DISEÑO DE INTERFAZ MÓVIL PARA ESTUDIANTES EXTRANJEROS Y REGULARES DE LA FACULTAD DE BELLAS ARTES DE LA UNIVERSIDAD DE ZARAGOZA

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ABSTRACT

Los dispositivos móviles, una de las herramientas más eficaces y avanzadas de la era de la tecnología, se encuentran entre las herramientas más eficaces para resolver problemas en la actualidad. El desarrollo de dispositivos móviles se ha convertido en herramientas útiles para hacer la vida más fácil al traer muchas aplicaciones móviles, esto ha dado importancia a de los diseños de interfaz dependientes de la experiencia del usuario (UI / UX).

En esta investigación, con el diseño de interfaz realizado para estudiantes regulares e internacionales de la Universidad de Zaragoza - Facultad de Bellas Artes, un diseño de interfaz de usuario para que los estudiantes accedan al sistema de calificaciones, visualicen sus horarios semanales, estén al tanto de eventos y resuelvan problemas. relacionados con la comunicación maestro-alumno, transporte / alojamiento y eventos. está diseñado dentro del marco de los principios de diseño.

Palabras Clave: usabilidad, experiencia de usuario, diseño de interfaz, satisfacción del usuario, Eramus +, generación Z.

RESUME

Tuğba Durmaz was born on June 28, 1997 in İzmir. After completing her high school education at Cengiz Topel Anatolian High School, she started her undergraduate education in the Department of Visual Communication Design at the Faculty of Art Design and Architecture of Sakarya University. She took part in volunteering projects in university life. In addition to these, she studied at the International University of Sarajevo in Sarajevo, Bosnia and Herzegovina, with the Mevlana Exchange Program in 2019. In the last year of her undergraduate education, she completed her education at the University of Zaragoza in Teruel, Spain, with the Erasmus exchange program. She continues her studies in the fields of Graphic Design, Advertising and Photography.

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1. CHAPTER: INTRODUCTION

1.1. Statement of the Problem

In the developing technology age, mobile phones are used by almost everyone. The development of telephone technology has brought the formation of many phone applications. However, the interface design is very important for the user to use the applications correctly and effectively. Because the interfaces of many phone applications have a complex and sloppy visual style, some communication problems occur between the user and the user. The phone application of Zaragoza University, which is designed according to the monitor layout and has a complex visual style, does not provide an efficient usability and does not provide a simple and understandable information flow. Students who come to the city of Teruel, where the Faculty of Fine Arts is located, experience many problems in terms of access to pure information, accommodation and transportation. This requires the development of a mobile application design, and there is currently no application that appeals to the generation Z who are studying at the university.

Associated with Generation Z, formed by those born after 2000, Assoc. Dr. Mehmet Gökhan Genel stated (on 2018 p.85-87) that the most shocking feature of the generation representatives is their growth with the internet and social media. Işık emphasized the importance of visuality as follows in his work General and Technical Communication (on p.99, 2006):

"People learn to see before they learn to speak, so visual communication takes place before speaking through communication and is more expressive and persuasive than non-visual. Because people learn by trying 1 percent of what they learn, touching 2 percent, sniffing 4 percent, hearing 10 percent and observing 83 percent of the events around them."

In this way, it was understood how important the transfer of information with visuality is especially in the generation Z, which is the representative of today. For this reason, it can be said that a special understanding of interface design is required in order to eliminate the incomplete information and visual flow of normal and international students, which are formed by the generation Z who are studying at the Faculty of Fine Arts.

1.2. Purpose of the Study

With this study, it is necessary to inquire about the reasons for the problems of the mobile application problems of University of Zaragoza from an institutional perspective, and to obtain the necessary results for the students of Zaragoza University-Faculty of Fine Arts and Erasmus students to use an easier and functional application with a mobile application interface that tries to eliminate the lack of information in terms of application will be studied. In line with this goal, mobile applications of Oxford Dictionary and Sakarya University Student Information System will be taken as reference. User analysis will be made after the meeting with the participants who have experienced the application as a result of these studies.

1.3. Importance of the Study

Mobile devices are one of the best ways to access fast information in the age of technology. It is increasingly possible to access information easily and effortlessly through mobile applications. Based on this, with the interface design of the mobile application to be made to the University of Zaragoza - Faculty of Fine Arts; It is thought that it will make the application remarkable by being simple, stable and understandable, and by making the right directions and helping appealing to the target audience. In this way, it is thought that the target audience will easily access important data within the specified institution through this efficient communication channel, helping students to reduce their anxiety about basic issues such as accommodation and transportation.

1.4. Assumptions

In attempting to find the answers to the research questions, several assumptions were made after the study. The results of our study are based on these assumptions: It is assumed that Erasmus + and regular students participating in the study will experience the demo version of the application interface. In addition, with the interface of the application to be made for the Faculty of Fine Arts, it is assumed that the target audience will be a user-friendly application that can be understood by accessing the contents in the event calendar, as well as the procedures such as accommodation, transportation, and communication with the teachers, and in this way, the efficiency obtained will increase at a high level.

1.5. Limitations of the Study

The limitations accepted from the outset in the context of the research results are:

The content of the mobile application to be prepared is limited to the information and services provided by the University of Zaragoza-Faculty of Fine Arts. Limited to Regular and Incoming exchange students studying at the undergraduate degree. Page examples of the application will be highlighted.

1.5. Definitions of Terms

Usability: The fact of something being easy to use, or the degree to which it is easy to use. ("Usability" TY)

User Experience: The user experience, the use of a product or the purpose of the perceptions and potentialities it has when using a product or service are the general effect (BULEY, 2013, p.5).

Interface Design (UI/UX): User interface (UI) design is the process designers use to build interfaces in software or computerized devices, focusing on looks or style. ("UI Design" TY)

User Satisfaction: User satisfaction refers to the user's comfort and acceptability of a computer/mobile application during the consumption of the content and the interaction with the system. ("What Is User Satisfaction" TY)

Z Generation: Generations were named as X, Y, Z in order to associate generations with the periods they lived in (eg wars, economic crises, etc.). Accordingly, those born after 2000 are called the "Z" generation. (Yalın, 2018, p.85).

