1　User Investigation

1.1　Introduction

In our project, we chose students as the target user group and conducted a survey through Ed and tutorial classes to gain a deeper understanding of their needs and preferences. The students who participated in the survey were mainly from computer science-related departments.

Through the survey, we found that students primarily use WeChat (55.1%) and Instagram (24.5%) to communicate with friends (61.2%) and classmates (28.6%). They like the user-friendly interface of these chat applications (71.4%) and prefer the option to set multilingual support (54.5%). Students hope that chat rooms will allow only the group owner to invite friends (63.3%). Opinions were divided on whether new users should be able to see chat room history (55% in favor, 45% against). Based on these findings and lecture slides [1], we conducted a PACT analysis for this group of computer science students and constructed relevant personas. The statistics for each question and the complete survey data are provided in the appendix (3.1).

1.2　PACT Analysis

People: (98%) of respondents are students at the University of Sydney, with only one staff member participating. Students primarily use the platform for academic-related activities, such as discussions and posting questions. They also want to communicate with friends. Among the respondents, 55.1% are currently using WeChat, and 24.5% are using Instagram, indicating that a design similar to these apps would be more familiar to them. Most respondents are computer science majors, with a few students from other majors.

Activities: The platform's primary use cases include participating in discussions, sharing academic experiences, and asking questions. Additionally, the platform should support students in communicating with friends. In terms of functionality, 61.2% of users primarily engage in group chats or private chats with friends, and 28.6% chat with schoolmates. Users prefer that only group owners can invite friends to join group chats (63.3%) and wish to retain chat history. Both staff and students can post articles and comment on them, with staff having the authority to manage posts and comments. Compared to other features, users highly prefer a friendly interface (71.4%). Regarding additional features, 54.5% of users want support for multiple languages.

Contexts: Considering the study and life of university students, they might use the platform both on and off-campus, including at home or during commutes. They can access the site anytime, with peak usage times during the day and evening. Teachers and staff need to be able to access the site at any time to manage student posts, requiring the platform to function reliably across different times and locations, providing a consistent user experience.

Technologies: Considering the usage patterns of university students, the platform must work on various devices, including laptops and phones. Given the diverse usage environments, the platform needs strong adaptive design to ensure a consistent and smooth user experience across all devices.

1.3 Persona

Name: Emma Zhang
Age: 20
Major: Computer Science
Background: Emma is a second-year computer science student at the University of Sydney. She is proficient in using various technologies and spends a significant amount of time on her laptop and smartphone. She uses chat applications like WeChat and Instagram daily to keep in touch with her friends and classmates.
Motivations:

- Share experiences and ask questions related to her studies.

- Communicate with friends and classmates for both academic and personal purposes.

- Use a platform with a user-friendly interface and multilingual support.

Frustrations:

- Difficulty in finding a platform that combines academic and personal communication.

- Lack of multilingual support in many existing chat applications.

- Confusion caused by complicated interfaces in some chat platforms.

Preferred Features:

- User-friendly interface similar to WeChat and Instagram.

- Multilingual support.

- Ability for group owners to invite friends to join group chats.

- Retaining chat history for reference and context.

