this period. The entire process is carried out through manual Excel work by the clinical psychologist responsible for reception management (UB27, UB13).

When any counselor's previous regular counseling session ends and the counselor is ready to initiate a new session with a new student, the clinical psychologist assigns the next waiting student to that counselor (UB14, UB15). Then, the counselor and the new student coordinate schedules once again for the upcoming regular counseling sessions. These schedules are arranged to accommodate the student's convenience as much as possible, and any adjustments can be made at their discretion (IB32, UD57).

4.1.3. Regular counseling progress

Regular counseling sessions typically consist of 12 sessions, and each session lasting approximately 50-60 minutes (IB33, IB22). Usually, counseling is scheduled at the same time each week, and from the student's perspective, they simply need to visit the center for counseling at the scheduled time. Before and after each counseling session, counselors have additional tasks. Before the session, they review the application form and previous counseling records to plan the session (UA10, UD34). After the session, they review the notes taken during the counseling, make additional notes, and organize the information for the next session (UD58, UD59). This loop continues throughout the regular counseling process.

The completion of regular counseling is not limited to finishing all of the 12 sessions. It may occur if the student is deemed capable of resuming normal daily life during the counseling, if the student cancels counseling due to personal reasons, or if the student fails to attend several sessions without any excuse. Counselors may encourage the student to reapply for counseling or facilitate a referral to external medical treatment after the conclusion of counseling.

4.2. Counseling in detail

4.2.1. Regular counseling

Of course, face-to-face counseling is a matter of therapeutic technique for mental health issues. Additionally, based on the analysis of user studies, it seemed that intervening in a counselor's counseling method for service usability is a very delicate and sensitive area, that should not be forced. Despite this, a detailed explanation of this process is described to enhance understanding of the attitudes of counselors and their activities before and after counseling. The research team was able to gain insights from these activities related to preparing for counseling rather than focusing on the counseling itself.

Counselors have preparations to make before a counseling session. The time required and the specific steps may vary among counselors, but typically, they spend about 10-15 minutes reviewing the counseling application or the content of previous counseling sessions (UD34). Those cover personal information, family relationships, present issues, and simple self-diagnosis results such as the PHQ-9

included in the application (UA16, UC3). Based on this information, counselors anticipate and prepare for topics they need to confirm or discuss with the student during the counseling session.

When the first counseling begins, there are things to verify or guide before discussing about the student's emotions. This includes confirming if the applicant is the correct person (UC9) and ensuring there are no inaccuracies in the provided information (UC15). This verification is not only crucial for personal information management but also plays a significant role in urgent situations for the students. Additionally, counselors check if the student has any other counseling experience (UC10, UA18), and they provide guidance and obtain consent signatures for service and information provision (UC11, UD41, UA19). While these activities are essential, they appear administrative and can be regrettable.

The narrative for the counseling begins with the information provided by the student in the application form (UA21, UA24). Once the counselor catches the current issues and pain of the student, they gradually delve into the past, guiding the student's story (UD47, UA22). According to counselors, they provide counseling based on interpersonal approaches to individuals who struggle with daily life due to anxiety and depression (IB1). This seems to be related that counselors consistently use questions about the relationships with family, friends, and people in the student's surroundings (UA29, UB23). To explore more details, additional questions related to events, space, atmosphere, and context are followed (UA31, UD50, UC20). Notably, counselors consistently showed an emotionally empathetic attitude. Instead of just asking questions, they continuously reacted to what the student shared, frequently expressing emotional empathy, such as saying, "It must have been challenging" (UA27, UC17, UD51).

Once the conversation has progressed to some extent and the contours of the student's issues become apparent, the counselor returns to the current situation. They may guess how the student would cope or what thoughts he might have (UD46, UC34). If there are any physical symptoms, the counselor provides advice on those matters (UB24). Subsequently, the counselor encourages the student to set their own goals, for example—after the counseling is over, what would the student like to be and which issues would he like to resolve (UA33, UB25, UC36). When the counseling time reaches about 45 minutes out of 50 to 60 minutes, the counselor asks the student about their experience with today's counseling (UA35, UD53). The counseling session ends with a summary of the counseling content, and guidance for the next session (UC38, UA38).

Often, there are some cases where counseling is accompanied by the diagnosis and medication treatment from a psychiatrist (IB28). In situations where daily life is too challenging, counselors may recommend or suggest this before, during, or after counseling (IB29).

4.2.2. Reception counseling and screening

A clinical psychologist is a qualification that encompasses it, so the roles performed at the center are slightly different. While counseling psychologists engage in counseling sessions and the planning of mental health programs (IB27), the clinical psychologist focuses on utilizing clinical knowledge to diagnose students' symptoms, assess risks, determine the need for psychiatric diagnosis, take over relevant information to counseling psychologists, and provide advice on psychological test analysis (IB26). The clinical psychologist can also perform tasks similar to counseling psychologists, but she primarily handles tasks exclusive to her qualifications. This system was established with the presence of the clinical psychologist at the center. She can assess the client's condition using various scales, drawing from her past experience working in a psychiatric hospital (UB31).

To perform tasks like the above which is called screening, one initial counseling session is necessary. The flow of this reception counseling is not significantly different from regular counseling with counseling psychologists, but its purpose is different. The screening before regular counseling sessions for detecting students' mental health issues early and providing guidance for the subsequent process may seem cumbersome (UB3). However, it is crucial since there are long waiting periods before regular counseling, and students should get appropriate treatment depending on their urgency. This process plays a vital role in preventing high-risk students from being left unattended during periods of disinterest or long waiting times (UB27).

Therefore, the clinical psychologist has taken on the role of being the representative of the center counselors, mainly because she is the first one who meets students. However, this comes with challenges such as fatigue, miscellaneous tasks, and inefficiency (UB5). Routine inquiries, providing non-specialized information, and similar tasks that do not require expertise seemed to be more efficiently handled through digital tools, increasing accessibility and reducing the workload for counselors. Additionally, since all counseling receptions go through the clinical psychologist by manual management using Excel charts (UB27, UB13), this could also be beneficial from the convenience provided by digital tools.

4.2.3. Counseling records management

Counselors document the counseling process by recording what the students say during counseling sessions. Maybe because they need to preserve the counseling history, it seems that the primary reason for recording is for the counselors themselves. To remember, analyze, and better understand the students' stories, counselors make an effort to review and organize these records (UA39, UD59). As the counseling progresses, a great amount of documents is generated. Although there are no strict rules on how to record, all counselors almost consistently write down everything about what students say in each

session (UA23, UB20), resulting in a significant frequency and volume of records. Additionally, all counselors have written these records manually using paper and pen or pencil, and some even showed signs of discomfort, such as sore wrists, from writing too much (UA17).

When reorganizing records, counselors do not insist on handwritten notes. They add additional notes based on what was previously written (UA13), organize and store them in more convenient digital files for information management (UB26, UD60), or review voice recordings made during counseling sessions (UD25). As a result, the records take a minimum of three interactions for each counseling session—recording the content during the session, reviewing and making notes after the session, and reviewing before the next session (UA10). The organized records, tagged with each student's name, are filed along with application documents in a filing cabinet (UA11, UB15). These files are retrieved during situations such as counselor self-review during counseling, sharing peculiar cases, or handovers (UB28). After the counseling is completed, those are stored in the cabinet for several years (UD16).

4.2.4. Counseling atmosphere

In terms of the recording method in counseling, one thing that never changes is that all counselors consider manual handwriting as a principle. When thinking about the efficiency of recording and managing information, if there is no inconvenience in using digital recording tools, it might be better to use them. However, the reason counselors insist on handwriting is not due to familiarity with that method. That is because counselors feel that the use of digital tools has a negative impact on creating a counseling atmosphere.

Counselors consider the counseling atmosphere very important. They consciously control not to look or use monitors, phones, and digital devices during counseling (UC85), aiming to prevent gestures that may give the impression of not paying attention to the student at that moment (UC23). Moreover, the area around the desk where counseling takes place is entirely analog. Paper, pencils, and pens are the basics (UC84), and instead of sharing contact phone numbers with smartphones, counselors use business cards (UD33). Even the clock is analog.

Counselors also put a lot of effort into the spatial arrangement of the counseling room to create a positive counseling atmosphere. For example, they place a clock in a location visible to them but not to the student, allowing them to check the time without disrupting the counseling session (UC76). Likewise, they arrange chairs so that the student faces away from the counseling room door (UC86) and install blinds on the counseling room windows (UC59, UD23) so as not to disrupt counseling. Some more strict rules were also observed regarding the configuration of the counseling space. Given the importance of punctuality in counseling, many clocks should be prominently displayed (UD17),

relatively blunt pencils and pens should be placed on the desk (UC83), and an appropriate distance between the student and counselor during the session is emphasized (UC86).

The center has been conducting online video counseling for the ongoing mental healthcare of students since face-to-face counseling became challenging due to COVID-19. Despite this unavoidable change, there are recommended elements to maintain a positive counseling atmosphere. Students are advised to turn on their cameras, conduct the session in a private space, refrain from using phones, and opt for online sessions only when face-to-face is impossible (UD68). Even in online counseling, there are numerous implicit rules to ensure a meaningful counseling experience.

On the other hand, counselors also have autonomy in the counseling configuration. There is no common format for recording counseling content. Counselors are free to decide where, how, and in what color they want to record information (UA12, UC66, UD43). The choice of how to document counseling content is based on the individual's efficiency, considering the practical purposes of understanding the student and better structuring the counseling. The composition of counseling spaces, except the mentioned implicit rules, has a high degree of freedom, resulting in different atmospheres in each counselor's office. Some counselors utilize a variety of drawings and pictures (UA57, UC46), while others put entertaining elements into their offices (UA52, UD22). Also, there are counseling rooms where only essential elements are neatly arranged.

4.3. Other context

4.3.1. Counselors' non-counseling duties

In university counseling centers, in addition to counseling, various preventive activities are planned to raise awareness and encourage more students in mental healthcare (IB14). These activities include center promotion, producing mental health-related content, organizing care program events, conducting surveys, and scheduling. While counselors may not prefer these tasks, they recognize their necessity for enhancing students' mental well-being. However, it is regretful that these works sometimes divert attention from counseling itself and both pre- and post-counseling activities (UA3, UA7, UD63). Although counselors may not particularly enjoy them (UB6, IB3, IB25), counselors approach these activities with a voluntary and proactive attitude, because they know those are needed.

The detailed tasks are listed:

- Contacting individual students and coordinating counseling schedules (UB10).
- Begin work with non-counseling tasks in order of urgency, not the counseling preparation (UB11, UD63).

- Engage in promotional activities, plan and conduct event programs, and produce and upload mental health content (UB6, UB18, IB25, UC2).
- Manage counseling feedback, handle external counseling psychologists, and participate in other center's schedules (IB3).

Things indirectly related to counseling also require additional time. One surprising aspect is that counselors, as they become deeply immersed in their students' stories during counseling, need some time for personal mental refreshment (UC41). If they are unable to resolve issues on their own, counselors sometimes provide each other with brief counseling and internally share unique or challenging cases to seek advice from one another (UD8). This internal exchange is certainly consuming the counselors' time, as it is regularly conducted through meetings at the center.

The task that counselors dislike the most and consider meaningless is administrative work (UA5, UB8, UD2). This type of work is perceived as having very little relevance to mental healthcare, and counselors feel it burdened. As the center is part of the university's organization, such administrative tasks are inevitable, and there is no dedicated staff to handle them. These accumulations of various tasks contribute to work overload for counselors. They consider counseling as the most desired task, but the reality is that it cannot always be their top priority due to the diverse demands they face.

4.3.2. Schedule and task management

In exploring how the project team could address these challenges, potential solutions were identified within the management of schedules and tasks of the center. Examining the analyzed results, it became evident that counselors spend much time and energy in managing their schedules and tasks. There were a lot of schedules written on sticky notes placed prominently on their work desks (UA50, UC56, UD36). Counselors appeared to place considerable emphasis on schedule management, with some even using two or more planners or calendars. As mentioned earlier, counselors' schedules extend beyond counseling, encompassing a variety of complex and additional tasks. Their stress can intensify due to sudden schedule changes resulting from center and school issues or students not showing up for appointments (UD61). One possibility was suggested that incorporating automation elements into center schedule management could reduce counselors' resource utilization.