Erasmus+ Program: Erasmus Program, by improving the quality in high resolution and enhancing European development; It is stated that universities will open up to the outside world, strengthen their relations with other universities, and student and academic staff mobility will be realized. (Ağrı, 2006, p. 120).

2. CHAPTER: METHODOLOGY

2.1. User Interface

The user interface is the most important part that is designed in accordance with the target audience to interact with technological devices such as computers, mobile phones and tablets, allowing the user to communicate with the device efficiently with its visuality. In this part, if the visuality is not planned to meet the needs of the target audience, bad results may be encountered. Since the complex structure of the design will negatively affect situations such as fast information retrieval, it loses its usability feature. In a good interface design, it is important to maintain its attractiveness by using effective graphics in design, as well as being simple, plain and appealing to the target audience.

Akyol also emphasizes that with the increasing importance of mobile technologies and that companies invest in user interface aesthetics in order to win customers, for example, the first point that customers who enter a store is the interface of a vehicle or device, therefore, how important aesthetics is in interface design (Akyol, 2014).

With a user-friendly interface design, it is predicted to limit the target audience and increase the efficiency of the application by establishing a better communication network.

2.1.1. User Interface - Usage Areas

Usage areas of user interfaces can be found in almost every product. In addition to devices such as televisions, computers, tablets and phones, many imaginable products such as dishwashers and television controls have emerged as a result of "User Interface" designs.

2.1.2. User Interface – Design Elements

2.1.2.1. Layout

Layouts represent the main grouped order in the user interface.

The layout of the pages can be considered as designs that can be easily understood by the user, appeal to the target audience visually and can be efficient by providing integrity. With a correct layout and space usage, users can easily access what they are looking for.

2.1.2.2. Color

Color preferences may vary depending on the function of the interface design. Color choices suitable for the institution / organization and target audience can increase usability. For this reason, choices may need to be made beyond personal tastes. In addition, it is very important to use the correct color for legibility.

2.1.2.3. Typography

The use of typography is very important in interface designs. The correct typography choice should be preferred without straining the eyes of the user and not disturbing the design balance.

Sarıkavak and Tuzcu emphasize the importance of taking measures such as font size and line spacing, which will ensure legibility according to age groups and target audience, as well as the text being readable (Sarıkavak, 2009, p.194; Tuzcu 2019, p59).

2.1.2.4. Icons

McKay defines an icon as: An icon is a small image used to represent a command, option, or object. The icon is generally three-dimensional, multi-colored and has a shadow (McKay, 2013). The use of icons in interface design should be used in a simple and plain way that the user can understand.

2.1.2.5. Balance

It can be defined as the use of icons, colors and typography in order to provide a harmonious image in the composition by visually blending them.

2.2. User Experince

User experience is the process of interaction between user and device / object. User experiences are encountered in many areas from A to Z. Many examples such as road signs, hospitals, museums, screwdrivers and so on have been created based on user experience.

User experience 3 should be handled as a whole with pre-use, order of use and post-use processes. While designing the user interface, the user experiences make a great contribution to the development of the interface, and the user-friendly designs that attach importance to the user experience and the interfaces that can be accessed effortlessly allow the user to perform their operations in a very simple way. In addition, a separate interface must be designed for each different device to be built. For example, it should be taken into account that the use of the interface for desktop devices and the interface design for mobile devices should be made in different ways.

Bulley specifies that being a user experience designer means learning what users want and designing services with a series of methods and techniques for their needs and uses, as well as facilitating the user's communication with the vehicle for a successful user experience (Bulley, 2013).

Regarding the concept of usability in the interface, Çağıltay emphasized that the user should try not to make mistakes and offer solutions to get rid of the error even if there is an error, remember the ease of use of the application even if the user does not use the application for a long time, and the importance of easy learning as well as being efficient and effective (Çağıltay, 2016).

Looking at all these examples, designing an efficient process for the user can be considered as the main goal.

2.2.1. Wireframe

Wireframes are considered the basis of techniques in all design classes. Wireframes are indispensable, especially when designing web interfaces. It is not possible to move on to the next step of the design without wireframe drawings. In the interface design, which is planned to be made with a good wirefame design, it is the section where the icons will be placed, how exactly they will work, and compliance with the target.

Creating a Wireframe, https://itcraftapps.com/blog/user-journey-map-of-screens/
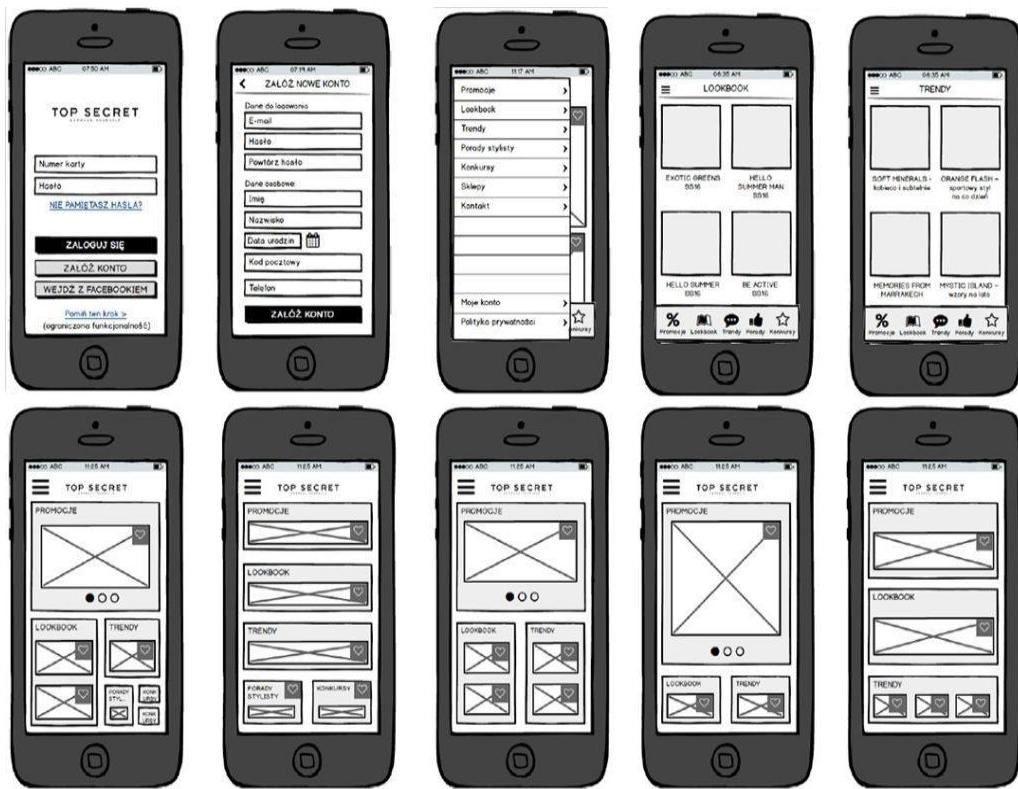
2.2.2. Prototype & Test

