# **Project Proposal**

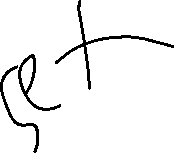
Human-Factors and Ergonomics

Class session number: 02

Team number: 05

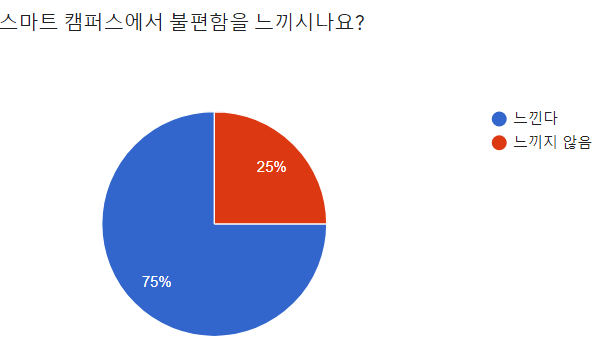
Team members: 이승유, 유희찬, 천효정, 홍주원

## **Topic**



To improve SMART CAMPUS application structure and develop it to replace HISNET mobile version

## **Background**

 This project aims to solve the main problems that actual smart campus users are experiencing. According to the preliminary survey, 75% of smart campus users felt uncomfortable with the smart campus, and the reasons for the inconvenience were slow loading speed of the screen, frequent login errors and server collisions, QR tagging not on the main screen, complicated menu configuration, and access multiple functions.

### **<Problem #1>**

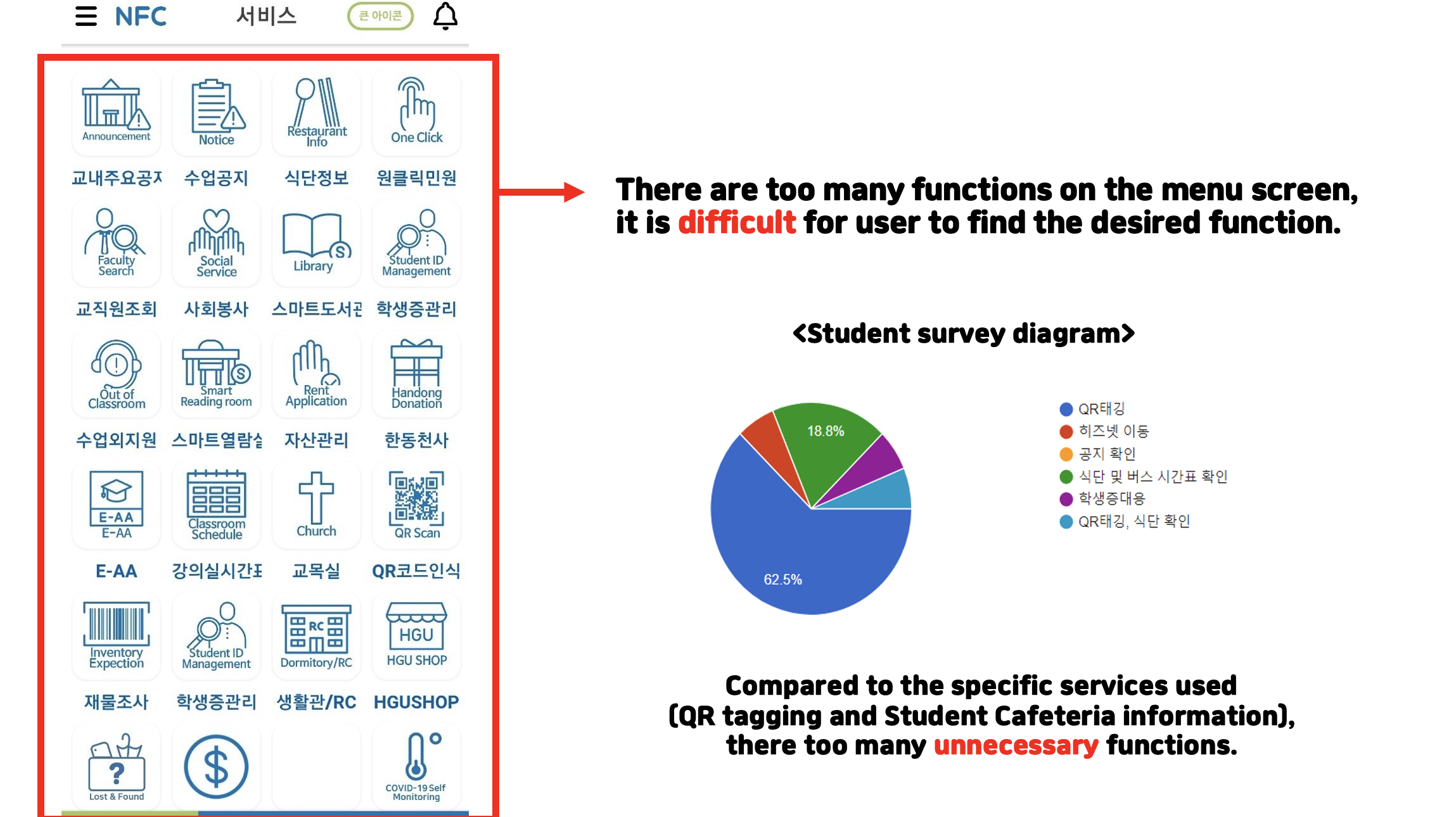
첫번째로 스마트 캠퍼스 앱을 열었을 때, 가장 먼저 보이는 메인 화면의 문제를 분석해보았다. 스마트 캠퍼스에서 가장 많이 쓰이는 기능인 QR 태깅이 메인 화면에 없고 화면을 이동해야지만 찾을 수 있는 불편의성을 갖는 것이다. 또한 메인 화면에 배치된 배너의 영역이 그 쓸모에 비해 너무 크다는 문제점을 찾을 수 있다.