4.3.3. Counselors sense of duty

Considering the insights, working as a university counselor seems to be highly challenging, with a substantial workload. Despite these challenges, counselors have chosen to work in university counseling centers, prioritizing the creation of meaningful counseling experiences. Even though being a counselor

is lengthy and demanding, they haven't emphasized higher salaries or better working conditions offered by other counseling centers (UB2). Making such a decision without a strong sense of purpose in this field would not be easy. We observed that counselors at the university work with a firm sense of mission and demonstrate a respectable attitude in their roles.

Counselors maintain an attitude of continuous learning and professional development to become better counselors. They consistently study the latest issues and therapeutic approaches in the field of counseling (IB10, IB11). While acknowledging that this pursuit is voluntary, they describe it as both challenging and rewarding (IB12). Through persistent efforts, some counselors have been awarded in their profession, and this achievement serves as inspiration for further growth in their counseling role (UD64). Witnessing the positive transformation of their students as they evolve and improve through counseling brings great satisfaction to counselors (UD1, IB21, UB7). For counselors, the counseling itself is the most important, and they express a genuine desire to focus on each individual student, enjoying the counseling process (UA2, UA6, UD13). Therefore, the sense of accomplishment derived from this is highly significant for them. Even without direct interviews, these proactive and authentic attitudes were clearly evident. In the role-playing sessions, despite it was the simulated nature of the counseling, all participating counselors engaged sincerely in constructing counseling sessions tailored to the concerns and situations presented by the students in their roles.

In continuation, counselors also strive to contribute to the effective operation of the center. The center's major directions are determined by higher authorities such as the center director or school administrators (IB37). But, when it comes to the day-to-day operations and student counseling, there is no one who knows it better than the counselors themselves. They consistently contemplate and take action to create better environments and counseling experiences given the circumstances. Looking at counselors' future plans documented in brief notes, including the direction for center operations, ideas for new initiatives, and tasks they aspire to undertake (UB33, IB16), it is certain that counselors do not settle in their roles but actively seek improvement.

4.3.4. Operation system set-up and update

Counselors have made significant efforts to ensure the center operates until it recently gets a stable system. In the initial stages of the center in 2016, only one counselor operated in challenging conditions and consistently requested improvements (IB40). Subsequently, with the arrival of the current center director, who is a psychiatrist serving as a professor at the school, and the addition of a clinical psychologist, the center expanded its capabilities to include counseling, diagnosis, and prescriptions (IB31, IB41).

At that time, user numbers were not as high, the center did not have a well-established system. However, through proactive promotion and efforts to highlight mental healthcare necessity, the utilization rate gradually increased. To cope with the growing demand, counselors went through a considerable trial-and-error process, and over time, the system naturally evolved into its current form (IB42). This was a challenging process, as there were few good examples from other universities or organizations to reference (IB32). Even now, there is no manual for establishing such an environment. However, the current systematic aspects of the system, such as application procedures, waiting lists, and the structure of 12 counseling sessions, are operationally and statistically justified (IB33). Based on these observations, it was deemed appropriate to continue in an agile manner, consistently incorporating the opinions of counselors into the system.

Counselors not only focus on just operating the center but also put efforts into creating an overall school environment that facilitates easy and effective mental healthcare. As part of these efforts, they have made guidebooks containing messages addressed to professors, emphasizing the significant impact professors can have on the students they handle (UC74). Additionally, tasks such as developing mental health content, establishing partnerships with external services, and conducting online counseling (UD67) have emerged as components of these efforts.

Currently, there are more plans to further improve. Recognizing the diverse population of international students due to the school's characteristics, the center acknowledges the needs for measures to address their specific needs and producing content in English (IB34). Additionally, there is a goal for the systemic organization of the operational system manual, as currently, there is no comprehensive guide available (IB44). The center director emphasizes a preventive treatment approach and aims to utilize digital platforms and content to achieve maximum effectiveness with minimal resources (IB45). This project is aligned with the goals of such initiatives.

4.3.5. Dilemma between resource distribution and focus

Considering the contributions of counselors to the development of the center, a significant dilemma emerges in mental healthcare activities. Counselors engage in promotional activities and initiatives to enhance accessibility, hoping that more students can receive help at the center. However, due to limited resources, it becomes impossible to accommodate a large number of students simultaneously. As a result, there is an increased demand for counseling, but operational constraints lead to extended waiting periods, sometimes reaching up to three months. Consequently, compared to the past, counselors feel challenging to conduct deep and sufficient counseling sessions with each student (IB15). This becomes a disappointment for counselors, and students also may express dissatisfaction, causing a decline in satisfaction for counseling (UD3). Nevertheless, refraining from vigorous promotion goes against the

counselor's mission. Additionally, considering that there are still students unfamiliar with the center and mental health services (UA4) and students who do not attempt therapy, counselors cannot ignore the need for promotional activities and find themselves engaged in non-counseling tasks.

4.3.6. Lack of support

If there is sufficient support from the school, the situation could be resolved, but there are limitations. The interests of the school and the counseling center operations are not mutually complementary (IB38). Therefore, counselors express many grievances about the school's support. While it is true that UNIST provides relatively more support compared to other universities (IB13), there is an absolute lack of human and financial resources. The school president or center director provides a general direction, however, the one who discusses the solution and creates systems to address specific details are counselors (IB39). Naturally, counselors have become the individuals who know the center's situation best, and without their involvement, the center's tasks cannot be accomplished. As a result, counselors continuously request improvements from decision-makers, expressing their needs.

Waiting for the school's support is a complex and indefinite matter. Therefore, as an alternative approach to resolving the situation, some projects are often planned with the school's research team. It is crucial that the project outcomes must be practical and can be realistically applied to bring improvements. If the research team conducts the project independently without collaborating on the expertise and their needs, the results become a burden that counselors cannot utilize and add to their workload. Hence, conducting the project through design research processes seemed appropriate. The research team aimed to avoid such pitfalls by applying user study methods.

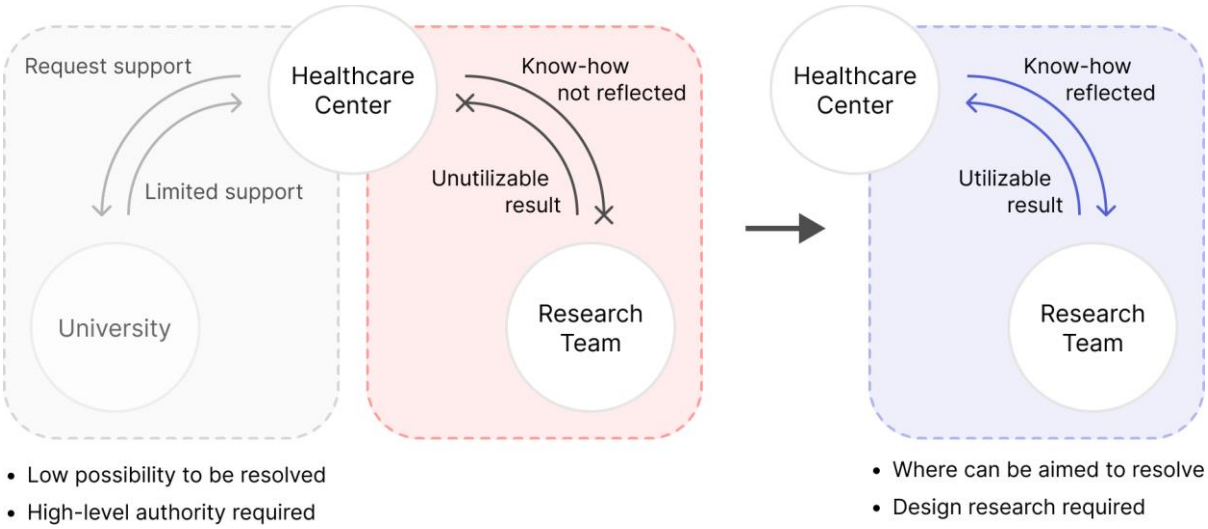

Figure 11. Administrative support that is difficult to improve (left) and research support that has the potential for improvement (right)

5. DESIGN OUTCOME

According to derived insight, it seems that counselors invest a significant amount of time and effort in tasks other than counseling. The inefficiency occurs from tasks that do not require specific expertise but are essential as part of their operational responsibilities (B3-1). This inefficiency was tried to be addressed through the design of digital service outcomes, aligning with the center director's direction to maximize effectiveness with limited resources (BII-15).

Many insights suggest that designing tools specifically to assist counseling itself is unnecessary. The counseling sessions are an integral and preferred aspect that counselors want to fully control. Therefore, the project team created tools that enhance the convenience of other tasks, allowing counselors to concentrate on counseling. Based on the identified insights, the team explored areas where solutions can improve the convenience and efficiency of tasks without encroaching on the unique domain of counselors. The designed app and web interface, along with the insights that support them, will be described.

5.1. Design proposal

5.1.1. Digital service structure

The overall structure of the developed digital service is shown in Figure 12. The designed features are informed by insights derived from user study results and analysis, and there are fundamental functions for the operation of the center and services. The platform includes interconnected mobile applications and a web page. The app is designed for student users accessing mental healthcare services, while the web page is for counselors who are the operators providing the services.

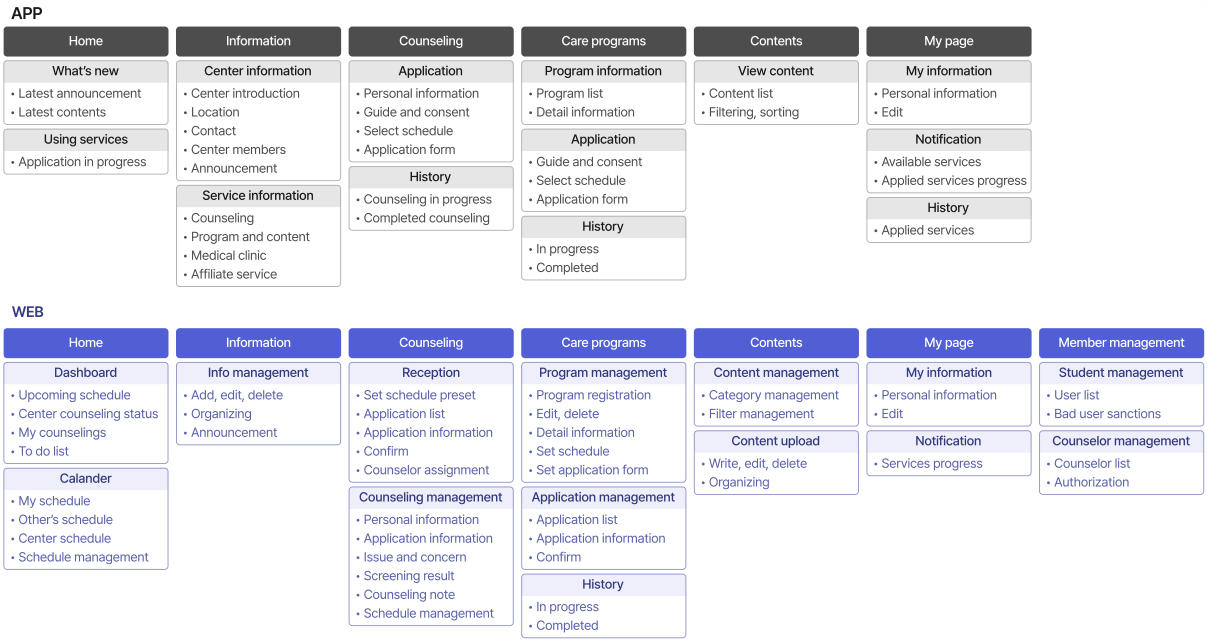

Figure 12. Information architecture of platform

5.1.2. Better access to the service

The initial challenge to address was the poor accessibility to the UNIST Mental Healthcare Center and its services. The center is located in an unfamiliar part of the campus, tucked away in a basement corner. Even if students are aware of the center's existence, access is not straightforward. Moreover, relevant information is scattered across various platforms such as the school portal site, the center's blog, emails, etc., without a conspicuous arrangement. To overcome these challenges, a smartphone app specifically designed for student users of the counseling center has been developed.