The icon, typography, color and placements related to the final appearance of the application are made at this stage. The prototype is revealed by taking the previously created layouts as a reference. Then the test phase is started. During the test phase, any errors related to the application are corrected and put into the test process again.

2.2.3. Final Version of Application

The interface design, which passes the Prototype and Test stages smoothly, can be updated many times with the feedback of the users. Then the latest version is revealed by the software team.

3. CHAPTER: PROCESS OF THE PROJECT

3.1. Knowing the Target Audience, Defining the Problem

In order to define the user and the problem, firstly, interviews were made with the people in this group, targeting students studying at the University of Zaragoza - Faculty of Fine Arts and international students coming through the exchange program. In these interviews, solution-oriented studies were carried out in order to ensure a healthy user experience by determining the problems faced by the users and users.

For the identification of the problems of the new students and international students who will be coming to the Faculty of Fine Arts of the University of Zaragoza, in order for the students to easily adapt to both campus life and city life; By collecting important information such as transportation, accommodation, course contents, lesson locations, teacher contact information, activities under a single application, it enables students to access the application with incident.

In the study, a questionnaire was developed in order to determine the problems faced by the students due to the great change in their lives who are just starting university or coming from abroad through an exchange program. A survey was prepared for international students as well as students who are currently studying at the Faculty of Fine Arts, and face-to-face interviews were conducted.

Questions For Students (Regular/International)

1) Age:
2) Gender:
   a) Male
   b) Female
3) Where are you living now?
   a) Apartment / Flat
   b) Dormitory
4) How long will you study at Zaragoza University Fine Arts Faculty?
   a) One Semester
   b) Two Semesters
   c) More Than Two Semesters

5) For how long have you been studying here Zaragoza University Fine Arts Faculty?

6) Which programme did you use for come to Zaragoza University Fine Arts Faculty?

   a) Erasmus+ Exchange Programme

   b) Full Time Student

7) Did you have any previous knowledge about the setting prior coming to Zaragoza University Fine Arts Faculty?

   a) Yes

   b) No

8) Where did you get this knowledge? Was this informations enough for you?

9) What type of non-academic problems or obstacles have you encounter during your first days, if you recall, how would you describe your first day/week at Zaragoza University Fine Arts Faculty?

10) Did you face any problem in transportation?

11) Did you face any problem in accomodation?

12) In general, what do/did you like best about your exchange institution?

As a result of the surveys, they stated that especially international students had problems coming to the city of Teruel due to the language problem they experienced when they arrived in the city, and that they did not have enough information about which means of transportation would be easy to use. Another problem is accommodation. Due to the face that the city is small and the lack of knowledge of the new students about accommodation, it has been determined that they do not have any information about where to find a house. Another problem was that there were some communication gaps in the teacher / student channel due to the students not being able to access the e-mail addresses of the teachers to be reached.

As a result, the students stated that it would be useful to present useful parts about the problems stated in the application interface.

3.2. Research & Examination of Graphical References

For the application interface to be made, the interface designs made by the universities around the world have been examined and taken as reference.

Image 1. *Sakarya University - Student Information System Application - Turkey*
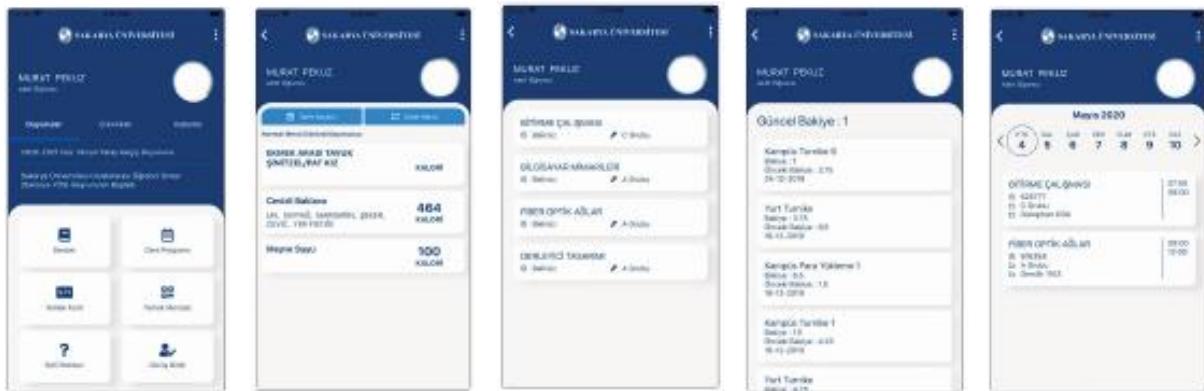
Image 2. *Welcome AGH UST / AGH University of Science Application – Poland*
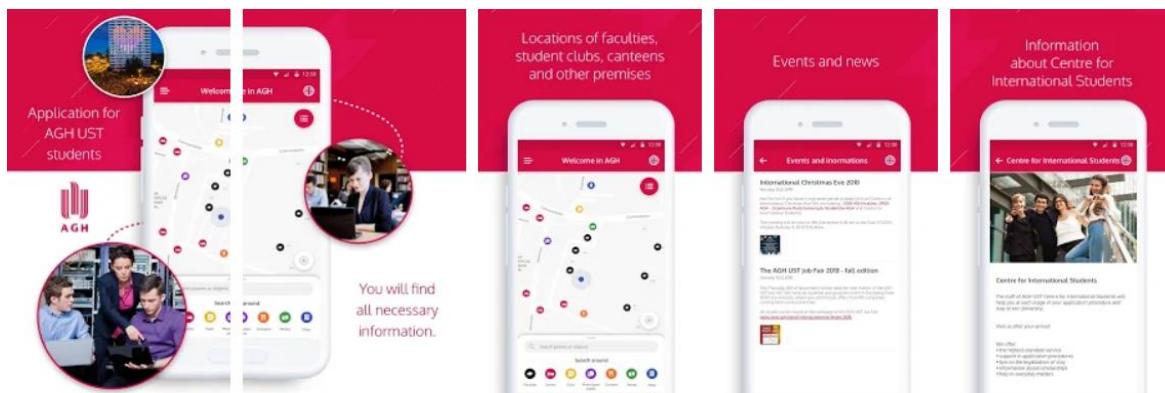