텍스트이(가) 표시된 사진

자동 생성된 설명

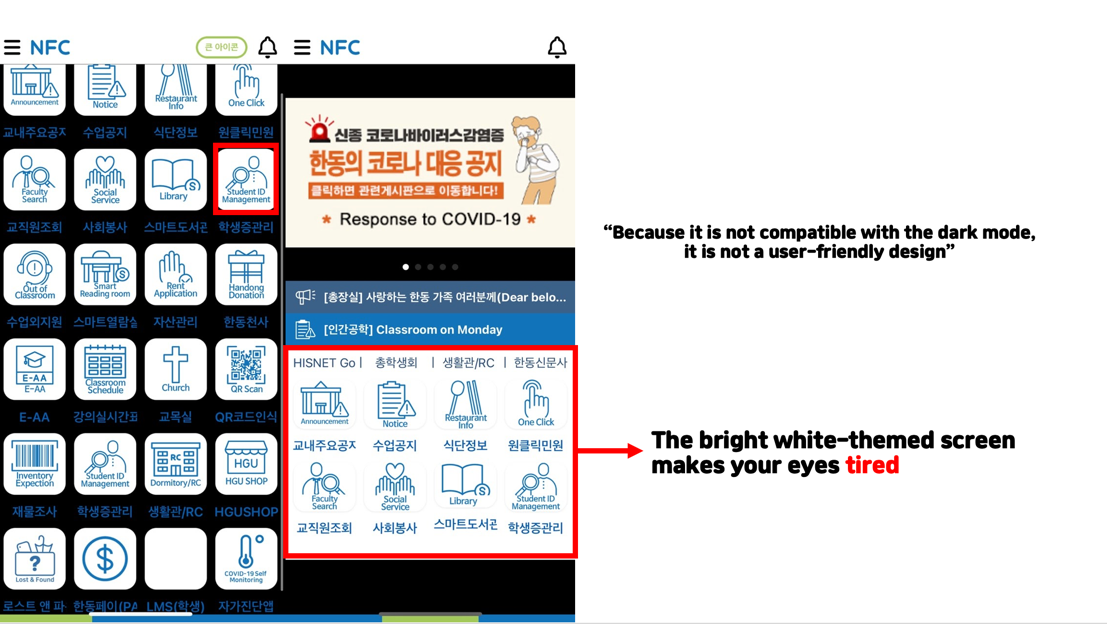
### **<Problem #2>**

두번째 문제 접근은 메뉴 화면에 중점을 두었다. 메뉴 화면에 존재하는 기능이 너무 많아 특정 메뉴를 찾을 때 복잡해서 한 눈에 확인할 수 없다는 문제점이 도출되었다.



### **<Problem #3>**

세번째 문제 포인트는 하얀색 화면이 눈의 피로함을 야기한다는 것이다. 스마트 캠퍼스 자체에 존재하는 다크 테마 설정이 없을 뿐더러 휴대폰의 다크 모드를 적용했을 때, 호환이 되지 않아 외관상 좋지 않다.