The app combines all information related to the center and its provided services, eliminating the need for students to search for scattered information manually. If students suddenly become curious about mental healthcare, they can simply open this app. Various consent forms and service information that counselors traditionally provided in person (A2-6) are now accessible on smartphones. This is expected to reduce the counselor's workload associated with answering numerous simple inquiries and providing service guidance.

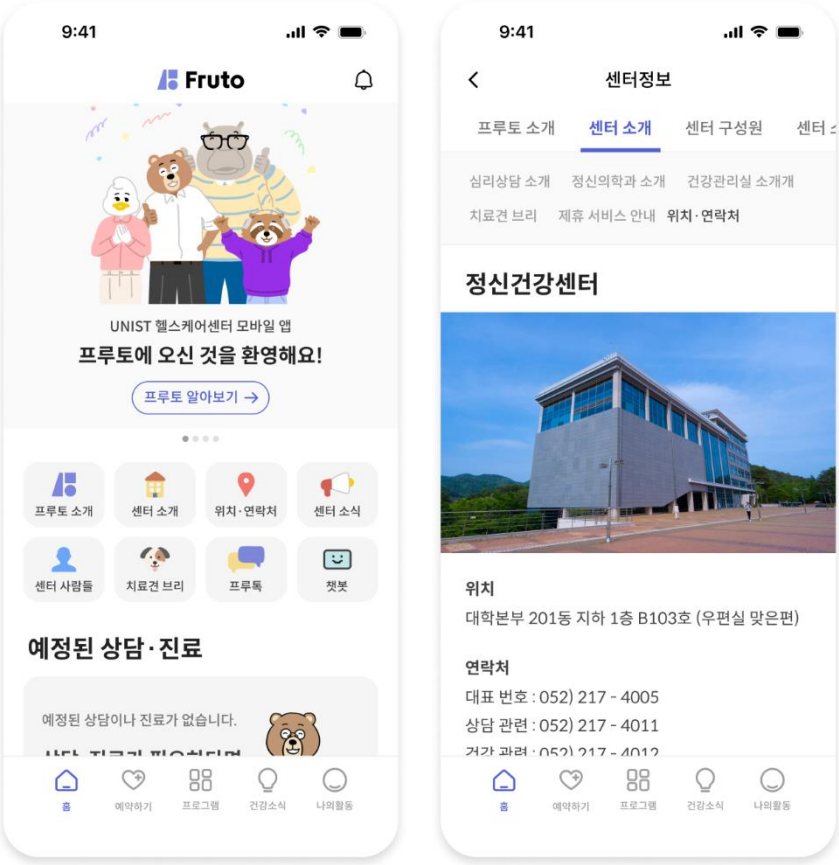

Figure 13. Smartphone application screen design

The center had previously created various application ways to improve the accessibility of counseling application processes. However, this led to confusion in the application, and counselors faced the inconvenience of separately checking and compiling applications from multiple routes. In the developed app, the counseling application process has been digitized and unified, enhancing accessibility for a generation more accustomed to smartphone use. Gradually phasing out other application methods is intended to reduce the inconvenience for counselors.

Another reason for digitizing the application process is to reduce instances where students hesitate to attempt counseling due to physical and psychological barriers. For counseling applications, students are required to receive a paper application form, manually fill it out, and submit it. From the perspective of a service user, a student, this bother process makes it hard to counsel right at the moment they decide on therapy. The multi-step process—deciding, visiting, filling out documents, submitting, waiting for contact, scheduling, and receiving counseling includes numerous stages where a student may quit applying. Therefore, we enabled students to submit the application form and choose a preferred schedule through their smartphones as soon as they decide on counseling, reducing potential points of hesitation or inconvenience in existing steps. These early stages of counseling can be digitized sufficiently and are considered not to affect the counseling atmosphere.

5.1.3. Easier application procedure

As all counselors use PCs and multiple monitors for their work, a web platform has been designed to manage students' service applications coming through the smartphone app. Digitalizing counseling application information provides advantages for counselors as well. Information management will become automated, eliminating the need for cumbersome exchange or storage of physical files. Furthermore, the data would already be in a format easily convertible into statistical records, reducing the need to transfer information from paper to Excel files and simplifying related tasks (D-9).

The clinical psychologist originally had to directly coordinate reception counseling schedules with students. However, to eliminate this inconvenience, students can now choose and apply for available time slots that counselors have pre-set. Additionally, tasks that were initially managed manually, such as maintaining the waiting list, marking the level of urgency, and adjusting the waiting priority accordingly (B2-12), can be performed automatically without the need to open separate Excel charts.

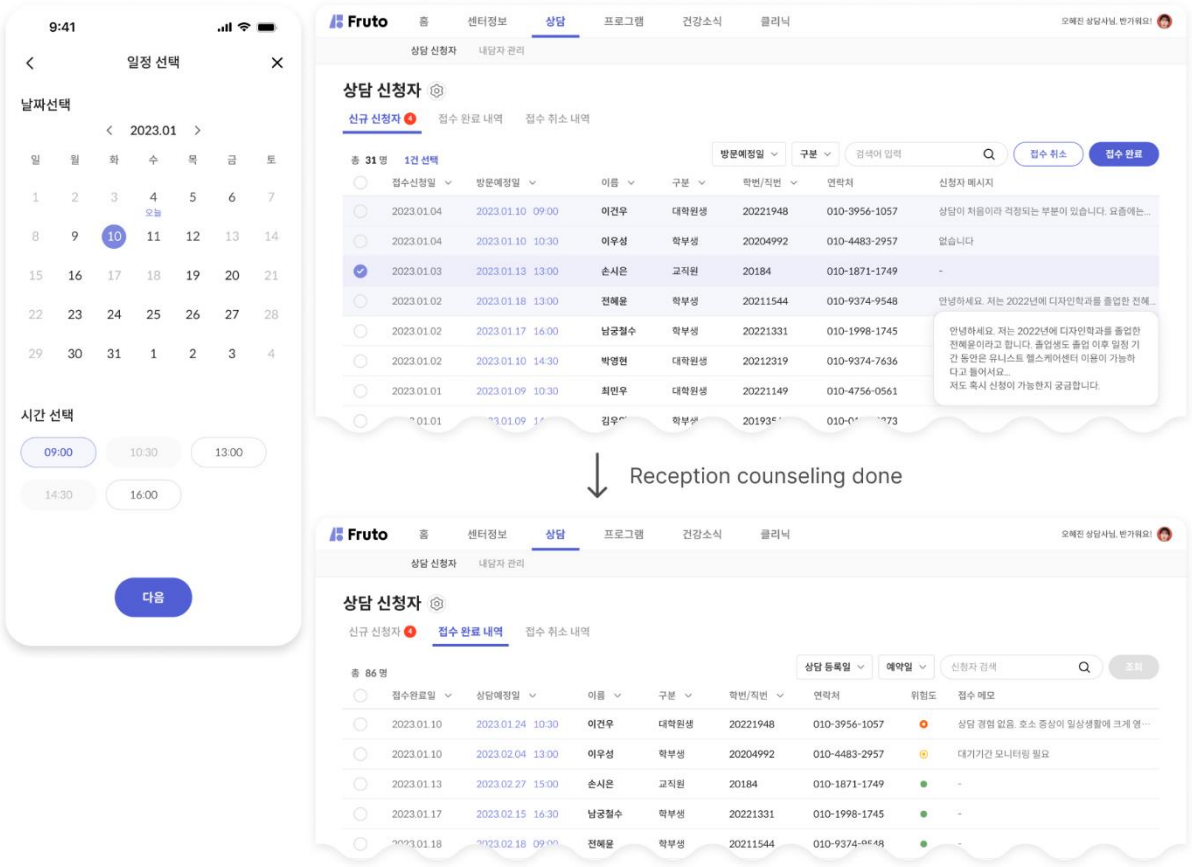

Figure 14. Digitalized counseling application and management

5.1.4. Record management

Counselors have kept students' applications, counseling session notes, and other documents in each file, reviewing and utilizing them quite frequently in their counseling activities (A2-1, A4-1, A4-12). While they are familiar with exchanging and managing these documents, it raises questions about whether the current method provides good usability from a data management perspective. Typically, these documents pile up on the counselor's desk during counseling sessions and are then stored in cabinets for an extended period after the regular counseling session is completed (D-16). Retrieving documents for the current counselee is relatively easy, but when one needs to check past records—for instance, when valid data requests arise due to certain incidents—it could be quite time-consuming.

While there may be advantages and disadvantages, counselors have agreed to archive and access this information on the administrator’s web platform, with an automated storage and disposal system. Consequently, the application information of counselees is easily accessible through a few clicks on the counselee list. Since counselors have recorded counseling session notes by handwriting, they would need to digitize those notes to store them on the web. However, it was considered a feasible feature given that counselors have already done this process by typing (B2-11, D-60). This attempt is expected to undergo continuous improvement based on usability evaluations.

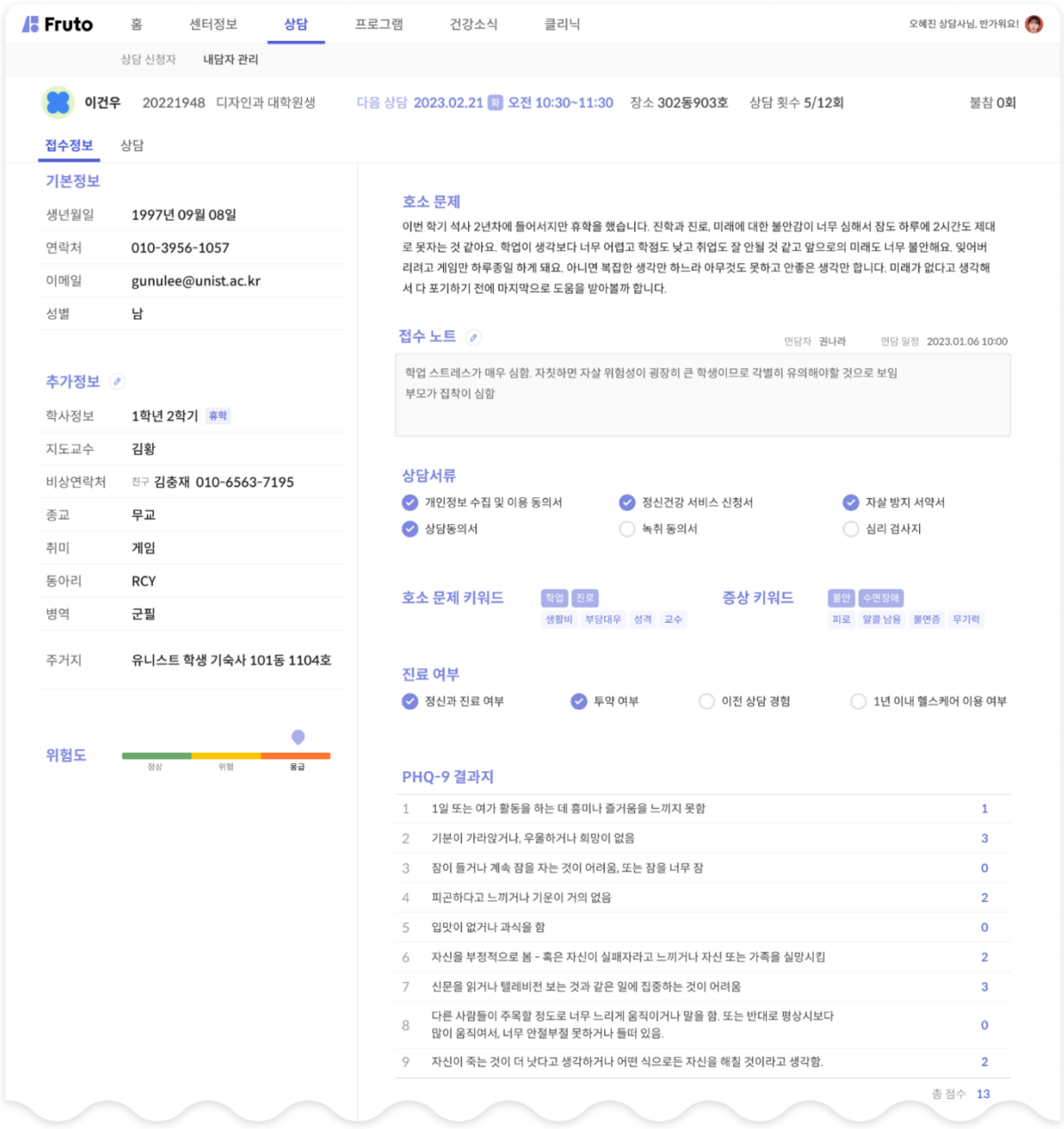

Figure 15. Management counseling record on platform

5.1.5. Schedule and task management

In the user study process with counselors, there was a significant number of discussions regarding schedule and task management. Handling these consumes counselors' time and effort a lot. Counselors have managed such tasks with multiple calendars and numerous memos (A1-6, B3-6, C4-7, D-7). Recognizing the need for features to assist in schedule and task management, counselors directly conveyed their needs and requirements for related functionalities. As a result, a dashboard and calendar features were developed. The dashboard is structured considering counselors' requirements and prioritizing tasks with high frequency. For better reflection, a workshop was conducted with the project team to identify counselors' needs and incorporate them into the development.