Image 3. *UCL Go! - Student Edition / AGH University of Science – Poland*
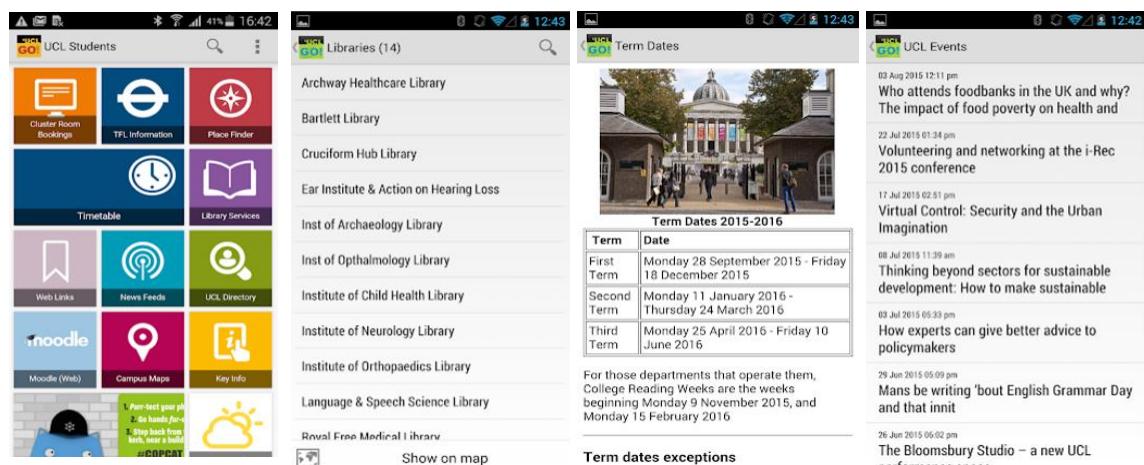
These applications are examined in the context of content, user interface, user experience and usability.

The interface designed for the University of Zaragoza - Faculty of Fine Arts will provide tips on how to easily access the city and find a home for students from abroad and new undergraduate students who will start their undergraduate education, as well as easy access to information about courses and teachers. "Welcome AGH UST / AGH University of Science Application" application can be cited as an example of the application. This application, which is the most suitable for the planned system, was chosen among the applications at the end of the studies.

3.3. Idea & Mindmap

After the determination of the problem and the interview with the target audience, a mind map sketch was made in order to establish the necessary connection and determine the keywords on the interface. Then the final version of the mind map was designed.

Image 4. *Mindmap - Sketch*
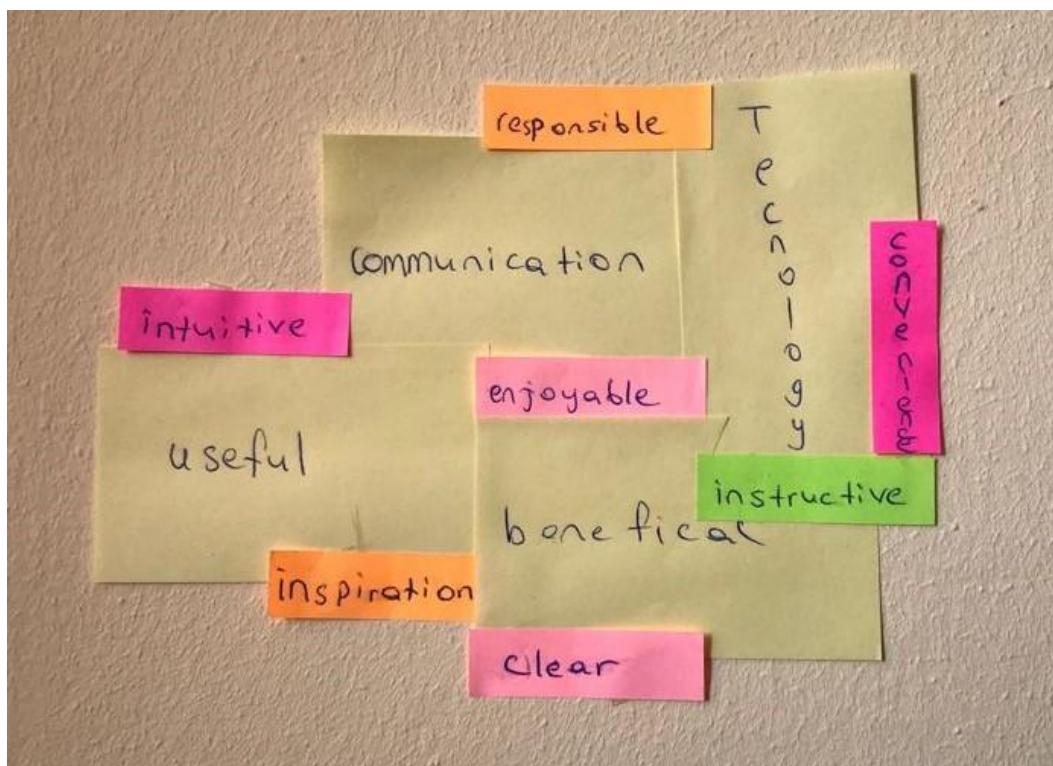
Image 5. *Mindmap*

3.4. Scenario Process

As a result of the analysis made after the interview, user flow and wireframes were created and the first steps of the application interface were accomplished.

