# **Project Proposal**

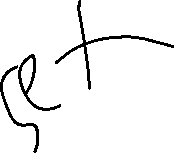
Human-Factors and Ergonomics

Class session number: 02

Team number: 05

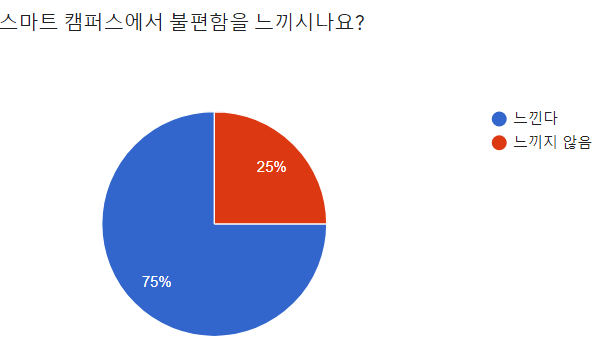
Team members: 이승유, 유희찬, 천효정, 홍주원

## **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>**

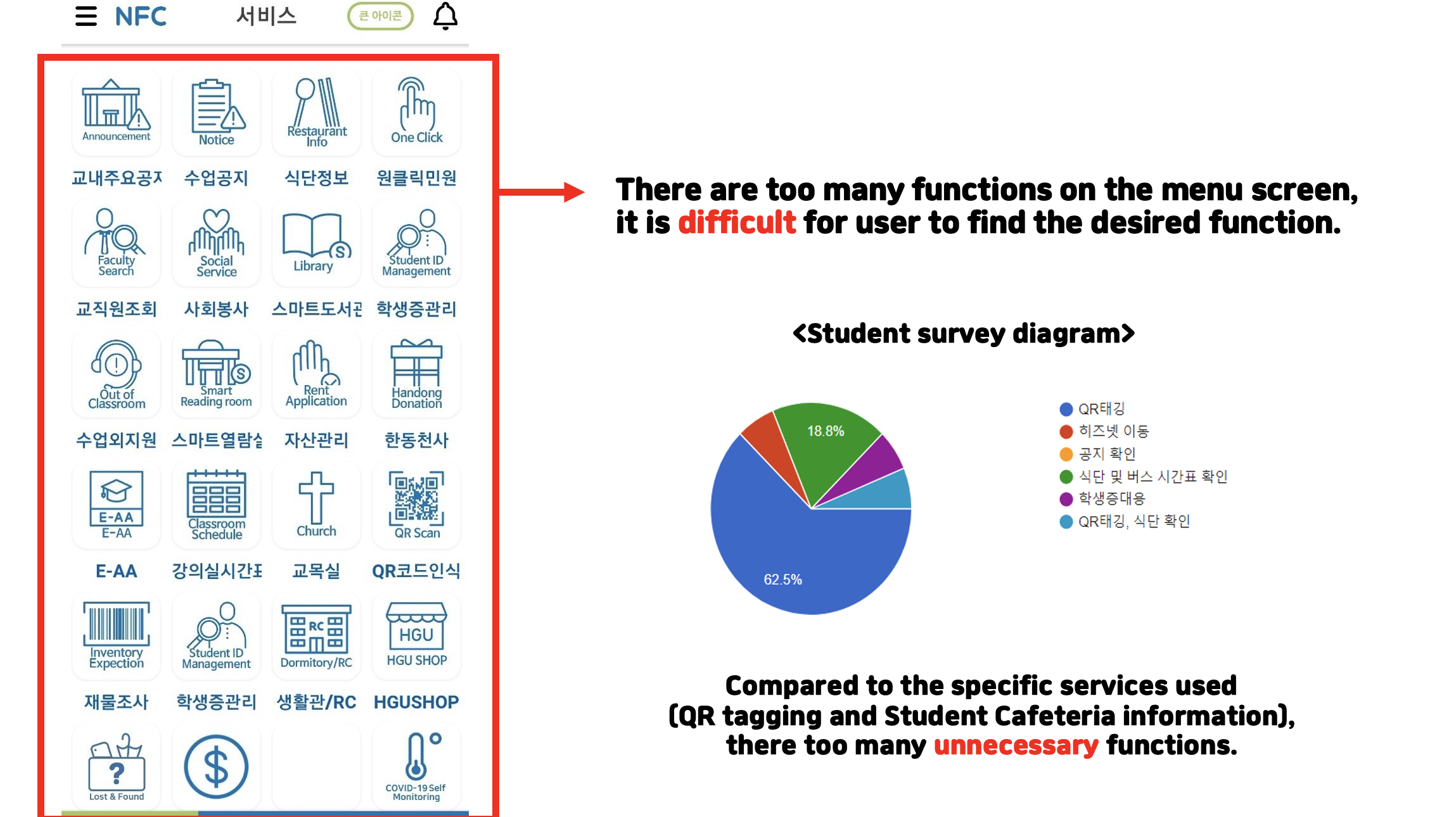
첫번째로 스마트 캠퍼스 앱을 열었을 때, 가장 먼저 보이는 메인 화면의 문제를 분석해보았다. 스마트 캠퍼스에서 가장 많이 쓰이는 기능인 QR 태깅이 메인 화면에 없고 화면을 이동해야지만 찾을 수 있는 불편의성을 갖는 것이다. 또한 메인 화면에 배치된 배너의 영역이 그 쓸모에 비해 너무 크다는 문제점을 찾을 수 있다.