On the dashboard, counselors can add or view upcoming schedules and check the current events and counseling status within the center. Also, the calendar is available through the left schedule table on the dashboard. To ensure a seamless transition from the previously used outsourced calendar within the center (B3-10), the new calendar was benchmarked to eliminate any gap with the existing one, adding the specific needs of a university center. Various types of schedules will be displayed including those for the entire center or each counselor, allowing to selectively show the types of schedules.

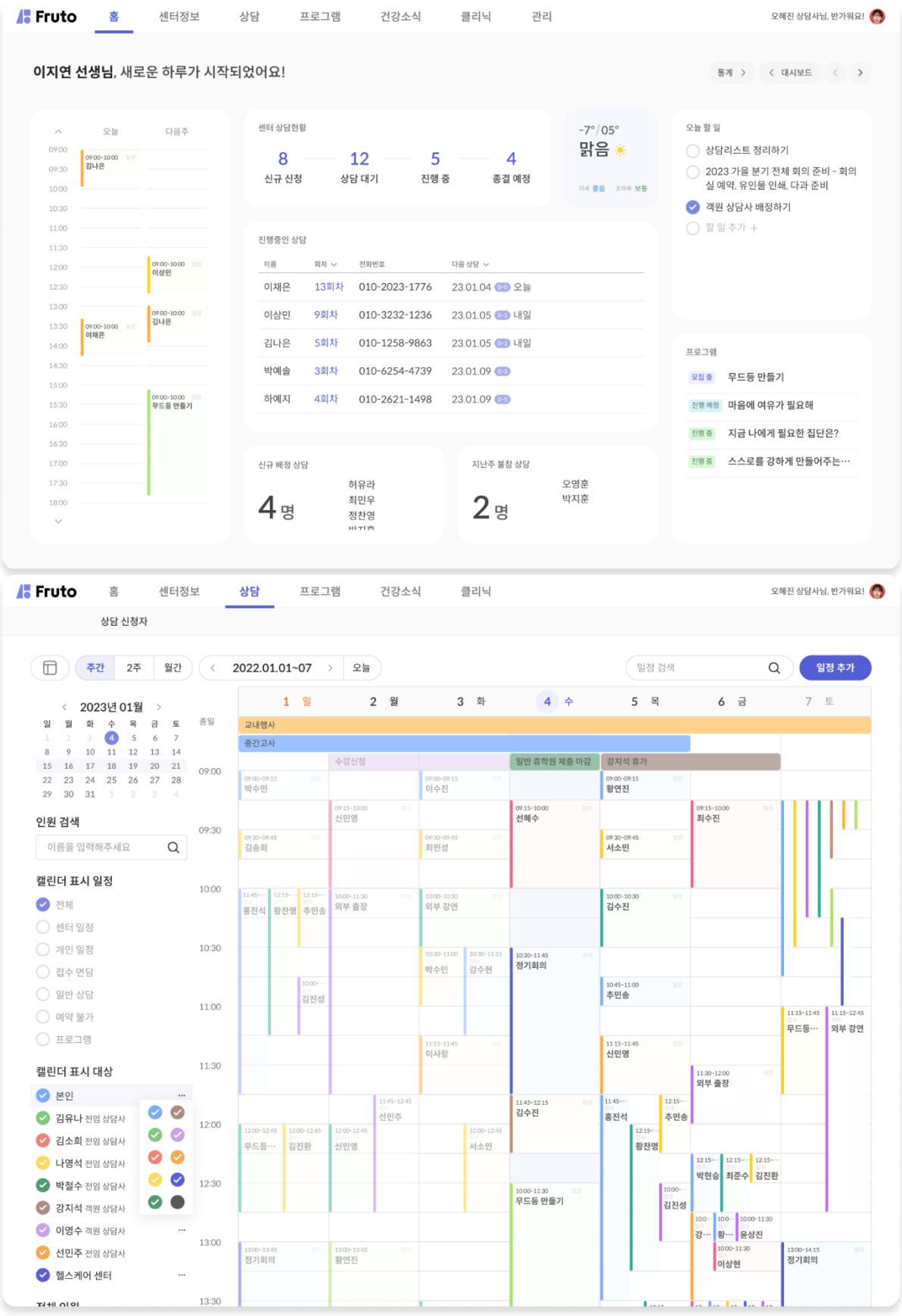

Figure 16. Dashboard and calendar

5.1.6. Contents and care programs

Content planning is the activity where counselors create or share mental health knowledge and helpful materials. Program planning means organizing and conducting participatory programs supporting mental well-being except counseling itself. Although these activities are considered non-counseling tasks, they clearly affect mental health promotion. With the occurrence of long waiting periods in the counseling process (B2-7), services like these are needed for students for mental health management in their daily lives, which is aligned with preventive treatment.

However, until recently, these were scattered across social media, blogs, emails, etc., and students are not well aware of them. This structure makes it difficult for them to see whether what they need is available when they want it. Therefore, content and program planning functions are integrated into the platform to allow faster access. Counselors can create and upload content directly on the web, and register program introductions and schedules to accept applications. Students can monitor these uploads in real time. They can receive notifications, enabling them to manage their mental health more quickly and according to their needs compared to the previous system.

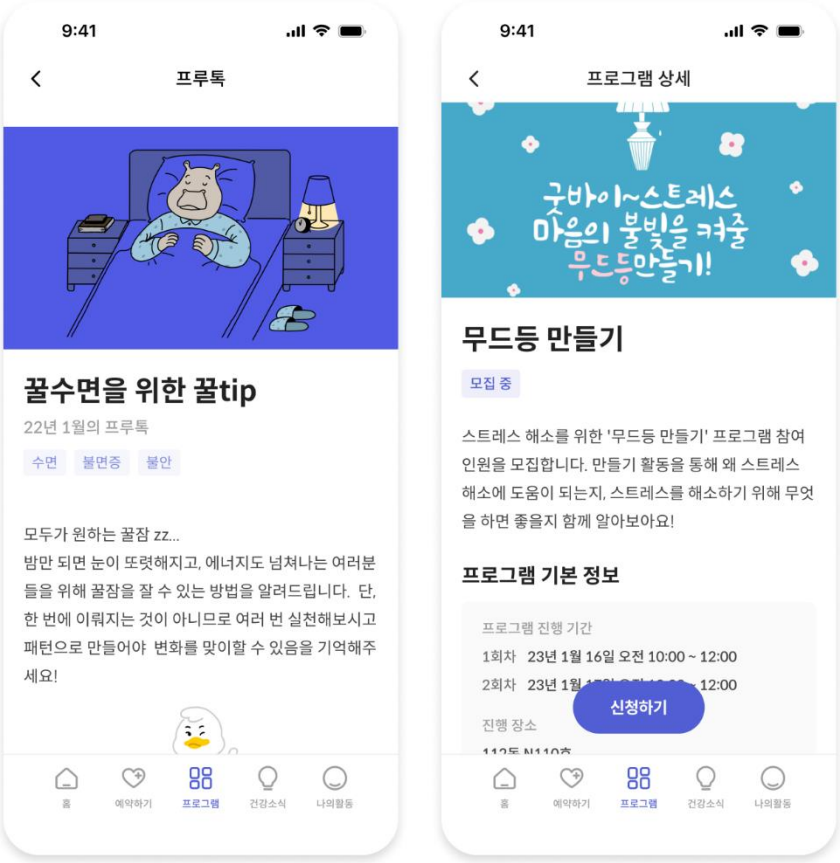

Figure 17. Meatal healthcare content and program

5.1.7. Other features

There are many other features developed, but they are not deeply rooted in the insights discovered in this study. Instead, these features are essential for operating the service and platform, including functions like login, sign-up, and the home screen. All features and designs were developed through continuous feedback exchanges with counselors. Various discussions ranged from the aesthetics of minor UI elements to the philosophy behind major features. Although there was no specific methodology for establishing a community between the project team and counselors, all members continuously and actively exchanged feedback on the outcomes with bond.

5.2. Design evaluation

In the final stage of the project, stakeholders gathered to evaluate the outcomes from iterations of the design, development, and feedback done throughout the project period. The director of the mental healthcare center, the center chef, all five counselors, the project team lead professor, two executives from the development agency, and five researchers, including the author participated.

The development agency presented the implemented features based on the platform requirements, through a presentation and live demonstration. After the presentation and question-and-answer session, participants were asked to complete an evaluation questionnaire. This questionnaire consisted of 11 items, tailored to the specifics of this project, drawing reference from the Client Satisfaction Questionnaire (CSQ-8) (Larsen et al., 1979) and the Post-Study System Usability Questionnaire (PSSUQ). The details are as follows.

Table 6. Intelligent mental healthcare platform evaluation participant survey 23.07.03

Question	Response method	Average score
Are you satisfied with the app overall?	1 ~ 5 scale multiple choice	4.08
Is the app's user interface (design) intuitive and easy to use?		4.15
Do you think the app's functionality and purpose are clear?		3.92
Are the key features provided by the app useful and can they be used appropriately?		4.00
Do the features provided by the app meet the needs and expectations of the proposal?		4.31
Can you conveniently use healthcare center services through the app?		4.38
Do you think the app's security features and user information protection features are sufficient?		3.92
Do you think this app has differentiation from other similar apps?		3.38
What features of the app were you particularly impressed with during the demo?	Short-answer	
What additional information do you think you need to use the app smoothly?		
If you have any additional comments or improvements about the app, please feel free to write them.		

The highest-scored question was "Is it convenient to use center services through the platform?" with an average of 4.38 out of 5 points. Considering that more than half of the evaluation survey participants were stakeholders of the center's operations, the positive response suggested about improvement in the convenience of center service delivery and utilization. The question that received the lowest score was "Do you think it has differentiation compared to other similar services?" with a score of 3.38. Clearly, the currently developed features mostly seem to lay the groundwork for digitizing the center's existing services. Functions like reservation and content viewing through smartphones are common in many other services. Due to the limited time and resources of the project, many creative new feature ideas were not actually implemented, but these were archived so that they could be developed and have differentiation in the future.

Among the open-ended questions responses, there was a notable appreciation for gathering scattered information into one place, even though there weren't unique features. However, several participants expressed the need for explanations on how to use these features since they were newly implemented on a digital platform. Additionally, there were comments about the visual appeal of the platform, but concerns were raised about its connection to the identity of the Mental Healthcare Center. It seemed that the branding and management guidelines should be considered to appropriately link their identities in the future. Moreover, given that the mental healthcare center handles sensitive information, there were opinions emphasizing the need for thorough security management.