3.4.1. User Flow

In order to provide a better user experience to the target audience with the information obtained from the researches, the user flow, which is an important guide in the design phase of the application, is started. User awareness will be increased by determining what the menus on the interface of the application will consist of. This application, which will be a guide for the regular students and international students of the Faculty of Fine Arts of the University of Zaragoza, has 3 main sections under the title of home, notifications and mail.

Image 6. *User Flow*
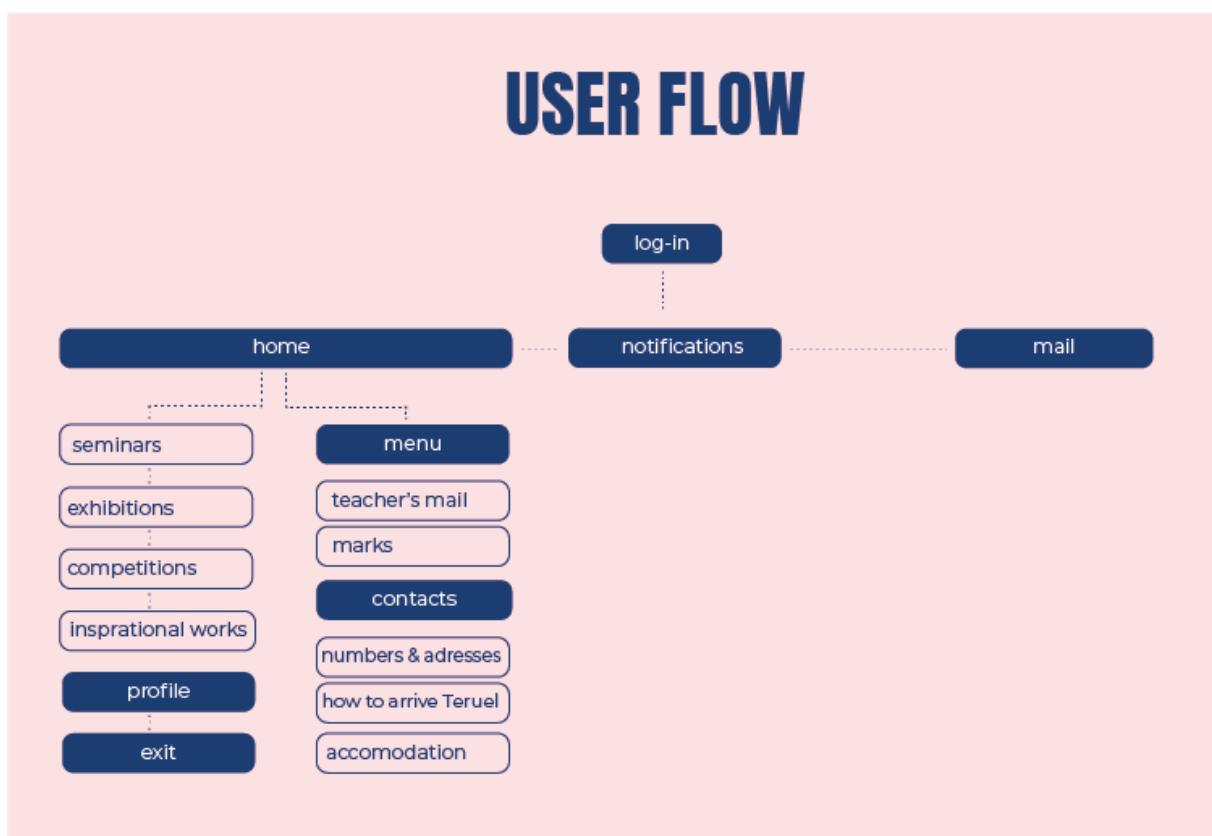
There are 3 subsections and an exit in the home part. On the home page, there will be a section with seminars, exhibitions, competitions, inspiring works and events. Teachers' mails, signs and contact section will be found in the menu tab. The communication part will consist of numbers & addresses, how to reach the city of Teruel and accommodation sections. It will also be possible to access the profile section from the home section.

In the notifications section, there will be sections such as courses, grade notifications, course cancellations, and event reminders.

In the mail section, students will be able to access the school e-mail address directly when clicking the icon.

3.4.2. Wireframe

In the wireframe phase, which is the last stage of the application interface as a draft, the graphical foundations of the interface are laid and it facilitates the final design with guidance.

Image 7. *Wireframes*

3.5. Interface Design

After the examined reference applications and the interviews, user flow and wireframes were created. After that, the interface design section, in which the user is contacted, has been passed. Information about the colors and fonts used in the application is provided.

3.5.1. Color

Since the application has a simple design in general, in order to ensure integration, a total of 5 colors were used, especially dark blue, which is the main color of Zaragoza University.

In addition, the application used a light pink color in the background to provide a combination with the dark blue color, which is the main color of Zaragoza University.

Image 8. *Color Palette*

3.5.2. Typography

The Montserrat font family, which belongs to the Sans Serif family, which is preferred in websites and mobile applications, was used as the typeface in the application. The Monserrat font family is used for texts in the application interface. Anton font family is used to increase clarity in headings.