2   Navigation design

We used Optimal Workshop for card sorting. A total of 11 participants completed the card sorting. The image is shown as figure 1. We categorized the multilingual functionality, which we learned about from the previous survey, under the "User settings/profile" card, as this special feature pertains to the entire user interface settings. The similarity matrix of the results is shown in the figure 2.
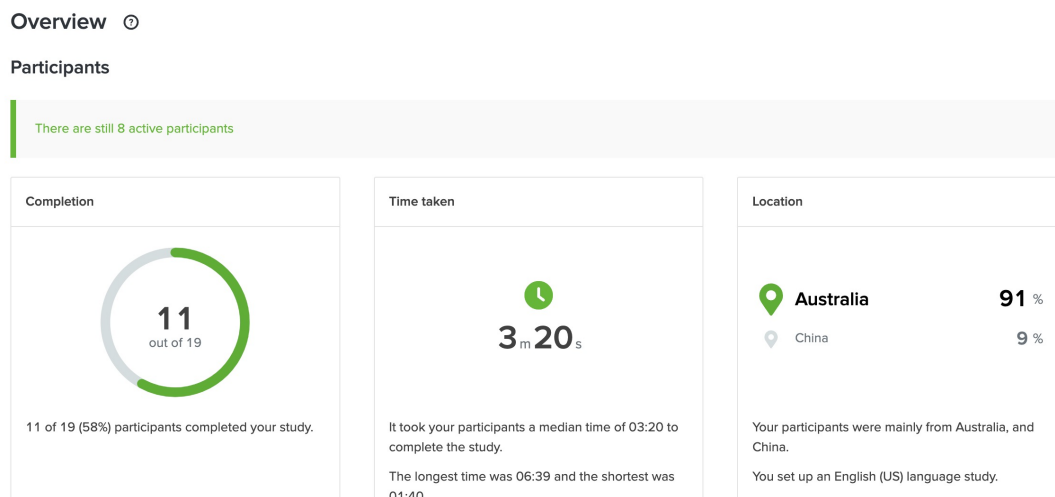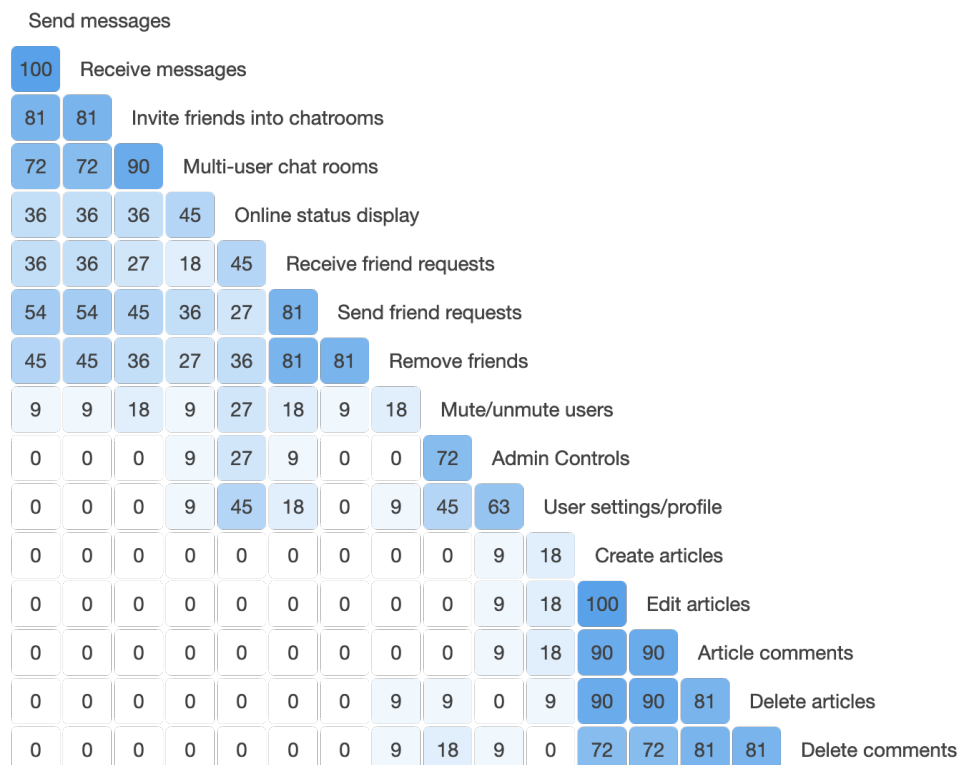
Figure 1: Card Sorting Overview

Figure 2: Similarity Matrix

Based on the similarity matrix, we have categorized as follows:

Page: Messages App

- Multi-user chat room

- Send message

- Receive message

- Invite friend into Chatroom

- Online status display

- Receive friend requests

- Send friend request

- Remove friend

Page: Settings

- Admin control

- Mute/Unmute User

- User settings/profile

Page: Knowledge Repo

- Create articles

- Delete articles

- Edit articles

- Article Comments

- Delete Articles

- Delete Comments

3　Appendix

3.1　User Investigation Survey Evidence

Overview:

15/05/2024, 14:11   Survey

Survey

49 responses
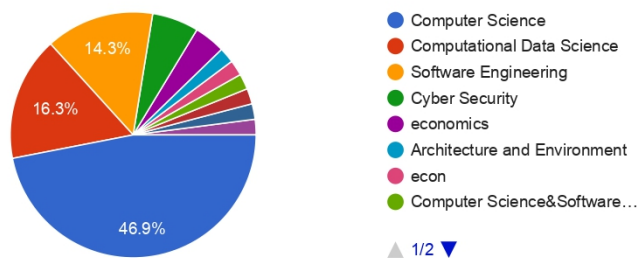
Publish analytics

What is your role?

49 responses

- Student
- Staff

What is your major?

49 responses

- Computer Science
- Computational Data Science
- Software Engineering
- Cyber Security
- economics
- Architecture and Environment
- econ
- Computer Science&Software…
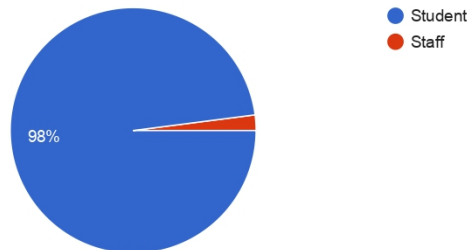
▲ 1/2 ▼

What chatting app are you using right now?*
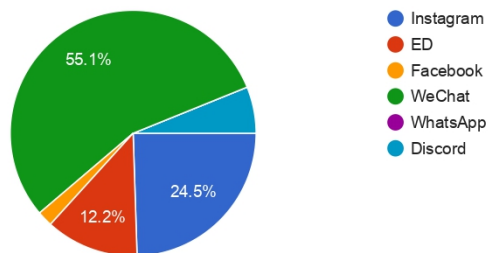
49 responses