6. LIMITATION

6.1. Limitation of this study

Although the insights from the user study with counselors were valuable, there are deficiencies in the user study. The role-playing scenario was based on the assumption of the initial counseling session after the reception, out of the total 12 sessions of regular counseling. As the subsequent events could only be known from what the counselors said, there is a need for further research on the actual problems and needs that may arise during the remaining period of service.

Since the focus of the user study was on counselors, the needs of students are rarely reflected in the provided services and features. While it is understandable that the features are highly dependent on counselors as they are the source of mental healthcare services. However, for the service to be a sustainable model, there should be merit for the students using it. Therefore, it appears necessary to conduct additional user studies focusing on students.

This project was exclusively conducted at UNIST (Ulsan National Institute of Science and Technology) and its affiliated counseling center, confining the scope to this specific university. If the digital platform, the project's outcome, aims to contribute to the nationwide promotion of university students' mental health, additional research including the context of other universities is necessary.

6.2. Necessity of the user test

The most critical limitation is the absence of user testing. Although project stakeholders evaluated the designed outcome, this feedback did not come from actual use experiences. There will be issues that might arise when actually operating the platform within the center's services.

Therefore, a user test is necessary to obtain data for validation of whether the insights from the user study have been well incorporated into the design outcomes and whether they provide convenience and efficiency in actual usage. The process of analyzing both quantitative and qualitative data from these tests to identify and address any arising issues has not yet been undertaken. Additionally, it should be assessed whether the service design complexity has decreased compared to the existing offline system and whether the digitization of the service is genuinely effective.

7. CONCLUSION

This study is a comprehensive documentation that concretely describes the attempt to develop a practical digital platform for supporting the mental healthcare of university students. While many studies emphasize the need for mental healthcare of university students, many of them focus on clinical results, and there is a lack of research on the practical application of findings in the real world. This project aims to contribute to the field by detailing the specific progress of developing a mental healthcare digital platform that can be implemented in actual university settings.

The project team discovered the prevalent issue of resource shortages in many university counseling centers. To address this, implementing a digital platform utilizing the advantages of digital resources and the concept of preventive treatment was suggested. To understand the actual environment of counselors who will provide the service, the team conducted user studies through interviews, observational research, and role-playing, and continually collaborated for development. It was expected that this approach would be helpful to the practical usability of the developed platform in the real world. Through these studies, it was revealed that counselors have experienced work overload not only due to counseling but also because of various tasks for operating the counseling center, such as promoting and miscellaneous work that does not require expertise. It was also found that counseling itself should be counselor-led, and new tools should help to simplify repetitive and cumbersome tasks. Additionally, systematizing the center's existing service system and gathering scattered information and functions onto the new platform were seen as ways to enhance service accessibility and reduce complexity. Throughout the project, the team maintained a community with counselors, exchanging continuous feedback and opinions with free-form until completion and evaluation. Despite the platform not being applied yet, the detailed documentation of the project's progress is expected to provide valuable knowledge for future projects and other studies.

8. FUTURE WORK

This project does not conclude here but will be continued with ongoing collaboration and project. The future work will primarily focus on addressing the shortcomings mentioned above.

To enhance the platform's completeness in terms of aesthetics and usability, using the platform meticulously and identifying any discrepancies between the initial design concepts and the developed results is needed. Subsequently, a thorough examination of areas where opinions conflicted between designers and counselors is necessary. Since counselors have specific needs for functionality, and designers aim for improved usability, the effectiveness of what approaches are better in actual operations should be verified through user studies, data collection, and analysis.

Given resource constraints, the focus of most research and design work was on counselors, who serve as the primary service providers. However, it is imperative to consider the user experience of students receiving the service. Planning to collect research data from students by enabling them to use the developed platform is crucial for ensuring practical usability as a comprehensive solution.

The further plans involve expanding the project beyond UNIST, not only for internal use but also for application in other Korean universities facing a shortage of mental health resources, or even universities abroad. In this process, research on the situations of different universities will be necessary, and the platform's features should be enhanced to ensure universality. Additionally, as there has been feedback about the lack of service differentiation, further research and development should be conducted to incorporate features that can address this issue.

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Appendix

User study with counselor A (22.11.23)

Code	Thick description and insight	Follow up question
UA1	1989년생 울산 울주군 범서읍 구영리 거주 버스 기다리는 시간을 포함해 30분, 버스 자체는 10분 걸려서 출퇴근 어머니, 남동생과 함께 거주	
UA2	상담 외적인 업무가 적고 상담에 집중할 수 있을 때 일이 잘 된다고 느낀다.	
UA3	상담 전 준비와 끝난 후 정리를 할 수 없을 때 상담에 영향도 가고 힘들다고 느끼는 것 같다.	
UA4	헬스케어센터에 대해 잘 모르거나 잘 못 오는 전화들에 대해 참 별로라고 생각된다.	
UA5	기본 행정 업무들 - 소화기 점검 등 - 이 시간낭비처럼 느껴진다.	
UA6	치료와 상담이 가장 중요한 업무라고 생각한다. 예방 프로그램 등 덕분에 학생들이 찾아오는 장점도 있지만 학생 한 명을 제대로 치료하고 상담하는 것이 더 우선으로 느껴진다. 다만 학생들이 많아서 한 명에게만 집중할 수 없다고 느낄 때가 있다.	
UA7	행정 업무는 별로 하고 싶지 않다. 학생들을 만나지 않는 홍보 기획, 도서 관리 같은 업무들도 선호하는 우선순위가 떨어진다.	
UA8	5년 뒤에 이 학교에 남아 있다면 지금과 비슷하게 일하고 있지 않을까. 그렇지 않다면 박사 학위 취득을 하러 가지 않을까.	
UA9	근무 시간은 9-18시로 근무를 하고 계시며 출근 후 가장 먼저 플래너를 작성하셨다. 플래너 내용은 하루의 타임테이블을 작성하는 플래너였다.	
UA10	상담 시작 전 내담자의 상담을 진행하며 작성한 노트 필기를 확인하신다.	수기로 작성하는 이유가 있는가? - 녹음해서 듣는 것보다 수기로 기록하는 것이, 글로 보는 것이 훨씬 편하다. 상담 때 바로바로 기록하고 추후 다시 기록을 살펴보며 형광펜 + 볼펜으로 마킹한다.
UA11	한 회당 하나의 종이 묶음으로 구성된 상담 노트는 따로 파일철에 보관하신다.	
UA12	노트의 내용을 확인하시면서 노란색 초크로 내용을 마킹하신다.	특히 노란색을 사용하는 이유는? - 상담 때 주의 깊게 볼 포인트를 체크하는 것이다.
UA13	주황색 메모지에 내용을 작성하는 경우도 있었다.	주황색 메모지에 적힌 내용은 어떤 것인가? - 특히 관리해 줘야 할 학생을 의미한다.

UA14	내부 포털과 이메일이 온 것들 것 확인하신다.	
UA15	헬스케어센터 내부 메신저를 확인하신다.	
UA16	상담 시작 전, 상담 신청서에 적힌 인적 사항, 가족 사항, 상담 가능 시간, 주요 상담 항목의 총점수를 빠르게 체크하신다.	
UA17	기록하는 것이 많아 손목이 아픈 듯 보이는 행동을 하신다.	
UA18	상담 시작 전 이전에 상담받아 본 적이 있는지 먼저 물어보셨다.	
UA19	동의를 받아야 할 부분이 적힌 이용동의서를 작성하고 동의하는 내용에 대하여 자세히 설명해 주신다.	
UA20	동의하지 않아도 상담이 진행되는 점을 말해주신다.	
UA21	상담신청서에 적힌 내용을 확인 후 빠진 내용에 관해서 물어보신다.	
UA22	상담 신청서에 적힌 내용을 기반으로 최근의 힘들었던 것을 시작으로 학창 시절까지 타고 내려가면서 상담을 진행하신다.	
UA23	학생이 말하는 것을 거의 빠짐없이 상담 노트(선생님 개인 줄 노트)에 기록하신다.	
UA24	작성하신 내용을 기반으로 다시 한번 내담자에게 물으며 내용을 확인하신다.	
UA25	감정에 대한 요소 또는 핵심 단어를 강조하는 표시로 동그라미를 치신다.	
UA26	상담 진행하시면서 계속 반응을 해주신다.	
UA27	주요 포인트는 '공감하기'인 듯한 리액션을 해주신다.	
UA28	감정에 대한 공감을 지속적으로 해주신다.	
UA29	이야기한 것 중에서 학과, 전과, 학년, 고향과 같은 인적정보, 친구 가족 관계, 어떤 사건의 계기, 문제의 대상(공부, 성적) 같은 부분을 자연스럽게 파고들어 가며 상담을 나뭇가지처럼 이어지게 진행하신다.	
UA30	종이 한 장을 다 채우면 뜯어서 옆에 두시고 다른 페이지에 이야기를 이어서 적으신다.	
UA31	심정에 대한 것을 말하면서 "자세히 말할 수 있을까요?"라는 멘트로 디테일한 대답을 유도하신다.	
UA32	상담한 지 40~45분쯤 마무리하시는 느낌 - "앞으로 상담받으면 서의 목표가 있을까요?"와 같은 목표에 대한 질문을 하신다.	
UA33	"12주 뒤에 본인이 어떻게 되면 고민이 해결된 것일까요?" "최소한 이것 정도는 해결되면 좋겠다 하는 게 있나요?"와 같은 질문을 하신다.	
UA34	내담자의 대답을 듣고 내용을 정리 후 "그러면 이러한 것부터 해봅시다. 어때요?"와 같이 말씀하신다.	

UA35	마지막으로 위 목표 리마인드 점검, 첫날이었는데 어땠는지? 내담자에게 질문을 하신다.	
UA36	처음 4~5회 정도는 질문들이 많을 거 같다, 이후부터는 본인 이야기를 많이 하면 된다고 말씀하신다.	
UA37	다음 주는 심리검사 한 것을 분석할 것이라고 말씀해 주신다.	
UA38	일정에 대한 리마인드 후 상담을 종료하신다.	
UA39	상담 종료 후 노트테이킹을 기반으로 리뷰를 진행하신다.	어떤 내용을 중점적으로 보시는가? - 왜 상담을 오게 되었는지부터 시작해 정보를 정리한다고 한다.
UA40	노트 내용을 빨간색, 노란색, 파란색 펜을 사용하여 확인하신다.	컬러에 따라 중요도가 다른가? - 빨간색: 제일 중요한 정보(방문 목적, 개인정보)/노란색: 상담 때 주의 깊게 볼 포인트/파란색:다음 회차 때 내담자에게 물어볼 질문들, 선생님 본인의 생각 기록
UA41	ㄴ자 책상에 필요한 모든 것이 있어 보인다.	
UA42	27인치 정도 되는 모니터 가로로 두 개가 책상에 배치되어 있다.	
UA43	파일철, 메모지가 굉장히 많다.	
UA44	다이어리와 플래너 여러 개, 심리학 서적이 선반에 놓여 있다.	
UA45	웹캠과 마이크가 있다.	왜 있는 건지? - 코로나 때 비대면 상담을 하는 경우가 있었고 집단 상담하실 때 사용하신다고 한다.
UA46	프린터 위에 가방이랑 짐이 많다.	
UA47	책상 가벽에는 서류들이 붙어 있다.	
UA48	상담하는 쪽은 따뜻한 조명, 업무하는 쪽은 그냥 형광등이 달려있다.	
UA49	탁상 달력에 간단한 일정이랑 지난 날짜에 x 자가 처져 있다.	
UA50	키보드 아래에도 월간 달력이랑 메모지가 있다. 주로 업무 관련 내용이 적혀있다.	
UA51	책상위 수많은 파일철에 큰 너임 태그로 이름이 부착 되어있다.	철학, 심리자료, 생각할 것, 심리상담 등의 자료였다.
UA52	다트가 벽에 걸려있다.	잘 사용하는가? 어떤 의미인가? - 잘 쓰지는 않아 인테리어 소품인 셈이고 가끔 선생님들이 던지고 가는 경우가 있다.
UA53	책상 아래 벨이 있다.	용도는 무엇인가? - 응급용 벨이며 보건실과 연결되어 있다.
UA54	연필깎이가 책상에 놓여 있다.	연필을 사용하시는 이유는? - 항상 연필을 주로 사용하고 있으며 학생에게도 임상 심리 검사지 체크하실 때 연필 사용을 장려한다고 한다. 확실하지 않은 정보들에서 연필

		을 사용하신다고 하셨다.
UA55	연예인 사진이 책상에 붙어있다.	심리적 안정감을 느끼시는가? - 없는 것보다는 낫다고 하셨다.
UA56	책장에 상담심리 등의 파일철은 따로 분류되어 있다.	분류한 이유가 있는가? - 심리 검사마다 해석 때 필요한 자료들이 달라서 그에 맞게 정리하고, 상담에 대해 공부하기 위한 자료, 집단 상담 운영에 관련된 자료, 영어 관련해 공부하는 자료, 철학관련 자료 등이 나누어져 있다고 하셨다.
UA57	상담실 내부에 그림들이 배치되어 있다.	그림을 둔 이유가 있는가? - 전시회 같은 데서 가져온 것이며 분위기 조성을 위해서 꾸미려고 하는 편이라고 하셨다.