Image 9. *Anton Font*

Image 10. *Montserrat Font*

3.5.3. Layout – Final Version of the Interface

**Image 11.** *Mockups. Logo, Log in, Lost Password, Lost Password 2*
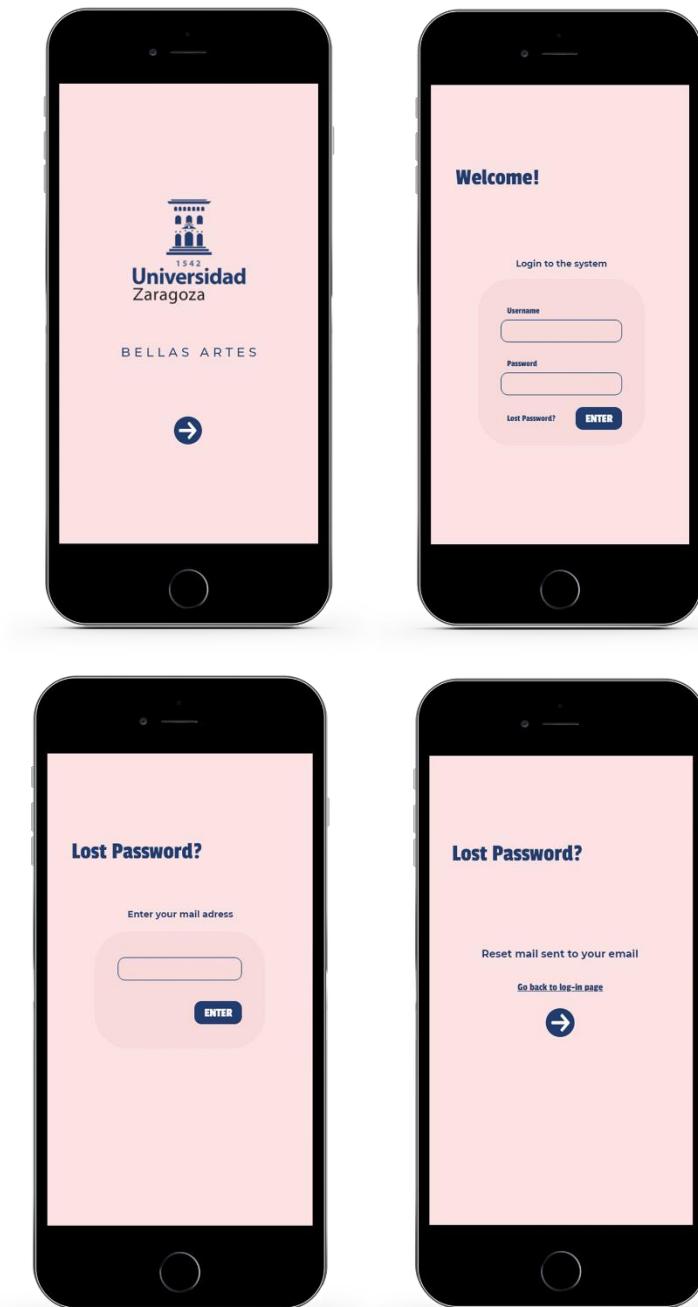
**Image 12.** *Mockups. Main Page, Notifications, Mails*
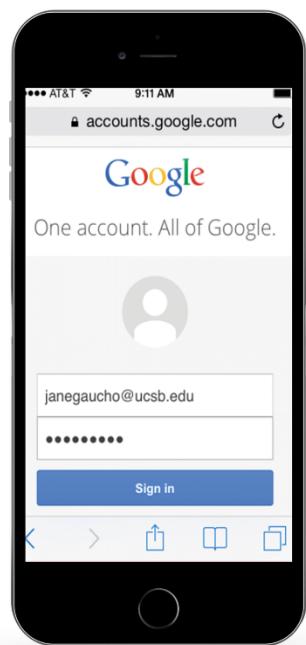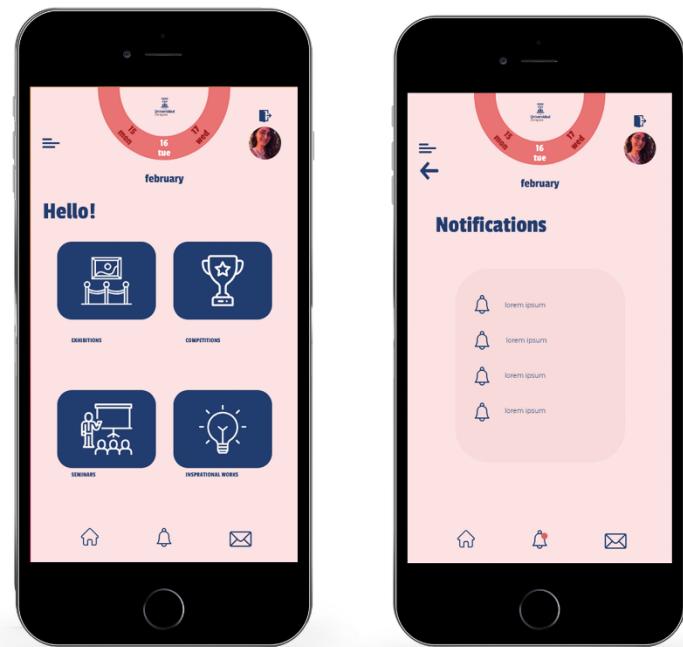
Image 13. *Mockups. Exhibitions, Inspirational Works, Competitions, Seminars*
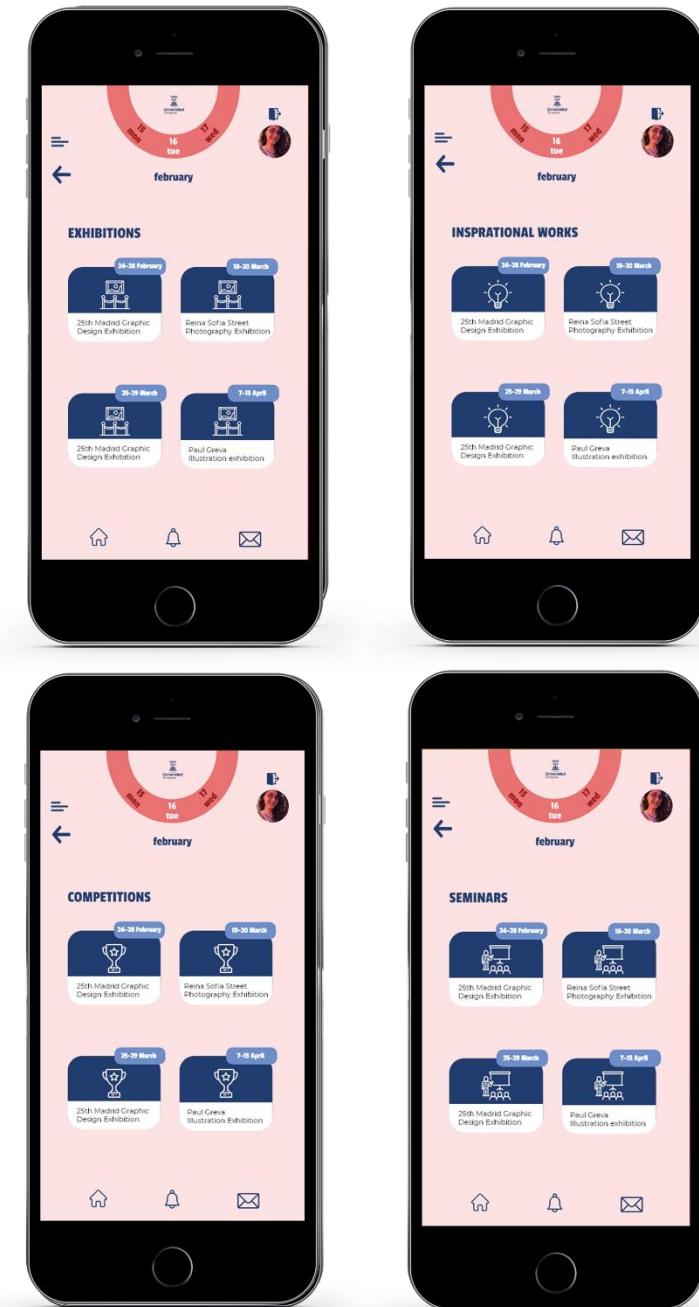
**Image 14.** *Exhibition Details, Menu, Teacher's Mails, Marks*
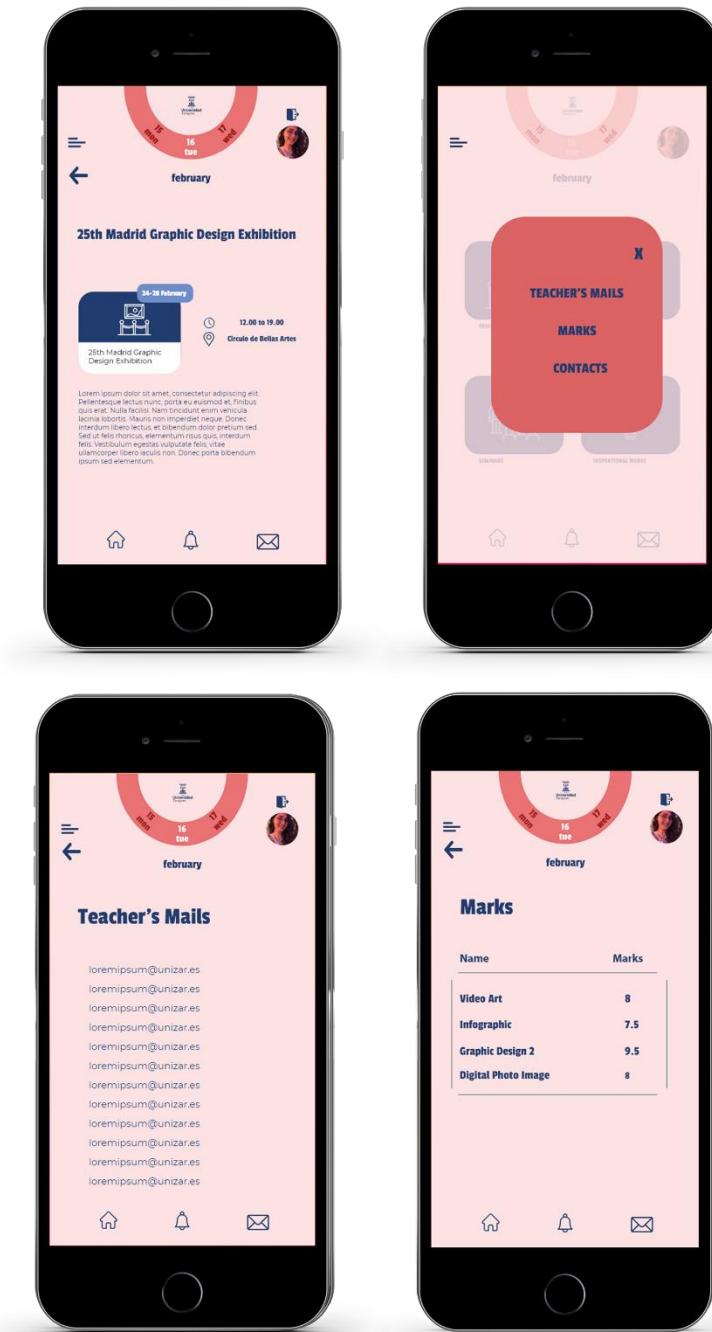
Image 15. *Contacts, Number&Adress, How to Arrive Teruel, Accomodation*
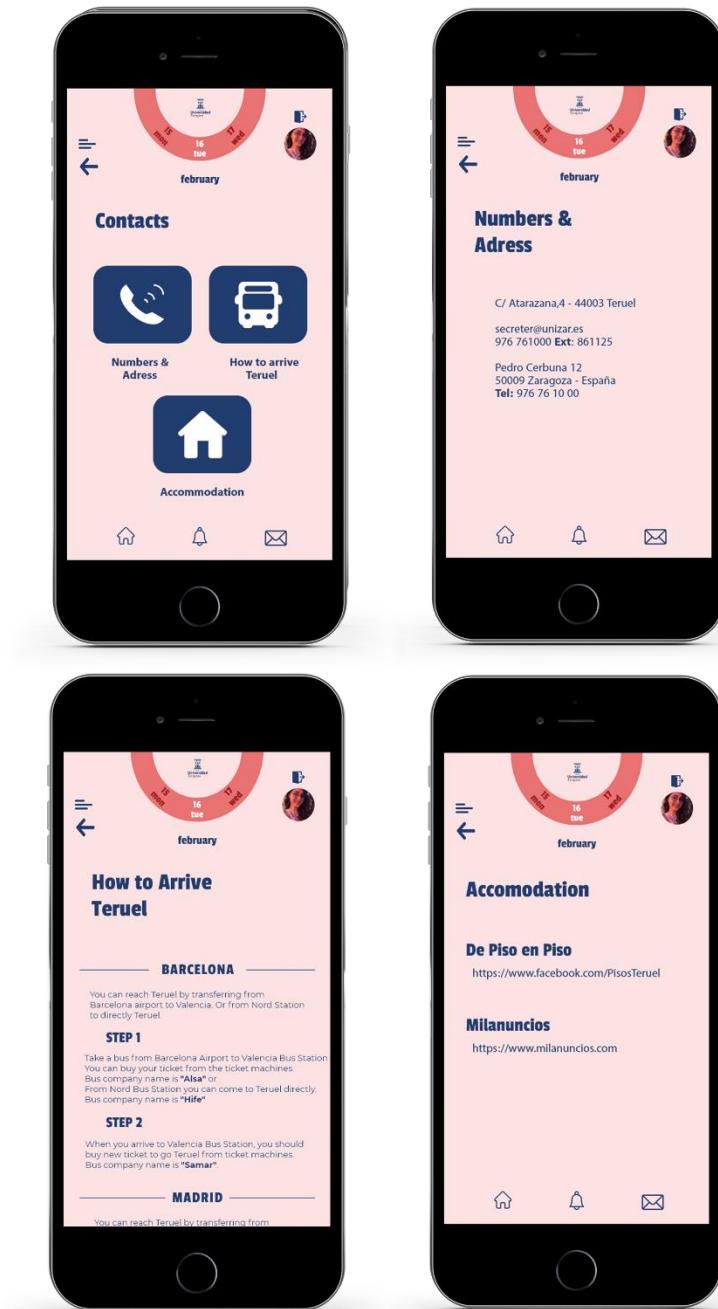