- Instagram
- ED
- Facebook
- WeChat
- WhatsApp
- Discord
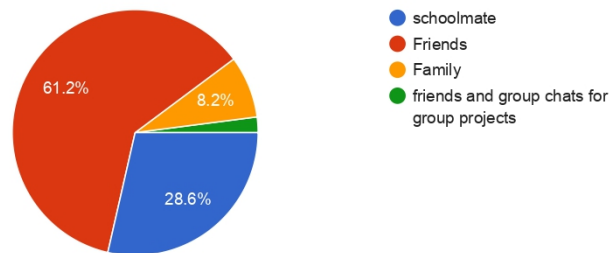
5

15/05/2024, 14:11   Survey

Who are you mainly using chat software to communicate with?   ⧉ Copy

49 responses

- ● schoolmate
- ● Friends
- ● Family
- ● friends and group chats for group projects

61.2%

8.2%

28.6%

What are the features you like the most in the chat app selected above? (Choose all that apply)   ⧉ Copy

49 responses

Feature	
User-friendly interface	35 (71.4%)
Stickers and emojis😜	21 (42.9%)
Group chats	24 (49%)
Customizable themes	9 (18.4%)
ppl all using it	1 (2%)
Message Encryption	1 (2%)
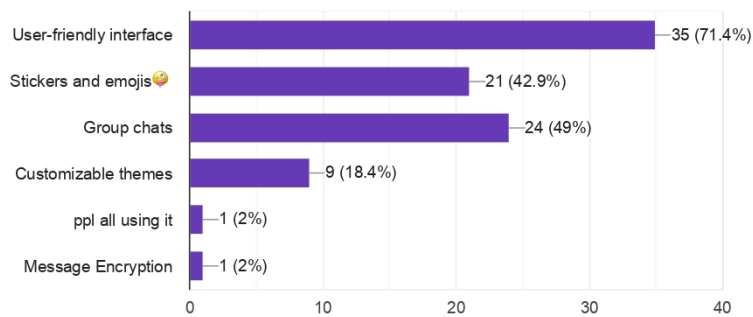
What type of chatroom do you prefer? (multiple choice)   ⧉ Copy

49 responses

Chatroom type	
Public chatroom, everyone can join	17 (34.7%)
Invite-only chatroom, only the room owner can invite others	31 (63.3%)
Chatroom where anyone in the room can invite others	18 (36.7%)
Users can directly join a friend's room	10 (20.4%)

6
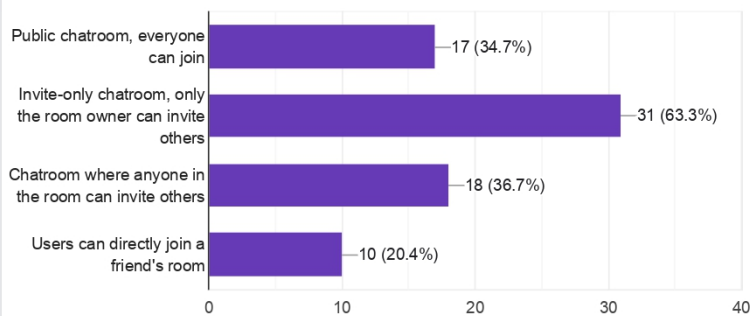
Can new users who join a chatroom see the chatroom history?
49 responses

Yes — 29 (59.2%)
No — 20 (40.8%)
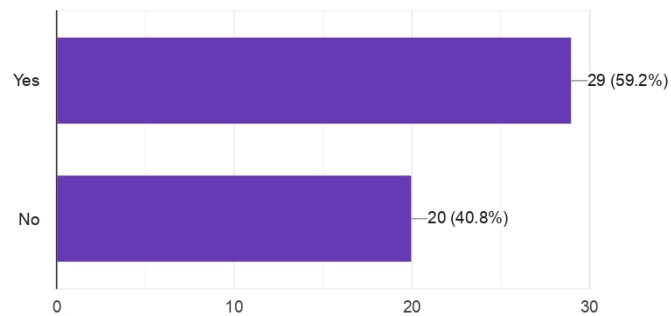
Which of the following features do you think would help you the most?
11 responses

- Multilingual Support — 54.5%
- Colorblind-Friendly — 27.3%
- Font Enlargement — 9.1%
- Text-to-Speech
- Eye Protection Mode — 9.1%
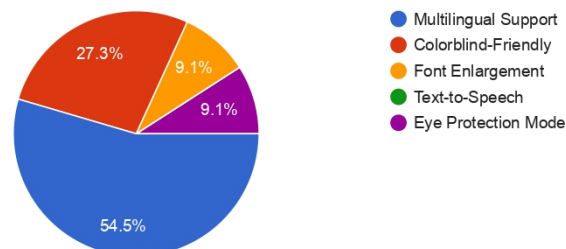
Do you like this interface?
49 responses

- Yes — 63.3%
- No — 36.7%

Google Forms

All Results: /Evidence/Survey-all.pdf

4 Design-Evaluate 1

5 Design-Evaluate 2

6 Contribution

References

[1] 7.users-designs.pptx. Canvas.