User study with counselor B (22.12.02)

Code	Thick description and insight	Follow up question
UB1	1987년생 울산 울주군 범서읍 천상리 거주 차로 10분 거리 출퇴근 남편, 센터에서 치료견으로 활동하는 강아지와 거주	
UB2	이전에는 대학병원에서 근무하다 2016년부터 유니스트에서 임상심리사 및 센터 직원으로 근무 중.	
UB3	임상심리사로서 접수 면담을 통해 내방 학생들의 정신 질환을 초기에 발견하고 의사와 소통하여 정신과로 안내하는 일을 한다.	
UB4	직접 정기적인 상담을 하지는 않지만, 필요에 따라 심리 검사지의 제공 및 해석 등을 통해 다른 상담 선생님들에게 자문을 드리기도 한다.	
UB5	센터 직원으로서는 상담센터의 대표 연락처를 맡아 여러 문의에 대해 대응하고 조율하는 파트리더 역할을 하고 있다. 상담 서비스의 접수와 상담 선생님 배정까지 담당한다.	전담 직원을 쓰면 해결할 수 있을 것 같은데 쓰지 않는 이유는? (일정 조율이나 문의 대응은 임상 전문성이 필요해 보이지 않음) - 대표번호를 맡고 있어서 여러 가지 온 학교에서 오는 문의와 대응을 해야 하는 것이 힘들지만, 파트 리더이며 접수를 맡고 있어서 자신이 맡는 게 효율적이라 생각해 어쩔 수 없이 맡고 있다.
UB6	일을 하다 보니 정신 질환은 예방, 초기 진단(=스크리닝)이 중요하다고 생각되어 홍보를 비롯한 여러 센터 프로그램 기획에도 참여하고 있다.	
UB7	임상심리사로서 전문 지식과 기술이 필요한 일에는 보람을 느끼고 즐겁다. 학생들의 치료가 잘 이루어지는 것에 도움이 되었을 때 특히 그렇다.	
UB8	직급 때문에 하는 행정 처리, 문의 대응 등의 잡일은 하기 싫다.	

UB9	일 처리는 공동 작업을 우선으로, 남에게 피해가 안 가도록 하려고 한다.	
UB10	출근하면 상담 서비스 신청이 들어온 것을 확인하고 몇몇 학생에게 연락한다. 신청자의 상태(위험도, 접수순서 등)에 따라 3일 이내에 연락하여 접수 상담 일정을 잡는다.	
UB11	당일 접수 면담 예정된 학생들이 누가 언제 오는지 확인하고 다른 업무를 시작한다.	
UB12	접수 면담 전 신청서를 통해 누락된 정보와 학적을 먼저 확인하고 호소 문제와 어떤 도움을 원하는지 파악한다. 치료 경력, 각 척도의 점수, 스케줄을 어느 정도 확인하고 사례번호 스티커를 붙인다.	
UB13	사례번호가 붙은 케이스를 신청 및 대기자 엑셀 시트 명단에 추가한다.	
UB14	각 상담사에게서 상담 종료되어 추가로 배정할 수 있는 인원이 있다고 연락이 오면 전임상담사에게 배정하거나 객원 상담사에게 일정 조율을 위해 연락한다.	
UB15	상담 대기자들 파일을 모두 꺼내어 놓고, 그중 배정 우선순위가 높은 학생들을 확인해 신청서, 접수 면담 일지, 온라인 상담 만족도 설문 등을 파일로 배정될 상담사에게 전달한다. 상담 종료된 학생들은 따로 보관한다.	
UB16	전문의 진료 희망자의 경우는 같은 파일을 하나 더 만들어 교수님에게 전달한다.	
UB17	여유가 날 때 이전 접수 면담 상담 내용을 한글 파일로 옮겨 정리한다.	
UB18	수요일은 브리 산책 프로그램으로 거의 하루 종일을 쓴다.	
UB19	내부 메신저는 '잔디', 일정 관리는 포털의 '아웃룩' 캘린더를 사용한다.	
UB20	내담자의 호소 문제 종류와 증상에 대해 질문하고, 접수일지에 기록한다. 신청서에 표기한 증상, 문제, 각 부분 척도를 참고하여 해당 표기의 구체적인 의미, 원인, 바람 등을 질문해 전반적인 상황과 상태를 내담자 스스로 정의할 수 있도록 하고 특히나 인지적 왜곡, 생략에 대해 더 구체적인 표현을 요구하거나 보다 구조적인 문장으로 정리를 돕는다.	
UB21	이전의 상담 및 약물 치료 경험과 원하는 상담 스타일이 있는지를 물어보고 예상되는 대기 시간, 약물치료 여부 등 대략적인 앞으로의 서비스 계획을 안내한다.	
UB22	대면 상담의 대기 시간이 2달 정도로 길기 때문에 그사이에 이용할 수 있는 비대면 화상 상담 서비스를 안내해 주고 요청에 따라 이용권을 제공한다. (헬로 마인드 케어) 사용자에게는 만족도 설문조사를 받기도 한다.	
UB23	상담 신청을 한 이유를 시작으로 최근 특정 사건이 있었는지, 무슨 생각을 했는지, 교우 관계, 가족 관계 등을 알 수 있을	

	만한 질문을 한다. 이 상담이 문제 해결에 도움이 될 것이라는 점을 안내한다.	
UB24	정신적 호소 문제 이외에 신체적 건강에도 이상이 없는지 질문하고, 수면 장애를 겪는다는 답변에 대해 조금 더 자세히 이야기한다.	
UB25	현재 학생의 상황과 호소 문제에 대비해서, 상담을 통해 어떻게 나아지고 싶은지 물어보며 스스로 목표를 만들도록 하는 듯하다.	
UB26	수기로 적은 접수 일지를 한글 파일에 정리한다. 내담자의 첫 마디가 중요한 경우가 많다. 최근 사건, 예전 사건, 증상 및 치료 이력, 희망 사항, 참고 사항 순으로 기록한다. 일정상 시간이 나지 않으면 추후에 하기도 한다.	
UB27	엑셀 시트 명단에 신청서 정보와 위험도 라벨(일반대기: 검정, 응급상담: 빨강, 잠재 위험: 파랑)을 기재한다. 잠재 위험의 경우 2달의 대기기간 동안 응급 위험이 있을 수 있는 경우를 말한다.	
UB28	내담자를 추가로 받을 수 있는 상담 선생님들께 대기 학생의 접수 일지 한글 파일과 신청서, 위험도 라벨이 포함된 파일을 직접 전달한다.	
UB29	선생님에 따라 접수 상담과 본 상담의 첫 회 상담에서 학생이 거의 같은 이야기를 하게 될 수도 있지만, 필수 불가결한 부분이라고 보신다.	
UB30	선반에 있는 파일들은 팀장님이 주신 것, 회의 자료, 자문 자료, 특강 자료, 읽으려고 한 자료 등이다. 사실 잘 보지 않게 된다고 한다.	
UB31	병원 근무 경험이 있으시기에 당시 쓰던 검사 분석 매뉴얼, 교육 자료 등을 가지고 계신다.	
UB32	자주 쓰는 것은 책상 위에 전부 있는 편이며 그 종류나 양이 많지 않다. 그 이외에는 선반에 보관하고 잘 꺼내지는 않는다.	
UB33	벽면 칠판에는 언젠가 하고 싶은 것, 기획하고 싶은 프로그램, 센터 내에서 하자고 했던 것, to do list, wish list 등이 적혀있다.	

User study with counselor C (22.12.28)

Code	**Thick description and insight**	**Follow up question**
UC1	1991년생 울산 북구 중산동 거주 자차로 40분 거리 출퇴근 부모님과 함께 거주	
UC2	헬스케어 센터 블로그에 컨텐츠를 작성하는 업무를 맡고 있다.	
UC3	상담 신청서를 확인하신다.	어떤 것을 주로 확인하시는지? - 주제가 될 만한 것들을 우선적으로 확인하고 임팩트가 있는 것을 확인하신다고 하셨다. 왜 왔는지,

		가족관계를 확인하신다고 하셨다. 이유경 선생님께서 구두로 특징을 설명하는 경우도 있는데 해당 경우는 위험 사례와 같은 것으로 굉장히 조심스럽게 오시는 경우가 있다고 하셨다. 그리고 자살 문제를 무조건 먼저 확인하시며 제일 높은 점수부터 확인하시며 점수표가 나오는 부분은 따로 확인하는 경우는 없다고 하셨다.
UC4	전화 통화를 하신다.	어떤 통화인지? - 선생님의 상담 학생이 아닌 다른 선생님의 상담 학생이며 객원 선생님 학생이라 선생님 번호를 몰라 학생이 연락한 것이었다. 객원 선생님께 전달 방법은 담당 선생님이 따로 계셔서 선생님께 전달 또는 직접 유선으로 전달하신다.
UC5	원형 흰색 포스트잇에다가 간단한 통화 내용 메모하신다.	포스트잇은 보관하시는지? - 포스트잇은 따로 보관하지 않으신다고 하셨다.
UC6	다른 선생님께서 메신저로 인식 조사를 언제 할 것인지 연락이 와서 답장을 하신다.	
UC7	구글 폼 설문조사 제작 중이시다.	
UC8	상담 준비는 오기 전에 다 하고 오신다고 하셨다.	
UC9	"윤이님 맞으신가요?"와 같은 본인 확인을 먼저 한다.	
UC10	이전 상담에 대한 경험을 확인하신다.	
UC11	상담 안내 용지를 학생에게 보여주면서 상담 안내를 시작하신다.	
UC12	사례 지도 같은 경우 선생님께서 원하실 때 한 번 더 요청 드리겠다고 말하신다.	
UC13	명함을 주시면서 선생님 소개를 한다.	
UC14	상담 중에는 전화를 잘 못 받으셔서 메일로 남겨주셔도 된다고 말씀하신다.	
UC15	인적 사항을 먼저 확인하신다.	
UC16	99년생인데 3학년인 이유를 먼저 물어보신다.	
UC17	"외로우셨겠다"와 같은 표현으로 감정에 대해 공감을 해주신다.	
UC18	단어에 대해 공감을 해주신다.	
UC19	공허하다는 말에 대하여 의미를 해석해서 되물으신다.	
UC20	상담 학생이 하는 말에서 꼬리 물기로 상담을 진행해 주신다.	
UC21	학생이 한 생각과 행동에 대해 연결 지어서 물어보신다.	
UC22	상황에 대해 공감을 해주신다.	
UC23	시선은 학생을 보며 공감해주시면서 손은 상담 내용을 계속 노트테이킹을 하신다.	