Image 16. *Profile*
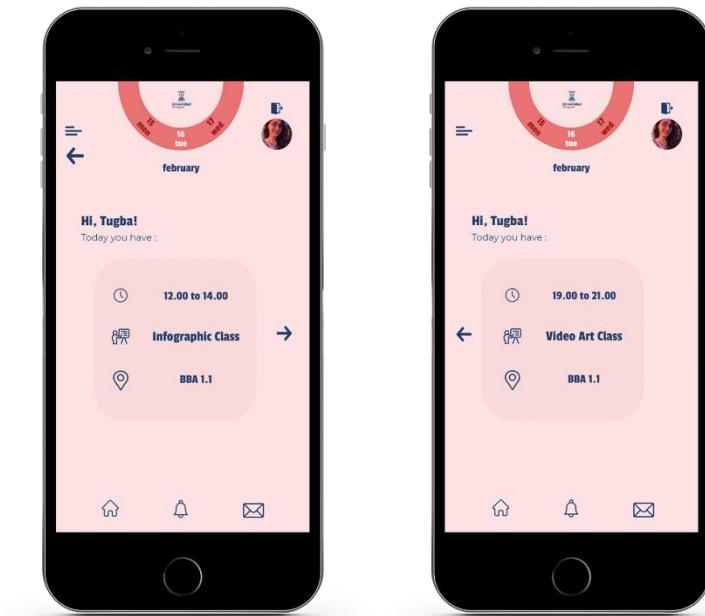
On the main page of the application, there are menu, notifications, mail profile and exit buttons, as well as buttons related to events. Clicking on the (Exhibitions, Competitions, Seminars, and Inspirational Works) events button displays the recent events and their details. In the menu section, you can access Teacher's Mails, Marks, and Contact sections. The Contact part consists of 3 separate parts: Numbers & Address, How to Arrive Teruel and Accommodation. When it comes to the profile section, it gives information about the upcoming lessons depending on the day, as well as the time and course location.