## **Plan for prototyping**

텍스트, iPod, 주차장이(가) 표시된 사진

자동 생성된 설명

**<QUICK MENU>**

### **Setting personal quick menu “My Favorite Menu”**

**Methods**: Users can save their own favorite menus in the quick menu slot  
**Effects**: Increase the convenience, every user can find what they want without any distraction

### **Organizing the placement of the Start Screen**

**Methods**: Remove unnecessary banners and place the commonly used dormitory QR code on the main screen  
**Effects**: Make it simpler and easier to use for the users. Therefore, the users can see the key functions that they need the most on the main screen

### **Classification of functions**

**Methods**: Classify the functions by categories on the menu screen  
**Effects**: increase the efficiency, reduces time of working process

### **Improvement of Dark mode**

**Method**: Make dark mode theme that makes the screen completely dark  
**Effect**: eliminate the eye fatigue

### **Notification for New announcement**

**Methods**: When a new class notice or major notice is uploaded, a notification push is displayed on the mobile phone.  
**Effect**: helps user not to miss any notification.

## **Plan for an experiment for usability evaluation**

### **Participant**

Target**:** Students who use Smart Campus app  
We will gather participants using SNS.  
6 students (two students for each grade 1, 2, and 3)

### **Purpose**

The purpose of this project is to find a problem with an existing Smart Campus app and check whether the problem has been solved when Smart Campus is replaced with the new version.

### **Composition of the experimental session.**

**Session 1. Check attendance through QR scan menu.**

Situation: When I checked the time, It is 9:59, one minute before the class starts. Unless you quickly take out the QR code scanner on Smart Campus and tag it, you will be late for attendance

Task: Please check QR code by using QR code scanner on the smart campus app.

**Session 2. Find the specific menu**

Situation: It is difficult to find because the menu is not classified and too complicated when entering the menu screen.

Task: Please find the menu that the experimental guide requested.

**Session 3. Open the smart library and check what textbooks were  
needed as written in the class schedule.**

Situation: I opened a smart library tap to find a book that I have to write a book review about as an assignment that a professor gave me, but I do nots remember the title of the textbook.

Task: Please display the class syllabus tab while the smart library tab is opened and check the supplementary materials.

### **Equipment**

Eye tracker, Cell phone, Camera, Survey paper, Introduction of the experiment.

### **Variables**

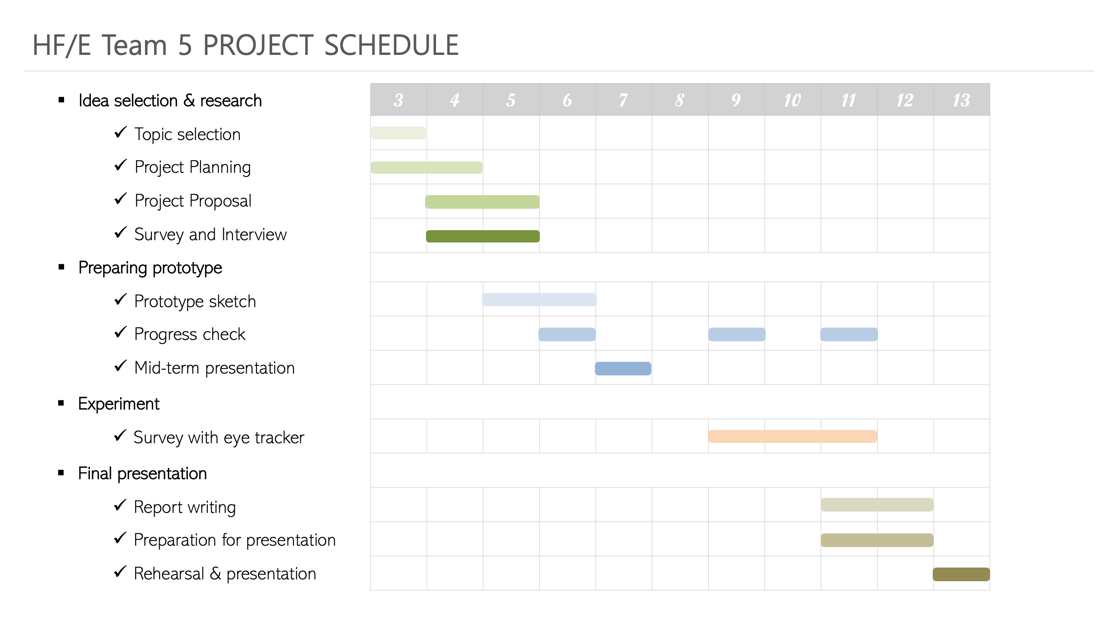
Quantitative: How much you touched and how quickly you found it  
Qualitative: How much convenience did the user feel and where he focused on (with. eye tracker)

### **Method**

Compare the prototype to the existing smart campus  
- Comparison the number of touches and time while users are doing the same task  
Get feedbacks from experiment using an eye tracker.

### **Process**

## **Schedule**



## **Expected outputs**

* Improved task performance – Reorganization of Menu, Category
* Improved physical discomfort – Dark Mode
* Improved inconvenience and satisfaction
* Identification of potential sources for supporting follow-up activities