UC24	중요 포인트를 노트테이킹 하신다.	
UC25	특정 표현에 대해 물어보신다.	
UC26	잉여라는 단어가 어떻게 다가왔는가에 대하여 물어보신다.	
UC27	선생님께서 생각하는 사전적 의미를 먼저 말해주고 그 이후 학생은 어떻게 생각하는지 물어보신다.	
UC28	학생의 상황에 공감을 해주신다.	
UC29	상황을 연계해서 잘 정리해 주신다.	
UC30	과거의 사건과 현재의 학생의 상태를 연계해서 말해주신다.	
UC31	현재 상태를 물어보신다.	
UC32	상담신청서를 보고 궁금했던 것을 물어보신다.	
UC33	상담 신청서의 항목에 체크 한 것을 보고 물어보신다.	
UC34	현재라면 어떻게 했을 것 같은지 물어보신다.	
UC35	상담에 대한 전반적인 내용을 들으시고 마지막에 휴학을 하고 싶었겠다고 말해주신다.	
UC36	상담을 하면서 어떤 걸 다루고 싶은지 물어보신다.	
UC37	앞으로 어떤 것을 지켜보아야 할지 말해주신다.	
UC38	학생이 말한 것을 정리하면서 다음 시간에 어떤 것을 할지 말해주신다.	
UC39	상담 마칠 때는 오늘 어땠는지 마음은 어땠는지 물어보신다.	
UC40	수고하셨다고 말하며 마무리하셨다.	
UC41	선생님 스스로 전환을 시키는 시간을 갖는다.	어떤 방법으로? - 생각을 전환하는 시간으로 노래를 흥얼거리시면서 시간을 가지신다고 하신다. 상담 내용에 대하여 공감하고 몰입하다 보니 전환하는 시간이 필요하다고 하셨으며 OFF가 안되면 분석을 따로 받으신다고 하셨다.
UC42	아침에 오면 공기청정기와 컴퓨터를 먼저 켠다.	
UC43	히터를 잘 틀지 않는 편이시라고 하신다.	
UC44	가습기는 오늘 처음 사용해 보셨다고 하셨다.	
UC45	다른 방에 비해 조금은 좁은 편이고, 정사각형에 가까운 구조이다.	
UC46	영화 포스터 사진이 붙어있는데, 학부 때 중요했던 영화들이었다. 굿윌 헌팅, 라이프 이스 뷰티풀	
UC47	책상을 찍어도 되냐고 했을 때 노출된 민감한 정보가 없어서 바로 찍어도 된다고 하셨다.	
UC48	달력 위에 투명한 판을 덧대고 그달의 주요 해야 하는 일정을 마커로 써두셨다.	

UC49	달력 볼 때 한두 번 보려고 하는 거고 적극적으로 활용하지는 않는다.	
UC50	포스트잇도 거의 붙어있지 않고 개인, 민감 정보가 잘 드러나 있지 않다.	
UC51	왼쪽 종이 서랍에는 상담에 쓰는 서류, 워크시트, 툴킷 등이 있고 이면지, 잡동사니가 있다.	
UC52	분홍색 미니 가습기는 매일 사용 중이시다.	
UC53	영양제 팩 같은 것이 지퍼백에 담겨있다.	
UC54	세로 모니터는 망고보드, 한글파일 같은 작업에 활용한다.	
UC55	배경 화면은 조카 사진이다.	
UC56	앞쪽 모니터 옆에 A4는 할 일 등을 적어 두었다.	
UC57	본 모니터 위에는 웹캠이 있다.	
UC58	마이크는 없고 이어폰으로 사용하신다.	
UC59	센터 로비가 보이는 창문에 블라인드가 쳐져 있다.	
UC60	왼쪽 서랍에는 거의 아무것도 없다.	
UC61	판넬은 환경미화를 위해 하려던 것인데 미루고 있으시다.	
UC62	책상 밑에는 발 받침대가 있다.	
UC63	구석에 심리 관련 서적이랑 종이 서류들이 있다.	
UC64	논문, 공부자료, 슈퍼비전 필기, 알쓸심잡 관련, 정보화 사업 자료가 있다.	
UC65	심리학책, 개인이 읽으시는 책도 있다.	
UC66	펜꽂이에 펜이 많은데, 학생들에게 주는 자료에는 강렬한 색은 사용하지 않고, 본인은 거의 검정 펜과 강조용 색을 사용하신다고 하셨다.	타인에게 보이는 것 : 주황색 녹색, 자신이 보는 것 : 빨간색 핑크색 (개인 선호), 심리 검사 해석 : 파란색
UC67	오른쪽은 옷장, 아래 캐비닛은 본인 및 객원 선생님들 케이스들 정리되어 있다. USB, 녹음기 등도 있고 보통 잠가 놓는다.	
UC68	맨 위에는 새 심리 검사지와 학생들이 작성해 온 것이 있다.	
UC69	감사 일기(타 행사에서 받아오셨다고)가 꽂혀있다.	
UC70	상담사 수료증이 꽂혀있다.	
UC71	학술대회 책자가 꽂혀있다.	
UC72	표준화 심리검사 자료, 카탈로그가 꽂혀있다.	
UC73	학생상담 안내서가 꽂혀있다.	
UC74	지도교수님을 위한 학생 상담법(센터에서 제작해서 교수님께 드리는)이 꽂혀있다.	
UC75	선생님의 탄생화인 수국 관련 인테리어 소품이 놓여 있다.	
UC76	내담자 자리 뒤 민트색 시계는 상담 때 선생님이 힐끗 체크하	

	려는 의도된세팅이다.	
UC77	교육 자료들이 꽂혀있다.	
UC78	3단 서랍이 있다.	
UC79	체온 일지가 있다.	
UC80	상담에 쓰기도 하는 심리 검사지가 있다.	
UC81	캐비닛 열쇠와 열쇠고리 그리고 칫솔 세트가 있다.	
UC82	휴지 박스 옆에 그림 검사를 위한 연필, 지우개가 있다.	
UC83	연필도 너무 뾰족하면 안 되는 룰이 있다고 하셨다.	
UC84	상담 신청지와 상담일지, 펜 등 역시 아날로그 도구로 진행하셨다.	
UC85	스마트워치를 착용하고 계시지만 상담 때는 쳐다보지 않으시며 스마트폰도 휴대하지 않는다.	
UC86	대면 상담에서는 테이블 크기, 상담자와 내담자의 위치, 내담자가 문을 등지고 앉는 등등 세세한 암묵적 규칙들이 존재한다고 하셨다.	
UC87	캐비넷에는 선생님과 객원 선생님들 상담 케이스 보관. 케이스는 매일 잠가둔다.	
UC88	비상벨이 책상 위에 존재한다.	벨의 위치가 다른 상담실과 다른 이유는? - 손을 주로 책상 위에 올려놓다 보니.

User study with counselor D (23.03.09)

Code	Thick description and insight	Follow up question
UD1	상담사로서 자신이 나아가고 변화하는 모습이 보일 때 뿌듯함을 느낀다.	
UD2	정량적으로 칼같이 정해지지 않은 많은 일들을 해야 할 때 기분이 좋지 않다.	어떤 일들인지? - 상담과 관련이 없는 잡다한 일들
UD3	사람들이 상담사로서의 업무를 잘 이해해 주지 못할 때 기분이 좋지 않다.	
UD4	건강과 감정적 편안함을 중요하게 생각한다.	
UD5	자신이 어제보다 얼마나 달라졌는지, 편안해졌는지 생각해 본다.	
UD6	예전에는 생각할 수 없었던 것을 이제는 생각하게 되는 것들이 무엇인지 생각해 본다.	
UD7	파트타임 상담사들의 상담 일정을 매일 관리한다.	
UD8	센터의 상담사들과 내부 사례 교류를 준비한다.	
UD9	학생 전체와 상담 신청 건수에 관한 통계를 관리하는 일을 한다.	예를 들면? - 신입생, 휴학생, 질병 휴학 수와 비율, 신규 신청, 상담 완료, 호소 문제

		수와 비율
UD10	5년 후에도 심리상담 일을 쭉 할 것 같다. 지금보다 빠듯하게 열심히 할 것 같다.	
UD11	정신 상담 서비스 이용자가 너무 많으니 인턴 상담사 교육을 기획해 보고 싶다.	
UD12	슈버파이저로서의 역할을 해내고 싶다.	
UD13	상담을 가장 잘 하는 것은 아니지만 상담을 제일 좋아한다.	
UD14	일상적으로는 수영과 남자친구와 이야기하는 것을 좋아한다.	
UD15	1986년생 울산 울주군 범서읍 구영리 거주 자차로 20분 거리 출퇴근 분가하여 고양이 2마리와 거주	
UD16	캐비넷에 현재 및 이전 상담 자료가 보관되어 있다.	
UD17	상담실에 시계가 많이 있다.	왜? - 상담에서는 시간을 잘 지키는 것이 규칙이다. 시계를 자주 확인하기 위해 내담자 자리 너머 뒤편에 두었다.
UD18	온도계가 걸려있다.	방이 추워서 달아두고 확인한다.
UD19	습도계가 있다.	
UD20	책상 위에 잡동사니가 꽤 있다.	
UD21	책상에는 사례집과 책들이 꽂혀있다.	
UD22	차 종류가 굉장히 많다. 즐겨 마신다고 하신다.	
UD23	출입문에 커튼이 있다.	문이 열려있을 때 업무 책상이 너무 잘 보이고, 문을 마주하고 앉는 내담자 얼굴이 보일 수 있기 때문
UD24	녹음기가 있다. 종종 상담 녹음을 하며 노트북을 녹음 파일을 옮기는 용도로 사용한다.	
UD25	축어록이 있다. 상담을 하면서 작성하기는 어려워 녹음된 것을 들으면서 문서화한다. 빠르면 두 시간 정도 걸리며 본인이 했던 상담을 체크하고 피드백하는 용도로 사용한다.	축어록 : 상담자 내담자 사이에 오고 간 상담 내용을 활자화한 것
UD26	아이패드가 있다. 회의 때나 교육을 들을 때, OTT 시청할 때 사용한다.	
UD27	핑크색 파일에는 상담사 배정과 관련된 것을 보관하는데, 지금은 내용이 없다.	
UD28	화요일에는 유연근무로 5시에 퇴근한다.	
UD29	업무 책상 위 포스트잇들에는 할 일 및 스스로를 피드백하는 글귀가 쓰여 있다.	
UD30	캘린더에 그때그때 다른 색깔로 일정을 적고 형광펜으로 연속적인 일정을 표시한다.	
UD31	'잔디'라는 메신저로 센터 내부 소통을 한다.	
UD32	서류 정리함에는 칸별로 검사지 및 책자가 들어있다.	

UD33	명함 뭉치가 있다. 내담자에게 예약 변경을 원할 때 명함의 연락처로 연락하라고 하면서 전달한다.	
UD34	상담 전에 상담 신청서나 이전 상담 내용을 10~15분 정도 훑어본다.	
UD35	메신저에 프린터기 잉크 교체와 같은 사무 업무 이야기가 올라온다.	
UD36	다른 상담사와 전화하며 메모지에 메모를 적고, 모니터상의 일정을 확인한다.	
UD37	프린트 잉크 업무를 물건 구매 담당 상담사에게 전달해야겠다고 한다.	
UD38	파트타임 상담사들을 위한 메모를 적고 물, 커피, 과자 등을 챙긴다.	
UD39	내담자에게 자신을 소개하는 것으로 상담을 시작한다.	
UD40	센터로 오는 길은 어땠는지 물어본다.	
UD41	상담 내용 필기, 녹음, 상담 서비스 이용 동의에 대해 설명하고 동의를 구하며 서명을 받는다.	
UD42	상담 중 내담자의 이야기를 정리하고 관련된 질문을 한다.	
UD43	자신만의 상담 일지에 자신의 방식으로 상담 내용을 기록한다.	
UD44	내담자의 이야기를 듣고 이해가 되지 않는 것은 다시 정리해 물어본다.	
UD45	내담자의 이야기를 선생님 나름대로 정의 및 정리를 하고 내담자에게 확인 질문을 한다.	
UD46	특정 상황을 가정하며 그럴 때 어떨지 내담자에게 질문을 한다.	
UD47	내담자의 어린 시절 경험에 대한 이야기를 유도한다.	
UD48	시간의 흐름에 따른 이야기를 할 수 있도록 유도한다.	
UD49	내담자의 이야기에 꼬리를 무는 형식의 질문을 이어간다.	
UD50	상황, 공간, 분위기, 인물에 대한 맥락을 이야기할 수 있도록 유도한다.	
UD51	감정적인 측면에서의 공감을 한다.	
UD52	상담이 끝날 때 종료를 알리면서 이후 상담에 대해 안내한다.	
UD53	오늘 상담에 대해 어땠는지 물어본다.	
UD54	내담자의 요청 사항은 반영하려고 한다.	
UD55	그림 치료를 요청했던 내담자가 있었으나 전공 분야가 아니었다.	
UD56	상담 시작 후 45분쯤부터 그날의 상담을 요약하고 정리한다.	
UD57	다음 회차 상담 시간을 조율한다.	