4. CHAPTER: CONCLUSIONS AND RECOMMENDATIONS

By the using of the mobile application interface, which will enable regular students and international students studying at the Faculty of Fine Arts at the University of Zaragoza in Teruel, Spain, to adapt easily to the city and also to use it as a guide, it is aimed for the students to easily handle their transactions before reaching the city and during their arrival in the city.

4.1. Conclusions

In this study conducted on the problems experienced by regular students and international students, it was seen that the biggest problem of the students coming to Teruel was the problem of accommodation and transportation and they wanted to be informed about these issues. In the interviews:

It was concluded that students, especially international students, needed assistance in matters such as accommodation, transportation, access to the school system and not being able to follow social activities due to language problems they experienced when they came to Teruel. As the easiest way to reach information is the internet, it was concluded that it is important for students to access information in a short time and easily. In addition, it has been concluded that a mobile application can further develop the content of the students according to their needs and turn it into an application depending on the wishes of the target audience with the feedback from the students.

The application is designed within the scope of user experience principles.

4.2. Recommendations

The usage area and intended use of the interface design should be investigated thoroughly. In addition, one should be aware of its limitations and act according to these limitations.

The interface study designed within the scope of user experience has been prepared according to the needs of regular students and international students coming to the Faculty of Fine Arts of the University of Zaragoza. It should not be forgotten that this study, which is depending up to the target audience group, should be open to update since it has a dynamic structure.

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