텍스트이(가) 표시된 사진

자동 생성된 설명

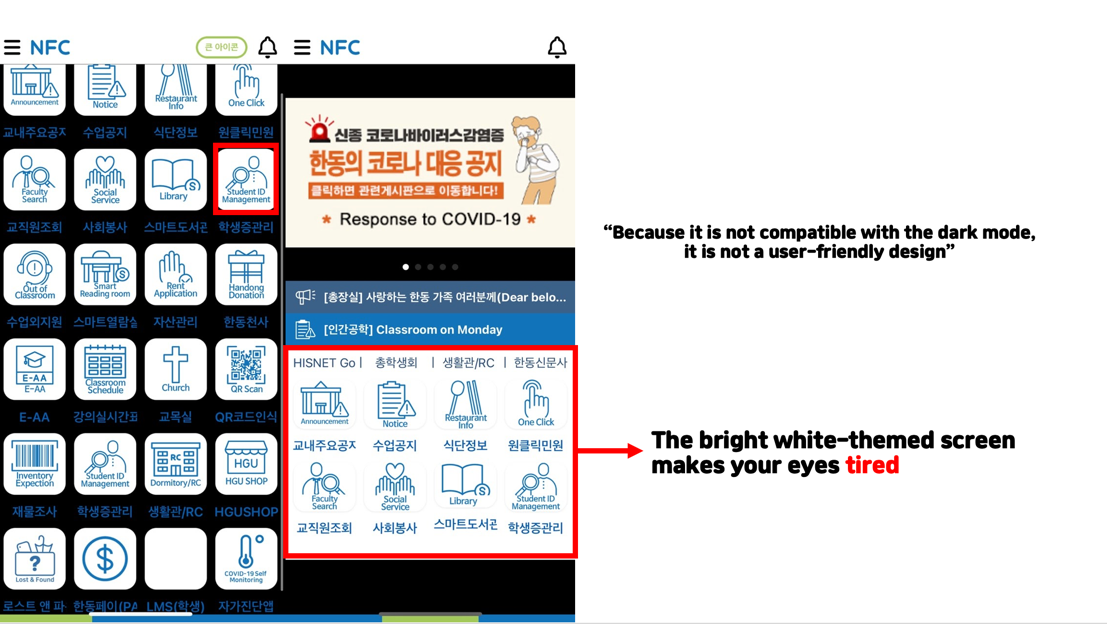
### **<Problem #2>**

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 not 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**

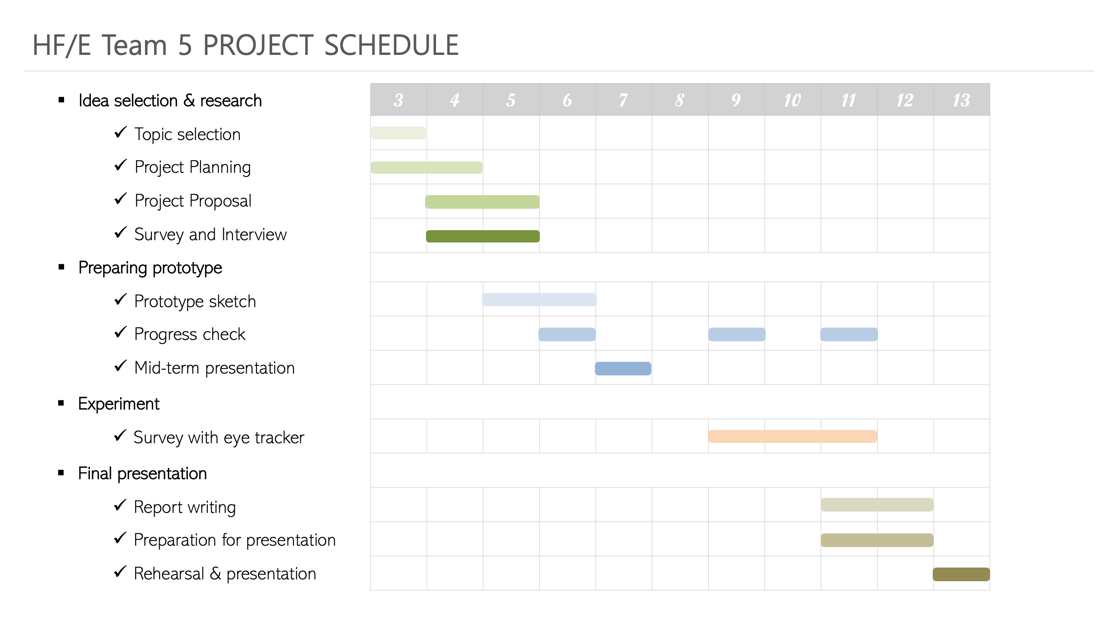
**Quantitative**: How much you touched and how quickly you found it  
**Qualitative:** How much convenience did the user feel and where he focused on (with. eye tracker)

### **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**