UD58	상담이 끝나면 다음 회차에 어떤 상담을 할지 기록한다.	
UD59	상담 내용을 다시 확인하면서 추가로 필기한다.	
UD60	상담 내용 정리가 어려운 경우에는 한글 파일로 정리한다.	
UD61	조율된 다음 회차 상담 일정을 메모한다.	
UD62	상담이 끝나면 메신저를 먼저 확인한다.	
UD63	상담 내용 리뷰보다 급한 업무를 먼저 처리한다.	
UD64	우수상담사 표창을 받은 적이 있다.	달라진 점이 있었는지? - 특별히 다른 점은 없고 다른 우수 상담사들과 이야기했던 게 영감이 많이 되었다.
UD65	청소년 상담의 경우 부모 동의가 필요하다.	조기졸업 하여 대학생이 된 경우는 어떻게 처리하나? - 사실 대학생은 대부분은 성인으로 본다.
UD66	내담자에게는 상담받는 사실을 부모님에게 이야기하라고 권유한다.	
UD67	비대면 상담을 진행하기도 한다.	
UD68	비대면 상담의 경우 몇 가지 이슈가 있다. 혼자 있는 공간을 권유한다. - 휴대폰 사용을 자제시킨다. 주변 소음을 줄이도록 한다. 내담자 편의로 비대면을 하는 경우 집중도가 떨어진다. 전체 모습이 카메라로 보일 수 있도록 권유한다. 카메라를 켜는 것이 원칙이다. 보통 ZOOM을 사용한다.	
UD69	비대면 화상 상담을 위한 외부 제휴 서비스 - 헬로마인드케어가 있다.	

Pre-interview with counselor B (22.11.01)

Code	**Thick description and insight**	**Follow up question**
IB1	심리상담은 불안, 우울 등으로 일상생활에서 적응하는 것이 어려운 사람에게 도움을 주는 것 - 대인 관계적인 접근을 한다	
IB2	상담실은 정서적인 것을 다루는 곳이며 상담은 자기 자신으로 사랑하는 것이 먼저라고 생각한다.	
IB3	센터에서 하는 일로는 홍보물 만들기, 상담 분석, 상담 후기 공모전, 객원 상담 선생님 관리, 일정 관리 등이 있다.	
IB4	상담 진행할 때 '감정 카드' 같은 도구 사용하는 경우도 있음 - 내담자가 마음속에서 심상이 잘 안 떠오르는 경우, 자기표현이 안 되는 경우는 도구를 사용해야 함	
IB5	명상 어플 '마보'와 같은 외부 서비스와 제휴해 내담자에게 권유하기도 함	
IB6	명상은 누구에게나 정신건강 관리에 기본적으로 도움이 되며 센터 상담사들도 관심있어 함	
IB7	'마보'는 권유 대비 내담자의 10% 정도 사용하는 듯하며 극소	

	수는 꾸준히 사용하고 대체로 정신적으로 힘들 때만 집중적으로 사용하는 듯함	
IB8	센터에 DVD와 책을 비치해 놓고 권유하기도 하는데, 보통 책을 권함	
IB9	요즘은 정신건강에 도움 될 유튜브 콘텐츠를 추천하기도 함	
IB10	상담사로서 발전하기 위해 매년 학회에 참가해 최신 이론이나 트렌디한 치료법을 배우는 것이 필요하다고 생각함. 계속 공부해 나가고 최신 이슈를 파악하려고 함.	
IB11	슈퍼 비전을 통해 정보와 지식을 꾸준히 얻음	
IB12	계속 공부를 해야 한다는 것이 힘든 점 이기도 함	
IB13	유니스트 센터는 다른 대학에 비해 상담사들의 자유도가 높은 편 임에도 불구하고 상담사들이 상담에 전념하기 어렵다고 느낀다.	
IB14	대학 센터에서는 심리상담만 하는 것이 아니라 예방, 잠재 위험 발굴, 잡무 등 일이 많다.	
IB15	상담 희망자가 많아 각 내담자의 최대 상담 횟수는 12회인데, 이렇게 제한하는 것은 상담을 잘 마무리하고 싶은 상담사 입장에서 스트레스다.	
IB16	학생들은 센터에서 좋은 상담을 받을 수 있는 걸 알았다면 더 일찍 왔을 것이라고 피드백하는데, 이런 상황이 안타까움. 인식 개선 등을 통해 개선되었으면 함.	
IB17	교내에서 홍보를 위해 여러 가지로 힘쓰지만, 홍보 매체가 거의 교내 메일로 한정되어 있다.	
IB18	학생뿐 아니라 교직원을 포함한 학교 구성원 대부분이 상담받을 수 있다.	
IB19	교수님들도 상담받을 수 있지만 상담사들이 대하기가 어려워 센터장이 진행하는 정신과 전문의 치료로 넘어간다.	
IB20	상담사와 이야기를 하고 싶어 하던 동네 이웃이 어떠한 이유로 즉시 상담받지 못했는데, 바로 다음 날 자살을 했던 일이 충격이 되었고 상담심리사로서 사명감을 가지게 된 계기가 됨	
IB21	상담사가 느낄 수 있는 보람이 얼마 없는데 학생이 성장하는 것을 보는 게 유일한 보람	
IB22	상담은 하루에 3~4명, 일주일에 12명, 한 회차에 50~60분 정도 진행한다.	
IB23	신기하게도 상담을 받는 내담자의 멘탈이 좋아지면 주변 사람들 또한 긍정적인 변화를 보이는 것 같다.	
IB24	업무 중 가장 시간을 많이 쓰는 것은 상담 신청서에 포함된 검사지, 또는 별개로 작성된 검사지 해석과 상담 일정 관리이고, 그다음은 센터 내에서 매주 또는 매달 진행하는 일정이다.	
IB25	꽤 자주 집단 상담 프로그램을 진행하기도 한다.	

IB26	임상심리사는 내담자 위험성 평가, 검사지 분석 후 적절한 서비스(상담 또는 치료) 분류를 진행한다.	
IB27	상담심리사는 여러 가지 치료 프로그램 진행, 상담 진행을 한다.	
IB28	일상생활에 어려움이 많은 경우 전문의 진단과 약물 치료를 진행한다.	
IB29	희망하지 않더라도 약물 치료를 권하는 경우도 있고, 상담을 먼저 진행한 후 진척을 보고 권하는 경우도 있다.	
IB30	상담 이론에 따라 역할 연습, 심상법, 노출 치료 등 상담 진행 방법은 다양하다.	

Post-interview with counselor B (23.01.25)

Code	Thick description and insight	Follow up question
IB31	센터에서 선생님을 배정한 이유는 정신과에서 일했던 경험을 바탕으로 임상적 증상을 보이는 학생에게 대응할 수 있는 환경을 구성하기 위했던 것으로 보임.	
IB32	초반에는 최대한 학생들 시간에 맞춰 상담을 진행했는데 점차 학생들의 수요, 인력을 고려해 어떻게 효율적으로 운영할 수 있을까 고민하면서 현재처럼 정착했음. 다른 곳에서 참고 할 만한 세팅이 없어 시행착오에 시간이 꽤 걸림.	이런 세팅에 대해 제작된 매뉴얼은 없다고 함
IB33	상담 운영의 효율과 상담의 깊이 사이 균형을 찾고자 8회기, 12회기 등을 시도해 왔으나 여전히 확정되지 않았음. 통계적으로 12회가 적합하다고 판단하여 현재는 12회.	
IB34	외국인을 어떻게 할지도 고려가 계속되고 있으나 마땅한 대안은 현재 없음.	
IB35	정신과 부속 의원은 모든 대학 상담센터에 필요하다고 보지만 학교의 지원과 의원의 참여 둘 다 쉽지 않음.	
IB36	우리 학교에 부속 의원이 생기게 된 것은 운이 좋아서 되었다고 보아도 됨. 학교에서 지원하고 추진하자고 하는 경우도 거의 없고, 정두영 교수님 같은 분이 매칭되기도 어려움.	
IB37	센터장님이 최종 결정권자이긴 하지만 매주 진행되는 전체 회의에서 그때그때 필요한 안건을 자유롭게 제시하는 식으로 운영하기에 실무자(선생님)들이 상황은 더 잘 앎.	
IB38	운영자, 치료자, 학교 직원으로서 각각의 입장에서 달라지는 운영의 고민이 많음. 상담회기, 대기자 관리, 행정업무, 상담에 집중 등 이해관계와 욕구가 충돌하며 할 수 있는 것과 포기하는 것에 대한 고민이 많음.	
IB39	학교, 총장님의 경우 방향성만을 제시하고 세부적인 운영에 관여하지는 않음. 한정된 자원과 방향성에 맞추어 센터 구성원들의 의사 결정이 주가 됨.	

IB40	이전에는 오히려 상담사가 한 명이었고 이용률도 낮았으며 상담실 환경도 열악했음. 학교에 개선을 요청하여 점차 현재의 모습을 갖춤.	공용 상담실에 문지혜 상담 선생님 혼자 계셨다. 학교의 사건 사고 등 지금 인권 센터에서 담당하는 일을 했었다.
IB41	16년도 이후 임상 전문가, 부속 의원이 생기는 등 센터의 자원과 홍보가 늘고 인식이 좋아지며 학생들의 이용률이 늘어나고 상담 서비스 대기 학생도 늘었음.	16년도 이후에는 부속 의원(진료실)이 생기면서 원내 처방이 가능해지고, 원내 치료가 가능해졌다. 고위험군 관리가 효율적으로 되었다.
IB42	개선과 대기 문제가 발생하며 자연스럽게 현재 시스템이 만들어짐. (접수 상담, 스크리닝)	
IB43	상담실 위치가 지하에 있기 때문에 접근이 어렵고 쾌적하지 못하다는 문제점이 있음. 향후 목표로 상담에 더 적합한 장소로 이동하고자 함.	
IB44	2023년에는 매뉴얼 등을 통해 현재의 업무를 체계적으로 정리하는 것이 목표임.	
IB45	헬스케어센터의 방향성, 센터장님의 방향성은 예방을 중요시하는 것. 플랫폼과 디지털 콘텐츠를 활용해 최소의 자원으로 효과를 보고자 함.	
IB46	하지만 동시에 상담사들은 더 깊이 있는 치료와 사례관리에 욕심이 있음.	
IB47	상담 분야는 보수적으로 면대면 상담을 중요시하고 이와 관련된 연구들이 주를 이루었으나 최근 특히 명상 쪽 디지털 서비스들이 출시되며 받아들여지고 있는 듯하다.	
IB48	모바일 명상 서비스 '마보'의 경우 수면, 불안, 걱정 등의 문제를 호소하는 학생들은 오래 잘 사용하는 경향이 있어 추천하는 편임.	
IB49	개인의 심리 문제를 넘어선 학교 내의 인권 관련 사건의 원활한 처리를 위해 17년도에 인권센터가 생기고 역할이 분담되었음.	
IB50	고위험군 학생의 경우 임상 전문가가 심리검사와 접수 면접을 통해 증상을 확인하고 부속 의원/외부 병원으로 연결해 준다.	

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University counselors research for the design of student mental healthcare platform